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LAKE CLARK NATIONAL PARK AND PRESERVE

ALASKA

HISTORIC RESOURCE STUDY



by

Harlan D. Unrau

United States Department of the Interior • National Park Service
Anchorage, Alaska

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Cover photograph: Agafia Trefon (1908-1928) holding a parasitic jaeger (*Stercorarius parasiticus*) at Tanalian Point; photographed by sport hunter Frederick K. Vreeland of New York City in the summer of 1921.

Courtesy Robert W. Vreeland

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Memorandum

To: Technical Information Center, Denver Service Center

From: Regional Historian, Alaska Region

Subject: LACL Historic Resource Study

Enclosed is a copy of the recently completed Lake Clark National Park and Preserve, Alaska: Historic Resource Study, written by Harlan D. Unrau and illustrated by Wyndeth Davis. This study identifies and documents the major historic events that have occurred in the Lake Clark-Iliamna Lake region and locates and identifies the most significant historic sites, scenes, and structures associated with them.

If you would like additional copies, please contact Historian Frank Norris at (907) 257-2685.

Sandra Faulkner

Enclosure in TIC 188/D-14

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PREFACE

This historic resource study has been prepared to satisfy in part the research needs as stated in the task directive (approved by David B. Ames, Acting Regional Director, Alaska Region, on May 25, 1990) concerning Lake Clark National Park and Preserve, Historic Resource Study, Package No. 101. The purpose of this study is the collection, presentation, and evaluation of historical research data pertaining to the historic events that occurred in the park/preserve and surrounding area and identification of historic resources associated with those events. It is intended that the study will provide a data base for the park's historic resources that will enable park managers to formulate management policies to preserve, protect, and interpret those resources.

A number of persons have assisted in the preparation of this report. My special thanks extend to Park/Preserve Superintendent Andrew E. Hutchison, Chief Ranger Hollis Twichell, and Resource Management Specialist Joseph Greene for helping me to understand the park/preserve historical research needs and expectations for this study, making available the park data files for research purposes, providing guidance for the location of historic resources in the park/preserve, and making suggestions for persons to interview and repositories to consult during my research. I also wish to extend my appreciation to former and present Alaska Regional Office directors Q. Boyd Evison and Jack Morehead, respectively; Associate Regional Director, Resource Services Paul F. Haertel; and former and present acting Regional Historians Kate Lidfors and Sandra Faulkner, respectively, for sharing their ideas on the nature of the research and scope of work required for the project. I am especially indebted to Theodore J. Karamanski, a professor in the history department at the University of Chicago, for serving as the field assistant to this project during the summer of 1990, surveying and examining 16 historic sites in the park/preserve, evaluating their significance for listing in the National Register of Historic Places, and preparing draft National Register nomination forms.

In addition, my thanks go to the staffs of the various repositories with whom I consulted during research for this study. Sara Hornberger, a local historian and resident of Lake Clark, was most helpful in this study, sharing her knowledge and previous research with me.

My thanks also go to Maurice L. Miller, Section Chief, Branch of Planning, Western Team, Denver Service Center for providing encouragement and administrative oversight for the project.

Finally, I would like to thank Frank B. Norris, a historian in the Alaska Regional Office, for his editorial assistance. John Branson, a ranger at Lake Clark National Park and Preserve, deserves special thanks for providing information about the Macnab-Vreeland expedition, supplying rare photographs, and correcting errors in the draft study.

For a variety of reasons the history of subsistence resource use within the park/preserve's coastal unit, as specified in Appendix II of the aforementioned task directive, was not completed in time to be useful for this study.

Harlan D. Unrau

INTRODUCTION

ESTABLISHMENT

The Lake Clark National Park and Preserve was established on December 2, 1980, by section 201 (7)(a) of the Alaska National Interest Lands Conservation Act (94 Stat. 2383; Public Law 96-487; hereafter referred to as ANILCA). The park contains approximately 2,600,000 acres, while the preserve encompasses some 1,400,000 acres.

GEOGRAPHIC LOCATION

Located in the heart of the rugged and glaciated Chigmit Mountains along the western shore of Cook Inlet, Lake Clark National Park and Preserve lies some 100 miles southwest of Anchorage. The Alaska and Aleutian mountain ranges converge in the park. To the south and west of the park and adjacent to it lies the preserve in an area of foothills, lakes, rivers, and tundra plains. The park and preserve is a composite of ecosystems representative of many diverse regions throughout Alaska and combine to form a natural showcase of superb beauty and wilderness.

PURPOSE

Section 201(7)(a) of ANILCA states that Lake Clark National Park and Preserve shall be managed to preserve and maintain the scenic beauty and qualities and protect the fish and wildlife populations and their habitats within its boundaries. Specifically, the act notes that the purpose of the park and preserve is:

> To protect the watershed necessary for perpetuation of the red salmon fishery in Bristol Bay; to maintain unimpaired the scenic beauty and quality of portions of the Alaska Range and the Aleutian Range, including active volcanoes, glaciers, wild rivers, lakes, waterfalls, and alpine meadows in their natural state; and to protect habitat for and populations of fish and wildlife including but not limited to caribou, Dall sheep, brown/grizzly bears, bald eagles, and peregrine falcons.

These specific purposes for the park and preserve are supplemented by the general purposes for all conservation system units established under ANILCA. As defined in section 101 of the act these general purposes include:

> (a) In order to preserve for the benefit, use, education, and inspiration of present and future generations certain lands and waters in the State of Alaska that contain nationally significant natural, scenic, historic, archeological, geological, scientific, wilderness, cultural, recreational, and wildlife values, the units described in the following titles are hereby established.
>
> (b) It is the intent of Congress in this Act to preserve unrivaled scenic and geological values associated with natural landscapes; to provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, including those species dependent on vast relatively undeveloped areas; to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and

coastal rainforest ecosystems; to protect the resources related to subsistence needs; to protect and preserve historic and archeological sites, rivers, and lands, and to preserve wilderness resource values and related recreational opportunities including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wildlands and on freeflowing rivers; and to maintain opportunities for scientific research and undisturbed ecosystems.

(c) It is further the intent and purpose of this Act consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for which each conservation system unit is established, designated, or expanded by or pursuant to this Act, to provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so.

Section 203 of ANILCA directs that the park and preserve be administered as a new area of the National Park System pursuant to the National Park Service (NPS) organic act of August 25, 1916 (39 Stat. 535), as amended and supplemented, and to section 1313 and other applicable provisions of ANILCA. The NPS organic act states in part that the National Park Service "shall promote and regulate the use of...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

ANILCA, however, made exceptions to the provisions of the aforementioned organic act. Sport hunting and trapping are permitted in Lake Clark National Preserve, and subsistence use is allowed in both the park and preserve.

SIGNIFICANCE OF RESOURCES

Lake Clark National Park and Preserve contains a composite of ecosystems and spectacular scenery representative of many diverse regions throughout Alaska. It is the variety of resources in the park and preserve that stand out as the value worth protecting and preserving for the enjoyment and education of the public.

The park and preserve contains great geologic diversity. Two great mountain ranges – the Alaskan and Aleutian – meet here. The craggy peaks, granite spires, glaciers, and snowfields of the Chigmit Mountains form the heart of the park and preserve. There are two notable glaciers – the Tuxedni and Double, two significant mountain passes – Merrill and Lake Clark, and two active volcanoes – Redoubt and Iliamna, both rising above 10,000 feet and listed on the National Register of Natural Landmarks.

The western flank of the Chigmits descends through tundra-covered foothills to boreal forest, while their eastern flank descends rapidly to the Cook Inlet, the rivers cascading to the sea through forests of Sitka and white spruce. The park and preserve contains the Chilikadrotna, Mulchatna, and Tlikakila national wild rivers which flow southwestward to Bristol Bay.

More than a score of glacially-carved lakes rim the mountain mass in the park and preserve. Lake Clark, more than 40 miles long, is not only the largest lake, but it is also the headwaters for red salmon spawning.

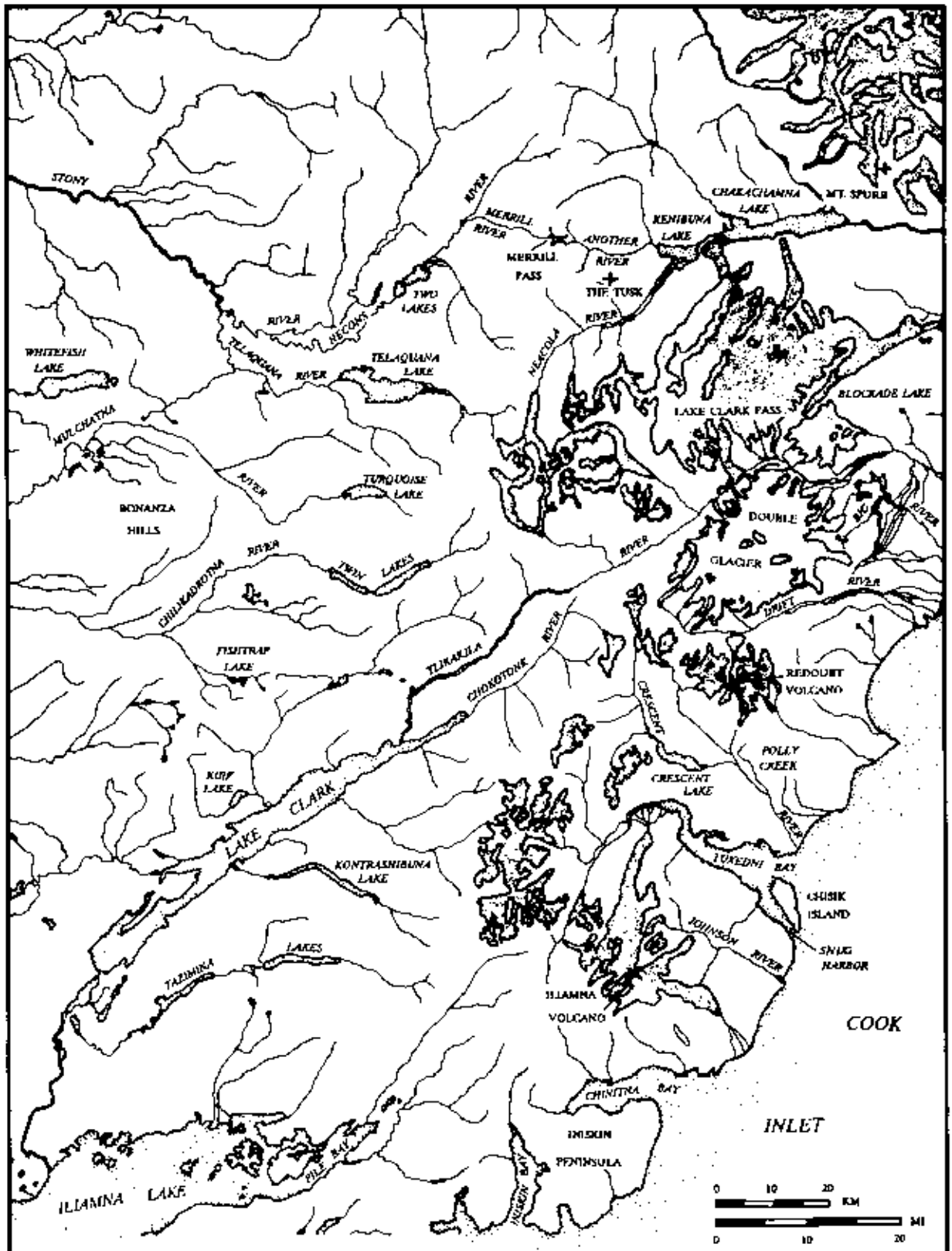
The upper reaches of the Kvichak River system extend into the park. This system is the world's most productive spawning and rearing habitat for sockeye salmon. It contributes about 50 percent of sockeye salmon caught in Bristol Bay, 33 percent of the entire catch in the United States, and 16 percent of the total world catch.

Wildlife abounds in and near the park and preserve. The Mulchatna caribou herd, numbering more than 100,000 and said to be the most stable and healthiest herd in Alaska, grazes and calves along the western boundary of the park and preserve. Dall sheep and moose forage the area, and brown and black bear, wolves, lynx, foxes, and other mammals are present. Fish include five species of salmon, rainbow trout, Dolly Varden, lake trout, northern pike, and arctic grayling. On the Cook Inlet side of the park and preserve, swans and other waterfowl nest on marshes and outwash plains and rocky cliffs in and adjacent to the park provide rookeries for puffins, cormorants, kittiwakes, and other seabirds. Seals and whales may be seen occasionally off shore.

The park and preserve contains significant cultural resources since the area has been occupied since prehistoric times. Dena'ina Indians lived at Kijik on Lake Clark until the early 1900s, when they moved to Nondalton and other sites. Other prehistoric sites are located near Telaquana Lake and along the upper Mulchatna River. Russian explorers, fur traders, and missionaries began traversing the region in the 1790s. The salmon industry began attracting white settlers in the early 1900s. While most of the early settlers around Lake Clark were trappers and miners, recent years have seen the development of an economy based on subsistence lifestyles, commercial fishing, and recreational activities.[1]

1. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve, Alaska*, August 1984, pp. 1-2; U.S. Department of the Interior, National Park Service, *The National Parks: Index 1985*, p. 19; U.S. Department of the Interior, National Park Service, *Draft Statement for Management, Lake Clark National Park and Preserve, Alaska*, ca. 1984, n.p.; Nancy Lange Simmerman, *Alaska's Parklands: The Complete Guide* (Seattle, The Mountaineers, 1983), pp. 193-95; and Alaska Geographic, *Lake Clark-Lake Iliamna Country*, Vol. 13, No. 4, 1986, pp. 1-150.

THE PREHISTORIC PERIOD



LAKE CLARK AND VICINITY

CHAPTER ONE

A BRIEF OVERVIEW OF THE LAKE CLARK REGION PRIOR TO EUROPEAN CONTACT

When the early European explorers arrived in the Cook Inlet region in the late 18th century, they found an Indian population, the Athapaskan-speaking Dena'ina, firmly established. At the time of first historic contact, or shortly thereafter, the area which the Dena'ina occupied included the Susitna River drainage, the shores of Cook Inlet, the entire Kenai Peninsula with the exception of the coast line along the Gulf of Alaska, the Lake Clark region north and west to include the upper Mulchatna and upper Stony rivers, Sixmile Lake on the Newhalen River, and the eastern two-thirds of Iliamna Lake.[1] It is estimated that the aboriginal Dena'ina population may have been between 4,000-5,000.[2]

The Dena'ina are one of the 11 major Athapaskan linguistic groups in Alaska.[3] Along with the Dena'ina, Tlingit, Haida, and others they are members of the Na-Dene language family.[4] The word "Dena'ina" derives from the term used by the Natives to mean people, exclusive of Eskimos and Europeans.[5]

Dena'ina language comprised at least three societies, corresponding roughly but not completely with the dialect divisions identified by James Kari, an anthropologist specializing in linguistic research, for Dena'ina of the 20th century.[6] While the hazards of water travel in Cook Inlet inhibited but did not completely preclude contact across the inlet, the most intense and constant relations occurred along the shores of the inlet rather than across it, effectively creating two societies, the Kenai Peninsula (Outer Inlet dialect) and Susitna (Upper Inlet dialect). The third society, Interior, was to the west in the Lake Clark – Iliamna Lake area.[7]

The group designated as the Dena'ina have been referred to by more than 50 different names by various authors. The most common names used, however, are "Kenaitze, Knaiakhotana, and

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1. James W. VanStone and Joan B. Townsend, "Kijik: An Historic Tanaina Indian Settlement," in *Fieldiana: Anthropology, Volume 59* (Chicago, Field Museum of Natural History, 1970), p. 13; Wendell H. Oswalt, "Historical Populations In Western Alaska and Migration Theory," *Anthropological Papers of the University of Alaska*, XI (December 1962), p. 2; and Joan B. Townsend, "The Tanaina of Southwestern Alaska: An Historical Analysis," *Western Canadian Journal of Anthropology*, I (No. 1, 1970), p. 5.

2. Joan B. Townsend, "Tanaina," in William C. Sturtevant, ed., *Handbook of North American Indians* (Washington, Smithsonian Institution, 1981), VI, p. 637.

3. William E. Simeone, *A History of Alaskan Athapaskans* (Anchorage, Alaska Historical Commission, 1982), pp. 3-4.

4. Priscilla Russell Kari, *Tanaina Plantlore Dena'ina K'et'una* (Anchorage, University of Alaska, Adult Literacy Laboratory, 1977), p. 3.

5. Cornelius Osgood, "The Ethnography of the Tanaina," *Yale University Publications In Anthropology, Number 16* (New Haven, Yale University Press, 1937), p. 15.

6. James Kari, "A Classification of Tanaina Dialects," *Anthropological Papers of the University of Alaska*, XVII (No. 2, 1975), pp. 49-53.

7. Townsend, "Tanaina," VI, p. 624.

Tinnats," with many of the other names being variations of those three. The people, however, prefer to be called Dena'ina.[8]

The length of time the Dena'ina have occupied the Cook Inlet region is still in question. The origins of the Athapaskans lie in remote prehistory, but it is likely that their ancestors migrated across Bering Land Bridge some 12,000 years ago at the end of the last ice age. Their linguistic home appears to be the Tanana-Yukon area, where they began to diversify several millennia prior to European contact to form one of the most widespread linguistic groups in North America.[9]

Recent anthropological studies have hypothesized that "Cook Inlet was inhabited by Eskimo-speaking peoples" for "some 2,000 years." During "the past 1,000 to 5,000 years the Dena'ina Athapaskans entered the Cook Inlet basin from the west, probably in two distinct phases." First a band entered the upper inlet through Rainy Pass. Later another band entered, probably through Merrill Pass to Kustatan in the vicinity of present-day Tyonek and then across the inlet to the Kenai Peninsula. Still later, perhaps just prior to European contact, members of this band pushed south to Kachemak Bay.[10]

The interior origins and close relationship of the Dena'ina to other Athapaskan Indians in Alaska has long been recognized. Baron Ferdinand von Wrangell, observing in 1839 the close linguistic and cultural ties of the Dena'ina, whom he referred to as the Kenay, to the Indians of interior Alaska, suggested that they likely had migrated to the Cook Inlet region from across the mountains:

> They call themselves Tnayna, from Tnay, that is "person," but the Kadyaks (Koniag) know them under the name of Kina-yut which the Russians also have accepted. These people, 460 families in number, live on the shores and in the environs of Kenay Bay (Cook's Inlet) and around Ilyamna (Iliamna) and Kyzzhakh (Lake Clark) lakes.
>
> It is probable that the Kenay came to the place [Kenay Bay (Cook Inlet); Iliamna; and Kyzzhakh (Lake Clark)] they now occupy from across the mountains. These migrant mountain people ultimately became coastal and semi-settled: they formerly used birch bark

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8. Joan Broom Townsend, "Ethnohistory and Culture Change of the Iliamna Tanaina" (Unpublished Ph.D. dissertation, University of California, Los Angeles, 1965), p. 70, and Joan Broom Townsend, "Tanaina Ethnohistory: An Example of a Method for the Study of Culture Change," in *Ethnohistory in Southwestern Alaska and the Southern Yukon, Methods and Content, Studies in Anthropology No. 7*, Margaret Lantis, ed. (Lexington, University of Kentucky Press, 1970), p. 2.

9. Robert L. Shalkop, "The Athapaskans," in Antoinette Shalkop, ed., *Exploration In Alaska, Captain Cook Commemorative Lectures, June – November 1978* (Anchorage, Cook Inlet Historical Society, 1980), p. 191. According to Frederica de Laguna, who pioneered archeological efforts in Cook Inlet during the early 1930s, oral traditions of the Kachemak Bay Tanaina relate that their ancestors arrived at lower Cook Inlet only several generations before the Euroamericans appeared. Frederica de Laguna, *The Archaeology of Cook Inlet, Alaska* (Philadelphia, University of Pennsylvania Press, 1934), p. 15.

10. James Kari, "Kalifornsky, the Californian From Cook Inlet," *Alaska In Perspective*, V (No. 1, 1983), p. 1; Kari, "A Classification of Tanaina Dialects," pp. 49-53; James Kari and Priscilla Russell Kari, *Dena' ina Etnena, Tanaina Country* (Fairbanks, Alaska Native Language Center, 1983), pp. 11-33; William B. Workman, "Prehistory of the Southern Kenai Peninsula," *Orthodox Alaska*, V (1974), pp 5-13; and William B. Workman, "Continuity and Change in the Prehistoric Record from North Alaska," in *Alaska Native Culture and History, Senri Ethnological Studies*, ed. by Y. Kotnai and W.B. Workman (Fairbanks, 1980), p. 79. In his doctoral dissertation on upper Cook Inlet Tanaina leadership, James Arthur Fall elaborates on the hypothesis that the Tanaina had replaced an earlier Eskimo population along the entire inlet. James Arthur Fall, "Patterns of Upper Inlet Tanaina Leadership, 1741-1918" (Unpublished Ph.D. dissertation, University of Wisconsin, Madison, 1981), p. 51.

canoes on lakes and rivers, and these have remained with them even now, but they also use baidarkas and baidaras covered with *laftals* (the tanned hides of sea mammals), probably adopted from the Kadyaks [Koniag of Kodiak Island] or Chugach [of Prince William Sound]. They cannot compete with the latter in skill and courage of [boat] navigation. Their favorite occupation remains the hunting of animals in the forests beyond the mountains."[11]

The interior antecedents of the Dena'ina were further attested by the Dena'ina themselves. According to A.B. Schanz, who visited the small Tanaina village of Kijik on the north shores of Lake Clark during his exploration of that region in 1891, the Kijik people themselves acknowledged that they were an offshoot of the interior Indians. In his description of the village, Schanz noted:

> The village at which we first met the Indians of Lake Clark is named Nikhkak [Kijik]...while the upper village is Kilchikh. The latter is located about nine miles up the stream which empties into Lake Clark at Nikhkak, and is really the original village. North of it is a gap or pass in the mountains over which the Natives make a portage to the sources of the Tketlkuk (Rock) [Stony] River, a tributary of the Kuskokvim. The head-waters of the latter are unknown territory, and form the hunting-ground of the Kalchani tribes, of which the Kilchikh Indians are acknowledgly an off-shoot.[12]

On the basis of field work undertaken under the auspices of the Peabody Museum of Yale University in 1931, Cornelius Osgood, a noted anthropologist who prepared the first ethnographic study of the Cook Inlet Dena'ina in the 1930s, divided the Dena'ina into seven subdivisions determined by area of residence. These included the Kachemak Bay, Kenai, Upper Inlet, Susitna, Tyonek, Iliamna, and Lake Clark areas.[13] Of these, the only subdivision with a completely interior orientation is the Lake Clark area. While the people of the Lake Clark region undoubtedly had contact with their coastal relatives, the Lake Clark, upper Mulchatna River, and upper Stony River peoples appear to have formed a distinct interior-oriented group which has continuity at least back to the early historic period.

The cultural center of the Dena'ina was the Cook Inlet region, possibly in the Skilak and Tustumena lakes area on the Kenai Peninsula. The Kachemak Bay Dena'ina lived in a marine environment with access to a variety of sea animals, such as fur seals, sea otters, sea lions, porpoise, beluga whales, and fish as well as large and small game. Farther north in the inlet the environment changes, as salt and fresh water mix, and access to sea mammals is correspondingly less. Consequently, subsistence patterns of the Kenai and Tyonek peoples emphasized salmon hunting over sea mammal hunting. Both groups also hunted moose, caribou, and bear as well as an assortment of small game, various small mammals, and birds. The upper Inlet Dena'ina caught few sea mammals compared to those in the lower inlet and relied primarily on salmon as well as caribou, moose, Dall sheep, and small game. The Susitna River Dena'ina, who inhabited the lower Susitna and Matanuska river drainages, depended on summer runs of salmon and fall caribou hunts

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11. James W. VanStone, trans. and ed., "The Inhabitants of the Northwest Coast of America by Ferdinand Petrovich von Wrangell." *Arctic Anthropology*, VI (No. 2, 1970), pp. 9, 12. Also see James W. VanStone, "An Introduction to Baron F.P. Von Wrangell's Observations on the Eskimos and Indians of Alaska, *Arctic Anthropology*, VI (No. 2, 1970), pp. 1-4.

12. A.B. Schanz, "Our Alaska Expedition," *Frank Leslie's Illustrated Newspaper*, LXXIII (No. 1886, 1891), p. 224.

13. Osgood, "Ethnography of the Tanaina,", pp. 13-15, and Cornelius Osgood, "Tanaina Culture," *American Anthropologist*, XXXV (October – December 1933), pp. 695-96.

for their subsistence base. The Dena'ina of the Iliamna Lake and Lake Clark regions depended to a great extent on the runs of sockeye salmon migrating into the lakes from Bristol Bay. While Iliamna has a resident harbor seal population, these mammals were of secondary importance compared to the caribou, moose, rabbits, and other terrestrial mammals living in the inland area which were hunted by the Dena'ina. Thus, the coastal Dena'ina peoples developed a culture with marked coastal Eskimo overtones, while the inland Dena'ina living around Iliamna Lake and Lake Clark, occupying an ecological niche between the mountain ranges west of Cook Inlet and north of Bristol Bay, exploited their environment in much the same way as did the neighboring riverine Eskimos of the Nushagak River and its tributaries.[14]

Because of the reliability of the salmon resource and the rich game population, the Dena'ina both in the coastal and inland regions were able to establish and maintain stable semi-permanent villages with populations that occasionally reached as high as 200. This shift from a semi-nomadic existence to a more sedentary settlement pattern occurred sometime before contact with Europeans. To date more than 60 current and abandoned villages have been credited to the Dena'ina, one of the largest and longest-in occupation being Kijik on the north shore of Lake Clark.[15]

Scholars believe that Kijik (Kijik Historic District was listed in the National Register of Historic Places on January 29, 1979) may have been established on the shores of Lake Clark during the late 1700s or early 1800s. If this is true, it is possible that the Dena'ina moved there from Kenai and the shores of Cook Inlet to remove themselves from contact with European traders and the violence engendered by rival Russian fur trading companies during the 1790s.[16]

South and east of Kijik was the Dena'ina village of Old Iliamna. The origin of this village is obscure but its strategic location suggests that it was a precontact site.[17]

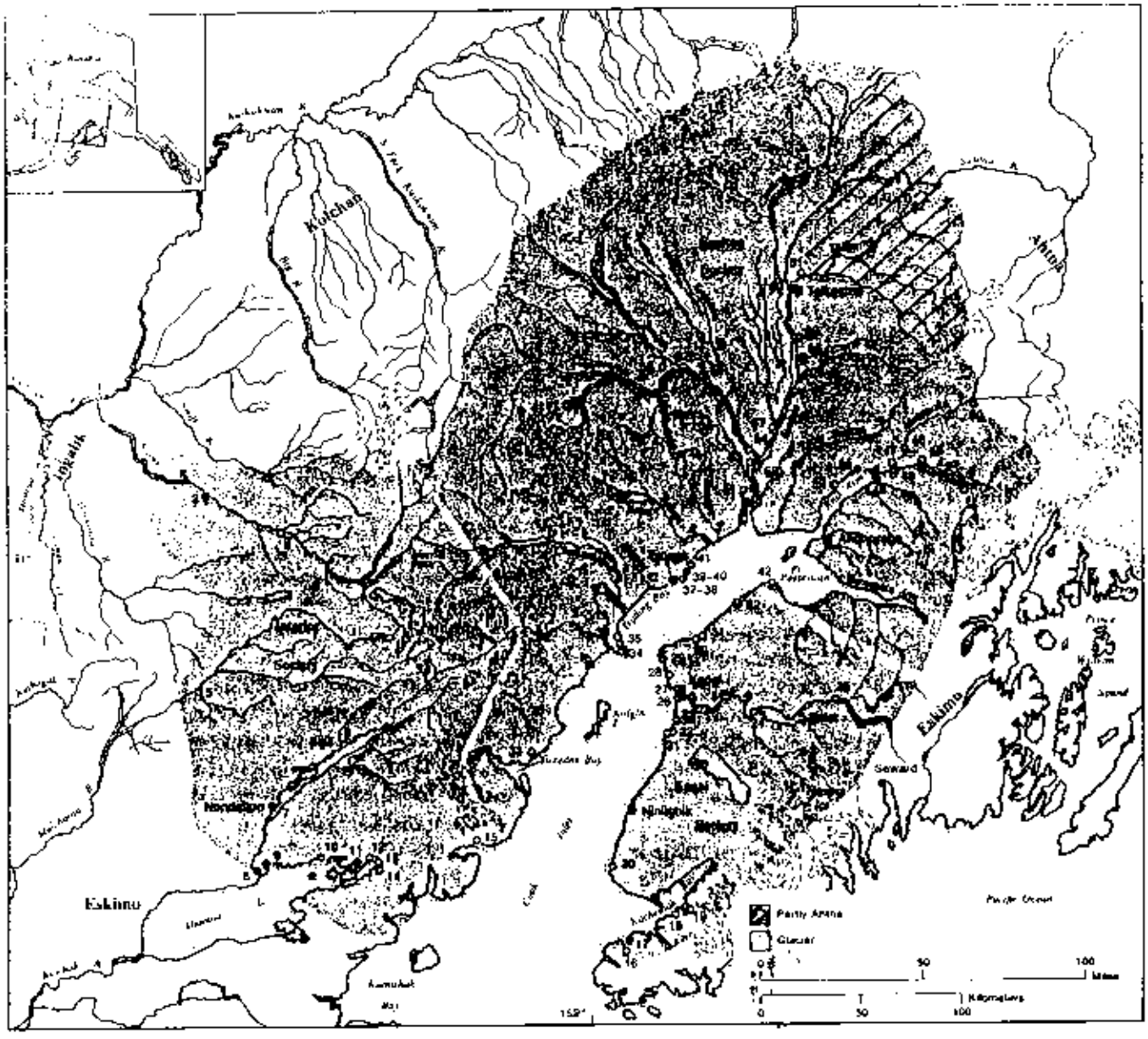
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14. VanStone and Townsend, "Kijik," pp. 13-15; Simeone, *History of Alaskan Athapaskans*, pp. 3-4; and Alice J. Lynch, *Qithjeh: The Historic Tanaina Village of Kijik and the Kijik Archeological District*, (Fairbanks, University of Alaska, Anthropology and Historic Preservation, Cooperative Park Studies Unit, *Occasional Paper No. 32*, 1982), pp. 6-7. Further data on the Bristol Bay region Eskimos may be found in Wendell H. Oswalt, *Alaskan Eskimos* (San Francisco, Chandler Publishing Company, 1967), and James W. VanStone, "Mainland Southwest Alaska Eskimo," in William C. Sturtevant, ed., *Handbook of North American Indians* (Washington, Smithsonian Institution, 1981), V, pp. 224-42.

15. Townsend, "Ethnohistory and Culture Change," pp. 70-73; Lynch, *Qizhjeh*, p. 7; and Townsend, "Tanaina of Southwestern Alaska," pp. 4-5. See the following page for a map showing the extent of Tanaina cultural presence (shaded area) and location of Tanaina settlements. The map may be found in Townsend, "Tanaina," VI, p. 625. In addition to the aforementioned work by Lynch, other sources should be consulted for data on prehistoric sites in Lake Clark National Park and Preserve. These include: de Laguna, The Archaeology of Cook Inlet, Alaska; George S. Smith and Harvey M. Shields, *Archaeological Survey of Selected Portions of the Proposed Lake Clark National Park: Lake Clark, Lake Telaquana, Turquoise Lake, Twin Lakes, Fishtrap Lake, Lachbuna Lake and Snipe Lake* (Fairbanks, University of Alaska, Anthropology and Historic Preservation, Cooperative Park Studies Unit, *Occasional Paper No. 7*, November 1977); Cook Inlet Historic Sites Project, comp., *Cook Inlet Region Inventory of Native Historic Sites and Cemeteries* (Anchorage, Cook Inlet Native Association, October 1975); and Inventory of Historic and Prehistoric Sites, Lake Clark National Park and Preserve, Alaska Heritage Resources Survey, Office of History and Archaeology, Alaska Division of Parks and Outdoor Recreation, Anchorage.

16. Smith and Shields, *Archaeological Survey*, p. 13, and Townsend, "Ethnohistory and culture Change," pp. 28-29. Also see U.S. Department of the Interior, National Park Service, National Register of Historic Places Inventory – Nomination Form, Kijik Historic District, Amended form prepared by Alice J. Lynch, March 7, 1981.

17. James W. VanStone, ed., *Russian Exploration in Southwest Alaska: The Travel Journals of Petr Korsakovsky (1818) and Ivan Yo. Vasilev (1829)*, trans. by David H. Kraus, (Fairbanks, University of Alaska Press, 1988), 73.



Dena'ina local groups, with settlements of various periods in the 18th through 20th centuries. The Dena'ina consisted of three broad societies: the Interior Society, to the west; the Susitna Society, to the north; and the Kenai Society, to the southeast. Most of the groups residing in the study area were part of the Interior Society. They included three groups of the Stony River Dena'ina, one group of Telaquana Lake Dena'ina, one group of Mulchatna Dena'ina, two groups of Lake Clark Dena'ina, and eight groups of the Iliamna Lake Dena'ina. The Stony River Dena'ina resided at: 1) Stony River village (part Ingalik and Yupik), 2) Lime Village, and 3) Canyon Village. The group of Telaquana Lake Dena'ina resided at 4) Trail Creek Village, while the Mulchatna Dena'ina resided at the 5) Chilchitna River mouth. The Lake Clark Dena'ina resided at 6) Kijik and 7) Nondalton. The Iliamna Lake Dena'ina resided at 8) Newhalen, 9) New Iliamna villages (mostly Yupik), 10) Chekok, 11) Pedro Bay, 12) Lonesome Bay, 13) Pile Bay, 14) Old Iliamna village, and 15) Chinitna Bay. One group from the Susitna Society resided at Polly Creek (#33). Source: June Helm, *Handbook of North American Indians: Volume 6, Subarctic*, p. 623.

The houses in a Dena'ina village were generally arranged in irregular fashion around the chief's house and contained several sleeping rooms where as many as 10 families lived. Entire villages were often hidden back in the woods for protection against raids. The aboriginal Denai'ina house was a semi-subterranean structure made from logs and covered with a birch bark roof with grass thatching and dirt piled against the outside. Because of Russian influence the design of post-contact Dena'ina houses was changed to above ground structures.

The most efficient means of transportation in the area occupied by the Dena'ina was by water, although foot trails existed between important points. In lower Cook Inlet the Eskimo-type kyiak and umiak were used, while birch bark canoes and moose skin boats were constructed in upper Cook Inlet. Skin sails were used with both small and large umiaks, and single-ended paddles were employed.

Several foot trails were employed in the Lake Clark region. In order to access the interior for trading purposes, Dena'ina traveled from Tyonek on Cook Inlet to the interior Lake Clark-Iliamna Lake area via Lake Clark Pass. Telequana Pass was utilized as a trading route between the Stony River-Upper Mulchatna country and Cook Inlet. A third route was the Iliamna Portage. This route, which is currently a 15½-mile long gravel road, connected the head of Iliamna Bay on lower Cook Inlet with Pile Bay on Lake Iliamna. According to an 86 year old elder from Old Iliamna, the portage was originally a brown bear game trail. Bears harvested spawning salmon up until mid-August on the Cook Inlet coast and then walked over into the Iliamna River drainage to fatten up on red salmon before seeking denning sites in late October and early November. According to archeologists and linguists, the Dena'ina have been using the portage for 200 to 300 years; before that time, natives had doubtless been using the route for hundred if not thousands of years.[18]

Another route important to Lake Clark people led from the lake to Old Iliamna at the mouth of the Iliamna River. This route started up the Tanalian River, then up the first valley to the south. At Tazimina Lakes the trail forked, one going south to Chekok and the other up to the head of Tazimina Lakes and down to Pile Bay on Iliamna Lake. A significant trail, known as the Telequana Trail, left the north shore of Lake Clark near Kijik and led northward across several stream valleys to Telequana Lake. A less traveled trail led from the head of Little Lake Clark up a valley to the south, through the mountains, and down to Tuxedni Bay.

Aboriginal Dena'inan social organization was greatly influenced by the moiety which controlled many aspects of everyday life. The moiety was made up of unequal numbers of matrilineal exogamous "sibs or clans," the clansmen being denoted by their face painting. These moieties influenced marriage and social relationships such as inheritance and blood revenge.

Because of direct contact with nearby Eskimo populations, the Dena'ina borrowed some Eskimo cultural features such as shamanism. The primary function of the shaman was to prevent or cure

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18. In the late 1950s and early 1960s the Morrison-Knudsen construction firm widened the portage road and in the process dynamited a votive rock at the summit which was called DzeL or "mountain gap" in Dena'ina. The boulder was along the trail and Dena'ina travelers would leave various offerings such as sea shells, bird feathers, or small coins as a sign of their respect to the spirits. In 1931, anthropologist Ales Hrdlicka was photographed standing beside this rock. Fred Roehl, Jr., interview by John Branson, September 1, 1993; Joan B. Townsend, *Ethnohistory and Culture Change of the Iliamna Tanaina* (Los Angeles, University of California, 1965), 71; Ales Hrdlicka, *Alaska Diary, 1926-1931* (Lancaster, Penn., Jacques Cattel Press, 1944), Smithsonian Institution Photo #93-4908.

disease. There was no organized religion, only a general belief in natural spirits, particularly of animals, upon whom man depended for survival. Spiritual emphasis generally was upon the individual's relationship to the supernatural, rather than group ceremonies.

Social behavior was not highly controlled, and within limits the Dena'ina were encouraged to express themselves. Individualism was a prime characteristic of the Dena'ina, and individual initiative was highly respected. The distribution of material goods through a potlatch was a means of acquiring individual prestige. Wealth was gained through hunting and trade with other tribes, and a man who acquired wealth could support other people in return for their work as well as have several wives.

Aboriginally, the Dena'ina conducted trade with surrounding tribes including the Eskimos of Kodiak and Prince William Sound and the Tanana, Tlingit, Ahtna, and Ingalik Indians of the interior and southeast regions of Alaska. Furs and tanned hides were the principal Dena'ina exports, and Native copper from the Copper River region, porcupine quills used for decoration, and obsidian for the manufacture of projectile points, blades, and scrapers were among the items sought by the Dena'ina.

Beginning in the 17th century the first sources of European goods to reach the Dena'ina were Russian trading posts in eastern Siberia. From these outposts the Chukchi funneled trade items across Bering Strait into interior Alaska via Eskimo traders on the Seward Peninsula. There is archeological and documentary evidence that European trade items, such as blue and red beads as well as pieces of iron, reached the Dena'ina before European contact.[19]

In 1778, when Cook sailed into the inlet that now bears his name, the Dena'ina occupied a rich coastal and inland environment scattered over a widespread area. The British expedition sailed away after a few days, and nothing appeared to be changed; but the die was cast.

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19. Shalkop, "Athapaskans,", p. 191; Smith and Shields, *Archeological Survey*, pp. 18-21; Simeone, *History of Alaska Athapaskans*, pp. 16-18; William Schneider, "Trapping Furbearers In Alaska: A Legacy And, Perhaps A Destiny!," *Alaska In Perspective*, III (No. 1, 1980), pp. 5-6; Joan B. Townsend, "Journals of Nineteenth Century Russian Priests to the Tanaina: Cook Inlet, Alaska," *Arctic Anthropology*, XI (No. 1, 1974), p. 4; Townsend, "Tanaina," VI, pp. 623-40; VanStone and Townsend, "Kijik," p. 23; Steven R. Behnke, *Resource Use and Subsistence in the Vicinity of the Proposed Lake Clark National Park, Alaska, and Additions to Katmai National Monument* (Fairbanks, University of Alaska, Anthropology and Historic Preservation, Cooperative Park Studies Unit, Occasional Paper No. 15, October 1978), pp. 24-26; and State of Alaska, Department of Highways, "Alaska Existing Trail System, Trail Inventory Map," September 12, 1973 (Copy on file at Elmer E. Rasmuson Library, University of Alaska, Fairbanks). For a more complete analysis and evaluation of the sociocultural aspects of Tanaina life see U.S. National Park Service, Alaska Region and Lake Clark National Park and Preserve, *Nuvendalton Quht'ana: The People of Nondalton*, by Linda J. Ellanna and Andrew Balluta, August 8, 1989. Two vols. (Draft).

THE RUSSIAN PERIOD

1741-1867

CHAPTER TWO

ACTIVITY IN THE NORTH PACIFIC AND THE COOK INLET REGION: 1741-1794

RUSSIAN EXPANSION IN NORTHWEST NORTH AMERICA: 1741-1778

In 1728 Vitus Bering, a Danish navigator and explorer in the service of Russia, sailed north from the Kamchatka Peninsula through the Bering Strait where he sighted the Alaska coast. A second Bering expedition was commissioned, the mammoth undertaking having as its goals mapping the entire northern coastline of the Russian Empire from Arkhangelesk to the Chukchi Peninsula, as well as the Kuril and Japanese islands, inventorying Russian possessions in northern Asia, sailing to the Pacific shores of North America, and bringing the entire region under Russian control. The objective of these activities was, in part, to prevent Spain from expanding northward from Mexico. Accordingly, in 1741 Bering and Lt. Aleksei Chirikof, his second-in-command, sailed from the Kamchatka Peninsula across the North Pacific in two boats, the *St. Peter* and the *St. Paul*, making the first recorded European landfalls in what is now Alaska.[1]

The several decades after Bering's second expedition witnessed far-reaching developments in northwest North America.[2] These included the Russian conquest of the Aleutian Islands and eastward penetration of the Alaska Peninsula in search of sea otter pelts, as well as furs from seals, foxes, and other furbearers, and the establishment of Russian outposts in Alaska. In response would come the slow but determined emergence of European and eventually American concern and suspicion about Russian activity in the North Pacific.[3]

RUSSIAN EXPANSION IN COOK INLET: 1741-1778

In their continuing search for new furbearing populations the Russian *promyshlenniki* moved eastward up the Aleutian chain and across the Alaska Peninsula during the several decades following Bering's second expedition. It was perhaps these men who first heard of the existence of the Cook Inlet (or Kenai Bay as the Russians generally called it) region and its surrounding territory. It is possible that they explored the region, but they left no journals, diaries, or maps.

While Russian penetration of the Cook Inlet region prior to Cook's voyage in 1778 cannot be documented, it is clear that they at least had cursory second-hand knowledge of the area. While it is not known when the first Russians reached the Cook Inlet area, it is likely that their trade beads, iron pieces, and trinkets traveled rapidly toward interior Alaska in advance of the Russians

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1. For a discussion of the question of Russian settlements in present-day Alaska prior to Bering's voyages see Pierce and Donnelly, eds. and trans., *Russia Population In Alaska and California*, by Fedorova, pp. 39--99.

2. An overview of these developments may be found in Alfred Hulse Brooks, "History of Explorations and Surveys," in Morgan B. Sherwood, ed., *Alaska and Its History* (Seattle and London, University of Washington Press, 1967), pp. 21-29.

3. James R. Masterson and Helen Brower, *Bering's Successors, 1745-1780* (Seattle, University of Washington Press, 1948), pp. 1-19. This book contains interesting reports and diary and journal accounts of early Russian voyages to the North Pacific and northwest North America.

themselves.[4] Joan Broom Townsend, an anthropologist who has done considerable ethnographic work on the Iliamna Dena'ina, has concluded that "we may assume that the trade beads traveled rapidly in advance of the Russians themselves reaching Iliamna Lake Dena'ina at least as early as the 1760s."[5]

Thus, by 1778 the Russians were in control of the Aleutian Islands and the southern Alaska Peninsula and were likely beginning to expand fur trading operations toward the Cook Inlet region. However, it would be the English and Spanish who first explored the long arm of the Pacific Ocean which penetrates the coastal range of Alaska's southern flank and which would subsequently be named Cook Inlet.

EUROPEAN RESPONSES TO RUSSIAN ACTIVITY IN THE NORTH PACIFIC

Because they were the first Europeans to penetrate the remote regions of northwest North America, the Russians enjoyed an absolute monopoly on that vast area until the late 1770s. During the period 1774-1792 twelve Spanish naval expeditions were sent from that port and Acapulco to explore the territory now comprising Washington, British Columbia, and Alaska, check on Russian activity in those areas, and claim northwest North America for Spain.[6] Expeditions which are of significance for this study because they entered Cook Inlet include those of Ignacio Arteaga y Bazan and Lt. Juan Francisco de la Bodega y Quadra, who entered Cook Inlet on August 1, 1779; Esteban José Martinez, aboard the frigate *La Princesa*, and Gonzalo Lopez de Haro, aboard the packetboat *San Carlos* who visited Prince William Sound and Cook Inlet and the islands of Kodiak, Shumagin, Umnak, and Unalaska in 1788; and a three-ship Spanish expedition under the leadership of Fidalgo which sailed to Cook Inlet and Prince William Sound in 1790.[7]

The first British effort to check on Russian activity in North Pacific waters and seek a northwest passage occurred between 1776 and 1780 when Captains James Cook and Charles Clerke, aboard the *Resolution* and *Discovery*, made a historic visit to Cook Inlet, the capes of Gregory, Foulweather, Fairweather, and Suchling, various islands including Kodiak, Unalaska, and Unimak, Bering Strait, and Petropavlovsk Harbor in Kamchatka. Curious Russian officials in those areas received Cook and his men with courtesy and assistance. Their superiors in St. Petersburg were subsequently annoyed, because Cook had given English names to many places the Russians believed their *promyshlenniks* had previously visited. Further, Cook had provided the first accurate locations, maps, and descriptions of all the places he had visited and of the Natives he had encountered. Most of the world accepted Cook's published findings, which revealed much information hitherto held secret or unevaluated.

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4. Fall, "Patterns of Upper Inlet Tanaina Leadership," p. 56.

5. Townsend, "Ethnohistory and Culture Change," p. 20. Townsend went on to state that it "is likely that glass beads were being imported for some time before 1741." Archeological evidence found at Pedro Bay on Iliamna Lake shows that the early trade goods which reached the Tanaina consisted of blue and white glass beads and pieces of iron. Joan B. Townsend and Sam-Joe Townsend, "Archaeological Investigations at Pedro Bay, Alaska," *Anthropological Papers of the University of Alaska*, X (No. 1, 1961), pp. 25-58.

6. Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, pp. 107-08.

7. Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, pp. li-liii, and Arsenio Rey-Tejerina, "Documentation, The Spanish Exploration of Alaska, 1774-1796: Manuscript Sources," *Alaska History*, III (Spring 1988), pp. 45-47.

EUROPEAN EXPLORATION OF THE COOK INLET REGION

The earliest European expeditions to chart the waters of Cook Inlet and describe and document the region, its surroundings, and its Native inhabitants were British and Spanish explorers who visited the area between 1778 and 1794. The British expeditions included those led by Captain James Cook (1778), Captains George Dixon and Nathaniel Portlock (1786), Captain John Meares (1788), and Captain George Vancouver (1794). The Spanish expeditions included those of Ignacio Arteaga y Bazan and Lt. Juan Francisco de la Bodega y Quadra (1779), Esteban José Martinez and Gonzalo Lopez de Haro (1788), and Salvador Fidalgo (1790). The journals and reports provided by these expeditions are the earliest written descriptions of the region and its Dena'ina inhabitants.

British Exploration of Cook Inlet

Captain James Cook (1778). Cook, who has been called "the greatest explorer of his age, the greatest maritime explorer of his country in any age," was an officer of humble birth who had served in the ranks of the British Royal Navy. He had served during the siege of Quebec in 1763 and had completed two voyages of exploration to the South Pacific when he sailed in 1776.[8] After his first voyage was completed in 1771 he was promoted to commander, and his second voyage, completed in 1775, was notable "not merely for a masterly technique in antarctic navigation, in preserving the health of seamen and in hydrographic work but also for its proof of the value of the chronometer as an aid to finding longitude."[9] Cook was elected a fellow of the Royal society and given its Copley medal for his paper on the methods he used in combatting scurvy.

Cook visited various islands in the South Pacific and discovered the Hawaiian group on January 18, 1778. He arrived on the northwest American coast in March 1778, and after spending almost a month at Nootka Sound sailed north in late April. Cook passed and named Cape Edgecumbe, Cross Sound, and Cape Fairweather, anchored under Cape Hinchinbrook where he encountered his first Alaskan Natives, and explored an inlet he named Sandwich Sound (later changed to Prince William Sound). Cook's vessels cleared the sound and sailed southwest down the Kenai Peninsula to Bering's Cape St. Hermogenes, reaching a region where the existing Russian maps showed sea rather than land to the north. With a gale driving them on, the expedition faced the dilemma of whether or not to attempt exploration of the body of water which began to open away northward. Clerke expressed the quandry facing the men:

> Here's a fine spacious opening, which this wind will not enable us to examine: as the Season now advances so fast, shou'd we leave a passage to the N'ward behind us, it wou'd be a most unfortunate incident; or on the other hand shou'd we get engaged in an extensive Sound, and after searching its various crooks & corners, find ourselves under the

8. Quotation of James Williamson, in Bernard De Voto, *The Course of Empire* (Boston, Houghton Mifflin Company, 1952), pp. 283-84. Also see Andrew Kippis, *A Narrative of the Voyages Round the World Performed by Captain James Cook with an Account of His Life During the Previous and Intervening Periods* (1788, reprint ed., Philadelphia, Porter and Coates, n.d.), p. 11.

9. Devoto, *Course of Empire*, pp. 276-84.

necessity of returning, from whence we came, it might have a most unhappy effect upon this Seasons operations.[10]

The last words would prove prophetic ones as Cook determined to investigate the wide opening, the entrance to Cook Inlet, in the hope that it would provide direct passage to the Bering Sea and the northern coast.[11] Within a day, however, Cook suspected that he was engaged in a hopeless venture. Although uncertain of himself, Cook, under pressure from his officers, spent more than ten days engaged in exploring the inlet that would bear his name. From his position southeast of Augustine Island Cook found that "nothing could be done to the West" so he "tacked and stood over for Cape Elizabeth" and plied northward up the inlet passing along the western shore of the Kenai Peninsula. On his trek northward Cook passed Kachemak Bay on May 27, arriving at a point some ten miles southeast of Kalgin Island on May 29. On the 28th and 29th, while moving along the east side of the inlet across from present-day Lake Clark National Park and Preserve, he noted:

Here was a strong tide setting to the Southward out of the Inlet, it was the Ebb, & ran between three and four knots an hour and was low-water at 10 o'clock. There was a good deal of Sea Weed and some drift wood driving out with the tide; the water too was now become thick like that in Rivers, but we were encouraged to proceed by finding it as salt at low water as the ocean. The strength of the flood tide was 3 knots and the Stream ran up till 4 PM. As it continued Calm all day, I did not move till 8 o'clock in the evening when with a light breeze at East we weighed and Stood to the North up the Inlet.[12]

As he neared Kalgin Island on the 29th Cook noted that "the weather was now become fair and tolerable clear, so that we could see any land that was within our horizon." Here he noted further:

In a North North East direction no land or any thing to obstruct us was to be seen; but on each side a ridge of Mountains rising one behind another without the least separation on either side. I judged it to be low water by the shore about 10 o'clock but the Ebb ran down till near Noon; the strength of it was four knots and a half and it fell upon a perpendicular ten feet three inches; that is while we lay at anchor, so that there is reason to believe this was not the greatest fall. Saw two smokes near the beach on the Eastern shore, a sure sign of their being inhabitants.[13]

As Cook moved up the inlet he passed the narrows between West Foreland and East Foreland (to use Vancouver's 1794 names). About noon he encountered his first Dena'ina Natives as two canoes, each paddled by one man and similar to ones he had seen in Prince William Sound, neared the ship from the western shore. Cook noted in his journal that one of the men "talked a great deal to no purpose for we did not understand a word he said; he kept pointing to the shore and we guessed he wanted us to go there." Cook moved toward West Foreland, which he "found to be the SE point of a tract of low land that shoot out from the East Main." Here Cook noted in his journal:

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10. *Journals of Captain James Cook*, vol. 3, pt. 1, p. 359; Williams, "Alaska Revealed," pp. 70-74; and U.S. Department of the Interior, National Park Service, *"It is a hard country, though": Historic Resource Study, Bering Land Bridge National Preserve*, by G. Frank Williss, [1986], p. 8.

11. J.C. Beaglehole, *The Exploration of the Pacific* (3d ed., Stanford, California, Stanford University Press, 1966), p. 299.

12. *Journals of Captain James Cook*, vol. 3, pt. 1, p. 362.

13. *Ibid.*, p. 363.

> This point together with the opposite one on the other shore, contracted the Channel to the breadth of four leagues, through which ran a prodigious tide: it looked frightful to us who could not till whether the agitation of the Water was occasioned by the strength of the stream or the breaking of the waves against rocks or sands but as we met with no shoal it was concluded to be the former, but in the end we were mistaken.[14]

Following the western shore of what is now known as Trading Bay, Cook anchored near North Foreland, then continued on to the northeast.

The *Resolution* and *Discovery* began their southward journey down the inlet on June 2. Following the west shore, the ships anchored in Redoubt Bay, some two miles below West Foreland the following day. Here Cook noted some exchanges with Natives and the sighting of Redoubt Volcano:

> A good many of the Indians attended upon us all the Morning, their company was very exceptable [sp], as they brought with them a large quantity of very fine Salmon which they exchanged for such trifles as we had to give them: the most of it was Split ready for drying. In the after noon the Mountains for the first time since we arrived in the River were clear of Clouds and we discovered a Volcano in one of these on the West side, it is in the lat. of 60°[23' N] and the first high Mou[n]tain to the North of Mount St. Augustine: the Volcano is on that side of the hill next the River and not far from the Summit; it is not considerable emitting a white smoke but no fire which made some think it was no more than a white thick cloud such as we have frequently seen on the Coast, for the most part appearing on the sides of the hills and often extends along a whole range and at different times falls or rises, expands or contracts it self and has a resemblance to Clouds of white smoke. But this besides being too small for one of those clouds, remained as it were fixed in the same spot for the whole time the Mountain was clear which was above 48 hours.[15]

On June 5, the last day Cook was in the inlet, he was visited by Natives from the Kenai Peninsula. This encounter prompted him to write in his journal about the inhabitants he had encountered throughout the inlet as well as the prospects of the fur trade for Great Britain:

> All the people we have met with in this River [i.e., Cook Inlet] are of the same Nation as those who Inhabit *Sandwich Sound*, but differ essentially from those of *Nootka* or *King Georges Sound*, both in their persons and Language. The language of these is rather more Gutaral, but like the others they speak slowly and distinct, in words which seem sentences. I have before observed that they were in possession of iron, that is they had Spears and knives of this metal and they had also of the former made of Copper. Their spears are like a Spontoon and their knives, which they kept in sheaths, are of a considerable length, these with a few glass beads were the only things we saw amongst them that were not of their own Manufacture. It is probable they may get them from some of their Neighbors with whom the Russians may have a trade, for I will be bold to say that the Russians were never amongst these people, nor carry on any commerce with them, for if they did they

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14. *Ibid.*, pp. 363-64.

15. *Journals of Captain James Cook*, vol. 3, pt. 1, p. 370. Apparently, the clouds must still have concealed Redoubt's sister volcano, Iliamna, some 25 miles to the south, since Redoubt is the second, not the first, high mountain to the north of St. Augustine. One of Cook's officers, John Gore, described Redoubt Volcano as a "Peaked Mountain" that "Emits Long Collums of Smoak from its Peak, Hence I call it Mount Vulcan." Gore noted further: "The South point of good Prospect I call point divide because There appears two Openings on Each side of it." *Ibid.*, p. 370, footnote 2.

would hardly be clothed in such valuable skins as those of the Sea beaver; the Russians would find some means or other to get them all from them.

There is no doubt but a very beneficial fur trade might be carried on with the Inhabitants of this vast coast, but unless a northern passage is found it seems rather too remote for Great Britain to receive any emolument from it. It must however be observed that the most, nay the only valuable skins, I saw amongst them was the Sea beaver, or the Sea otter as some call it; all the other skins that I saw were of an inferior kind the foxes and Martins in particular. It must also be observed that the most of the skins we got, which were not many, were made up in dresses, some were however very good other old and ragged enough, and all of them very lousey. But as they make no other use of skins than clothing it cannot be supposed they are at the trouble to dress more than what is necessary for this purpose and perhaps this is the chief use for which they kill the animal for the Sea and Rivers seems to supply them with food. Whereas a trade with Foreigners would increase their wants by introducing new luxuries amongst them, in order to purchase which they would be the more assiduous in procuring skins, for I think it is pretty evident they are not a scarce article in the Country, and to judge from the skins we saw amongst the Inhabitants, here are all the Animals that are found in the Northern parts of the world whose skins are sought after, though they may not be all of that high perfection.[16]

During his exploration of the inlet Cook did not give the "river" a name, though its eastern arm he called, appropriately, the Turnagain River. For one normally so meticulous in naming natural features, Cook left an unusually large number unnamed in this area, but none of the importance of Cook Inlet itself. The reasons for this might be in Cook's frame of mind. It is certain that there could be problems in choosing a suitable name for a river which was both an imposing geographical feature and a bitter disappointment to the expedition. Thus, the designation "Cook's Inlet" (today Cook Inlet) was not finally appended to the body of water until George Vancouver's explorations in 1794.[17]

Captains Nathaniel Portlock and George Dixon (1786). In 1786, at least five British ships were on the Alaskan coast engaged in fur trading. Among these was a two-ship expedition equipped and dispatched by the King George's Sound Company in London, consisting of the *King George*, commanded by Capt. Nathaniel Portlock, and the *Queen Charlotte*, under the command of Capt. George Dixon, both men veterans of Cook's third voyage. The two ships would continue trading along the Alaska coast until they returned to China and Europe in 1788.[18]

During their fur trading venture along the Alaska coast Portlock and Dixon entered Cook Inlet on July 19, 1786. After leaving Coal Harbor on July 26, Portlock and Dixon proceeded northward in Cook Inlet toward Trading Bay, which they named. As they pushed up the inlet, Portlock noted the Redoubt Volcano:

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16. *Ibid.*, pp. 371-72.

17. Williams, "Alaska Revealed," pp. 76-78.

18. *Journals of Captain James Cook*, vol. 3, pt. 1, pp. 371-72, footnote 5; James R. Gibson, *Imperial Russia In Frontier America: The Changing Geography of Supply of Russian America, 1784-1867* (New York, Oxford University Press, 1976), p. 9; and Tompkins, *Alaska: Promyshlennik and Sourdough*, pp. 71-72.

> A large column of smoke issued from the summit of Mount Volcano [Redoubt Volcano], but no fiery eruption was to be seen; neither could we perceive any fires, or other signs of the coast being inhabited on either side the river, which was rather remarkable, as the adjacent country seemed pleasant, and well sheltered from the inclemency of the weather.[19]

Soon after arriving at Trading Bay on July 28, the ships were approached by several groups of Dena'ina Natives from the western shore, anxious to conduct trade. Two large canoes and several small ones approached the ships the following day. Portlock described the encounter:

> The large canoes contained about twenty people each; the small ones held but one, or at most two persons....We procured from this party near twenty sea-otter skins, and a few cloaks made of the earless marmot skins sewed together very neatly. They traded in a fair open manner, and were very importunate with us to go on shore.[20]

On July 30 the ships were again visited by several groups of Natives from whom Portlock and Dixon purchased "some good sea-otter skins, together with several marmot cloaks, raccoons, and foxes." The Natives also brought "plenty of excellent fresh salmon" which the traders "obtained for beads and buttons." Portlock observed:

> Our traffic for some days was much in the same state, and the behavior of the Natives was very quiet and peaceable; however, according to Indian custom, they made no scruple of thieving, and some that were on board the King George on the 3d August gave us a specimen of their talents in that line, by stealing the hook from a block-strap, and a grindstone handle, which being made of iron, was no doubt reckoned a prize.

Portlock did not "think it prudent to use violence with them for these trifling depredations" and contented himself "with ordering a good look-out to be kept."[21]

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19. Portlock, *Voyage Round the World*, p. 111. Aboard the *Queen Charlotte* William Beresford observed the Redoubt Volcano:

> A considerable smoke issued from its summit, which is very lofty, but we saw no fiery eruption; nor did I find, on inquiry of Captain Dixon, that they ever saw any greater appearance of a volcano from this mountain, during their cruise up this river, their last Voyage [1778], at which time it was discovered.

Dixon, *Voyage Round the World*, p. 62.

20. Portlock *Voyage Round the World*, pp. 112-13. Beresford, on board the *Queen Charlotte*, observed that the natives "brought us skins of various sorts, such as land and sea otters, bears, raccoons, marmots, & c. & c." Dixon, *Voyage Round the World*, p. 62.

21. Portlock, *Voyage Round the World*, p. 114. Aboard the *Queen Charlotte* Beresford observed:

> They also brought no great plenty of excellent fresh salmon, which we bought very cheap, giving a single bead for a large fish; indeed they were so plentiful, that at any time if we refused to purchase, they would throw the fish on board, sooner than be at the pains to take them back. The salmon come into the river in innumerable shoals, at this season of the year, and are caught by the natives in wears, with the greatest ease; they are smoked and dried in their huts, and make a very considerable part of their food during the Winter.

Dixon, *Voyage Round the World*, p. 63.

During a chat with an elderly chief Captain Dixon learned "that there had lately been a battle between the Russians and the natives, in which the Russians were worsted." The chief intimated that he would not quarrel with the British, however, because "he was certain" they "belonged to another nation, from the difference in our dress." The origin of the quarrel with the Russians could not be determined, but Portlock and Dixon believed it "most probably" was "occasioned by theft."

Portlock and Dixon decided "to quit Cook's River the first opportunity" after learning from the Indians on August 5 that their "neighbourhood" and the "Adjoining country" were "entirely drained of skins, and that they could not procure any more." In addition, the few skins that were brought after the first few days of heavy trading "were of an inferior quality." Portlock commented, however, that several Indians wished to sell "a very good Nankin frock, and another a blue frock." Several Indians had "a number of small blue glass beads, which they seemed very fond of, but the frocks were held in very little estimation." These articles, according to Portlock, "must doubtless have been procured from the Russians previous to their quarrel, and soon after they came into the river."[22]

Before tacking southward from his position in Trading Bay Portlock described the surrounding territory. The "land to the Westward" was "prettily diversified with valleys and gently rising grounds, which in general" were "clothed with pines and shrubs." "Many of the vales" had "small rills of water" which discharged "into the sea, and in one of them were several houses and some stages" on which the Natives dried their salmon. "These, contracted with the mountains situated behind them, which are entirely covered with snow," composed "a landscape at once beautiful and picturesque."

Portlock observed that during "the late stormy unsettled weather, the air had been mild and temperate." Thus, he was "inclined to think that the climate here" was "not so severe as has been generally supposed; for, in the course of our traffic with the natives, they frequently brought berries of several sorts, and in particular blackberries, equally fine with those met with in England."

Portlock also noted the potential for trade profits in furs, minerals, and salmon in Cook Inlet. He observed:

> Besides the various sorts of furs met with here, and which have already been enumerated, Cook's River produces native sulphur, ginseng, snake root, black lead, coal, together with the greatest abundance of fine salmon; and the natives behave quietly and barter fairly; so that a most profitable trade might doubtless be carried on here by any persons of sufficient enterprise to undertake it.[23]

As Portlock neared the southern end of Trading Bay, he encountered a shoal. He anchored above West Foreland and while sending out parties "to found all round it" he wrote his impressions of his surroundings in his journal:

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22. *Portlock, Voyage Round the World*, pp. 114-15. Beresford observed on August 10 that:

> For several days past, but few canoes had been near us, and these brought us nothing but old tattered pieces, the remnants of dirty skins which they had wore to defend themselves from the inclemency of the weather: indeed for some time past, what good skins they brought were cut into strips, probably with a view to obtain better prices: but this practice we discountenanced as much as possible.

Dixon *Voyage Round the World*, p. 64.

23. Portlock, *Voyage Round the World*, pp. 118-19.

> Within this shoal to the Westward the land appeared very high, and in many places covered with snow. Near the sea was a narrow slip of low land covered with pines, and there appeared some openings like harbors; but time would not admit of my sending the boat to examine them.

Several small canoes "from a town near the South point of Trading Bay" approached the ships. In one of the canoes was a Native whom Portlock had nicknamed "the Factor" because of his help in procuring furs for the British during their stay in Trading Bay. From "the Factor" Portlock received information that the Russians frequented the west side of Kalgin Island and that there was "a passage betwixt that and the main." The purpose of "the Factor's" visit was to enlist the support of the British in a punitive foray against the Russians at English Bay, but Portlock refused, consoling him with the gift of "a light horseman's cap" and distributing "a few trifles amongst the other Indians."[24]

Aboard the *Queen Charlotte*, William Beresford made observations on the terrain surrounding Trading Bay, the prospects of the fur trade in Cook Inlet, and the characteristics of the Natives encountered by the British. Writing on August 10 he described the countryside in graphic terms:

> Surely a prospect more dreary and uncomfortable can scarcely be conceived, than that which presented itself to our view to the North West. The land, indeed, close by the sea-side, is tolerably level, affords a few pines, which, together with shrubs and underwoods, intermixed with long grass, make the landscape not altogether disagreeable; but the adjacent mountains, whose rugged tops outreach the clouds, absolutely beggar all description: covered with eternal snow, except where the fierce North wind blows it from their craggy summits, they entirely chill the blood of the beholder, and their prodigious extent and stupendous precipices, render them equally inaccessible to man or beast.

Beresford went on to comment about the Natives, their lifestyle and physical characteristics, and the potential of the region's fur trade. He noted:

> The inhabitants seem not to have fixed on any particular spot for their residence, but are scattered about here and there, as best suits their convenience or inclination. Tis most probable they are divided into clans or tribes, as in every large canoe we saw, there was at least one person of superior authority to the rest....In their manners they seem harmless and inoffensive; but this might probably be occasioned by the different treatment they met with from us, to what the Russians had used them to. The weapons we saw are bows and arrows, and spears; these are very useful in hunting, as well as fighting; the flesh of the various beasts they kill serving them for food, as their skins do for clothing. One would reasonably suppose, that the skins of large beasts, as bears, wolves, & c. would be held in the greatest estimation as clothes by these people: this, however, is not the case, the greater part wearing cloaks made of marmot-skins, very neatly sewed together, one cloak containing perhaps more than one hundred skins: it is most likely that their women's time is principally taken up in employments like these. Besides the sea-otter, here are bears, wolves, foxes, raccoons, marmots, or field mice, musquash, ermine, &c. &c. but the marmot and fox seem to be in the greatest plenty. The trade these people are fondest of for their skins, is toes [length of iron that could be fashioned into a knife or spear point]

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24. *Ibid.*, p. 120.

> and light blue beads, scarcely any other sort (though we had a very great variety) being taken the least notice of.[25]

Beresford, writing home in September as the ships were preparing to leave the American coast, commented that the two ships' crews were disappointed with the results of their fur trading enterprise in Cook Inlet. He noted, however, that the fur purchases of his ship "were far from despicable." In "Cook's River" the *Queen Charlotte* had collected "near sixty prime otter skins; about the same quantity of an inferior kind; about twenty five marmot cloaks, together with raccoons, foxes, &c. &c. sufficient to fill three puncheons." Portlock's success, according to Beresford, was nearly equal to that of the *Queen Charlotte*.[26]

Although Dixon and Portlock were disappointed in the fur yield from Cook Inlet they were impressed by the wealth of furs in other parts of northwest North America. They also noted that the Russians had not fully exploited that wealth.

John Meares (1788). During 1786-1788 John Meares, a British officer aboard the *Iphigenia* commanded by Captain William Douglas, visited the northwest American coast on his way from the Chinese port of Macao, intending to capitalize on the trade in sea otter pelts. On June 17, 1788, Meares entered Cook Inlet, and while passing up that body of water east of Saint Augustine Island, seven or eight canoes approached his ship "from a few huts that were a little way a-head of the ship." The Dena'ina Natives "were so poor," however, "as not to produce an inch of fur amongst them." Noting that all "the natives of this place were ticket-men, and immediately produced their tickets, as passports for good usage," he went on to explain:

> These tickets are purchased by the Indians from the Russian traders at a very dear rate, under a pretence that they will secure them from the ill treatment of any strangers who may visit the coast; and as they take care to exercise great cruelty on such of the natives as are not provided with these instruments of safety, the poor people are very happy to purchase them on any terms.

Several days later five canoes from upper Cook Inlet approached the *Iphigenia*. The British bought five "otter-skins" from these Natives, paying for each with two feet of "broad bar-iron." The Natives were each armed with several daggers "as if they were at war with the Russians and Kodiak hunters." The Natives urged the British traders "to go higher up the river" as they had "a considerable quantity of...sea-otter skins, but were afraid to bring them down, on account of the Russians." Thus, a long boat was dispatched up the inlet and ordered to proceed

> as high as Point Possession; to look into most of the small bays or low lands in search of inhabitants, and to barter...iron or beads for sea otter skins, black foxes skins and salmon.

If any Russians were encountered, they were to be treated "civilly," but neither they nor any Natives were to board the long boat.

During the afternoon of June 25 Meares noted that "two canoes came down the river, and brought a sea-otter cut through the middle, and otherwise mangled." According to Meares, it "appeared as

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25. Dixon, *Voyage Round the World*, pp. 65, 67-68.

26. *Ibid.*, p. 83. Both Dixon and Portlock published maps or charts of Cook Inlet along with their journals.

if these natives thought that the flesh was wanted, and not the skin," although the Natives and the white traders could not communicate. The Natives "gave no cause for supposing that they had ever traded with any European people." Since the Natives had no beads in their possession and were attracted to those given them now as if they had never seen any before, the traders "conjectured that they were inland natives, who live up country in the winter, and had descended some river which empties itself into Smoky Bay, as that was the quarter from whence they appeared to come."

Hounded by the Russians and the Kodiak hunters as they moved up the inlet the British party in the long boat returned to the *Iphigenia* on June 27, "having obtained nothing but one very indifferent sea-otter skin, and about two dozen of split salmon." As high up the inlet as West Foreland and East Foreland the party had encountered "Russians and Kodiak hunters, who followed" them "from village to village, and had got entire possession of the river." The traders, "disappointed of the supply of salmon which they expected to have found in Cook's River," sailed out of the inlet on July 2 heading southwestward along the Alaskan Peninsula, anxious to replenish their provisions.[27]

Captain George Vancouver (1794). By the early 1790s so many expeditions were trading along the Alaskan coast that, Washington Irving later wrote in *Astoria*, "it was as if a new gold coast had been discovered." Commerce, not exploration, was the objective of these expeditions, but as these vessels put into bays and sailed through channels that Cook had never seen, their commanders, some of whom had sailed with Cook on his last voyage, began to question his conclusions.[28]

Such questions led to a prolonged survey of the northwest coast by the British navigator George Vancouver during the early 1790s. Thus, the Vancouver expedition was a lengthy and detailed postscript to the Cook voyage of 1778. Vancouver had been a midshipman on that voyage, and he now produced detailed surveys to fill in gaps left by Cook, clarifying points of geographical ambiguity and uncertainty of location. Working his way methodically northward from Nootka Sound, Vancouver did not reach the principal stretches of the Alaska coastline until his third season of exploration in 1794.[29]

Entering Cook Inlet on April 11 Vancouver determined to commence his survey "on the western side of the river." Anchoring just south of Chinitna Bay, Vancouver observed:

> For the first time this season we noticed some flocks of wild geese, and could not avoid remarking, that they all flew to the southward, contrary to what might have been expected from the advanced state and mildness of the season: which, however, on Sunday morning the 13th, suffered a very material alteration as the wind came to the N.E. and was attended by a sharp frost and a very heavy fall snow. On leaving the eastern shore the

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27. John Meares, *Voyages Made In the Years 1788 and 1789 From China to the North-West Coast of America* (Amsterdam and New York, N. Israel and Da Capo Press, 1967), pp. 307-13. Meares included a map with his journal that reflected uncertain geographical conjecture. His map indicated, for instance, that Cook Inlet was linked to Hudson's Bay via Slave River and Slave Lake. "Historical Cartography of Cook Inlet, Alaska: Case Study & Proposed Testimony of William R. Hunt," p. 8, File — "Hunt, William R., Historical Cartography of Cook Inlet, Alaska," Box V-30, Record Group 03, Department of Law, Cook Inlet Case Records, 1960s-1970s, Alaska State Archives and Records Center, Juneau.

28. Glyndwr Williams, *The British Search for the Northwest Passage in the Eighteenth Century* (London, Longmans, 1962), pp. 230-35.

29. Williams, "Alaska Revealed," p. 85.

depth of water gradually increased from 25 to 35 fathoms, fine sandy bottom in mid-channel and then decreased again as we approached the western shore, which about six was indistinctly perceived through the falling snow.

Vancouver remained here until April 14, noting in his journal:

> ...when the western horizon became clear, and shewed us cape Douglas bearing by compass S. 9 E.; mount St. Augustin, S. 9 W.; the northernmost land in sight N. 9 W.: and a low point. S. 31 W.: from whence the shores to the southward fell so far back to the westward, that we could only distinguish the summits of a range of lofty disjointed mountains entirely covered with snow, that seemed principally to occupy the space between that low point and cape Douglas, but at the same time gave the country an appearance in this point of view of being greatly divided by water. From thence to the northward, excepting a small open bay abreast of us with two rocks lying before its entrance, the shores appeared to be compact, and the surface of the country descending rather abruptly at first, admitted near the water-side a narrow border of low land; this was covered with wood, which continued to grow some distance up the sides of the mountains, which were very lofty and rugged, and above the line where vegetation ceased were wrapped in perpetual snow.

Moving up the inlet Vancouver again dropped anchor near Tuxedni Channel, which merges with a larger opening to the north, a broader but very shallow entrance to Tuxedni Bay behind Chisik Island, which lies between the two. Here, according to Vancouver, the "western shore was bounded by lofty rugged mountains, between the bases of which and the water-side was a margin of low or moderately elevated wood-land country." The northernmost opening "being the largest, appeared to be a sound, winding towards the foot of the volcano [Iliamna], which, from its apparently close connection with the neighboring mountains, probably gave the limits to its extent."

Vancouver left the "openings" for his assistant, Peter Puget, to examine, "not considering them sufficiently important to retard our progress." Moving up the inlet in his ship the *Discovery* along the western shore, Vancouver entered Redoubt Bay on the 16th and encountered his first Dena'ina Natives:

> Shortly after noon we were visited by three of the natives, each in a small skin canoe, who without the least hesitation, made their canoes fast alongside, and came on board with evident marks of being acquainted with European manners, by their bowing very respectfully on coming upon deck. They made signs for snuff and tobacco, which, with some other trivial articles they solicited, they seemed to be highly gratified by receiving, and expressed a degree of modest concern that they had not any thing to offer in return. At dinner they did not make the least scruple of partaking of our repast, with such wine and liquors as were offered to them; though of these they drank very sparingly, seeming to be well aware of their powerful effect.

Vancouver sailed north-northeastward several miles in the late afternoon to the northern extremity of Kalgin Island. Here Vancouver noted that the Redoubt Volcano was "a remarkably lofty mountain on the west shore" which was "a steep cliff moderately high." On either side of the cliff was "a low flat beach, particularly to the northward, where the margin of low land is of a greater extent than we had noticed further to the southward, from the base of the mountains, which, so far as we were able to discern, are a connected and undivided barrier along the western side of the river."

Vancouver and his men landed on Kalgin Island on the 17th, reconnoitering the beach and making observations. After moving his ship to the east side of the island, Vancouver wrote in his journal, describing the surrounding scenery. He stated:

> The weather now, though extremely cold, (the mercury standing at 25) was very cheerful, and afforded us an excellent view of the surrounding region, composed, at a little distance from the river, of stupendous mountains, whose rugged and romantic forms, clothed in a perpetual sheet of ice and snow, presented a prospect, though magnificently grand, yet dreary, cold, and inhospitable. In the midst of these appeared the volcano near the summit of which, from two distinct craters on its southeastern side, were emitted large columns of whitish smoke; unless, as was supposed by some on board, it was vapor arising from hot springs in that neighborhood; but how far this conjecture was consistent with the severity of the climate at the top of that lofty mountain, is not within the limits of my judgment to determine.

Later that evening Vancouver moved into the southern portion of Trading Bay. Here he observed that "the shores of the river were comparatively low, or only moderately elevated, jutting out into three remarkable steep cliffy points." These he named "the WEST, NORTH, and EAST FORELANDS"; the two former are on the western, and the latter on the eastern, shore." While anchored in the bay two Natives "in a small skin canoe" visited Vancouver's ship. He described this encounter with the Natives, who lived on the west shore of the north part of the bay, in very positive terms. Vancouver noted:

> One of these, whose name was *Sal-tart*, possessing some apparent superiority over the rest, presented me with some martin skins, and received in return some iron, beads, a few other trinkets, and a small quantity of snuff and tobacco, all of which he seemed to value very highly. These people appeared to be acquainted with the Russians, of whose language they seemed to speak several words; but our very confined knowledge of that, as well as our total ignorance of their native tongue, prevented our acquiring the information which, from the intelligent appearance of these very civil and well-behaved strangers, we might otherwise have been enabled to obtain.

Leaving Trading Bay the *Discovery* moved up the inlet. While Vancouver was completing his exploration of the upper reaches of Cook Inlet, some of his men under the direction of Lt. James Whidbey made a detailed examination of Trading Bay between West and North Forelands. During their reconnaissance the men encountered friendly Natives and a Russian establishment belonging to the Lebedev-Lastochin Company, a rival of the Shelikhov-Golikov partnership's establishment at English Bay near the entrance to the inlet. The Russian fort, which on the map accompanying Vancouver's report is called "Russian Factory," was in the vicinity of present-day Tyonek.

While still in the northern part of the inlet "making the necessary observations for ascertaining the final termination" of its extent, Vancouver's ship was approached on May 7 by the *Chatham*, commanded by Mr. Puget. According to the original plans of the expedition, the two ships were to have rendezvoused at the inlet for its exploration but had become separated because of a "very heavy, irregular sea." Accordingly, Puget had entered the inlet several days after the *Discovery* and conducted his own exploration of its western shore as he moved northward. Pushing up from the entrance to Iniskin Bay on May 3, Puget observed "a few small bays or coves on the compact western shore." During the evening he and his crew

were met by one hundred and fifty skin canoes, which were estimated to contain about three hundred of the natives; some carried three persons, others two, and a few only one person. They spoke the Russian language, pulled off their hats or caps, and bowed as they passed; several attempted to reach the vessel, but were prevented by the favorable breeze which was too valuable at this time to be sacrificed to the curiosity of the Indians.

Vancouver recounted portions of Puget's journal in his own. He observed:

By Mr. Puget's journal it appears, that a compact, connected body of very high mountainous land binds the western shore of this inlet, at no great distance from water side, all the way from cape Douglas to the volcano [Iliamna]; from whence the same lofty range continues until it branches off to the north-west, towards those mountains that, from the upper part of the inlet bore the appearance of being detached. The sound, whose waters appeared to us on the 15th of April to wash the base of the volcano mountain [Tuxedni Bay] was approached by them much nearer than by us, and is described by Mr. Puget as having been seen quite round; in its south-west part is a small opening formed by two low points covered with wood; the entrance is very narrow, and at low water a flat, interspersed with large detached stones, appeared to extend from the commencement of that low land to its termination, including the passage into the opening or rivulet [Tuxedni Channel]. Under these circumstances it was considered as unworthy of any further examination, and with the assistance of the flood tide their route was pursued to the northward, between the low island [Kalgin Island] and the main land, in soundings from 30 to 13 fathoms; keeping near the former, in the expectation of seeing some of the Russians from the establishment that Malacha had stated to be on the island. This was passed within about half a league of its western side, and a signal gun was fired, but to no effect.

Vancouver went on to summarize Puget's description of Redoubt Bay, noting:

Mr. Puget represents the country from the above supposed sound as descending from the base of the mountains, and gradually forming an inclined plane, terminating at the water side in a compact beach, or low cliffs well wooded: the mountains rise very perpendicularly, and, like the others that encompass this region, are lofty, apparently barren, and always covered with snow; from the shores of this open bay a shoal extends some distance into the inlet.

After visiting the Russian establishment, known as the Nikolaevsk Redoubt, near the mouth of the Kenai River on the eastern shore of the inlet, Vancouver's expedition finally left Cook Inlet on May 14 and headed for Prince William Sound. Thus, Vancouver had confirmed with meticulous thoroughness Cook's conclusion that Alaska provided no gateway or passage to the polar sea except through Bering Strait. As important as Vancouver's surveys of the Alaskan coastline was his finding of Russian trading posts and vessels along the mainland shores, including those of Cook Inlet. The Russians he had encountered in the inlet seemed, he wrote ominously, "to use every endeavor to impress us with an idea, that the American continent and adjacent islands, as far to the eastward as the meridian of Kayes island [Kayak Island], belonged exclusively to the Russian empire." As a result of Vancouver's explorations, the coastline, if not the interior of Alaska, was largely charted

and documented, and the maps he prepared, including the one for Cook Inlet would serve navigators for many years.[30]

Spanish Exploration of Cook Inlet

Ignacio Arteaga y Bazan and Lieutenant Juan Francisco De La Bodega y Quadra (1779). Unaware of Cook's activities during 1778 the Spaniards made preparations for their own explorations in 1779 when two new frigates, the *Favorita* (purchased in Peru) and the *Princesa* (built at San Blas) offered sufficient surplus shipping to allow for reconnaissance. Under the command of Ignacio Arteaga y Bazan and Lt. Juan Francisco de la Bodega y Quadra, the expedition sailed on February 11, 1779, and headed toward Bucareli Bay in search of Russian and British presence and possible passages to the Atlantic. Finding nothing promising, they continued until August 1 when they found themselves amidst a number of islands near the entrance to Cook Inlet. They named Chatham Bay on Cape Elizabeth Island, "Nuestra Senora de la Regla" (Our Lady of the Rule), and the island itself, "San Ancieto." Believing the Kenai Peninsula to be an island, they named it, "Isla de la Regla" (Island of the Rule). On August 2, a party went ashore, built a rock cairn, erected a cross, and held a mass to commemorate claiming possession of the land for Spain. The Iliamna Volcano on the west shore of Cook Inlet was sighted and named Miranda. Having weathered stormy conditions and with both crews suffering from scurvy, the two ships quickly left for Mexico without contacting any Russians.[31]

Esteban José Martinez and Gonzalo Lopez De Haro (1788). In 1787 the Spanish crown's fear of Russian encroachments and possible foreign activities to the north of its California settlements was intensified. As a result Esteban José Martinez sailed from San Blas on March 8, 1788, aboard the *Princesa* with Gonzalo Lopez de Haro as second in command on the packet *San Carlos*. The vessels sailed directly for Prince William Sound, arriving off Montague Island on May 18. For several weeks the men cruised the coasts of the island, trading with the Natives, distributing Spanish silver coins as solid proof of Spanish presence, planting bottles and crosses on shore to claim possession of the land, and observing evidence of prior British and Russian visits. Because of contrary winds the men determined to return to Monterey, and on June 15 the ships left Montague Island and turning southeastward sighted the Iliamna Volcano on June 13. After having agreed to rendezvous at Unalaska Island, the ships separated with Lopez de Haro sailing along the shore of the Kenai Peninsula.

Lieutenant Salvador Fidalgo (1790). Because of the dual concerns about Russian activities and the fear that the elusive Northwest Passage might still be found, the new viceroy of New Spain, Conde de Revillagigedo, ordered Lt. Salvador Fidalgo to continue the exploration of Alaska. His orders were to conduct reconnaissance in Prince William Sound and Cook Inlet and then return to Nootka Sound without losing sight of land. Taking Pilot Esteban Mondofla along to act as his translator, Fidalgo sailed from Nootka on May 4, 1790, and arrived at Prince William Sound on May 24.

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30. George Vancouver, *A Voyage of Discovery to the North Pacific Ocean and Round the World, 1791-1795*, ed. by W. Kaye Lamb (London, The Hakluyt Society, 1984), IV, pp. 1,214-63; Williams, "Alaska Revealed," p. 85; and "Historical Cartography of Cook Inlet, Alaska," pp. 8-9.

31. Archer, "Russians, Indians, and Passages," pp. 134-35. Spanish documents relating to this expedition are listed in Rey-Tejerina, "Documentation, Spanish Exploration of Alaska," 54-57. For more data on this voyage see Mary Gormly, "Early Culture Contact on the Northwest Coast, 1774-1795: Analysis of Spanish Source Material," *Northwest Anthropological Research Notes*, XI (Spring 1977), pp. 12-14, 50-55.

He entered Cook Inlet in early July. Concerning its terrain and climate, Fidalgo observed:

> From the Island of San Antonio [Cape Elizabeth Island] to Quadra Point [Coal Point], it consists of very high Mountains with forests of pines in the valleys between. From this point to the North it is all level with much forest. The W coast is a chain of high mountains, of which the most conspicuous is the Volcano Miranda [Iliamna], which I saw pour out from its peak a thick column of smoke. On this coast there are no Russians, and very few Indians.
>
> The climate which I experienced in this River is somewhat milder than that of Prince William, and the land promises fertility because of the good color of the soil and the luxuriant grasses.[32]

In mid-August Fidalgo sailed to Kodiak Island. Leaving Kodiak in late October, Fidalgo arrived in San Blas on November 14.[33]

The Russians did not welcome the penetration of the British and Spanish traders into Alaskan waters. They viewed these poaching foreigners as a threat to their expanding fur trading expeditions. To overcome this competition from the British and Spanish and establish northwest North America as an exclusive Russian colonial preserve the Russians would initiate efforts during the late nineteenth century to found permanent settlements and consolidate fur trading operations in the region.

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32. Katrina H. Moore, trans., "Fidalgo's Alaskan Voyage of 1790: The Claiming and Naming of Cordova and Valdez, From Manuscripts in the Archivo General de la Nación, Mexico," April 1775, pp. 57-61 (copy on file in Elmer E. Rasmuson Library, University of Alaska, Fairbanks.)

33. Archer, "Russians, Indians, and Passages," pp. 138-39. Spanish documents related to this expedition are listed in Rey-Tejerina, "Documentation, Spanish Exploration of Alaska," pp. 58-59. For more data on this voyage, see Gormly, "Early Culture Contact," pp. 22-26, 59-61.

CHAPTER THREE

RUSSIAN FUR OPERATIONS, EXPLORATION, AND RELIGIOUS ACTIVITIES IN THE COOK INLET-LAKE CLARK REGION: 1778-1867

While the British and Spanish were undertaking their exploration and fur trading voyages to the North Pacific, "rapacious" Russian fur trading operations led to the rapid depletion of sea otter populations in the Aleutian Islands closest to Kamchatka. Consequently, the fur trading expeditions from Siberia became longer, more costly, and less profitable. Out of this state of affairs emerged a man of vision and energy who redefined the fur trade, ultimately leading to the formation in 1799 of a quasi-governmental monopoly known as the Russian-American Company.[1]

THE SHELIKHOV COLONY ON KODIAK ISLAND

Scholars generally agree that Grigorii I. Shelikhov was the leading entrepreneur in Russian's expansion across the North Pacific to northwest North America.[2] In 1781 he persuaded his associate Ivan Larionovich Golikov, a merchant from Kursk, and another Golikov, Captain Mikhail Sergeevich, to join him in establishing a fur trading company, sometimes referred to as the American Northeastern Company.[3]

The primary object of the company, according to Shelikhov's vision, was to establish a settlement in the North Pacific. To carry out his vision Shelikhov proposed that the company be awarded exclusive monopolistic trading privileges in Alaska similar to those offered by the British to colonial companies such as the East India Company.[4]

Sailing with three galiots and 192 men, Shelikhov, accompanied by his wife, left Okhotsk on August 16, 1783, and arrived at Kodiak Island on August 3, 1784, after a long and harrowing voyage. Here he established the first permanent Euroamerican settlement in Alaska at a bay he named for his vessel *Three Saints* (Tri Sviatitelia).[5] This outpost would serve as a base for the Shelikhov-Golikov Company's activities in south-central Alaska and the starting point for new surveys of the northwest coast of North America.[6]

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1. Polevoi, "Discovery of Russian America," p. 29; Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, pp. xliii-xlv; Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 12-14; and Gregov, ed., *Russian-American Company*, by Okun, pp. 22ff.

2. Pierce, ed., *Chronological History of the Discovery of the Aleutian Islands*, by Berkh, pp. 55ff.

3. Pierce and Donnelly, eds and trans., *History of the Russian-American Company*, by Tikhmenev, p. 12.

4. Polevoi, "Discovery of Russian America," p. 29, and Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, xliii-xlv.

5. See Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, pp. 113-14, for a discussion of the topic relating to Russian establishment of a settlement at Unalaska preceding that at Three Saints Bay on Kodiak Island.

6. Polevoi, "Discovery of Russian America," p. 29, and Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 13-14.

In May 1785, after having subdued the Koniags, Shelikhov turned his attention to further exploration. A party of 52 *promyshlenniks* and 11 Aleuts from the Fox Islands were dispatched northward and eastward in four baidaras, accompanied by 110 Koniags in their bidarkas. The expedition was to engage in fur trading, explore as far as Cook Inlet and Prince William Sound and meet the tribes inhabiting the islands and coasts of the region. Later detachments of *promyshlenniks* explored the south and west coasts of Kodiak and "along the American coast from Katmak to Kamysh [Cook] Inlet." While thus engaged the men learned of Iliamna Lake and of different portage routes to the west side of the Alaska Peninsula. According to Shelikhov, the party had "peaceful relations with the natives" and "constantly befriended them, treated them well, gave them gifts and were thus able to bring them into alliance, took hostages from them and traded with them, and there was not the slightest discord."[7]

RUSSIAN AND BRITISH RESPONSES

Upon returning to Siberia in late 1786, Shelikhov wrote a lengthy, glowing but misleading report on how the Natives on Kodiak and in the surrounding region had welcomed him and his colonizing effort.

Meanwhile, Shelikhov's plans to colonize northwest North America and establish fur trading hegemony in the region did not go unnoticed. Pavel Sergeev Lebedev-Lastochkin, a wealthy merchant from Irkutsk, recognized the financial potential of such undertakings and quickly organized his own colonization effort in Russian America. Shelikhov and Lebedev-Lastochkin had been partners in previous fur trade ventures, and Shelikhov even had a financial interest in Lebedev's colonization effort, although it was in competition with his company. While other colonization projects were initiated, they were unsuccessful compared with the efforts of Shelikhov and Lebedev-Lastochkin.

Lebedev hired Peter Kolomin as his foreman and dispatched him along with 38 men on the ship *St. Paul* to establish a post in south-central Alaska during 1786. Kolomin stopped at the rival Shelikhov Company post at Three Saints Bay on Kodiak in the spring of 1787 and asked Evstraty I. Delarov for advice about the location for a settlement. Though rivals, Delarov aided Kolomin, suggesting that he establish a post in Cook Inlet where there was an ample sea otter population and where the proximity to Alexandrovsk Redoubt would be to each company's benefit. Thus, Kolomin and his men proceeded to the mouth of the Kasilof River where it empties into Cook Inlet on the west coast of the Kenai Peninsula. There in July 1787 they commenced to build a fort, named Georgievsk Redoubt or Fort St. George, consisting of two log buildings surrounded by a stockade.[8] Back in Siberia, Shelikhov and Lebedev were irritated by the cooperative arrangement between their two managers in Alaska and began to lay plans to replace Delarov and Kolomin with more competitive individuals.

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7. Richard A. Pierce, ed., *A Voyage to America: 1783-1786*, by Grigorii I. Shelikhov [trans. by Marina Ramsay] (Kingston, Ontario, The Limestone Press, 1981), pp. 15, 46-47; "After November 18, 1786, The Account of the Voyage of Grigorii I. Shelikhov and His Wife, Natalia Shelikhova, from Okhotsk to the Coast of Northwest America and Return, Including a Description of Islands and Native Peoples Encountered," in Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, pp. 308-09; Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 16-17; and Bancroft, *History of Alaska*, pp. 227-28.

8. Townsend, "Ethnohistory and Culture Change," p. 26.

As the Shelikhov and Lebedev-Lastochkin companies were completing their fortified posts along the shores of Cook Inlet, British trading vessels began visiting the area. During 1786-1788 at least five British vessels entered Cook Inlet to exploit the lucrative fur trade, several of which left journals describing the region, its fur potential, and Russian trading operations. As related in chapter 2 of this study, the fur traders Portlock and Dixon entered the inlet in July 1786 aboard the *King George* and *Queen Charlotte*.[9]

At Trading Bay an elderly chief informed Dixon that there had been a battle between the Cook Inlet peoples and the Russians in which the Natives had been victorious. Since this was only several months after the hostilities between Shelikhov's men and the Kenai-Chugach forces, this reference may refer to that affair, although all Russian sources claim that the *promyshlenniks* defeated the Native war party. Or it may refer to a local skirmish "occasioned by theft," as Portlock and Dixon concluded. While in Trading Bay the British found the Natives in possession of beads and clothes, which "must doubtless have been procured from the Russians previous to the quarrel and soon after they came into the river."[10]

Near West Foreland another old Native whom the English dubbed "the Factor," because he helped them obtain furs, informed Portlock that the Russians frequented the vicinity of Kalgin Island. He asked for British assistance in a punitive raid against the Russians at English Bay, thus suggesting that local animosity against the Russians was high.[11]

Nearly two years later, in June 1788, John Meares, an independent British trader aboard the *Iphigenia*, visited the northwest American coast on his way from China, intending to capitalize on the fur trade. Meares observed that the Natives were each armed with several daggers "as if they were at war with the Russians and Kodiak hunters." As high up the inlet as West and East Forelands the Meares party encountered "Russians and Kodiak hunters, who followed" them "from village to village, and had got entire possession of the river."[12]

THE RUSSIAN COMPANIES' RIVALRY

From the comments of Portlock, Dixon, and Meares, it would appear that while the Russians had not yet penetrated the interior of the Cook Inlet region, they and other foreign traders visiting in ships were exploiting the inlet and coastal fur resources, especially that of the sea otter, to the degree that fur was rapidly becoming an extremely scarce commodity. With the dwindling sea otter population and the conflict between the local inhabitants and the Russians, as well as the ill treatment of the Natives by the Russians and occasional trading ships, many Natives seemed already to be quitting the area or perhaps the Dena'ina population was beginning to dwindle as a result of Russian oppression.[13]

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9. Portlock, *Voyage Round the World*, pp. 104-05.

10. *Ibid.*, pp. 114-15; and Townsend, "Ethnohistory and Culture Change," p. 27.

11. Portlock, *Voyage Round the World*, p. 120.

12. Meares, *Voyages Made In the Years 1788 and 1789*, pp. 307-13.

13. Townsend, "Ethnohistory and Culture change," pp. 29-30.

Apparently, the Dena'ina of Cook Inlet were not completely subjugated by the Russians, however, because a report to the Russian government by Governor-General Pil of Irkutsk on February 14, 1790, referred to problems with the Dena'ina during 1788 or 1789. In the report Pil observed that Delarov "explained that the Kenai natives, evidently beguiled by the visit that the foreigners paid them, became so bold as to try to exterminate the Russian traders." The Natives first "killed ten of the Golikov and Shelekhov Company" men and "then, in another place, they put to death four workmen" of the Lebedev-Lastochkin Company.

In 1789 Shelikhov sent a Russian expedition to explore the Aleutian Islands and the Alaska mainland with the purpose of establishing "the empress' rule over all the newly described places." The expedition was led by the navigators Gerrasim G. Izmailov and Dmitrii I. Bocharov, who set sail from Kodiak in 1789 to explore "the southwestern side of Kenai Bay and Kamyshak Bay." The two men buried metal plates with imperial crests in the ground or in some cases affixed the crests to trees. In 1791 Bocharov continued along the north coast of the Alaska Peninsula as far as the mouth of the Kvichak River in Bristol Bay, and then crossed the peninsula south of Iliamna Lake, reaching the south shore at a bay some 35 miles from Kodiak Island.[14]

The year 1791 witnessed increased competition and rivalry between the Shelikhov and Lebedev-Lastochkin companies in the Cook Inlet region.[15] In July 1791 Alexander Andreevich Baranov, a venturesome trader and experienced merchant who hailed from near the Russian-Finnish border, arrived in Kodiak to serve as the new manager of Shelikov's operations in northwest North America. Shelikhov had wanted to hire Baranov as his manager for several years, but it was not until 1790, after Baranov's employees had been killed and his stores plundered while trading with the fierce Chukchi of the northern Far East, that he agreed to terms with Shelikhov.[16]

About the same time Lebedev-Lastochkin determined to replace his manager in Alaska. As his foreman and assistant foreman he chose Grigorii Konovalov and Amos Balushin, two of the most notorious and brutal *promyshlenniks* in Siberia. These two leaders and 62 men arrived at Cook Inlet in August 1791 aboard the ship *St. George the Victorious* piloted by Stephen Zaikov. They established a post, known as Nikolaevski Redoubt or Fort St. Nicholas, twelve miles north of the first Lebedev-Lastochkin company fort, Georgievsk Redoubt, near the mouth of the Kenai River where it empties into Cook Inlet on the west coast of the Kenai Peninsula. The first building was hastily constructed during the late summer on the flats below the bluff near present-day Kenai, where for the first year the hull of their beached boat served as one wall. The Konovalov-Balushin men soon embarked on a policy of terrorism designed to obtain complete control of northwest North America for their faction of the Lebedev-Lastochkin Company. The result was nearly a decade of chaos and violence pitting the brutal Lebedev company against its associates at Kasilof and the more pragmatic Shelikhov Company at English Bay with the Natives in the region caught in between.

Despite the violence and chaos in the Cook Inlet region and surrounding area both the Shelikhov and Lebedev companies continued their fur hunting and trading operations during the early 1790s.

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14. Pierce and Donnelly, eds and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 24-25, 29.

15. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, p. 26.

16. Pierce, ed., *Baranov*, by Khlebnikov, pp. 1-2. Baranov's accomplishments are summarized in pp. 101-18 of this work. Also see C.L. Andrews, "Alaska Under the Russians – Baranof the Builder," *Washington Historical Quarterly*, VII (July 1916), pp. 202-16.

In the spring of 1793 Baranov and 30 Russians in two large baidaras set out from Kodiak for Cook Inlet to investigate first hand the fur hunting possibilities of that region since the number of sea otter pelts taken there had been decreasing each year. In 1789 some 3,000 sea otters had been taken in Cook Inlet, but this number had declined steadily to 2,000 in 1790, 800 in 1791, and 600 in 1792. During the summer of 1793, however, Baranov's hunters were only able to garner 480 sea otters there. Concluding that the inlet was nearly "hunted out" and the sea otters almost "completely extinct" Baranov decided to concentrate his fur trading operations further east in Prince William Sound and Yakutat Bay.[17]

VASILII IVANOV EXPLORES THE ILIAMNA COUNTRY

For its part the Lebedev-Lastochkin Company also actively participated in the fur trade operations in Cook Inlet during the 1790s. The company "not only traded with the natives of Kenai Bay, bartering with them for the pelts of sea otter and river beavers, otter, fox and sable, but also organized expeditions to the north."[18] Sometime in the early 1790s, after the Lebedev-Lastochkin Company had consolidated its hold on the shores of Iliamna Lake, an expedition, consisting of Russian traders headed by Vasilii Ivanov and accompanied by several Dena'ina Indians, was sent farther into the interior in a northerly direction. Russian traders had long been intrigued by accounts of the fur wealth in the Kuskokwim and Yukon valleys, but virtually nothing was known of this area. It was hoped Ivanov could obtain accurate information concerning this vast region and its potential for the expanding fur trade.

Ivanov's journey is said to have taken place between Christmas and Easter, and he is reported to have seen or been told of many large settlements and an abundance of fish, furbearing animals, and birds. Russian historians believe that Ivanov's route led from Iliamna Lake across Lake Clark to the upper Mulchatna River valley and from there to either the Holitna or Stony rivers, tributaries of the middle Kuskokwim. In his report, Ivanov mentioned two large rivers, the Tutna and the Balsanda. The former has been identified as the Kuskokwim and Ivanov's party is believed to have traveled down it as far as the Eskimo village of Ohagamiut. According to Ivanov's account, it was at this point, where the two rivers are closest together, that he crossed over to the Balsanda which has been identified as the Yukon River.

All of this is highly conjectural and based on a manuscript in the Kodiak office of the Russian-American Company seen by the naval officer Gavriil I. Davydov, together with conversations with Ivanov which the Russian historian Vasilii N. Berkh reportedly recorded at Kodiak in the winter of 1804-1805. Nevertheless, Russian scholars who have studied the matter in detail believe that Ivanov was the first Russian explorer to penetrate the interior of Alaska and thus, at the very least, the European discoverer of the Kuskokwim River, a waterway that would play a significant role in the Russian fur trade in southwest Alaska.[19]

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17. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 31-32, 151.

18. Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 121.

19. James W. VanStone, ed., *Russian Exploration In Southwest Alaska: The Travel Journals of Petr Korsakovsky (1818) and Ivan Ya. Vasilev (1829)* [trans. by David H. Kraus] (Fairbanks, University of Alaska Press, 1988), p. 6. A Russian government map in 1802 shows a lake in the vicinity of Lake Clark with the name of Ilima. On the same map Iliamna Lake is called Shelikof. "[Russian Chart Showing Alaska, the North Pacific and the Adjacent Siberian Coast]," 1802 (Russian language map annotated in French; reprinted by U.S. Coast and Geodetic Survey, August 1898), Record Group 23, Records of the Coast and Geodetic Survey, National Archives and Records Administration, Cartographic and

The two aforementioned documentary sources in which Ivanov's ventures are based are Berkh's *A Chronological History of the Discovery of the Aleutian Islands* and Davydov's *Two Voyages to Russian america, 1802-1807.* In the former, Berkh alludes to discussions with Ivanov during his historical research:

> I have talked often with the brave promyshlennik Vasilii Ivanov, who led this crew. They traveled from Christmas till Easter, traversing by his estimate over five hundred versts, and saw many rivers and lakes where fish abounded. On their way they met about ten different tribes speaking different dialects, but saw no villages anywhere with more than two hundred inhabitants.
>
> Ivanov talked much of the river "Tunta," from four to six versts wide, along which he had heard that there were more than forty villages, but he could not accurately explain where this river is. He reached it after 25 days journey and believes that he traveled always more north than east. As is known, Ivanov started his journey from Lake Il'miana [Iliamna], on the west side of Kenai Bay and returned to the same place, so perhaps the river Tunta flows into Kamyshatsk Bay, which Cook called Bristol Bay.[20]

In his work Davydov observes that the Lebedev-Lastochkin Company had sent "off north of Lake Iliamna several *promyshlenniks* accompanied by a sizable number of savages who had had bondsmen taken from them." The report read in part:

> Towards Christmas we left Lake Iliamna on skis and followed the River Nugulna which flows into the lake. Then we crossed Lake Klichikh out of which this river flows. From there we travelled north for seven days, past four villages in which we saw between forty and sixty men, as far as the River Bamadna, flowing out of the high mountains. After leaving this river we spent a whole day crossing the mountain ridge, and in four days we arrived at the River Khakhlitna after passing a densely populated village. From the Khakhlitna we travelled eight days to the north through flat, open country as far as the River Khagylin, which flows into the sea. On its banks there is a village in which we saw seventy or more men. It is eight days' journey north from this village to the River Galtsana and past the small settlement of Krolikova toiona (it is not known why the chief was called this name – Rabbit Chief). From Krolikova to the Tutna, an extremely broad river, is six days' journey, past the village of Mandychatsk in which there were up to ninety warriors (adult and capable of fighting). We went down the Tutna for two days as far as the village of Ukhagmak, where there were more than two hundred inhabitants. From there, following the same river, it is a day's journey to the village of Tuliuka where there were about one hundred and fifty people. Then we went through a portage (a narrow place where in the summer the boats are carried from one river to the other) to the mouth of the Balsanda, where there is the large village Izyntylkhuk with more than seven hundred inhabitants in it. From Izyntylkhuk we travelled for a day along the coast to Ikgeetsko which stands on the river of the same name and which has some seventy people in it. Thus it can be seen that both the Tutna and the Balsanda flow into the sea with a day and a night's journey between them.

Architectural Branch, Alexandria, Virginia, and U.S. Department of the Interior, Geological Survey, Bulletin 299, *Geographic Dictionary of Alaska*, by Marcus Baker (2d ed., Washington, Government Printing Office, 1906), p. 186.

20. Pierce, ed., *Chronological Discovery of the Aleutian Islands*, by Berkh, pp. 71-72.

According to Davydov, the report stated

> that the mouth of the Tutna is further north than the Balsanda, that the width of the Tutna [at its mouth, I believe] is between 4 and 6 versts, and that there are many islands along the river.

In his report Ivanov, according to Davydov, noted the rich fur resources in the region traversed. His men had seen many fur bearing animals such as beaver, river otters, foxes, martens, wolverines, grey squirrels, muskrats, and hares. Also noted were a variety of freshwater fish, such as burbot, pike, and nelma, and birds, including partridges, grouse, and quail.[21]

The Dena'ina village of Old Iliamna appears to have been part of the Lebedev-Lastochkin operations. Anthropologist James W. VanStone believes that Old Iliamna was the site of a company *odinochka* or small fort built sometime around 1790. (Joan Townsend, another anthropologist, believes that the *odinochka* was located somewhere between Pedro Bay and Old Iliamna.) Around 1800 the Dena'ina destroyed the fort because of the many crimes of murder, hostage taking, and cheating which the Dena'ina had suffered at the hands of the Lebedev-Lastochkin men.[22]

In April 1794 George Vancouver, the British sea captain, entered Cook Inlet, during his lengthy voyage of exploration to northwest North America. While searching for the elusive Northwest Passage he observed the activities of Russian trading companies in the inlet and visited several of their posts along its shores. Near North Foreland a contingent of Vancouver's men under the command of Lt. Whidbey visited a Russian establishment belonging to the Lebedev-Lastochkin Company which on the map accompanying Vancouver's report is called "Russian Factory." The fort was undoubtedly near present-day Tyonek. In his journal of the voyage Vancouver described the post, made rather desultory observations on the lifestyle of the Lebedev hunters, and recorded his mistaken perception as to their amicable relationship to the Natives in the vicinity. As the contents of this chapter have shown, Vancouver's optimistic observations on the amicability of Russian-Native relationships could not have been further from the truth.

Vancouver also visited Nikolaevsk Redoubt, the Lebedev Company post at the mouth of the Kenai River on the east shore of Cook Inlet. The English navigator was less than impressed with the Russians he encountered and the conditions in which they were living.

RUSSIAN ORTHODOX CHURCH INFLUENCES

Some five months after Vancouver left Cook Inlet, the earliest missionizing effort of the Russian Orthodox Church in America began at the behest of Shelikhov – an endeavor that would have a profound cultural impact on the Natives of the Cook Inlet and Lake Clark regions.[23] Prior to 1794

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21. Richard A. Pierce, ed., *Two Voyages to Russian America, 1802-1807,* by G.I. Davydov [trans. by Colin Bearne] (Kingston, Ontario, The Limestone Press, 1977), pp. 200-02.

22. Van Stone, ed., *Russian Exploration in Southwest Alaska,* 73; Joan B. Townsend, *Ethnohistory and Culture Change of the Iliamna Tanaina* (Los Angeles, University of California, 1965), pp. 54, 56-57, 59.

23. For a comprehensive survey of the history and inventory and analysis of the records and archives of the Russian Orthodox Church in Alaska see Barbara S. Smith, *Russian Orthodoxy In Alaska: A History, Inventory, and Analysis of the Church Archives in Alaska with an Annotated Bibliography* (Anchorage, Published for the Alaska Historical Commission,

the *promyshlenniks* and sea captains, laymen all, performed the initiatory rites and gave cursory Christian instruction to the inhabitants of the islands and mainland of northwest North America. Thus, while Orthodox Christianity preceded both Russian officials and churchmen, laymen could not continue the work indefinitely. It also became evident that their efforts were not always inspired by pious motives.

By Imperial Decree on June 20, 1793, Catherine II entrusted the religious mission to Metropolitan Gabriel, a member of the Holy Synod in St. Petersburg.[24] In September of that year the Metropolitan reported to the Synod that he had chosen capable missionaries to be sent to the colonies for the dissemination of Christian doctrine.

Although sent by order of the Empress and under the immediate supervision of Archimandrite Ioasaf, the missionaries were in a sense employees of the Shelikhov-Golikov Company. They, as well as all subsequent missionaries, were paid a salary by the company. Their financial obligations to the Russian State and the Shelikhov Company notwithstanding, the monks understood their role in the colonies as general overseers of the morality of the Russians as well as enlighteners and protectors of "the heathen." The company officials, led by Baranov, obviously wanted the missionaries to confine themselves to converting the Natives. Thus, the different assignments of the company officials and missionaries would lead inevitably to frequent clashes. Several of the monks participated in mutinies against Baranov's administration, and in 1796 the hieromonk Makary left his post without authorization to take the Natives' cause directly to the Holy Synod in St. Petersburg.[25]

By the spring of 1795 the missionaries were anxious to expand their religious activities as virtually all the Natives on Kodiak had been baptized by the hieromonks Makary and Juvenal the previous winter.[26]

1980); Library of Congress, Manuscript Division, *The Alaskan Russian Church Archives: Records of the Russian Orthodox Greek Catholic Church of North America – Diocese of Alaska* (Washington, 1984); and John T. Dorosh, "The Alaska Russian Church Archives," *The Library of Congress Quarterly Journal of Current Acquisitions*, XVIII (August 1961), 193-203. Cultural and educational developments in Alaska are covered quite extensively in Jerome Lincoln Starr, "The Cultural and Educational Development of Aborigines and Settlers in Russian America, 1784-1867" (Unpublished Ph.D. dissertation, New York University, 1961).

24. "June 20, 1793, A Decree from the Governing Senate Approving the Request of Ivan L. Golikov and Grigorii I. Shelikhov to Build Churches in Order to Propagate the Orthodox Christian Faith Among Natives of North America," in Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, pp. 413-14.

25. *Ibid*, pp. 10-11; Kovach, "Russian Orthodox Church in Russian America," pp. 63-65; and "May 18, 1795, A Report from Archimandrite Ioasaf to Grigorii I. Shelikhov Regarding Activities of the Russian Orthodox Clergy in Alaska, and Problems with Aleksandr A. Baranov," in Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, pp. 465-75.

26. Bishop Gregory (Afonsky), *A History of the Orthodox Church in Alaska (1794-1917)* (Kodiak, St. Herman's Theological Seminary, 1977), p. 25.

When Makary departed for Unalaska in 1795, Juvenal went to Nuchek on Prince William Sound and reportedly baptized some 700 Chugach Eskimo.[27] Crossing the Kenai Mountains, he spent the winter of 1795-1796 on the west coast of the Kenai Peninsula where he "baptized all the local inhabitants."[28] During the spring of 1796 he had some Dena'ina take him across Cook Inlet, and he began missionary work among the Natives in the Iliamna area. There he fell out of favor with the Natives and was killed. His death would become the focus of controversy and the stuff of numerous legends and apocryphal stories.

The legendary events leading to Juvenal's death are recorded in Bancroft's *History of Alaska*, published in 1885. According to Bancroft's account Juvenal took exception to the Native practice of having more than one wife, thus incurring the ire of a local chief named Shakmut by preaching fervently against polygamy. Bancroft wrote:

> The chief and others began to plot his downfall. It had been a marvel to the savages that a man should put a bridle upon his passions and live in celibacy, but their wonder was mingled with feelings of respect. To overcome the influence which the missionary was gaining over some of his people, Shakmut...plotted to throw temptation in his way, and alas for Juvenal...it must be related that he fell. In the dead of night, according to his own confession, an Ilyamna (sic) damsel captured him by storm.[29]

Bancroft received his information from a diary attributed to Juvenal that was "discovered" by his research assistant Ivan Petroff.[30] To quote the English translation of Juvenal's purported diary, the events surrounding his death were as follows:

> September 25th – With a trembling hand I write the sad occurrences of the past day and night. Much rather I would leave the disgraceful story untold but I must overcome my own shame and mortification and write it down as a warning to other Missionaries who may come after me. Last night I retired at my usual hour after prayers with the boys who sleep in another room. In the middle of the night I awoke and found myself in the arms of a woman whose fiery embraces excited me to such an extent that I fell a victim to lust and a grievous sin was committed before I could extricate myself. As soon as I regained my senses I drove the woman out, but I felt too guilty to be very harsh with her.

Two days later, the diary entry states:

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27. Born in 1761 at Ekaterinberg, Juvenal was the son of a mine foreman, Feodor Govorukhin of Nerchinsk. In secular life his name was Jacob, and he worked as an engineer at the Kolivano-Voskresenskikh state mines and was released upon his request in 1791 to enter the Valaam Monastery as a novitiate. Upon the recommendation of the ruling bishop, he was ordained as an hieromonk before going to Alaska. Kovach, "Russian Orthodox Church in Russian America," p. 55.

28. Richard A. Pierce, ed., *The Russian Orthodox Religious Mission In America, 1794-1837, with Materials Concerning the Life and Works of the Monk German, and Ethnographic Notes by the Hieromonk Gedeon* [trans. by Colin Bearne], (Kingston, Ontario, The Limestone Press, 1978), p. 15. For more data on the Kodiak mission, see pp. 24-73 of this work.

29. Bancroft, *History of Alaska*, p. 371. Also see Urey Lisiansky, *Voyage Round the World In the Years 1803, 1804, 1805, and 1806* (Amsterdam and New York, N. Israel and Da Capo Press, 1968), p. 187.

30. "A Daily Journal Kept By the Rev. Father Juvenal, One of the Earliest Missionaries to Alaska, 1796," *Kroeber Anthropological Society Papers* (Spring 1952), pp. 31-59. A copy of the handwritten diary is in the Bancroft Library at the University of California, Berkeley, while typescript copies are on file in several Alaska libraries. See Townsend, "Ethnohistory and Culture Change," pp. 37-53, for a scholarly source that accepts the validity of the diary.

> September 27th – My disgrace has become public already and I am laughed at wherever I go, especially by the women. Of course, they do not understand the sin, but rather look upon it as a good joke. It will require great firmness on my part to regain what respect I have lost for myself as well as in behalf of the Church. I have vowed to burn no fuel in my bedroom during the whole winter in order to chastise my body – a mild punishment, indeed, compared with the blackness of my sin.

The diary ends on September 29 with Juvenal describing his pain and bleeding "from a blow struck with a bone club by the Chief."[31]

The legends surrounding Juvenal's fall from grace have been perpetuated in various published and unpublished works for the past century. The diary, however, has been found to be a forgery by a number of scholars of Alaskan history, including Morgan Sherwood, Richard A. Pierce, Michael Oleksa, and Lydia Black.[32] Since the English "translation" of the diary in the Bancroft Library is in the handwriting of Ivan Petroff, it is likely that he was the forger.[33]

Several letters to the prior of Valaam Monastery by the monk German during the early nineteenth century discuss what was known in Alaska in the years following Juvenal's death, thus casting further doubt about the authenticity of the diary. In one letter to the prior written during the early 1800s, German, who had become *de facto* head of the Kodiak mission following the death at sea of Bishop Ioasaf in 1799, wrote:

> In 1795 Hieromonk Iuvenalii left Kadiak for Nuchek, where he baptized more than seven hundred Chugach, and then crossed to Kenai Bay and baptized all the local inhabitants. In the following year (1796), he crossed to Aliaska – in the direction of Lake Iliamna, or Shelekhov, where his apostolic duties came to an end, together with his life. He had served the church more than all his fellow brothers. The savages killed him. The reason for his death, so it is said, was partly that the first thing he did after baptizing the Natives was to order them to give up polygamy, and also that the toens and other leading men in the tribes there had been persuaded by Father Iuvenalii to give him their children so that the latter might be educated on Kadiak; when he set out with them the men regretted what they had done, gave chase, caught up with him, and fell upon him. We are told that when Father Iuvenalii was attacked by the savages he did not think at all to defend himself, or run away, which he could easily have done, especially as he had a firearm with him. He let himself be taken without offering any resistance and asked only that those with him should be spared, which was done. Much later the Americans themselves related that when Father Iuvenalii was already dead he had risen up and followed his murderers, saying something to them. The savages, supposing him to be still alive, attacked him again and beat him; but as soon as they left him he again stood up and followed them, and this happened several times. Finally, in order to be rid of him, the savages hacked his body to pieces. Only then did this fervent preacher fall silent, a martyr of the word of God, it

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31. "A Daily Journal Kept By the Rev. Father Juvenal," pp. 55-56.

32. Lydia T. Black, "The Daily Journal of Reverend Father Juvenal': A Cautionary Tale," *Ethnohistory*, XXVIII (Winter 1981), pp. 33-58. One of the undocumented stories related to Juvenal's death is that it took place at Priest Rock, an unusual outcrop on the north shore of Lake Clark.

33. *The Tides*, February 27, 1987, "Alan Boraas Articles," Notebook, Library, Homer Society of Natural History, Pratt Museum, Homer, Alaska.

could be said. But the strength of his words did not die away. On the spot where the missionary's remains lay, so it is said, there at once appeared a column of flame, reaching up to the sky.[34]

In a later letter on December 13, 1819, also addressed to the prior of Valaam, German reported:

As for the remaining brothers I believe you heard about them in the first year after our arrival. Two hieromonks, Father Makarii and Father Iuvenalii who had been an assistant in our monastery and was a former officer called Iakov Fedorovich and when he entered the monastery in St. Petersburg given the name Iuvenalii set off to preach, Makarii to the Aleutian Islands of the Fox Chain and from there he returned to Russia, and Iuvenalii went to the eastern coast of the mainland, first of all to Chugatsk Bay where he baptized all the people. Then he set off northwards along the coast crossing the mountains to Kenai Bay, where he spent the winter baptizing the Natives. Then he went further north and crossed Aliaska. There he was killed by some of the tribesmen, though rumors vary as to in what manner, and by exactly which tribe. There is still no reliable information.[35]

A more critical interpretation of Juvenal's death during the early 1800s is found in a report from Nikolai P. Rezanov to the directors of the Russian-American Company. After visiting the colonies in North America to investigate conditions, Rezanov reported on November 6, 1805:

Further, without informing the Administrator [the monks] set out for any place where they took it into their heads to make converts. On the Alaska Peninsula near Iliamna Lake, now Lake Shelikhov, trade had been developed with mountain Natives and offered great potential. The monk Iuvenalii immediately hurried there to proselytize; he conducted forced baptisms and performed marriages, taking young women away from some [men] and giving them to others. The American Natives tolerated all this madness and even put up with beatings for quite a while, but finally decided they had to get rid of this depraved person. They took counsel among themselves and solved the problem by killing the priest. There is no need to grieve over him, but in their rage the Natives also killed the entire artel of Russians and Kodiaks; not a single one of them survived.

Since then the Natives feed on vengeance. They fear Russian settlement. And although the Russians have made some mistakes, they now are being given no quarter; last year five Russians were killed. I have warned the Holy Fathers that if they make a single move without approval from the Administrator, or if they interfere in any civil matter, I have authorized the Administrator to send any transgressors back to Russia where they will be defrocked and punished for endangering public safety.[36]

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34. Pierce, ed., *Russian Orthodox Religious Mission*, p. 45.

35. "No. 20, A Copy of a Letter from Father German to Ionafan, the Abbot of Valaam Dated 13th December, 1819, in *ibid*, p. 115.

36. "15. November 6, 1805, A Letter from Nikolai P. Rezanov to the Directors of the Russian-American Company Regarding Russian Orthodox Missionaries in Alaska," in Basil Dmytryshyn, E.A.P. Crownhart-Vaughan, and Thomas Vaughan, eds. and trans., *The Russian American Colonies: 1798-1867, A Documentary Record* (3 vols., Portland, Oregon Historical Society Press, 1989), III, pp. 102-03.

Questions about Juvenal's death aside, the Orthodox community believes that he was killed while serving the church, and he is honored as a martyr.[37]

While the missionaries had begun a mission house, church, and school at St. Paul's Harbor during the winter of 1794-1795 the Holy Resurrection Church was not consecrated until July 1796. At the same time the Kodiak Vicariate was established under the Irkutsk Diocese with Ioasaf as bishop.[38] This church would serve as the base for religious activities in southwestern Alaska for almost 50 years.[39]

THE MEDVEDNIKOV-KASHEVAROV EXPEDITION TO ILIAMNA LAKE (1797)

While he was struggling to gain supremacy over the Lebedev-Lastochkin Company during the spring and summer of 1797 Baranov initiated a reconnaissance of the Iliamna region which resulted in what may have been the first Euroamerican discovery of Lake Clark. In September 1796 the *Tri Sviatitelia* had shipwrecked during a storm in Kachemak Bay in Cook Inlet while returning to Kodiak from Yakutat Bay where it had delivered 30 families and a "goodly number" of *promyshlenniks* for a settlement to tap the sea otter fur trade of that region. During the spring of 1797 Baranov sent "carpenters and a smith" from Kodiak to repair the vessel. The repairs were completed that summer, and Baranov sailed to Cook Inlet to inspect the repaired ship. While there he laid plans for Vasilii Grigorevich Medvednikov and Filipp Kashevarov, two of the repairmen who had been aboard the ship when it wrecked, to "go to Lake Iliamna, in order to describe it and also to reconnoiter the lake." According to Kashevarov, who submitted written statements on the shipwreck, its repair, and subsequent exploration in 1822, Medvednikov had visited the lake earlier "in 1792 when he had travelled from Unalashka by baidara along the north shore of Aliaska [peninsula]." He had ascended a river [Kvichak] and at the right hand from the Northern Sea [Bering Sea], at the mouth of the lake, put up a cross" near the confluence of the Newhalen River and Lake Clark. He had then turned "back and portaged to Katmai and returned to Kad'iak."

Thus, during the summer of 1797 Medvednikov and Kashevarov "went in three baidarkas, taking along the sharpshooter Kochesov whose task it was to get food for us and as a guide the Russian Shusharin who formerly was serving with the Lebedev Company and had been on Iliamna." According to Kashevarov the party

> reached the portage bay [cove], transported the baidarkas on our backs over one not too formidable ridge about two verst distance and reached a small lake from which flows a small stream that empties into Lake Iliamna. We carried the baidarkas for additional 10 verst or so, following the stream, only in places going down it, as it is shallow, fast, and has many rapids, and in general inconvenient. For this reason, we carried everything on our backs. The route was well travelled, as there was on Iliamna a small fortification of the Lebedev Company. Even baidaras have been portaged along that trail and the Kenaitsy [Dena'ina] use it ceaselessly going in both directions. In about two or three hours we came to a fork, that is, the confluence of the stream along which we were travelling with another one, considerably larger and rather deep. Here we spent the night in an uninhabited place

37. Smith, *Orthodoxy and Native Americans,* p. 12.

38. Dorosh, "Alaskan Russian Church Archives," p. 195, and Kovach, "Russian Orthodox Church in Russian America," p. 72.

39. Townsend, "Journals of Nineteenth Century Russian Priests to the Tanaina," p. 6.

and the next morning launched our baidarkas and went downstream. There was a multitude of red sea fish [red salmon], which were moving in droves, so that they splashed us all in our baidarkas out of fright.

Finally, the men "arrived at the Lebedev artel" on Iliamna Lake "which was about 40 miles from the Kenai Sea or even less." There they found

> 15 Russians and Kamchadal in good order. They had earthen barracks with subsidiary structures, surrounded by a fence [palisade], as is the case here in Sitkha. A sentry, armed with a naked sword [sablia] stood at the gate. The Baidarshchik was a Russian, Takmakov. However, even though they had a communal barracks, few Russians lived there. One surmises that the fleas bothered them. Moreover, all had wives and children and thus almost everyone of them had, inside the fort, small dwellings of bark [baraborki iz lub'iev] where they lived. All of them were killed later on, in two or three years time.

Along the shores of Iliamna Lake the men observed

> plenty of spruce timber, but, they say, it is not very suitable for construction; land animals are various, birds and fish are in great plentitude, also sea mammals and seals. Baidarshchik Takmakov gave us a guide from his fort, a Kenaets, who travelling in a single hatch baidarka, guided us to the mouth of the river we sought. We found the cross which Medvednikov erected there earlier.

While returning to the vessel, the men encountered bad weather. Thus, Medvednikov instructed Kashevarov and Shusharin, together with the Indian guide, to proceed

> when it will become calm, along the route on which we had come here toward the vessel, while he and the sharpshooter Kochesov were to follow the river. He knew that there lived Aleuts who spoke the Kad'iak language. He was hoping, with their aid, to find another and shorter portage, by other lakes, about which he had heard, [by which he could] reach the vessel. Unfortunately, he was in error. He found the settlement abandoned, there was no one to guide him, and he himself knew the [route] but poorly. Therefore, he was forced to return to the cross, from which location the Kamyshak peaks could be seen and which did not seem too far away. He found an arm of [Lake] Iliamna which seemed to him to lead farthest into the interior and he followed it inland, and landed. Then he went on foot, carrying his baidarka, thinking that soon he should come out to the Kenai Sea but here, too, he was cheated of success. Instead, he suffered extreme privation, going over mountains and ravines, and along very rapid streams. He marched on foot for three days and reached the vessel a week after we did. He had to abandon the baidarka frame enroute, and carried along on his own shoulders only the covers, coming to the vessel on foot.[40]

40. "Answers to questions posed by Mr. Khlebnikov, Manager of the Sitkha Office of the Russian American Company, which is under the patronage of His Imperial Majesty, to Filipp Kashevarov, teacher at the school within the authority of the same office," July 10, 1822, Filipp Kashevarov, Shur Collection, Rasmuson Library, University of Alaska, Fairbanks (microfilm copy from Gosudarstevnnyi Arkiv Permskoi Oblasti, Fund 445, Opis'1, ed. khr. No. 75, Khlebnikov Papers; translated by Lydia Black, November 4, 1985). Lydia Black, a professor in the Department of Anthropology at the University of Alaska, Fairbanks, sent a copy of this document to me on February 14, 1990.

Following Konovalov's departure from Prince William Sound in July 1797, Zaikov, captain of another of Lebedev-Lastochkin's ships, remained in Cook Inlet with 60 hunters. Dissension among the Russians and the persecution of the Natives "reached such an extreme," however, "that the infuriated Kenais destroyed the two [Lebedev] outposts at Iliamna and Tuiunak [present day Tyonek], killing twenty Russians and almost one hundred subject Natives. In reaction the Lebedev men rounded up nine Dena'ina at Nikolaevsk Redoubt and shot them through the head. The Indians were so infuriated that they turned their wrath on the redoubt. When Baranov learned of the plight of the remnants of Lebedev's Company at Nikolaevsk Redoubt, he sent a well-armed party of men from Alexandrovsk Redoubt under Malakhov to their aid. The relief expedition found the fort under siege by the Dena'ina who were preparing to set it on fire, but apparently they retreated when Baranov's reinforcements arrived. Later that summer some of Baranov's men occupied the two remaining settlements left by the "Lebedev men" on Lake Iliamna and Tyonek, pacifying the Natives and taking hostages."[41]

Despite the respite afforded by the Dena'ina retreat the Lebedev-Lastochkin Company's position in Cook Inlet continued to decline. In March 1798, for instance, Baranov wrote that because of the "corrupt and disorganized" state of Lebedev's operations, some of his men had begun working for him.

In May 1798 Zaikov and the remainder of Lebedev's traders left Nikolaevsk Redoubt and Cook Inlet permanently. Subsequently, this post became the property of the Shelikhov Company as Baranov sent his men to take it over. Thus, the struggle for control of Cook Inlet was ended, and Baranov, rid of his "restless neighbors," assumed full control of the region, with the exception of several scattered outposts belonging to minor fledgling companies.[42]

Although Baranov had succeeded in eliminating rival fur trading companies from the Cook Inlet region, the violence, chaos, and rivalry of the 1790s left a bitter legacy of rebellion among the area's Native inhabitants. Writing in 1800, after visiting the settlements in Alaska under his control during the summer of 1798, Baranov reported:

> At Lake Iliamna the people rebelled after Lebedev's crew left, and killed three of our men. There was trouble all along the bay and they plotted three times to kill all the Russians and the Kadiak natives who are working for us. These plots became known but even now we cannot pacify the restless spirit and appease the hatred of these people....

While he was in Cook Inlet, Baranov went to Nikolaevsk Redoubt where he made plans and "had a place cleared" for a new fort on the elevated right bank of the Kenai River to avoid winter floods and heavy seas. He then handed the fort's reconstruction and management over to Malakhov, and left for Alexandrovsk Redoubt on August 15, taking with him "the furs of the land animals that had been accumulated." There he "met a party of native workers and Russians" under the charge of

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41. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 45-46; "Letter, Baranov to Polomoshnoi from Kodiak, April 28, 1798," and "Letter, Baranov to Larionov, from Kadiak Island, July 24, 1800," in Pierce and Donnelly, eds., *History of the Russian-American Company, Vol. 2*, by Tikhmenev, pp. 92-94 and 107, respectively; Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 130; and Pierce, ed., *Baranov*, by Khlebnikov, p. 23.

42. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 45-46, and Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 130.

Fedor Ostrogin and sent a shipment of furs "to the Kadiak warehouse, adding to them the small quantity" that he found at Alexandrovsk.[43]

AN OVERVIEW OF THE RUSSIAN AMERICAN COMPANY

Establishment

Shelikhov's experiences at Kodiak and the surrounding region during 1784-1786 had a profound impact on his grand vision for a Russian colonial empire in North America. His experiences convinced him that in order to keep the North Pacific region as a Russian preserve, the government must develop regulations to govern operations in that vast, inhospitable area.

When Shelikhov returned from his Kodiak settlement to Irkutsk in 1787, he prepared a series of communications to highly placed government officials regarding his accomplishments and further plans in northwest North America. His plans called for giving a single company a monopoly on hunting and trading. Shelikhov and Golikov soon presented their plans to Empress Catherine II.

While praising Shelikhov for his accomplishments, Catherine rejected his request to form a company that would enjoy exclusive rights to hunting, trade, and exploration in the North Pacific. She based her refusal on philosophical grounds, influenced in this matter by the free trade writings of Montesquieu and Adam Smith. However, she was also no doubt exercising caution to avoid potential international confrontations in a distant arena she could not defend.

Shelikhov's enterprises in support of his grand vision of a Russian colonial empire were interrupted by his death on July 20, 1795, but his family and loyal adherents pressed on with his great plans. For two years his widow Natalia skillfully directed the company's affairs. In 1798 the various Shelikhov companies merged with one of his competitors, the Irkutsk-based Mylnikov Company, to form the United American Company.[44]

Finally on December 27, 1799, some 100 years after Peter the Great urged Russian merchants to follow the example of foreign merchants and establish "East India-type companies," Emperor Paul I issued a charter to "The Russian-American Company under the Supreme Protection of His Imperial Majesty." This company (in actual fact the renamed and reorganized United American Company) was granted a monopoly, for a period of 20 years, to all the hunting, trading, and mining "on the north-east coast of America from 55° latitude north to Bering Strait and beyond, and also on the Aleutian, Kurile, and other islands situated in the North-Eastern Ocean." The emperor granted the company "special privileges," commanding that it guide the destinies of the Russian

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43. "Letter. Baranov to Larionov, from Kadiak Island, July 24, 1800," in Pierce and Donnelly, eds., *History of the Russian-American Company, Vol. 2*, by Tikhmenev, pp. 106-07, 116; Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 130; and Pierce, ed., *Baranov*, by Khlebnikov, p. 23.

44. Pierce and Donnelly, eds. and trans., *History of the Russian-American* Company; by Tikhmenev, pp. 48-60; Gregov, ed., *Russian-American Company*, by Okun, pp. 22-38; and Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian American Colonies*, III, pp. xxxi-xxxiv. For Natalia's views on her husband's achievements, see "Not Before August 3, 1798. Notes By Natalia A. Shelikhova Pertaining to the Role of Grigorii I. Shelikhov in the Achievements of Shelikhov-Golikov Fur Trading Company," in Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian Penetration of the North Pacific Ocean*, II, pp. 505-09.

colonies in North America. The company carried out this directive until March 31, 1867, when the Russian government sold its North American colonial possessions to the United States.[45]

Administrative Structure

In the Russian colonies in North America, the directors' representative was the chief administrator, general manager or governor, who supervised an extensive staff. Baranov filled this position from 1799 to 1818. To enable the chief administrator to manage the company's colonial possessions more efficiently, the directors divided the vast area into seven administrative units. The second of the seven units, based in Kodiak, embraced the islands of Kodiak, Ukamok (Chirikof), Semidi, and others in the area, the coast of the Alaska Peninsula to the meridian of the Shumagin Islands, Cook Inlet, the Iliamna Lake-Lake Clark region, the coast of Bristol Bay, the Nushagak, and portions of the Kuskokwim river basins.

These administrative units were reorganized periodically as the fur trade expanded and company operations became more complex. By the early 1860s, for instance, the company had divided the Russian colonies into two districts – Sitka and Kodiak – and 10 administrations or subdistricts that were subordinate to Sitka. The Kodiak district, which included the area of present-day Lake Clark National Park and Preserve, covered "the shores and islands of Kenai and Chugach bays; the northern part of the Aliaska Peninsula up to the meridian of the Shumagin Islands; the islands of the Kad'iak archipelago; Ukamok Island and other adjoining islands; and to the north the shores of Bristol Bay, the Nushagak river area, and several places near the Kuskokwim River."[46]

The administrative units were under the jurisdiction of the chief administrator whose principal office was in New Arkhangel on Baranof Island. The chief administrator appointed all officials of these units, delegated to them their duties, and held them accountable for their conduct and performance. In some instances their officials, with the consent of the chief administrator, entrusted *prikashchiks*, or assistants, with the administration of remote regions of their territories. Below these officials were the heads of various redoubts and *odinochkas*, or one-man posts, who supervised company trade with the Natives and exercised control over the Natives themselves. All officials were either Russian or Creole, persons having mixed Russian-Native parentage.

At the lowest rung of the formal administrative structure was the network of *toyons*, or Native leaders. The company adopted the practice of using these Native leaders from Russia's earlier colonial experience in northern Asia and North America. Officials of the company selected these Native leaders to carry out several tasks: (1) organize Native hunting parties; (2) distribute food to needy Natives; (3) preserve peace and order in the Native community; and (4) insure that every

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45. Grekov, ed., *Russian-American Company*, by Okun, pp. 44-49. This is the standard work detailing the establishment, development, and operation of the Russian-American Company. Also see Tompkins, *Alaska: Promyshlennik and Sourdough*, pp. 87-99, and Mary E. Wheeler, "The Russian American Company and the Imperial Government: Early Phase," in Starr, *Russia's American Colony*, p. 43. For copies of the charter see "July 8, 1799, The Charter of the Russian American Company, Granted By Imperial Decree of Emperor Paul I." and "December 27, 1799, An Imperial Decree From Emperor Paul I Granting Special Privileges To the Russian American Company For A Period of Twenty Years," in Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian American Colonies*, III, pp. 12-17 and 18-23, respectively. A translation of the charter may also be seen in *Russian American Company Charters*, translated from the Russian by Richard A. Pierce, under contract for the Division of State Libraries, State of Alaska, n.d.

46. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 396-97.

member of the Native community was engaged in constructive activity. For their efforts the *toyons* received from the company extra supplies of such items as tobacco, alcohol, clothing, and uniforms. They also received medals and letters of recognition and were sometimes honored by having personal audiences with the chief administrator.

The final link in the company's administrative structure was the Russian Orthodox Church. Not only was church an inseparable part of the Russian Imperial system, but provisions in the company's charters mandated that the company provide full economic assistance and support to the church in fulfilling its mission to care for the spiritual needs of Russian Orthodox employees of the company and to convert the Natives to Orthodox Christianity.

Status of Russian and Non-Russian Subjects

Many Native peoples lived in the area under the jurisdiction of the Russian-American Company. Among the full-blooded Natives the Charter of 1821 distinguished between (a) tribes "inhabiting places administered by the Company" and (b) tribes "inhabiting the coast of America where the Company has its colonies." The Charter of 1844, on the other hand, divided the Native tribes into three more definite classifications: dependent or settled tribes, including the Kurils, Aleuts, and Koniagas who had been forced into submission by the Russians; semi-independent, or "not wholly" dependent, tribes such as the Dena'ina of the Cook Inlet-Lake Clark region and Chugach of Prince William Sound who derived part of their needs from the company; and independent peoples, such as the Tlingits, Kolchans, Malegmiuts, and Innuits who maintained their aboriginal existence largely free of Russian control.[47]

DEVELOPMENTS IN THE COOK INLET-LAKE CLARK REGION: 1799-1821

The 68-year period during which the Russian colonies in northwest North America were administered by the Russian-American Company was marked by continuing efforts to expand the firm's operations, establish new settlements, and exploit the region's resources. In the Cook Inlet-Lake Clark area the violence, chaos, and competitiveness of the preceding era was largely replaced by a relaxation of hostilities between the Natives and Russians. The fur trade was expanded as the Russians made repeated efforts to explore and penetrate the interior region and thus open up new areas for hunting and trading. Religious activities of the Russian Orthodox Church were also increased in the region as more regular missionizing efforts were implemented, particularly after 1845 when the Kenai Mission was established.

Relations Between the Russians and the Dena'ina During the Early 1800s

Relations between the Dena'ina and the Russians had relaxed considerably by the early 1800s. This was due in part to the aforementioned decline in the sea otter population in Cook Inlet during the early 1790s and the elimination of rivalry between opposing Russian companies vying for control of the area later in that decade. As a consequence the Russians turned their attention increasingly

47. Stoddard, "Some Ethnological Aspects of the Russian Fur Trade," pp. 40-41. For further data on the legal status of native tribes under the charters of the Russian-American Company see U.S. Congress, Senate, *Russian Administration of Alaska and the Status of the Alaskan Natives*, Prepared by the Chief of the Foreign Law Section, Law Library of the Library of Congress, 81st Cong., 2d Sess., 1950, S. Doc 152.

to southeast Alaska, where they not only hoped to check growing British influence but planned to use the area as a base from which to establish supremacy in the North Pacific.[48]

The relative calm in Russian-Native relations in the Cook Inlet region was also the result of the Dena'ina's resistance to Russian domination. Most Cook Inlet Indians were not Russian subjects or "dependents," as were the Aleuts and Koniags. Rather, they were known as a "semi-dependent" people. As aforementioned the Russian-American Company classified Native groups into three categories based on their dependence on the company for supplies to meet basic subsistence needs. According to this scheme, the semi-independent Dena'ina derived only part of their subsistence needs from the Russians.[49]

In her *The Russian Population In Alaska and California* Fedorova further elaborates on the relative independence of the Dena'ina around Cook Inlet. While the Indians supplied the company post at Nikolaevak Redoubt with furs throughout the period, they bartered with company representatives rather than paying tribute. The manager at the fort, according to Fedorova, "bartered Russian goods with the Kenais for pelts of river beaver, otter, sable, bear, lynx, fox, and for beaver castors."[50]

Observations by Gavriil Ivanovich Davydov (1802). In October 1802 Gavriil Ivanovich Davydov and his friend Lt. Nikolai A. Khvostov reached Kodiak after a two-month voyage from Okhotsk. Davydov commented on the Native settlements, Russian posts, and fur operations on the Alaska Peninsula and in the Cook Inlet region. He noted:

> There are also two [artels] on the island [peninsula] of Aliaska: at the native village of Kakmaisk [Katmai] and on the island of Satkhum [Sutkum]. In the latter place [there are] large stocks of lakhtaks (scalion and seal skins used for covering baidaras and baidarkas) and they also shoot deer and bears and trap foxes. These is no native settlement here and the place is inhabited only by some hunters and some Kad'iak kaiurs. The baidarshchik in Kakmaisk receives by barter animal pelts from the North and from the hinterland of Aliaska. Earlier there had been another artel on this peninsula, near Lake Iliamna. However, it was twice destroyed by the savages and the company did not have the resources to establish it again, although it was a rich source of pelts. In Kinai Bay there are two artels, Aleksandrovsk at the mouth of the Bay, and Nikolaievsk much further to the north. From both of them, and especially from the latter, there is a good supply of furs – the best ones being bears and black otters.

During a four-year voyage around the world in 1803-1806 Urey Lisiansky, a captain in the Russian navy, stopped in Kodiak. While there be noted in his journal that "furs were brought us from the Bay of Kenay, or Cook's River." The person who brought the fur cargo informed him that the Natives of the bay "were of a quiet disposition." The bay had "fourteen settlements, and about three thousand inhabitants, who have a language of their own."[51]

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48. Gregov, ed., *Russian-American Company*, by Okun, pp. 51-53.

49. Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 164.

50. Pierce and Donnelly, eds. and trans., *Russian Population in Alaska and California*, by Fedorova, p. 200.

51. Lisiansky, *Voyage Round the World*, pp. 187-88.

Although relations between the Russians and Dena'ina were more tranquil in the Cook Inlet and Iliamna regions during the early 1800s than during the previous decade, old animosities periodically flared into violence. In 1805, for instance, Nikolai P. Rezanov, who had been sent by the company to review the organization and structure of the colonies, reported that the Natives of the Iliamna area "feed on vengeance" and "fear Russian settlement." The Russians were "being given no quarter; last year five Russians were killed."[52]

Russian-American Company Administrative Policies at Nikolaevsk Redoubt (ca. 1818-1821)

Little is known about Russian-American Company operations in the Cook Inlet-Lake Clark region prior to the late 1810s. During the period just prior to 1818, however, the Russian-American Company initiated a series of activities to expand and develop its commercial operations in the Cook Inlet and Iliamna Lake regions. While few details are available, the company's board of directors passed a resolution on March 15, 1818, honoring Michael Kondakov, administrator of Nikolaevsk Redoubt at Kenai, for "his earnest service to the Company." The efforts for which he was recognized included a

> survey of the Kenai Bay and census of its population; attempts to establish trade with the Copper River Indians; trade with the natives at Iliamna and other places; plans for exploration of the Copper River Region to search for copper, mica, and other minerals; acquisition of nine hundred beavers and a good quantity of minerals by trading with the natives; promotion of gardening and agriculture; providing of fish and vegetable supplies.

The resolution noted that these "extensive activities were carried on by an aged man with few and inefficient assistants in a sparsely populated region."[53]

Available documentation suggests that following Kondakov's apparent retirement the Nikolaevsk and Alexandrovsk redoubts on Cook Inlet were placed under the provisional administration of the "prikashchik Ershev." On April 6, 1818, however, the "retired sub-officer Frolov" was "appointed baidarshchik at Kenai Bay" and ordered to sail to Nikolaevsk Redoubt and assume his new responsibilities. Frolov was "to live in Kenai Bay for the benefit of the company, to win the friendship of the savages, and fulfill the orders of the leadership." Leontii A. Hagemeister, who succeeded Baranov as chief administrator of the Russian-American Company in 1818, mentioned the Iliamna country to Frolov before he left for Cook Inlet. In his instructions, he indicated that:

> To the Aleut Eroi [Georgii] Solov'ev, who was wintering at Iliamna, I am sending as a gift from the company 4 arshins of red baize in expectation that he will also try to be useful in the future. In time I will be happy to assign him even more.[54]

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52. "November 6, 1805, A Letter from Nikolai P. Rezanov to the Directors of the Russian American Company Regarding Russian Orthodox Missionaries in Alaska," in Dmytryshyn, Crownhart-Vaughan, and Vaughan, eds. and trans., *Russian America Colonies*, III, p. 103.

53. *Documents Relative to the History of Alaska*, Alaska History Research Project, 1936-1938, IV, p. 179.

54. "No. 96, Proposal to the Kad'iak office," April 6, 1818, and "No. 97, Order to [retired] sub-officer Frolov," April 6, 1818, in Richard A. Pierce, trans., *The Russian-American Company, Correspondence of the Governors Communications Sent: 1818* (Kingston, Ontario, The Limestone Press, 1984), pp. 58-60.

EXPANSION OF THE FUR TRADE INTO THE INTERIOR OF SOUTHWEST ALASKA: 1818-1848

By the late 1810s the furbearing populations in the traditional hunting areas of Russia's American colonies had declined sharply, thus resulting in a serious reduction of the Russian-American Company's profits. This was especially true of the sea otter population. In 1800 Baranov estimated that a minimum of 100,000 sea otter pelts had been taken out during the previous decade. By 1806, however, the number of such pelts delivered to China had declined to less than 5,000 per year. In areas such as Cook Inlet, where sea otters had once been plentiful, they were now "quite rare" as evidenced by the fact that only 100 pelts had been taken in 1812.[55]

Exploration Expeditions into the Interior

As the numbers of furbearing animals declined in traditionally exploited areas, and with the Hudson's Bay Company squarely across the path of any eastward expansion, the Russian-American Company was forced to turn its attention to the vast area of southwest Alaska north of the Alaska Peninsula.[56] This was a virtually unknown region to most officials. But to those who were familiar with Ivanov's account of an expedition north of Iliamna Lake during the 1790s, the company had definite reasons for believing that new profits could be reaped through trade with the Indian and Eskimo inhabitants for furs. It is likely that in response to pressures exerted by the British and Americans in conducting explorations and trade in North Pacific waters, the Russians felt compelled to extend their influence into areas of Alaska with which they had not previously been commercially associated.

Petr Korsakovsky Expeditions (1818-1819). As a result of these pressures the Russian-American Company commissioned an expedition by Petr Korsakovsky in 1818. Little is known concerning Korsakovsky other than that he was "a company employee with some experience in writing descriptions and familiar with the trade relations of the mainland natives."[57] His expedition, dispatched from Kodiak, was directed to explore the country to the north of Bristol Bay. Our knowledge of the expedition is due entirely to the instructions sent by Chief Administrator Hagemeister, who that year had succeeded Baranov, to Grigorii G. Potorochin, the head of the Kodiak office, in January and April 1818 and to Korsakovsky's travel journal translated by David H. Kraus of the Library of Congress and edited by James W. VanStone of the Field Museum of Natural History in Chicago.

As can be inferred from a series of company communications the Korsakovsky expedition would be part of a major company effort to expand its fur trade operations in the Iliamna Lake-Lake Clark region and northwestward. The first reference to company intentions regarding penetration of the interior in southwest Alaska appears in a company directive issued by Hagemeister to the Kodiak office on January 28, 1818. Hagemeister recommended that the company settle "more firmly in the region of Lake Iliamna," while retaining the Nikolaevsk Redoubt at Kenai and abandoning the Alexandrovsk Redoubt at English Bay:

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55. Basil Dmytryshyn and E.A.P. Crownhart-Vaughan, trans., *Colonial Russian America: Kyrill T. Khlebnikov's Reports, 1817-1832* (Portland, Oregon Historical Society, 1967) pp. 34-35.

56. Tompkins, *Alaska: Promyshlennik and Sourdough*, pp. 148-64.

57. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 158-59.

> Since the number of Russians on Kad'iak has decreased and there is ever less need for them year by year, the office must eliminate two artels, or at least one to begin with, so that with the coming spring people can be transferred to Kenai Bay on the artel baidara to establish an artel at Iliamna, which will be under the administration of [Fort] Nikolaevskii. Since the locality presently occupied by the Aleksandrovskii fort yields no profit, give that name to the new one being established at Iliamna, transfer property from the old to the new, and abandon or dismantle the old one.[58]

Two days later Hagemeister sent a personal letter to Potorochin:

> I wrote to the office about abolishing at least one artel. I ask you to organize everything so that we can use the people at Iliamna already this year; the dwellings ought to be built this summer, fur hunting can start in the fall, and trade in the spring.[59]

At the same time it was recommended that the "Voskresensk artel" on Resurrection Bay on the east side of the Kenai Peninsula be abolished. On February 11, 1818, that artel's abandonment was urged "because of the dilapidation of the buildings." Company workers were to "remove the iron...transfer the Russians and Kaiurs to Iliamna and, as few natives remain, try to persuade them to make the move also."[60]

That the purpose of the Korsakovsky expedition was not only to assess the fur potential of the interior of southwest Alaska but also its mineral possibilities can be inferred from several letters written by Hagemeister to Potorochin in April 1818. The general manager observed on April 6:

> I have also sent [some] white talc, found in the northern lands between the rivers Kuchuk, Kaushik, and Iliamna, along with a white clay. As the expedition now equipping for the north may possibly find similar products, order them not only to examine the [geological] type but its source [matrix].[61]

The following day he wrote:

> I repeat my wish about Iliamna. As far as the odinochka to the north of Katmai is concerned, such, too, is necessary. The fur hunting enterprise, being everywhere poor, compels us to seek means in the north. The vessel which I intend to dispatch will not bring any other benefit, but, hopefully, to determine the [true location of the] capes by astronomical observations, [a task] which the coastal [land] expedition cannot accomplish.

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58. "No. 30, Proposal to the Kad'iak office," January 28, 1818, in Pierce, trans., *Correspondence of the Governors, 1818*, p. 16.

59. "No. 36 [sic; should be 38], Letter to the manager on Kad'iak, Grigorii Gerasimovich Potorochin," January 30, 1818, in *ibid.*, p. 21.

60. Quoted in Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 136.

61. "No. 95, Letter to Mr. Potorochin," April 6, 1818, in Pierce, trans., *Correspondence of the Governors, 1818*, p. 58.

> From your reports I see that the expedition shall proceed almost by Kolmakov's route, but I do not confirm this [yet], as I have requested that you send it over the tundra.[62]

Two communications from Hagemeister on April 11 reveal further details as to his hopes for expanding the fur trade in the Iliamna area and to the region to the north and northwest. In a letter to Potorochin he noted:

> Aleksandr Andreevich [Baranov], learning in conversations of my wish, and the reasons therefore, to reduce the number of artels and, using the same people, to establish an artel at Iliamna, advised me to eliminate the Voskresenskaia artel, and to [salvage] the iron from the dilapidated buildings there. Not knowing local conditions, but hearing that no more than 100 to 150 river beavers are acquired in trade from the natives, I am agreeable to this counsel, and instruct the office to carry it out, unless there are reasons to the contrary which are not known to me. Transfer the Russians and Kaiurs to Iliamna. As there remain but a few aboriginal inhabitants, try to persuade them to move to another more populous place, and it would be best if they were agreeable to moving to Iliamna. I hope that the office will take the most sensible measures, according to circumstances, and report to me, giving the reasons for what is done. If any building, or a part of it, is still in good shape, leave it, reducing it in size. Leave in place one or two families of trustworthy Aleuts as an odinochka; the others should go along with the Russians as stated above.

A second communication to the Kodiak office that day contained detailed directions for the proposed expedition:

> The office, in its reports, does not explain in detail where the expedition to the north is instructed to proceed, but I am concerned that it is supposed to follow the route taken by Kolmakov. As this would not bring as much interesting information as is desired, I must state my wish that the expedition if at all possible select another route. From Iliamna, it should go to the N or NNW. Earlier rumors of two great rivers appear to promise much information, but not having detailed knowledge of what was done before, nor about means [to reach them] or people who could explain all these to me, I must allow the office to act according to the information collected from the people who have been in the interior. Korsakovskii in the course of his march is to proceed on the basis of inhabitants, from one village to the next which they know, and [collect information from] inhabitants there. If the expedition goes across Aliaska [Peninsula] to Kamyshadtskaia Bay [guba] and from it to Lake Iliamna, it can take from the winter outpost [zimov'e] the Aleut Solov'ev, who has got acquainted with the inhabitants from Sibai, leaving in his place one of your men, and maybe one of his former comrades in order not to terminate trade on Iliamna. In the middle or end of August, it will be necessary to halt in order to build a winter camp [zimov'e] and put up a cache of foodstuffs. If unable to proceed farther than the zimov'e on the Iliamna, or to establish a wintering camp for lack of a suitable location [the

62. "No. 125, Letter to Mr. Potorochin," April 7, 1818, in *ibid.*, p. 74. Korsakovskiy was to also investigate rumors concerning Europeans believed to be descendants of Russians who supposedly lived "somewhere to the north on a river Khuveren." See Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, pp. 64-70.

expedition] is to return to Iliamna, in which case it is to be attempted, when opportunity is present, to send brief messages about the well-being of the expedition.[63]

Subsequently, Hagemeister revised the directions for the expedition to include exploration of the Nushagak River for the purpose of selecting a site at which to establish a redoubt. Thus, as a result of Korsakovsky's expedition the Alexandrovsk fort at English Bay and the Voskresensk artel on Resurrection Bay would be transferred not to Lake Iliamna but to the new Alexandrovsk Redoubt near the mouth of the Nushagak River.[64]

In the spring of 1818 the Korsakovsky expedition was dispatched to explore the region to the north of Bristol Bay. The party consisted of the Creole Fedor L. Kolmakov, three Russians, Petr Gorokhov, Gavril Patyukov, Andrey Klimovskiy, and 20 Aleuts. On April 27 Korsakovsky proceeded from Kodiak across Shelikof Strait by baidara, grouped his men at the Katmai artel, and then crossed the Alaska Peninsula to Bristol Bay. From there Kolmakov, who feuded with Korsakovsky over leadership of the expedition, led a detachment west to Cape Newenham by way of Kvichak and Nushagak bays, the lower reaches of the Togiak River, and Hagemeister Island. This trip required 41 days, the return journey to the Eskimo village of Ekuk at the mouth of the Nushagak River being made in mid-July. Kolmakov's party was almost certainly the first Russian party to travel in this area.[65]

In late July Korsakovsky, leaving Kolmakov and a few others at the mouth of the Nushagak, led a detachment which ascended the Kvichak River to Iliamna Lake and from there to what would later be called Lake Clark and the upper reaches of the Mulchatna River, a Nushagak tributary. Arriving in the vicinity of Iliamna Lake on July 29 he noted in his journal:

> A fresh wind from the north. We set out and again took yesterday's course. We traveled 15 miles in that way. The lake opened up in the north. The channel from the lake was no deeper than 10 feet with a width at the entrance to the lake of 100 sazhens and over the distance of 15 miles was no deeper than 18 feet. The lake appeared to be very extensive; we could not see land to the north, except for the right and left shores of the lake. The wind prevented us from going out onto the lake. Even at the [channel's] mouth, there was surf. At four in the afternoon we went ashore, set up camp, and settled down for the night. There were plenty of fish all along the river, including humpback salmon, dog salmon, king salmon, charr, and red salmon. Bears were plentiful, but no caribou. There are caribou here in herds in August and October; they swim across the river. The Aglegmiuts have temporary dwellings on this river where they spear a goodly number of caribou and there are years when they get 20 caribou apiece.

On August 1 Korsakovsky, who must have been in the vicinity of Kakhonak Bay, apparently sought a suitable crossing to Kamishak Bay in Cook Inlet. That day he wrote in his journal:

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63. "No. 133, Letter to Mr. Potorochin," April 11, 1818, and "No. 134, Proposal to the Kad'iak office," April 11, 1818, in Pierce, trans., *Correspondence of the Governors, 1818*, pp. 78-79.

64. Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, pp. 136-38.

65. James W. VanStone, ed., "V.S. Khromchenko's Coastal Explorations in Southwestern Alaska, 1822," trans. by David H. Kraus, in *Fieldiana Anthropology*, Vol. 64, (Chicago, Field Museum of Natural History, November 23, 1973), p. 7. Also see Richard A. Pierce, *Russian America: A Biographical Dictionary* (Kingston, Ontario, The Limestone Press, 1990), pp. 248-50.

> We left this spot at five in the morning, keeping to our previous course and proceeding 20 miles. We went ashore for the night. My companions and I went up the mountain to spot the place from which there is a portage to the Kamyshak. We climbed the mountain and saw a chain of high mountains to the ENE and NNW with snow, and across from these to the ESE and SSW there was a mountain chain also, [but] without snow. Between these mountains, we saw level land. There were no forests. We recognized this place as the portage. In the bay we saw no fewer than 50 islets overgrown with spruce, birch, and with scrub alder. En route we saw two old Indian shelters. We could not help but think that after spring they hunt caribou here. Near shore the hunters killed a caribou.

The following day he approached the vicinity of Pile Bay. Here he spent the night while noting in his journal:

> East wind with rain. Our guides were somewhat perplexed as to the route to take and which we would find the Indians, but thought that there should be food supplies in these bays. We traveled among the islands. We looked in all the bays for signs of the Indians. We saw nothing but two old huts; we sent out four baydarkas to one of the bays to find some signs of life, but because of the increasing weather, they were unable to do so. We crossed the portage, one mile, leaving the islets to the west. We left [the bay] and entered another bay to the north. At the very point of the cape we saw 50 poles fashioned by Russian axes. We went 18 miles by various routes and then went ashore for the night. In one place we saw juniper and red currants. There were mushrooms aplenty.

Korsakovsky stayed in the Pile Bay area until August 7, meeting Eremei Rodionov, commandant of a company post in the village of Staraia Iliamna, who offered to lead a small party into the interior. While at Pile Bay Korsakovsky observed:

> We reached the first settlement by evening. The local toyon, who had been away to the distant people returned because of eye trouble, and informed us that Rodionov had returned directly to his home. Our hunter killed a caribou. The local Indian women brought us crowberries, bog bilberries, blueberries, and cloudberries. I paid them with rings and some thimbles and beads. I gave the toyon a cotton scarf, which he wished for his eyes. I paid the seven Aglegmiut guides for their efforts with seven large, heavy knives, tobacco, needles, rings, beads, etc. The command [Russian and Aleuts] asked for cotton scarves, which request I granted.[66]

The Korsakovsky party left Pile Bay on August 7 with Rodionov and several Dena'ina guides. They "went 15 miles to the WSW by the lake, then entered the Nugylin [Newhalen] River." Proceeding up the river three miles, they approached rapids and went ashore. Leaving their "baydarkas," they took their equipment and "went overland four miles." They stopped "at a nine family settlement," which may have been at or near the south end of the Sixmile Lake. Here they "were received cordially" and pitched their tent for the night, the local inhabitants bringing them "fresh and dried fish." One Indian gave Korsakovsky "as a gift 100 untanned ground squirrel skins."

In preparation for the trek northward Rodionov advised Korsakovsky "to take three more men" as "guides, making it five, and the sixth the interpreter from among the Russians to translate from the

66. For more data on the Tanaina settlements in the Iliamna Lake-Lake Clark area, see Townsend, "Ethnohistory and Culture Change," pp. 59-60.

Kodiak to the Kenai dialect." He paid "these persons in advance with cotton scarves and tobacco, to keep them from running off."

On August 10 the party left the southern end of Sixmile Lake, following "the shoreline for six and one-half miles." In his journal he commented:

> We crossed it in one baydarka, which we left on the north shore, so that on the return trip we could cross over to our remaining baydarkas. The width here was 100 sazhens, the depth did not exceed 10 feet; the current was strong. It flows from the east from Lake Kychig [Lake Clark] and falls into Lake Iliamna....One of the Indians told me that it [Lake Clark] is not much smaller than Iliamna. The shores are covered with spruce, birch, and scrub alder. The red salmon enters from Iliamna, but only a few. We left this place quickly and proceeded through the marshes to a high mountain, from which we descended to a low place and passed again through marshes overgrown with trees and through a beaver ground strewn with wind-fallen trees, then proceeded 12 miles over the mountains and across silty lakes. We all got soaked by the increasing rain. We set up the tent and went to sleep.

From the Lake Clark vicinity the Korsakovsky party proceeded northwest into the interior. The route taken is uncertain, but the expedition may have ascended the Chulitna River and then its tributary the Koksetna. From there he apparently portaged to a tributary of the upper Mulchatna, itself a major tributary of the Nushagak, and on the 16th reached a "Kenai settlement" which cannot be positively identified. Here he

> ordered the crew to unload the guns. We were received cordially by the toyon Cheydak and the important man Sisutan. They gave me a gift of untanned ground squirrels for [blank space in text] and the toyon's son gave us caribou meat, and then brought us dried king salmon and sea lion meat, apologizing that it was so very little, because he put up his supplies in his caches and that they were moving to their winter quarters. As gifts, the toyon took the meat of two caribou, which by their custom he cut up into small pieces. He gave one piece each to the Russians and the rest he distributed to the Kodiak Aleuts, because, according to their code, when a person visits them for the first time, they try to give him as many presents as their means allow.

Korsakovsky was advised by the local *toyon* that he should stay in the area while Rodionov was dispatched "with his interpreter and five Kenaians" to "seek out the Tutna Indians" on the Kuskokwim River. While Rodionov was gone on this two-week trek which undoubtedly followed much the same route as Ivanov had in the 1790s, Korsakovsky and some of his men remained in the upper Mulchatna, hunting, fishing, and trading with Indians. Rodionov returned with Eskimos from the Kuskokwim on September 2. Although his route is uncertain, and it is not clear that he reached the Yukon, it seems likely that he reached the Kuskokwim near the mouth of the Holitna in the vicinity of Tulukaghogmuit, a name commonly rendered "Crow Village" in English located just below Aniak.

On his return Rodionov brought back Kylymbak, an elderly *toyon* from the settlement of Ukhaan on the Kuskokwim. Kylymbak referred to settlements that may have been on the Yukon, Seward Peninsula, or Norton Sound and to the continuing Alaska-Siberian trade. He repeated earlier rumors of bearded men, stating that during travels northward he met such men wearing caribou skin garments and carrying copper blunderbusses.

After the return of Rodionov, Korsakovsky traded with the Natives. He noted in his journal:

> Toward evening I gave them raincoats, trousers, scarves, large beads, seed beads, knives, needles, ulus, etc. Afterwards they gave me 25 beavers of different sizes. Kylymbak gave Patyukov a beaver kit, an Indian gave Gorokhov one small beaver, and one beaver kit. They gave Klimovskiy a worn fox skin parka, and they gave to some of our Aleuts beaver kits.

Finally, the Kuskokwim Eskimos "curiously" proposed that the Russians establish a settlement "at the mouth of the Nushagak."

During September 4-7 Korsakovsky and his party traveled from the upper Mulchatna to Rodionov's summer camp at Iliamna Lake, picking up their "baydarkas" near the point where Sixmile Lake joins Lake Clark. On September 14 the party left the summer camp for Cook Inlet, likely ascending Chinkelyes Creek and crossing the divide to Iliamna Bay north of Kamishak Bay. En route they hunted seals, caribou, and ducks and fished for silver salmon. Korsakovsky describes the trip over the Iliamna portage as follows:

> We traveled for ten miles amid high mountains, which were snow-covered to the northeast, then came out to the sea. Although the portage is not very long, it was difficult and dangerous. In the middle of the portage there is a forested mountain on which there are extremely large rocks. The ascent from the lake and the descent on the sea side was at least one mile, very high and steep. The rocks were overgrown with moss and scrub alder. They made the baydarka portaging very difficult. We got all over the portage, only one was damaged.

After heading south from Iliamna Bay, the party crossed Shelikof Strait in the vicinity of Kukak Bay to Afognak before arriving at St. Paul's Harbor on Kodiak on October 4.[67]

Although the exploration by the Korsakovsky expedition provided the Russians with its first reliable information concerning the fur potential and Native groups in the Bristol Bay and Kuskokwim River valley regions, Hagemeister was not entirely happy with its results. On December 4, 1818, he wrote to Potorochin at Kodiak:

> The expedition sent to the North last year has returned; it went by Lake Iliamna and the Nushak [Nushagak] River to Cape Chernyi which appears to be the cape called Niunam [C. Newenham] on Arrosmana's [Arrowsmith's] map. According to the Kad'iak office's report, from Karsakovskii's description, he seems to have discovered mountains of gold, but it is not possible to unearth real information. The journals have not been sent, the maps are drawn without scale and do not correspond to the description. Although Karsakovskii has marked down degrees, the extent of Lake Iliamna [as drawn] is altogether different from the description. The rocks, clay and various articles brought back are being held by the Kad'iak office – what for? A mystery! Many localities were indicated on the basis of rumors [current] among inhabitants. Although this expedition has not made any great discoveries, it promises hope for the future. The efforts of Karsakovskii, Klimovskii and others deserve attention.

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67. VanStone, ed., *Russian Exploration in Southwest Alaska*, pp. 7, 50-63, 73-75, and Pierce, *Russian America: A Biographical Dictionary*, pp. 253-54.

Accordingly, Hagemeister submitted specific instructions to Potorochin relative to Korsakovsky's next expedition in 1819. He enclosed "instructions for keeping journals and ordered that Korsakovsky was to keep a journal, "setting down everything in detail," which was to "be sent from the Nushagak River to the Kad'iak office for dispatch to me."[68]

Hagemeister echoed his somewhat ambivalent feelings about Korsakovsky's expedition in a letter to Ivan A. Kuskov on December 24. He observed:

> I suppose you have heard about the Northern Expedition from Leontii Andreianovich. It was dispatched from Kad'iak, crossed by the portage at the burned peak [*obgorelaia sopka*, volcano] in Kenai Bay to Lake Iliamna (which on the Admiralty chart is called Shelekhovo), from it by the Kuchak River to Bristol Bay, then along the coast and across portages [they reached] to the cape they called Chernyi (on Agrosmana's [Arrowsmith's] map, C. Newenham). There they got acquainted with Indians, and from there returned to Kad'iak for the winter. They discovered nothing special, but there is hope for the future, and I ordered the Kad'iak office to send them out again next year, so that they can go farther.[69]

The information supplied by Korsakovsky, however, galvanized Hagemeister's determination to establish a trading post at the mouth of the Nushagak River on Bristol Bay under Feodor L. Kalmakov. The redoubt would serve as the base for further Russian exploration and fur trade expansion in interior southwestern Alaska.[70] In early December 1818 he made his plans known to Potorochin at Kodiak. The settlement, referred to as the "Aleksandrovskaia fort," was to

> be transferred, not to Lake Iliamna, but directly to Nushagak, whither you are to dispatch the men, adding about 10 Aleut men, so that with the Russians there will be no more than 25 men. They are to be sent from Kad'iak about the middle of April, the same as the expedition to the north, and to follow the same route to the Nushagak River, but the expedition must not wait for them but press on.[71]

During the summer of 1819 Korsakovsky led another expedition, for which no journal is known to exist, to Bristol Bay, this time by way of the upper Alaska Peninsula, Iliamna Lake, and Kvichak River. An important accomplishment of the 1819 expedition was the aforementioned establishment of a trading post at the mouth of the Nushagak.[72] But an accurate assessment of Korsakovsky's geographical contributions is difficult because no map accompanies his journal. The instructions which the explorer received from Hagemeister were almost exclusively concerned with the people he was likely to encounter. As the advance agent for the Russian-American Company, he was not

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68. "No. 286, Proposal to the Kad'iak office," December 4, 1818, in Pierce, trans., *Correspondence of the Governors, 1818*, pp. 157-63.

69. "No. 306, My Dear Sir, Ivan Aleksandrovich [Kushov]," December 24, 1818, in *ibid.*, p. 176.

70. Winston L. Sarafian and James W. VanStone, "The Records of the Russian-American Company As a Source for the Ethnohistory of the Nushagak River Region, Alaska," *Anthropological Papers of the University of Alaska*, XV (April 1972), p. 54.

71. "No. 289, Proposal to the Kad'iak office," ca. December 6, 1818, in Pierce, trans., *Correspondence of the Governors, 1818*, pp. 164-54.

72. VanStone, trans., *Russian Exploration in Southwest Alaska*, p. 8.

primarily interested in geography and as a result made virtually no contribution to knowledge of the topography of interior southwest Alaska.

Korsakovsky's 1818 expedition was the first overland party to southwest Alaska for which a journal exists and so, in a sense, everything he wrote about the country represented new information. Although his general route across the Alaska Peninsula may have been known since the 1790s and his account of his interior route is extremely vague, his journal provides some of the first detailed information on some portions of the area traversed. Although primarily a land expedition, Korsakovsky's party explored parts of Nushagak Bay and obtained enough information concerning the rivers flowing into that body of water to enable the company to appreciate its importance as a potential location for the trading post that was established there during his exploration in 1819.

Although Korsakovsky's journal pays little attention to Native settlements, he does provide a list of settlements and their leaders. Only a few of these can be identified with certainty, however, and most were not actually visited by the expedition.

As a result of Korsakovsky's efforts in 1818-1819 the company learned a number of important things about interior southwest Alaska even though specific details may have been lacking. Beaver and other furbearers were plentiful, the Eskimo and Indian inhabitants were friendly and receptive to trade, and the country was apparently drained by a number of navigable rivers which would make penetration of the interior relatively easy. The Aleksandrovsk Redoubt seemed ideally located to attract Eskimos with furs and, equally important, to serve as a point of departure for further explorations into the interior. Within ten years, such explorations were to take place virtually every summer, and within 25 all of southwest Alaska would be opened to the fur trade.[73]

Ivan Ya. Vasilev Expeditions (1829-1830). Baron Ferdinand P. von Wrangell succeeded Lt. Petr E. Christiakof as general manager or governor of Russia's American possessions in 1830. The year before Wrangell assumed his duties, Ivan Ya. Vasilev, an ensign in the Russian Corps of Fleet Navigators, was placed in charge of the Northern Land Expedition to survey the region between the mouth of the Nushagak River and Norton Sound, collect topographical and ethnographic data, and establish relations with Native tribes. Thus, in 1829 Vasilev explored the Nushagak and Kuskokwim river drainages as well as the Wood and Togiak rivers and Tikchik and Wood River lakes. While on his journey Vasilev noted in his journal on June 11, 1829, that his party was in the vicinity of Iliamna Lake. They

> could see, to the SE, mountains along Lake Iliamna, and to the NW, the Kamyshak Range [Aleutian Range]. To the W there were low mountains [probably Ketok Mountain]; the remaining places were level and low. En route [they] passed the mouth of the river Mulchatna, down which the natives go to Iliamna and to Kenai Bay.[74]

Vasilev's explorations, which noted the presence of extensive populations of beaver and other furbearing animals in the interior and resulted in establishing trade relations with some important

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73. VanStone, ed., *Russian Exploration in Southwest Alaska*, pp. 8-13. Also see VanStone, ed., "Khromchenko's Coastal Explorations in Southwestern Alaska," pp. 10-34.

74. In a survey of the Russian American colonies during 1833 Khlebnikov observed that beavers, land otters, gray and red foxes, lynx, and muskrats were "bartered from the Kenais and Aglegmyuts." Wolverines and wolves were also bartered but in lesser quantities. Gibson, "Russian America in 1833," pp. 1-13. See Appendix E for a copy of "The Catch of Furbearing Animals By Hunters Under the Jurisdiction of the Kodiak Office, 1818-1830."

individuals, encouraged Wrangell to sponsor further inland exploration between Norton Sound and Cook Inlet by Vasilev in 1830 and others in subsequent years to tap the potential fur wealth of interior southwest Alaska. To this end he ordered the construction of a post, known as the Mikhailovsk Redoubt, on Stuart or St. Michael Island, approximately 60 miles north of the mouth of the Yukon River, thus providing a vantage point from which to explore the Yukon. Once the post was occupied, plans were made to carry out Wrangell's orders for expanded exploration.[75]

Andrei K. Glazunov Expeditions (1833-1834). The man chosen to lead the first expedition from Mikhailovsk Redoubt to the Anvik, Yukon, and Kuskokwim rivers in December 1833 was Andrei K. Glazunov, a Russian Creole who had entered company service and explored the Yukon delta and Bering Strait regions during 1830-1832.

While the original journal of Glazunov's expedition into the interior during the winter of 1833-1834 was never published, an extract, in Russian, appeared in 1836 and was translated into German by K.E. von Baer in 1839. A French translation, made by the historian Henri Ternaux-Compans, was printed in 1841 and included a map based on the one in the German translation.

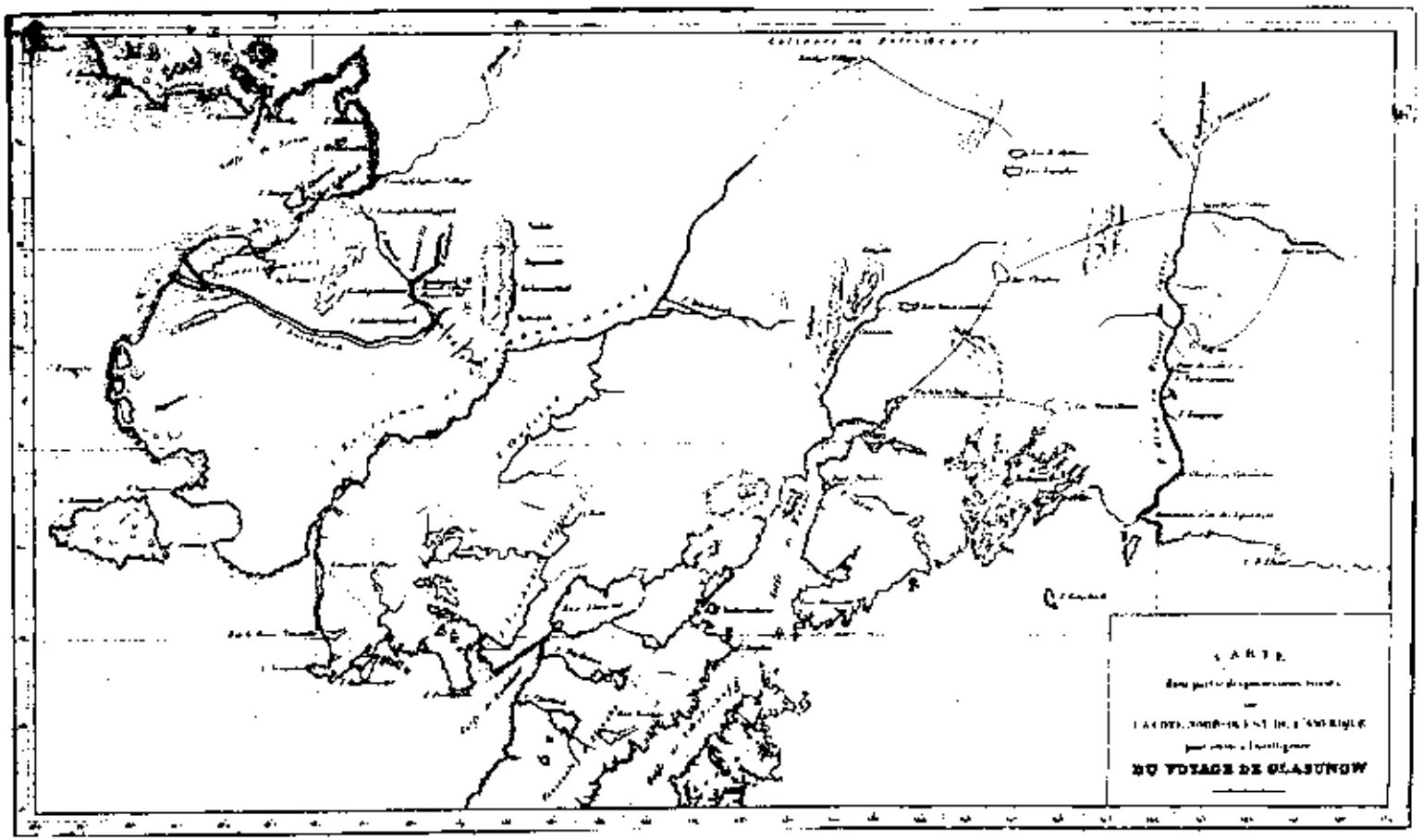
The map showing the general route followed by Glazunov indicates how much of the coast of Alaska between Prince William Sound and Norton Sound was known at that early date. Of interest to this study, the map shows a post or fort located on the west bank of an unnamed river near its junction with Iliamna Lake. The river enters Iliamna Lake from the northeast and joins Iliamna to a smaller unnamed lake. It is likely that the unnamed lake represents Lake Clark, the river the Newhalen, and the post Rodionov's summer camp and trading post.[76]

In late February 1834, Glazunov and his party arrived at Kwigymtainagmut, near the confluence of the Kuskokwim and Kolmakov rivers, where a Russian post had been established by the Creole Lukin in 1833 following explorations by Fedor Kolmakov in 1832-1833. The English translation of Glazunov's journal extract describes his activities, observations, and intentions while at the village:

> There were four winter huts and some caches in this village. In winter the number of inhabitants consists of 120 persons of both sexes. Glazunov attempted to procure guides to conduct him to the mouth of the Tschalchuck (Stony River), which empties into the Kuskokwim, because they said that there is a portage from there to the Gulf of Kenai (Cook Inlet). But, far from showing a desire to accompany him, the inhabitants made every effort to dissuade him from his project, pointing out that he would undoubtedly perish from hunger and poverty if he succeeded in escaping from the ferocious Kyltschanes (interior Athabascans). They assured him that at first he would travel a long time without finding a habitation, and that, having arrived in the swamps which border the gulf of Kenai (Cook Inlet), he would probably fall into the hands of the Kyltschanes, who would massacre him with all his companions. Lukin confirmed what the natives said; he added that at the beginning of the winter he himself had ascended the Tschalchuck (Stony River) to a sufficiently great distance and that its course was so rapid the ice was frozen almost

75. VanStone, ed., *Russian Exploration in Southwest Alaska*, pp. 8-10, 13-14, 93 and Pierce, *Russian America: A Biographical Dictionary*, pp. 518-19.

76. See the following page for a copy of the map accompanying Ternaux-Compans' summary of Glazunov's travels.



Map accompanying Ternaux-Compans' summary of Glazunov's travels. Source: Henri Ternaux-Compans, *Bibliothèque américaine; ou, Catalogue ouvrages relatifs a l'Amérique, qui ont paru depuis sa découverte jusqu'a l'an 1700* (Argonaut), 1968.

> nowhere. The banks were covered with brush so thick that he had been forced to retrace his steps and had been on the point of dying from hunger on the way.

Glazunov finally left without guides on February 25. Two days later he found two men who consented to accompany him as far as the mouth of the Stony River. The men assured him

> that it was impossible that a portage existed between the sources of the Kuskokwim and the Gulf of Kenai (Cook Inlet), because they were separated by inaccessible mountains; they also told him that the Kyltschanes (interior Athabascans) who inhabit the sources of the Kuskokwim and the Tschagiluk (Innoko River) trade together, and that the former give the latter, in exchange for beaver skins, tobacco which they receive from the inhabitants of the banks of the Tschalchuck (Stony River), who obtain it from the Kenayens (Dena'ina); but this commerce is not large, because of the distance.

Approaching the mouth of the Stony River on March 7 Glazunov apparently saw one of the peaks in the Alaska Range "about seventy or eighty versts distant." According to his guides, he was told that it was "there that the Tschalchuck [Stony River] has its source, and the opposite slope is inhabited by the Kenayens [Dena'ina]." Soon Glazunov's guides abandoned him, "because they did not wish, at any price, to expose themselves to a death which appeared to them inevitable." After trying in vain to find the reported portage by which it would be possible to find a stream flowing into Cook Inlet, he turned back.

While the most easterly point reached by the Glazunov party is not known, scholars believe that it was about 50 miles from the Kuskokwim, not far from what are now called the Lime Hills to the west of present-day Lake Clark National Park and Preserve. The journal extract notes that the men returned to Mikhailovsk Redoubt on April 15, "but for a long time they had swollen eyes and feet." Glazunov's winter journey of approximately 1,400 miles in 104 days during 1833-1834 stands as one of the most notable accomplishments in the history of interior Alaskan exploration. The expedition benefitted the company since many of the Native settlements which he visited entered into trade relations and made subsequent visits to the redoubt.[77]

Petr Malakhov Expeditions (1838-1840). During 1838-1840 the Creole Petr Malakhov, son of Vasilii Ivanovich Malakhov, who had earlier been commandant of the Nikolaevsk Redoubt at Kenai, was sent from the Mikhailovsk Redoubt to explore the upper Yukon. He ascended the river during two expeditions to the mouth of the Koyukuk. At the site of what would later be called Nulato, he built a block house, storeroom, and bathhouse. He then crossed to the Kuskokwim, which he followed to its junction with the Stony River. In accordance with his instructions he then attempted to follow the Stony to Cook Inlet, but nearly perished on the way because of a shortage of provisions. During his journey he acquired a quantity of furs and strengthened trade relations with Native tribes.[78]

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77. James W. VanStone, "Russian Exploration in Interior Alaska: An Extract from the Journal of Andrei Glazunov," *Pacific Northwest Quarterly*, L (April 1959), pp. 37-47. Also see "Extract of the Diary of Ship's Mate Andrei Glazunov, Written During a Journey into the North American Interior," in Richard A. Pierce, ed., *Russian America Statistical and Ethnographic Information By Rear Admiral Ferdinand Petrovich Wrangell With Additional Material by Karl-Ernst Baer* [translated from the German edition of 1839 by Mary Sadouski] (Kingston, Ontario, The Limestone Press, 1980), pp. 69-80; Wendell H. Oswalt, *Mission of Change in Alaska* (San Marino, The Huntington Library, 1963), p. 12; and Pierce, ed., *Russian America: A Biographical Dictionary*, pp. 167-68.

78. Richard A. Pierce, "Russian Exploration in North America," in Shalkop, ed., *Exploration In Alaska*, pp. 123; and Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, p. 184.

Lt. Lavrentiy A. Zagoskin Expeditions (1842-1844). Although considerable exploration had been conducted in interior southwestern Alaska by the early 1840s the vicinities of the Kuskokwim and Yukon rivers "remained either unexplored or completed exploration had failed to furnish the precise data required for expanding the company's activities." Thus, in 1842 the Russian-America Company commissioned Lt. Lavrentiy A. Zagoskin, who had recently transferred from the Imperial Navy to the employ of the company to pursue several objectives, one of which was

> to follow from Fort St. Michael to their sources the two rivers Yukon and Kuskokwim, and the river known to us to flow parallel to these two, the Chagelyuk, which is reported to have an abundant supply of river beaver; to put down the most satisfactory description possible of the country drained by these rivers and to ascertain the most practical and shortest portages from one river to another.[79]

The subsequent three-year expedition of Zagoskin, covering the years 1842-1844, has been described as representing "the outstanding Russian achievement in interior Alaskan exploration" and "a fitting culmination to the efforts of Wrangell to foster the pursuit of scientific interests in Russia's American possession."[80] Zagoskin made statistical, ethnographical, geological, and botanical observations; surveyed the Yukon River for a distance of 600 miles (as far as the vicinity of the Nowitna River), and the Kuskowim River (to the junction of the Takotna River) for a distance of 250 miles; and explored the most important tributaries of the Yukon for a distance of 100 miles.[81]

In the extensive and detailed published journal of his travels Zagoskin includes some observations that are pertinent for this study. While traveling along the Kuskokwim River in 1844, he visited Kolmakovsk Redoubt, which had been established by Fedor Kolmakov across the river from the aforementioned village of Kwigwmpainukamiut three years earlier, as well as the Lime Hills region, near the intersection of the Kuskokwim and upper Stony River, west of present-day Lake Clark National Park and Preserve.[82]

Although some of Zagoskin's place names are difficult to identify and some of the distances he cites are questionable, he discovered that much of the beaver fur from the upper Kuskokwim region was traded to the Dena'ina. This tribe, who had been able to establish lucrative middlemen positions in the thriving trade between the Russians at Nikolaevsk Redoubt at Kenai and the interior peoples, met the upper Kuskokwim Athapaskans at a place called Itstsynno, probably near present-day Medfra. While he was in the upper Kuskokwim Zagoskin observed in his diary:

> The location of Fort Kolmakov makes it very important as a center for trading operations between the tribes of the upper and lower river. At the present time the manager of the fort has direct, friendly relations with the natives of the first five villages towards the mouth of the Kuskokwim. In the last one, Ugavik, he keeps a temporary post for trading

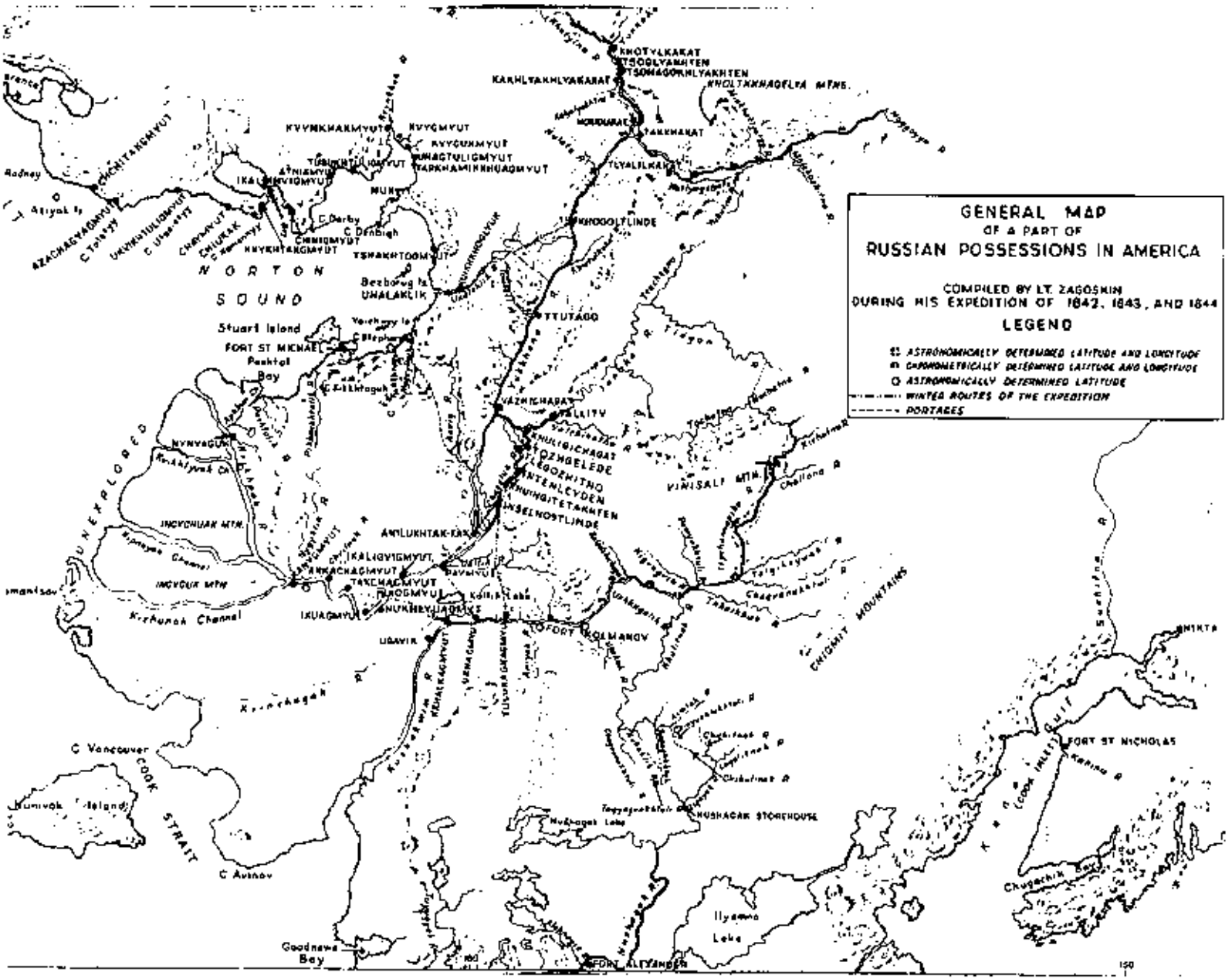
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79. Henry N. Michael, ed., *Lieutenant Zagoskin's Travels in Russian America, 1842-1844* (Toronto, University of Toronto Press, 1967), p. 82.

80. M.B. Chemenko, G.A. Agranat, and Y.E. Blomkvist, eds., *The Travels and Explorations of Lieutenant Lavrentiy Zagoskin in Russian America, 1842-1844* (Moscow, State Publishing House of Geographic Literature, 1956), p. xii.

81. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, p. 348, and Michael, ed., *Lieutenant Zagoskin's Travels*, p. 83.

82. Oswalt, *Mission of Change*, pp. 11-12.



Map of Zagoskin's travels. Source: Henry N. Michael, ed., *Lieutenant Zagoskin's Travels in Russian America, 1842-1844*, 359.

with the tribes of the lower river, but he has not decided to visit that area himself, out of consideration for the great numbers of natives there and their turbulent character. He trades rather with the natives living along the banks of the Ittege. On the other hand he goes every year to the upper Kuskokwim and carries on profitable trading with the tribes there [Itstsynno] and with the Trynay [Dena'ina] of the Tkhalkhuk [Thaluk, Stony].

Up to 1841 more than 2,000 beaver pelts were bought up in the Komakov post. But in 1842 through ignorance as to which tribes carried on trade with this settlement, the Kenai [Dena'ina] were given the means of crossing over the mountains to the upper Kuskokwim, and the number of furs collected sank to 1,200. We know that the Kenai have abused the remote tribes and are few in number, and also, when they are held up by bad weather on the return journey, they often eat beaver hides after they have steamed off the fur. For this reason and out of regard for our relations with the tribes of the interior it seems to me more profitable to leave things the way they used to be, and to limit the activity of each division to the area enclosed by its natural boundaries.

Further east, near the intersection of the Kuskokwim and the Tkhalkhuk (upper Stony) rivers in the region of the Lime Hills he commented further:

At the point where it joins the Kuskokwim the Tkhalkhuk flows from the east but its source is towards the northeast, according to the manager of the fort. Lukin went upstream as far as the native villages which are situated 45 miles from the mouth, at the first rapids, but the natives say that this river flows out of a lake situated in mountains called Chigmit.

We saw a few of the nearer peaks of this chain, about 50 miles distant, from the cliff by the river where we made our observations. The Chigmit Mountains separate the waters of the Kuskokwim basin from those that flow into Kenai Gulf, and in all likelihood constitute a cross-branch or spur of the true Rocky Mountains which were seen by Mackenzie on his voyage to the Arctic Ocean. The name of the Tkhalkhuk has been known to us since Glazunov's ill-fated trip, but truth compels us to add that a year before Gluzunov, the [present] manager of Fort Kolmakov visited the natives of that river and in areas to which Glazunov never penetrated. The Trynay of the Tkhalkhuk River who belong to the tribes occupying the shores of Kenai Gulf are exclusively traders. They visit the Nikolayev redoubt [Fort St. Nicholas], the Slatin post [on Iliamna Lake], and Fort Kolmakov, which they consider very accessible. The powder and firearms they buy there, they trade to the Kenai Gulf area.

Thus, it appears that the Cook Inlet Dena'ina, with the encouragement of the Russians, served actively as middlemen in the fur trade between the Cook Inlet and upper Kuskokwim regions.[83]

SCIENTIFIC EXPLORATION OF THE INTERIOR OF SOUTHWEST ALASKA: 1830s-1860s

While the Russians sponsored exploration of interior southwestern Alaska during 1818-1848 in their quest to expand the inland fur trade, they also promoted scientific inquiry in the region beginning

83. Chemenko, Agranat, and Blomkvist, eds., *Travels and Explorations of Lieutenant Lavrentiy Zagoskin*, pp. 254, 268, 272. See following page for a copy of a map of Zagoskin's travels that appears in this work.

in the 1830s. The data gathered by the various scientific investigations was valuable to the Russian-American Company as it continued to exploit the resources of northwest North America.

Baron Ferdinand P. Wrangell (1839)

In 1839, four years after leaving office as general manager of Russia's American colonies, Wrangell published his *Russian America Statistical and Ethnographic Information*. By the time Wrangell became chief administrator of the colonies in 1830 he had achieved distinction both as a naval officer and explorer in Northeast Asia and North America. His work included observations and materials he gathered during his years in North America. For portions of this publication he drew heavily upon the accounts of Vasilev and Glazunov whose expeditions into the interior he had encouraged and promoted.

One of the chapters in his work was entitled, "Notes On Two High Mountains On the West Coast of Cook's Inlet and the Effect of Subterranean Fires on the Island of Unimak." The chapter, which illustrates Wrangell's keen sense of scientific inquiry into geographical and scientific topics, provides some of the earliest detailed data on the Iliamna and Redoubt volcanoes, both of which are in present-day Lake Clark National Park and Preserve. He observed:

> A chain of high mountains extends along the west side of the bay; some of the peaks (*sopki*) are covered in eternal snow. The loftiest summit seen from the Nikolaevskii Redoubt is that which Vancouver recognized to be a volcano. Smoke rises unceasingly from its pointed summit. The deep fissures which have been torn in its sides are clearly visible from the redoubt 133 versts distant. The visible part of the mountain, known here as the Iliamna volcanic peak, is covered by eternal snow; on a sunny day, the snow sparkles so that the mountain seems to be very near, even to an experienced eye. Surveying by means of two baselines of a triangle, I found the mountain to be 62°11½', by the true compass, southwest of the redoubt and 465,240 feet, or 76.45 Italian miles distant; 14 feet above sea level the angle of the summit is 1°9'30" (measured on 8/20 June 1834 on a clear, sunny day). Taking the curve of the earth's surface into account, and the operation of refraction at 1/7 of the visible height, the perpendicular height of the mountain is 7,635 above the horizon, 4,331 feet below it, so that the total height is 12,066 feet, that is, 1,085 feet higher than Mount Etna. Iliamna's peak serve as a very convenient landmark to determine other points since the mountain is visible from the greater part of Cook's Inlet and from the opposite (N and S) sides of the Aliaska Peninsula. Another pointed mountain rises opposite the redoubt, 86°36' southwest by the true compass and 319,999 feet or 52.59 Italian miles distant; since the summit is calculated at 1°58'40", it follows that the perpendicular height is 11,270 English feet above sea level.

Petr Doroshin (1848-1854)

The gradual extermination of the sea otter and other furbearing animals and the discovery of gold in California in 1848 influenced the Russian-American Company to give serious attention to geological and metallurgical surveys beginning in the late 1840s. Thus, the company sent Petr Doroshin, a mining engineer, to Alaska in 1848. With the help of 12 men, he carried out his investigations in 1849-1850, reporting that he found gold grains everywhere he dug along the Kenai River, although not in paying quantities.

In 1851 Doroshin set to work looking for coal. He found promising coal veins at Port Graham and on the northwestern shore of Kachemak Bay, before sailing north along "the eastern shore of the Inlet to its head, crossing the mouths of the streams but not entering them, thence down the western shore as far as Kamishak Bay." Here he left the boat and struck out over the mountains to Iliamna Lake, making notes on the geologic formations of the country. Reaching the lake he took a boat down the Kvichak River to Bristol Bay and from there "up the Naknek River and lakes and the Mishket River to the rapids." He then crossed the mountains to Katmai. After extensive exploration of the Kodiak, Unga, and Sitka regions, he returned to Russia in 1854.

Captain M.D. Teben'kov (1852)

In 1852 Captain M.D. Teben'kov of the Russian Navy published his *Atlas of the Northwest Coasts of America* in St. Petersburg. The atlas (the first atlas produced by a Russian cartographer was that by Sarichef in 1826) was based on data he had gathered from other resources as well as exploration voyages of his own and included hydrographic notes. Teben'kov paid particular attention to the Kodiak-Cook Inlet region because of its extensive economic traffic. Thus, the atlas included a rather detailed map of Cook Inlet, including topographical features along its west shore. Among the features delineated were the Redoubt and Iliamna volcanoes and the Alaska Range. Regarding the west side of the inlet, Tebenkov observed:

> The west shore of Kenai Bay is a northern extension of the range of snowy mountains of Aliaska [Peninsula], turning here their rocky side. Two mountains, Iliamna and Redutskaia, are particularly distinctive for their height. Kashevarov fixes the first at 12,066 feet and the second at 11,270 feet....Trees grow on the coast or at the foot of the mountain; the shore at the water's edge is generally steep and rocky.[84]

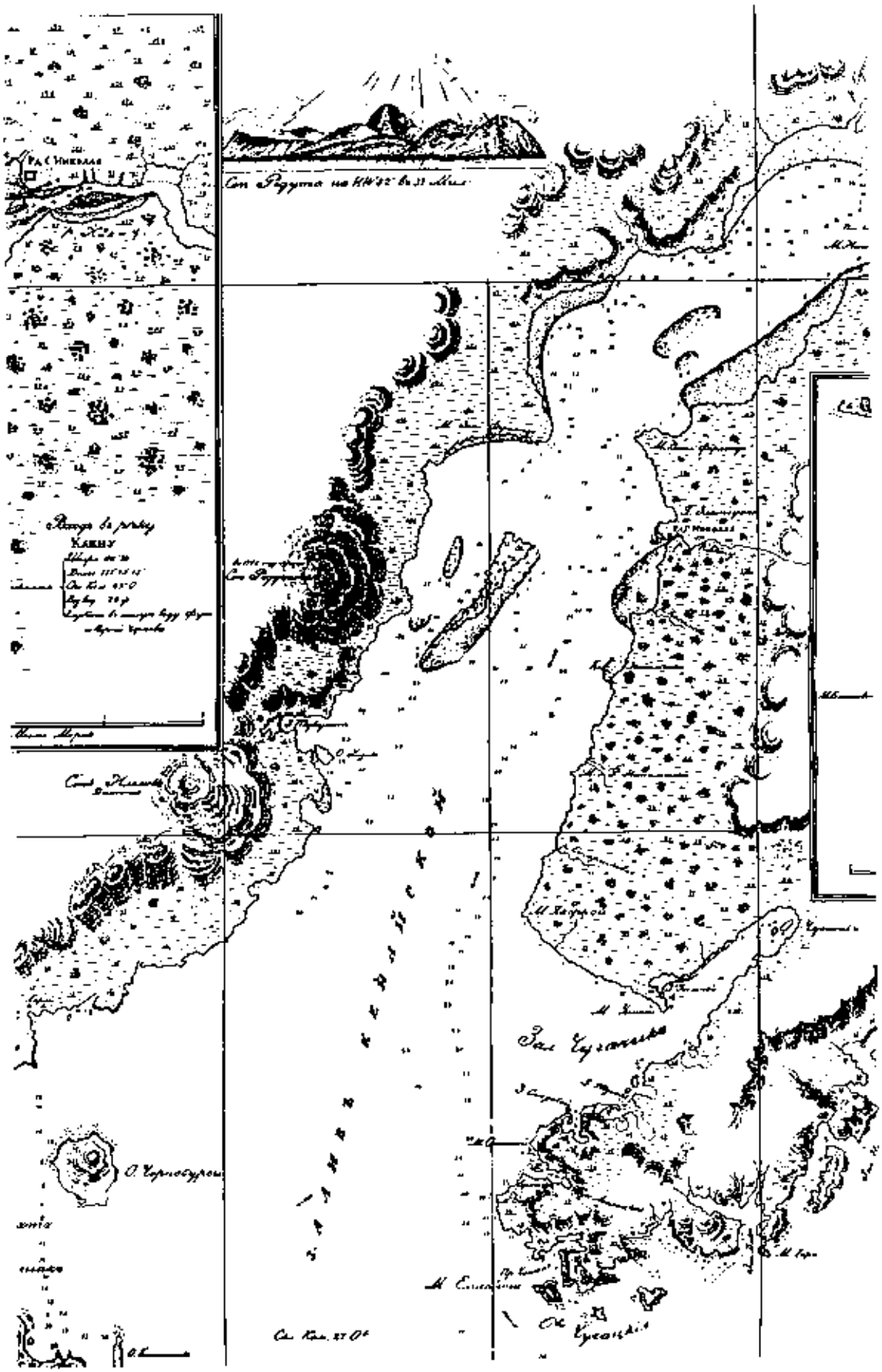
EVENTS IMPACTING NATIVE AND NON-NATIVE POPULATIONS IN THE COOK INLET-LAKE CLARK REGION: 1830s-1860s

While the Russian-American Company was directing exploration of interior southwestern Alaska as a means of expanding its fur trade operations, events were taking place in the vicinity of Cook Inlet and Lake Clark that would have a major impact on the area's indigenous and non-Native populations. During the 1830s and 1840s, the Russians established several agricultural settlements. Then, in the late 1830s, a disastrous smallpox epidemic struck the Dena'ina in the Cook Inlet-Lake Clark area, decimating the Native population and causing Native culture to decline.

The agricultural settlements were encouraged by the Russian government, which wanted to increase the number of non-Native persons along the shores of Cook Inlet. In 1835, former employees of the Russian-American Company with families were permitted to remain in the colonies permanently, be reclassified as "colonial citizens," and establish special settlements. It was recommended that "similar settlements also be formed for the Creoles."

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84. R.A.Pierce, ed. and trans., *Atlas of the Northwest Coasts of America From Bering Strait to Cape Corrientes and the Aleutian Islands With Several Sheets On the Northeast Coast of Asia*, compiled by Captain 1st Rank M.D. Teben'kov and published in 1852 With Hydrographic Notes (Kingston, Ontario, The Limestone Press, 1981), pp. 18-19. See the following page for Teben'kov's map of Cook Inlet.



Teben'kov's map of Cook Inlet. Source: R.A. Pierce, ed. and trans., *Atlas of the Northwest Coasts of America...*, Chart V.

Under this policy construction began on agricultural settlements on Elovyi and Afognak islands and Cook Inlet. The only successful settlement to be established in the Cook Inlet region was Ninilchik on the east shore of the inlet at the mouth of the Ninilchik River in 1835. Four years later, Wrangell reported that the farming communities, such as Ninilchik had a "significant number" of cattle, hogs, goats, fowl, and ducks.

Later, in 1844, the agricultural settlements at Kachemak Bay (Seldovia), Kenai, Knik, and Matanuska were established on the east and north shores of Cook Inlet, and Rossiiskoe Selenie [Russian settlement] on the northwestern shore (Tyonek). These sites, however, were apparently soon abandoned for want of settlers.

RELIGIOUS ENDEAVORS OF THE RUSSIAN ORTHODOX CHURCH IN THE COOK INLET-LAKE CLARK REGION: 1799-1867

Ivan Veniaminof, who had become Bishop Innocent in 1840, established three new missionary districts during 1842-45 to promote evangelization in remote areas where there had been only limited religious activities in previous years. In 1842 he established the Nushagak Mission, which would be based at Alexandrovsk Redoubt.[85]

Two missionary districts, the Kvikhpak or Yukon Mission and the Kenai Mission, were established in 1845 in concert with reorganization of Russian-American Company business operations in interior southwestern Alaska. As a means of reducing company expenditures, A.K. Etolin, chief administrator of Russian's American colonies during 1840-45, announced plans for the reorganization in December 1844. Etolin, aware that Innocent planned to establish new missionary districts in the Cook Inlet and Yukon-Kuskokwim regions, wrote to Innocent on December 23, describing his plans and recommending concurrent changes in the alignment of religious administration:

> Alexandrovsky Redoubt at Nushagak will be eliminated and only a post with one bidarka leader and three or four Aleuts will be left there. These men will be subordinated to Nikolaevsky Redoubt at Kenai Inlet, from where they will be supplied with foodstuffs and trade goods via Iliamna Post, which trip may be easily completed on boats in six days. This plan will eliminate the use of sailing vessels in communicating with Nushagak.
>
> The Kolmakovsky Redoubt on Kuskokwim, which is now subordinated to the Alexandrovsky Redoubt, and all other trading posts on Kuskokwim River will be subordinated to Mikhailovsky Redoubt.

Thus, he requested Innocent "to issue an instruction"

> if possible, that upon the establishment of a permanent church at Nikolaevsky Redoubt on Kenai Inlet, the priest there should take charge of the church at Nushagak while the

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85. *Ibid.*, I, pp. 386-6; Nichols and Croskey, eds. and trans., "Condition of the Orthodox Church in Russian America," pp. 53-54; James W. VanStone, "Some Aspects of Religious Change Among Native Inhabitants in West Alaska and the Northwest Territories," *Arctic Anthropology*, II (No. 2, 1964), pp. 21-22; Kovach, "Russian Orthodox Church in Russian America," pp. 174-75; and Antoinette Shalkop, "The Russian Orthodox Church in Alaska," in Starr, ed., *Russia's American Colony*, pp. 215-17.

CENSUS OF PERSONS UNDER THE JURISDICTION OF THE KODIAK OFFICE, AS OF JANUARY 1, 1825

	Adult		Minors	
	Male	Female	Male	Female
Clergy	2			
Russian officials and promyshlenniks	68			
Retired promyshlenniks	5			
Non-salaried promyshlenniks	9			
Creole service personnel	31	96	76	74
Creoles freed from service	1	1		
Aleuts on salaries	9	6	5	3
Aleuts freed from service	12	5		
Total	137	108	81	77
Free Aleuts on Kodiak Island and nearby islands	883	1,110	442	344
On the shore	5	4	3	6
Total	1,025	1,122	527	427
Infants	527	427		
Total for Kodiak	1,552	1,649		in all, 3,201
On Unalaska	36	34	15	13
In the Sutkhum artel by census of 1822	17	13	5	6
In Chugach Bay, Chugach	460	517	322	264
In Kenai Bay, Kenaits	383	418	253	245
Aleuts in Katmai settlement	43	46	26	16
In Aleksandrovsk Department	179	238	123	127
Total	1,118	1,266	744	671
Infants	744	671		
Total	1,862	1,937		grand total 3,799

Total population in Kodiak Department	7,000
Excluding Russians	84
Total	6,919

Source: Dmytryshyn and Crownhart-Vaughan, eds., *Colonial Russian America, p. 144.*

missionary at Mikhailovsky Redoubt will take charge of all the converts along the Kuskokwim River; this will relieve the Company of the delivery of large quantities of supplies to Nushagak.[86]

Bishop Innocent responded favorably to Etolin's recommendation for coordination of religious activities and fur trade operations by establishing two new missionary districts in December 1844. The Kvikhpak or Yukon Mission was to be based at Mikhailovsk Redoubt with the charge to spread Christianity in the Yukon and Kuskokwim valleys.[87] The Kenai Mission under the leadership of the priest Igumen Nicholas would be based at Nikolaevsk Redoubt at Kenai to missionize in the Kenai Peninsula, Cook Inlet, Prince William Sound, and Lake Clark-Iliamna Lake regions, an area that incorporated present-day Lake Clark National Park and Preserve.[88]

Having established these two missionary districts, Innocent ordered the ecclesiastical consistory of Sitka to issue several ukases. The first read:

> Send ukases to the Kenai and Nushagak missionaries with the information about Nushagak and order the *first one*: that he must try, if possible, to make a trip this summer from Nikolaevsky Redoubt via Iliamna Post to the mouth of Naknek River; to learn in detail all local conditions regarding communication with Nushagak; and to send me his report and his travel journal at the first opportunity. The *second one*: that in case the missionary at Kenai, Hieromonk Nicholas, will not be able to reach the mouth of Naknek River this summer, he must endeavor to make a trip at least to Iliamna Post and to find in detail whether it will be possible for the Kenai missionary to take charge of the Nushagak region (except the Kuskokwim and Chulitna rivers which from now on will be under the charge of the Kwihpah missionary) and whether he can visit all the settlements of the Nushagak mission in one summer; he (Nushagak missionary) must be ordered to report to me in detail about his achievement this summer and transmit to me his travel journal.[89]

While no documentation was found concerning the results of the missionaries' travels and reports during the summer of 1845, Nicholas was given charge of the Nushagak Mission in 1846.[90]

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86. *Documents Relative to the History of Alaska*, I, pp. 365-66. As early as 1835 Fedor Kolmakov, manager of the Alexandrovsk Redoubt, had been ordered by company officials to allow the "iliamnins" (Tanaina of Iliamna Lake area) to hunt in the Nushagak region, thus leading to the supposition that furs from that area were being traded at Iliamna as well as at the redoubt. Sarafian and VanStone, "Records of the Russian-American Company As A Source for the Ethnohistory of the Nushagak River Region," pp. 66.

87. Pierce and Donnelly, eds. and trans., *History of the Russian-American Company*, by Tikhmenev, pp. 381-83; *Documents Relative to the History of Alaska*, I, pp. 368-69; and Shalkop, "Russian Orthodox Church In Alaska," in Starr, ed., *Russia's American Colony*, pp. 212-15.

88. *Documents Relative to the History of Alaska*, I, p. 247; Afonsky, *History of the Orthodox Church in Alaska*, pp. 57, 62-63; and Townsend, "Ethnohistory and Culture Change," p. 58.

89. *Ibid.*, I, pp. 366-67.

90. Kovach, "Russian Orthodox Church In Russian America," p. 235, and Sarafian and VanStone, "Records of the Russian-American Company As A Source for the Ethnohistory of the Nushagak River Region," p. 75.

Kenai Mission Activities (1845-1867)

Nicholas arrived at Nikolaevsk Redoubt at Kenai with one song leader on April 26, 1845, to begin "his missionary activities." Born in Russia about 1806, the son of a church songleader, he entered the monastic order and was sent to Sitka in 1841 with Bishop Innocent to serve as steward of the Bishop's house and priest of his chapel.[91]

During the two years following the establishment of the Kenai Mission, Nicholas "visited all the villages of the Kenai Natives and of the Chugach, baptizing 400 people, not counting children." His missionary travels included the Dena'ina villages of Kijik on the shores of Lake Clark and the Mulchatna River valley to the northwest as evidenced by the existence of confessional records for those areas dating back to 1847.[92]

Although the Kenai Mission had been established to take pressure off the Kodiak Mission, missionary work still faced considerable obstacles. The Iliamna Lake villages were difficult to reach because one had to cross the inlet and then portage some 12 miles over the Aleutian Range. Travel from Iliamna to Kijik village on Lake Clark and the Mulchatna villages beyond was even more difficult and time consuming, since that required both overland and water travel. Because of these difficulties, the Iliamna, Kijik, and Mulchatna villages were rarely visited by a priest. In 1853, these Dena'ina villages were removed from the Kenai Mission and placed under the jurisdiction of newly appointed Hiermonk Theophil of the reestablished Nushagak Mission from which access was probably easier.[93] The Kenai Mission would continue to have responsibility for the Dena'ina of the Cook Inlet vicinity.[94]

Condition of the Church (1860s)

As a result of Bishop Innocent's efforts the Orthodox Church grew extensively in Russia's American colonies from 1841 to 1867. From a rather limited parish concept, confined to the areas with the largest concentration of Russians, the religious mission in 27 years had come to embrace large regions populated primarily by Native tribes. By the mid-1860s the colonies had a cathedral at Sitka, nine parish churches, including three missions, and 35 chapels. The total number of clergy in

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91. Ibid., I, p. 247, and II, pp. 354-55.

92. "Kijik Confessional Records, 1847-1910," translated by Anne Sudcamp and John Stinson; Dena'ina names identified by Andrew Balluta and Albert Wassillie with the assistance of Linda Ellanna; data compiled and analyzed by Linda Ellanna, Anne Sudcamp, and John Stinson; January to May 1987, pp. 1-20; and "Mulchatna Confessional Records, 1847-1886," transliterated by Anne Sudcamp and John Stinson; Dena'ina names identified by Andrew Balluta and Albert Wassillie; Dena'ina names written by Albert Wassillie, with the assistance of Linda Ellanna, Andrew Balluta, and Anne Sudcamp; May and September 1987, pp. 1-28. Copies of both of these documents were provided to the author of this study by Linda J. Ellanna, Professor of Anthropology, University of Alaska, Fairbanks.

93. Sarafian and VanStone, "Records of the Russian-American Company As A Source for the Ethnohistory of the Nushagak River Region," pp. 75-76.

94. Townsend, "Journals of Nineteenth Century Russian Priests to the Tanaina," p. 7, and Kovach, "Russian Orthodox Church in Russian America," pp. 225, 268.

America in parish churches was 11, aided by "sixteen additional church service persons."[95] Among the parishes were the "Kenai Mission on Kenai Bay and Chugach Sound," which extended to "the interior of the mainland up to the Copper River, with 1,633 parishioners of both sexes," and the Nushagak Mission, which covered the area "along the Nushagak River and along Bristol Bay up to Lake Iliamna" with "1,635 parishioners of both sexes."

The churches and chapels were generally maintained through donations from parishioners and revenues from the sale of candles. Donations from parishioners were partly in cash and partly in furs. Since the company had the exclusive right to purchase all furs, it paid the church from 25 to 50 paper rubles for one sea otter pelt, depending on its quality.

Although the company had pledged to set aside a yearly stipend of 24,927 rubles for churches when the diocese had been established in 1841, the actual cost for church operations, including housing for clergy, servants, and transportation, amounted to an annual total of 32,938.70 rubles. In addition the Holy Synod paid 3,085 rubles each year for the maintenance and operation of the Kenai Mission.

According to Bishop Petr of Sitka in 1860 the tribes "most adaptable to conversion to Christianity" had been the Aleuts, the Alegmiuts and Ugalents in Nushagak parish, and the "Kenais." This was "primarily due to the fact that they are quite gentle and obedient people and are willing to be baptized when they have been persuaded that this is necessary." In general, however, these tribes were "indifferent to religion."

After visiting the colonies to investigate their affairs on behalf of the Russian-American Company, Captain P.N. Golovin published a lengthy report in 1862. In a section on religious activities and administration, Golovin blamed much of the Native religious indifference on the clergy:

> It is no wonder that they are not convinced of the superiority of the Christian faith, for not one of the missionaries in the colonies has the slightest knowledge of their language, and consequently cannot converse with them. Even when they come to confession they do so with the help of interpreters who may know the Native dialect, but little Russian. Often they are unable to express any of their thoughts at all.

CONDITIONS IN THE COOK INLET-LAKE CLARK REGION ON THE EVE OF ALASKA'S PURCHASE BY THE UNITED STATES

In 1867 Russia sold its North American colony to the United States for $7,200,000. With its empire facing increasing difficulties in other parts of the world and the growing awareness that it could not defend the colony against foreign intervention and competition, the Russian government decided

95. While the leadership of the American mission was held by Russians, Creoles and native Americans from the beginning were trained for positions of church responsibility. In addition to developing a native clergy, the church undertook to establish a body of laymen who could conduct weekly worship services in the absence of a priest. In the interior a local religious leader was critical because a priest could only visit a village periodically and the native population was highly mobile, moving seasonally to fishing and hunting sites. While only a priest could perform the liturgy and administer the sacraments (except for baptism which any layman could perform) trained laymen could conduct all other services. Smith, *Orthodoxy and Native Americans*, p. 16.

not to renew the charter of the Russian-American Company and concluded the sale of Alaska to the United States.[96]

The question may well be asked as to the conditions and Russian-American Company operations in the Cook Inlet-Lake Clark region as the Russian government prepared to sell its American colonies. Two principal sources provide a picture as to what those conditions and operations were. The principal two sources are P.A. Tikhmenev's *History of the Russian-American Company*, published in 1863 and Captain P.N. Golovin's report after visiting the colonies in 1862.

According to Tikhmenev several "company odinochkas and native villages" were located on the Alaska Peninsula just to the southwest of Cook Inlet. These included locations at Katmai Bay with 457 inhabitants and Iliamna Lake "on the Iliamna River, with 140 inhabitants." On the shores of Cook Inlet "fir, pine, larch, alder, poplar, and, in the northern part, birch" grew in profusion as well as "many berries – crowberries, raspberries, frostberries, cranberries, and red currants." Regarding Kenai Bay, as the Russians called Cook Inlet, Tikhmenev observed:

> Cape Douglas on the west shore and Cape Elizabeth on the island next to the east shore, forty-six miles apart, form the entrance to this bay. There are many indentations in the shores of this bay, the main ones being Kamyshak Bay on the west shore and Chugachik or Kachetmak Bay on the east shore. The west shore of the bay is made up of the high mountains of the Aliaska Peninsula, the largest being the Iliamna and Redoubt volcanoes.

The Cook Inlet-Lake Clark region was administered by the Kodiak Department of the Russian-America Company. The Kodiak Department, according to Golovin, included:

> the coast and islands in Kenai Bay and Chugach Sound, the coast of the Alaska Peninsula to the meridian of the Shumagin Islands, the islands of Kodiak and Ukamok and all the adjacent islands, and Semidi Islands. To the north it embraces the coast of Bristol Bay and the Nushagak and Kuskovym river basins.[97]

Within the department there were "colonial posts for barter with the natives, and there are special *prikashchiks* and *baidarshchiks* in the redoubts and odinochkas, all of whom were appointed by the chief manager from among Russians or Creoles in Company service."

The redoubts and odinochkas were, according to Golovin, little more than trading stores. They were generally enclosed with a four-sided palisade for security. In two diagonally opposite corners formed by the four-cornered palisade were small log towers, defended by several small caliber guns, each firing on the two faces adjacent to it. There was no military garrison, and in case of alarm the *promyshlenniks* and workers living in the redoubt became a garrison for which they were armed with rifles and sidearms.

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96. Gregov, ed., *Russian-American Company*, by Okun, p. 243. Further information on the sale of Alaska may be found in Howard I. Kushner, "'Seward's Folly'?: American Commerce in Russian America and the Alaska Purchase," *California Historical Quarterly*, XIV (Spring 1975), pp. 5-26; Ernest Greuning, ed., *An Alaskan Reader* (New York, Meredith Press, 1966), pp. 37-48; and Richard A. Pierce, "Prince D.P. Maksutov: Last Governor of Russian America," *Journal of the West*, VI (July 1967), pp. 395-416.

97. Tikhmenev denoted the population of the Kodiak department as of January 1, 1863: Russians and foreigners, 130; Creoles, 969; Aleuts and Kurils, 1,993; and dependent tribes on the mainland, 2,765.

Both Golovin and Tikhmenev devoted considerable attention to the Native Dena'ina in the Cook Inlet-Lake Clark region. The Nikolaevsk Redoubt at Kenai, according to Golovin, was the only place in the Cook Inlet region with a significant Russian population and supervised an extensive area which included an *odinochka* at Iliamna. More than 900 "Kenais" lived in the region.

THE AMERICAN PERIOD

1867 - PRESENT

CHAPTER FOUR

THE FUR TRADE IN THE COOK INLET–LAKE CLARK REGION 1867 – EARLY 1900s

FUR TRADE OPERATIONS AND PRACTICES

Volume of Fur Production

It was furs that brought about the rapid exploration and colonization of what is now Alaska under the Russians. After purchase of Alaska by the United States in 1867 furs continued to be both a magnet and a source of wealth during the early American period. It was not until the final decade of the 19th century that furs were outstripped by commercial fishing and mining in dollar volume of Alaska exports.[1]

The conservation practices instituted by the Russian-American Company were gradually discarded after transfer of Alaska to the United States. Production figures for furs as provided in the censuses of 1880 and 1890 indicate that fur production in Alaska during the first 23 years of American rule (1868-1890) was nearly triple that of the last 23 years of Russian occupation (1845-1867). The tremendous increase in fur harvesting under the Americans can be better understood by focusing on the sea otter, the most significant item in the fur trade along Alaska's Pacific southwestern shores during the late 19th century.

Most of the types of furs found in Alaska were available in the Cook Inlet-Lake Clark region during the early American period, the most prominent exceptions being the polar bear and some species of foxes. The 1880 census report, for instance, indicated the presence in Cook Inlet of sea otter, beaver, land otter, brown bear, black bear, cross fox, silver fox, mink, and marten. The sea otter grounds, according to the fur distribution maps which accompanied the report, extended from the mouth of the inlet as far northward as the Forelands.[2]

In his *Our Arctic Province*, published in 1886, Henry W. Elliott observed that the "greatest number of different mammals found wild in any one region of Alaska is to be recorded" in the Cook Inlet country. The most prominent furbearers he noted included beaver, land otter, large gray wolves, lynx, wolverine, marten, mink, ermine, weasels, and muskrats.[3]

The 1890 census report included information on the distribution of furbearing animals in the Cook Inlet region. Sea otter were present "in the waters of the southern half of Cook inlet, and thence eastward to Prince William Sound," the "annual catch having dwindled to 400 to 500 skins." The land otter was found on the shores of Cook Inlet, while beaver were present "about Lake Iliamna, and the lakes and rivers of the Alaska peninsula." On the "shores of Cook Inlet and the rivers emptying into the same heavers" were "still comparatively plentiful, especially in the vicinity of the

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1. Robert N. DeArmond, "The Fur Trade of Cook Inlet: 1867-1900," November 1969, p. 1, File – Fur Trade-DeArmond History, Box V-30, Record Group 03, Cook Inlet Case Records, 1960s-1970s, Alaska State Archives and Records Center, Juneau.

2. *Report on the Population, Industries, and Resources of Alaska*, by Petroff, pp. 55-60.

3. Elliott, *Our Arctic Province*, p. 91.

large lakes occupying the central portion of the Kenai peninsula." The "largest specimens" of the brown bear were shipped from the coast of Cook inlet. On "the steep sides of the volcanic range of mountains on the west side of Cook inlet" brown bears could "be seen in herds of 20 or 30." From Bristol Bay eastward the black bear was "confined to the timbered regions about Lake Iliamna," but was more plentiful on the coast of Cook Inlet. Other furbearing animals in the Cook Inlet-Lake Clark region included the black or silver fox, the mink, which was "most plentiful in the vast tundras or mossy marshes of the Lower Yukon, Kuskokwim, Togiak, and Nushagak basins," the marten which inhabited "the valleys of the Yukon, Kuskokwim, and Nushagak rivers, from the headwaters down as far as timber exists, on the wooded mountain ranges of Cook Inlet and the Kenai Peninsula," the lynx, "found only in the wooded mountains of the interior on Kenai peninsula and the St. Elias range of mountains," and muskrats.[4]

Fur Harvesting Methods and Results

Several natural trade routes tended to funnel the furs from the large hinterland toward Cook Inlet. On the western side of the inlet there were a number of lesser trade routes, the most significant of which was probably the portage from Iliamna Lake to Iliamna Bay.

The northern part of Cook Inlet, as well as the inland Lake Clark region, was inhabited by Native Dena'ina who lived largely on the upland and who harvested land-based furbearers. The Native Dena'ina of the southern inlet lived close to and on the sea and thus their fur harvesting depended to a greater extent on harvesting sea creatures, such as seals, sea lions, and sea otters as well as various fishes and shellfishes.

In the early American period the maritime fur hunters of southern Cook Inlet still lived in numerous small villages scattered along the shore. As time passed, however, the seacoast people began to congregate in fewer and larger villages, one of the principal causes being that white traders preferred to do business in central locations rather than plying the coasts or traveling to many small villages. As the traders commenced establishment of permanent trading posts in larger villages, these became magnets further increasing the centralizing population trends.

While hunting pressures had been generally equalized along all sections of the coast prior to this centralization trend, migration to larger centers changed this equilibrium. The wildlife populations, including the sea otter and other furbearers, began to decline around the large villages. As a result, the fur hunters, and especially the sea otter hunters, moved out into camps during the hunting season. For the sea otter, this season was customarily from early spring until late fall, although in some areas hunting was conducted throughout the winter as weather permitted.

As the sea otter population dwindled, the hunting camps were moved frequently. The white traders began to take a hand in the camp moving, using their trading vessels. This practice soon developed into a pattern in which the trading schooner provided all transportation except for the actual hunting, kept the camps supplied with necessities, and picked up the furs at intervals.

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4. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, pp. 208-12. For more information on the types, ranges, and habitats of furbearing animals in the Cook Inlet region see Miner Bruce, *Alaska: Its History and Resources, Gold Fields, Routes and Scenery* (2d ed., New York and London, The Knickerbocker Press, 1899), pp. 63-83.

Sea otter hunting was not confined to vessels with Native hunters. No reports have been found of vessels with white hunters taking sea otter inside Cook Inlet, but otter hunters were not publicity seekers. There were no extensive investigations of the sea otter trade as there were of pelagic sealing, and consequently documentary sources are few.[5]

As the sea otter continued to dwindle another hunting method was devised whereby the hunters lived aboard the vessels. They were thus enabled to devote almost full time to hunting. When one hunting ground was depopulated, the entire crew could move quickly to another location. They could range farther seaward than was possible from a land base. This was of particular significance for Cook Inlet. The sea otter, which lives on shellfish and prefers the sea urchin, is seldom found in waters more than 50 fathoms in depth since this is the greatest depth to which it can readily dive for food. Along much of the southern coast of Alaska the 50-fathom curve is quite close to shore, but virtually all of Cook Inlet is within that depth. Using a floating base the hunters swept the entire inlet of its sea otter population.[6]

Laws existed to stem the annual kill, but the laws were rarely enforced. The first Alaska legislation enacted by Congress, in fact, was the Customs Act of July 27, 1868. Section 6 of the act provided that:

> It shall be unlawful for any person or persons to kill any otter, mink, marten, sable or fur-seal or any other furbearing animal within the limits of the said territory or in the waters thereof.[7]

Few Alaskans observed the prohibition as furs were a principal source of income. The officers of the Customs and the U.S. Revenue Marine were generally too busy attempting to stop liquor and gun smuggling to pay much attention to fur law enforcement, but there was apparently an effort to enforce this law at Kodiak. Because of the unenforceability of this law, the Secretary of the Treasury modified the ban on fur taking on July 6, 1870, granting permission "to the inhabitants of Alaska to kill the sea otter." This change resulted from the government's finding that it was "not only impossible at nearly every point to prevent the natives from hunting these animals, but also, in view of their destitute condition, highly impolitic to stop this source of their supply."[8]

On April 21, 1879, the fur laws of Alaska were modified again. The amended law stated:

> No furbearing animals will be allowed to be killed by persons other than natives. The use of firearms by natives in killing otter is prohibited from May until September. No vessels are allowed to anchor on the sea-otter grounds except those which may carry parties of

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5. DeArmond, "Fur Trade of Cook Inlet,", p. 8.

6. DeArmond, "Fur Trade of Cook Inlet," pp. 4-8. Also see Elliott, *Report Upon the Condition of Affairs*, pp. 54-62.

7. Quoted in Jeannette P. Nichols, *Alaska: A History of Its Administration, Exploitation, and Industrial Development During the First Half Century Under the Rule of the United States* (Cleveland, The Arthur H. Clark Company, 1924), p. 47.

8. George S. Boutwell, Secretary of the Treasury to William Kapus, Collector of Customs, Sitka [and enclosure], and McIntyre, Hutchinson, Kohl and Company to William Kapus, Collector of Customs, Sitka, September 5, 1870, U.S. Customs Service, Letters (general) Received by Collector of Customs, Sitka, Vol. 8, Alaska Historical Library, Juneau.

natives to or from such grounds. White men lawfully married to natives and residing within the Territory are considered natives within the meaning of this order.[9]

The last sentence of the order resulted from numerous petitions addressed to the Secretary of the Treasury from white male Alaskan residents. These men asserted that they were lawfully married to Natives and were unable to make a living except by hunting sea otters.[10]

Despite its intention the effect of the order of April 21, 1879, was to open sea otter hunting to everyone. If a white man claimed to be hunting otters by virtue of a Native wife in a distant village, it was virtually impossible for the few enforcement officers to prove otherwise. The order also encouraged mixed marriages in Alaska.

As a result of the extensive sea otter hunting operations, the population of these furbearing animals was decimated along the south Alaska coast and in Cook Inlet. The heaviest production came between 1881-1890. After that it tapered off rapidly, and by 1893 Native hunters were able to capture relatively few.[11]

In 1890, the Eleventh Census commented on the declining sea otter population in Chinitna Bay, once "the richest sea-otter hunting ground in the Kadiak district." The census report stated that the bay, which borders portions of present-day Lake Clark National Park and Preserve, was

> a deep indentation of the coast, but too shallow to serve as a harbor for any but the smallest sailing craft. This bay has been visited annually during the last decade by large sea-otter hunting parties of Kadiak Eskimo, numbering from 100 to 200 canoes, carried here by schooners or steamers of the Alaska Commercial Company, and taken home again with their spoils when supplies were exhausted. These hunters lived in temporary camps upon the low sandspits partially inclosing the bay, going to sea in search of otters whenever the weather was clear and the sea smooth enough for canoes. For many years this was the richest sea-otter hunting ground in the Kadiak district, but as from year to year the number of white men hunting with schooners of from 8 to 15 tons burden increased, until the surface of the inlet was dotted with their sails, the shy animals began to disappear, and the few which escaped from the incessant slaughter sought more retired feeding grounds.[12]

Fur-taking regulations for Alaska remained without substantial change between 1879 and 1893. On January 19 of the latter year, however, the Secretary of the Treasury, alarmed by reports of the rapidly declining sea otter population, imposed tight restrictions. The new order provided that:

> No furbearing animal will be allowed to be killed by persons, other than natives, within the limits of Alaska Territory or in the waters thereof.

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9. John Sherman, Secretary of the Treasury, Treasury Order Dated April 21, 1879, U.S. Customs Service, Letters (general) Received by Collector of Customs, Sitka, Vol. 9, Alaska Historical Library, Juneau.

10. H.H. French, Assistant Secretary of the Treasury to Collector of Customs, Sitka, July 16, 1877, U.S. Customs Service, Letters (general) Received by Collector of Customs, Sitka, Vol. 11, Alaska Historical Library, Juneau.

11. "Sea Otter Hunting," pp. 46-47.

12. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, p. 71.

White men married to natives and residing within the Territory will not be entitled to the privilege of natives under this order.

The use of rifles, shotguns, or other firearms by the natives in killing sea otter, or the use of nets in taking them, is hereby prohibited.

No vessel except United States revenue cutters will be allowed to transport parties of natives to or from localities where sea otter are found.[13]

Enforcement of the order of January 19, 1893, would have virtually ended sea otter hunting in Alaska, because it would have curtailed the number of hunters considerably and there were too few Revenue Cutters in Alaskan waters to spend their time transporting hunters. Thus, the prohibition against transporting hunters was revoked on May 14, 1893.

Legislative protection was finally given to the sea otter by an act of April 21, 1910, specifically prohibiting the killing of sea otters and certain other furbearing animals within the limits of the Territory of Alaska, except when authorized by regulations promulgated by the Secretary of the Interior. The North Pacific Sealing Convention of 1911 further extended protection to sea otters by prohibiting all killing by nationals of the United States, Great Britain, Japan, and Russia on the high seas of the Pacific Ocean north of the 30th parallel of north latitude, including the seas of Bering, Kamchatka, Okhotsk, and Japan. Congress passed an act on August 24, 1912, approving this convention, thus prohibiting the killing of sea otters on the American side of the North Pacific, both in territorial and extraterritorial waters. Presidential proclamations signed by Woodrow Wilson on May 31, 1913, and Calvin Coolidge on January 14, 1929, provided further protection to sea otters.[14]

AMERICAN FUR TRADING COMPANIES

Hutchinson, Kohl and Company – Alaska Commercial Company

On January 31, 1868, the firm of Hutchinson, Kohl and Company was established with offices at 425 Sacramento Street in San Francisco. The firm had six partners: Hutchinson, Kohl, Sloss, Gerstle, Boscowitz, and Wasserman. When Captain Niebaum arrived in early March with his cargo of sealskins, he was invited to become the seventh partner, and he promptly accepted.

By the spring of 1868 Hutchinson, Kohl and Company had emerged as the commercial successor to the Russian-American Company. On October 10, 1868, the principals of Hutchinson, Kohl and Company established a second firm, the Alaska Commercial Company. The new firm assumed

13. O.L. Spaulding, Acting Secretary of the Treasury, Department Circular No. 11, January 19, 1893, quoted in DeArmond, "Fur Trade of Cook Inlet," p. 11.

14. U.S. Bureau of Sport Fisheries and Wildlife, North American Fauna, No. 68, *The Sea Otter In the Eastern Pacific Ocean*, by Karl W. Kenyon (Washington, Government Printing Office, 1969), p. 135. Despite these preservation measures the sea otter population in Cook Inlet remained low. In 1957, for instance, some 40 otters were observed in Kamishak Bay near St. Augustine Island, and in 1965 some 120 otters were observed around St. Augustine Island and Shaw Island and in the Cape Douglas vicinity. *Ibid.*, p. 179. Also see U.S. Department of the Interior, Division of Territories and Island Possessions, *Alaska* (Washington, Government Printing Office, 1946), p. 31.

control over the Alaska operations and assets of Hutchinson, Kohl and Company on September 28, 1870.

The Alaska Commercial Company, which opened new offices at 310 Sansome Street in June 1871, continued to expand its operations for nearly 40 years, becoming a virtual monopolistic economic and political power in Alaska. While the principal business of the company at its inception was fur sealing, large numbers of other marine and land-based furs were secured along the Aleutian chain, Seward Peninsula, the Yukon and Kuskokwim valleys, and the region around Kodiak, Bristol Bay, and Cook Inlet. In this vast area the firm took over old Russian-American Company trading posts and constructed new ones, trading merchandise for furs and supplying Natives, miners, and prospectors. The furs from the Cook Inlet region were shipped first to the district headquarters at Kodiak and then to Sitka from where they were forwarded to company headquarters in San Francisco.

With the decline of the Alaskan fur trade during the 1890s and the loss of its Pribilof sealing lease in 1890, the Alaska Commercial Company emphasized the outfitting of prospectors and transportation. In 1901 it merged with the International Mercantile Marine Company and Alaska Goldfields, Ltd., to form two new companies: the Northern Navigation Company for transportation and shipping and the Northern Commercial Company for mercantile trade. In 1911 the remaining Alaska Commercial Company properties in the Kodiak district, including those in the Cook Inlet region, were sold to William J. Erskine, a long-time company employee. Not until 1942, however, was the corporate dissolution completed, most of the remaining properties having been sold to Volney Richmond, who operated the Northern Commercial Company at Seattle.[15]

Cook Inlet Trading Posts. Available records indicate that Hutchison, Kohl and Company had only two or three trading posts in Cook Inlet and that all were located on the eastern side of Cook Inlet.[16] The Alaska Commercial Company, however, gradually added posts until near the end of the 19th century it had twelve, extending from Cape Douglas in the south to the head of Knik Arm in the north. Most of the twelve were located on the Inlet's east side and had little relevance to the Lake Clark country. Those that were of primary interest were Douglas, Tyonek, and Iliamna.[17]

Douglas Station. The southernmost fur trading post of the Alaska Commercial Company was the Douglas Station on the western side of the entrance to Cook Inlet, a short distance north of Cape Douglas. This trading post was located along the coast in the vicinity of numerous Native villages inhabited by sea otter hunters. Native hunters from the coastal villages of Swikshak and Kaguyak to the west and Kamishak, Chenik, and Amakdedore to the north traded there, as did the land fur trappers from an unidentified "interior village."

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15. Frank H. Sloss, "Who Owned the Alaska Commercial Company?," *Pacific Northwest Quarterly*, LXVIII (July 1977), pp. 120-30; Frank H. Sloss and Richard A. Pierce, "The Hutchinson, Kohl Story," *Pacific Northwest Quarterly*, LXII (January 1971), pp. 1-6; Gerstle Mack, *Lewis and Hannah Gerstle* (New York, Profile Press, 1953), pp. 30-62; Samuel P. Johnston, ed., *Alaska Commercial Company: 1868-1940* (N.P., N.D.), pp. 7-8, 15-17, 34-36; L.D. Kitchener, *Flag Over the North: The Story of the Northern Commercial Company* (Seattle, Superior Publishing Company, 1940), pp. 24-50, 145-46; and *Alaska Herald*, September 15, 1868, and May 1, November 1 and 15, 1871. The by-laws and regulations of the Alaska Commercial Company are printed in Elliott, *Report Upon the Condition of Affairs*, pp. 271-77.

16. DeArmond, "Fur Trade of Cook Inlet," p. 25.

17. The records of the Kodiak District of the Alaska Commercial Company are in the archives of the Rasmuson Library at the University of Alaska, Fairbanks. The materials are cataloged in Wendell H. Oswalt, *Alaska Commercial Company Records, 1868-1911: Register* (College, University of Alaska Library, 1967).

There was considerably more marine traffic at Douglas Station than at most other company posts on Cook Inlet. Many schooners operated both by the company and by rival trading firms called at the station. The former left merchandise, picked up furs, brought in hunting parties, or transported hunters from Cape Douglas village. Native bidarkas also came and went from the Douglas Station, some coming from as far as Coal Bay on the east coast of the inlet.

Although the length of operation of the Douglas Station has not been determined, the company records contain no entries after 1900. By that time the sea otter had virtually vanished from Cook Inlet waters, and it is likely that the station closed that year.[18]

Tyonek Station. The principal Alaska Commercial Company fur trading post in the upper inlet was Tyonek, which was open from at least 1875. It was located on the west shore of the inlet just north of Trading Bay.[19] Much of the trade of the Tyonek Station was with the Susitna and Knik Arm Dena'ina before trading posts were opened in those regions. For instance, C.G. Holt, the agent at Tyonek in the early 1880s, often organized expeditions up the Susitna River to obtain furs to overcome the efforts of rival companies and traders. Dena'ina from Kustatan, just south of Trading Bay and West Foreland, and the Illiamna Lake area also traded occasionally at Tyonek.[20]

Iliamna Station. Available records for the Iliamna Station primarily include scattered "accounts and inventories" for the years 1890-1899 and there are no station logs to describe the operation of the station itself. The station was located on the north side of Iliamna Bay on the west coast of Cook Inlet on what would become known as AC Point, some 12 miles over the portage from Iliamna Lake. The station, which was largely off the beaten path for Euroamericans, served the vast Iliamna Lake-Lake Clark region during the late 19th and early 20th centuries; Dena'ina people hiked over the portage hiked over the Iliamna Portage during this period to trade for manufactured goods. Prior to its establishment, the station's location had been known to the Dena'ina, who had called it Q'anlcha NuL, or "fox den."[21]

At the time of Alaska's transfer to the United States, a "populated point" and perhaps a fur trading post had been reported at or near Iliamna Lake.[22] Later in 1883, explorer Johan Adrian Jacobsen visited a trading station at the village of Iliamna of Iliamna Lake. According to Jacobsen, the station, operated by the Alaska Commercial Company and consisting of five huts, was visited by a "yearly trading vessel" that arrived "early in June." The inland region was "heavily stocked with

18. DeArmond, "Fur Trade of Cook Inlet," pp. 29-31.

19. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, p. 71.

20. *Ibid.*, p. 40; Fall, "Patterns of Upper Inlet Tanaina Leadership," p. 83; and "Station, Tyonak, From June 20th 1881 to September 20th 1882, From Sept. 21st, Kinnick, 1882 to Feb. 28th, 1883," and "Records, Tyonak Station, Commenced August 17th, 1876, to April 11, 1878, Sent to Kodiak Station," Records of the Kodiak Division of the Alaska Commercial Company, Box 151, Files 1556-57, Alaska Commercial Company Records, 1868-1937, Rasmuson Library, University of Alaska, Fairbanks.

21. *Report on Population and Resources of Alaska at the Eleventh Census*, p. 38; Linda J. Ellanna, ed., *Lake Clark, Sociocultural Study Phase I* (Anchorage, NPS), 1986.

22. Pierce and Donnelly, eds. and trans., *Russian Population In Alaska and California*, by Fedorova, p. 147.

elk, caribou, and brown bears." Jacobsen then crossed the portage from Iliamna Lake to Iliamna Bay on Cook Inlet where he met a "trader at a summer post." [23]

The 1890 census report stated that "a small depot of supplies for the trade with the Dena'ina villages on Iliamna lake" was located along the west shore of Cook Inlet on "Iliamna bay, which is shallow and affords but precarious shelter." Merchandise was taken from the bay to the inland lake "on the backs of men over a steep mountain trail."[24]

The trading post at Iliamna Lake was administered by John W. Clark, the principal Alaska Commercial Company trader at Nushagak from the early 1880s to 1897 and the man for whom Lake Clark would be named. At various times during the 1880s and 1890s the Nushagak post, which administered the company's Nushagak division, maintained outstations at Ugashik, Togiak, the mouth of the Mulchatna River, and other points along the Nushagak River in addition to the one at Lake Iliamna. During this period, Clark's trade in furs reportedly amounted to some $10,000 annually, a sum abetted by his encouragement of Bristol Bay Eskimos to hunt sea otter in Cook Inlet.[25]

Although little is known about the operation of Iliamna Station at AC Point on Cook Inlet, M.W. Gorman provided a description of the structure and fur trade of the surrounding region in 1903 after the decline in furs had forced closure of the post. During the Russian period the Lake Iliamna region, according to Gorman, had been "rich in fish, game and furbearing animals." After the transfer of Alaska to the United States and the establishment of trading posts by the Alaska Commercial Company, the "fur trade began to be pushed to its fullest capacity." Gorman went on to state:

> This energetic organization no longer waited for the easy-going native to bring his furs to the trading posts at Kodiak, Bristol Bay, or Nushagak, but soon established a small trading post at the head of Iliamna Bay, and within fifteen miles of the lake, where clothing, blankets, provisions, rifles, ammunition and the numerous showy trinkets of which the red man is so fond were bartered for furs. The insignificant looking building in which so much trading was done is a small, one-room hut, built of rough slabs of spruce set up on end, a floor of the same, and a sod roof, to protect the trader and the stock.
>
> Furbearing animals were abundant, the Company reaped a rich harvest, and the poor, thoughtless natives lived in comparative luxury for a time; but the day of reckoning was approaching. In less than a generation the mink, martin, muskrat, otter, bear, mountain sheep and moose became almost extinct, and the Company abandoned its trading post. A few caribou and mountain sheep still remain; grouse, ptarmigan, arctic hare, parka squirrels and hair seals are still abundant; but ammunition is expensive, and the native no longer has furs to offer in exchange for it.

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23. Gunther, trans., *Alaskan Voyage*, pp. 190-91.

24. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, p. 71

25. Kitchener, *Flag Over the North*, p. 164; VanStone, *Eskimos of the Nushagak River*, pp. 59-60; and *Annual Report of the Governor of Alaska, 1892*, p. 32.

As a consequence the Natives' chief means of subsistence, according to Gorman, was "the sockeye salmon, of which he must obtain enough in the one month during which the run continues, in summer" to support "himself, his family and his dogs till the next season."[26]

Rival Fur Trading Firms

Despite its position as the principal fur trading company in the Cook Inlet region, the Alaska Commercial Company faced business competition in its ventures during the late 19th century. The competition was provided by several smaller fur trading companies and a variety of independent traders.[27]

F.E.G. Tittle and Company. F.E.G. Tittle and Company was an early rival of the Alaska Commercial Company on Cook Inlet and at some other locations along the southern Alaskan coast. The owners of the firm were F.E.G. Tittle of San Francisco, Benjamin Levy of Sitka, Captain Marquis Levy of unknown residence, and possibly Aaron Levy, also of Sitka. Benjamin and Aaron Levy signed a petition for a municipal government in Sitka in November 1867, and they ran a general store in the town. Marquis Levy arrived in Sitka in December 1868 in command of the 55-ton schooner *General Harvey* owned by F.E.G. Tittle.

During 1869 the *General Harvey* sailed northward, establishing company trading posts at Unalaska, Kenai, English Bay, and Nuchek on Hinchinbrook Island. The vessel arrived back at Sitka in September, bringing in "a good load of furs" from Kenai. The furs were shipped to the company headquarters in San Francisco from where trade goods were taken to the company posts. Reportedly, the vessel had carried two barrels of whiskey on her voyage north and some had been sold to Natives at Kenai, but neither those charges nor similar ones the following year that the vessel was carrying a still and cargo of molasses to Cook Inlet for conversion to alcohol was proven.

In January 1871 the *General Harvey* sailed to English Bay to load coal for San Francisco. It was also reported that Tittle had dissolved his partnership "with the Levi parties – Levi, Lee & Co." Thus, Tittle left the fur business in Alaska, and Captain Thomas K. Lee joined the Levy-dominated firm briefly as a partner. After Lee left the company in the early 1870s, Levy and Company remained in business at least until 1876, when word reached Sitka that the firm's schooner "Annie Martin arrived at Kodiak with 2,000 assorted furs and expects to leave soon for San Francisco." Soon thereafter, Levy and Company sold its Kenai trading post, and perhaps its other stations as well, to Shirpser, Haritonoff and Company.[28]

Shirpser, Haritonoff and Company. Shirpser, Haritonoff and Company was one of the most successful of the fur trading firms on Cook Inlet during the early American period. The company purchased the 37-ton schooner *Clara L. West* which was skippered by Abraham Haritonoff and operated along the south central Alaskan coast. A shore station was established just inside Cape

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26. M.W. Gorman, "The Lake Iliamna Region, Alaska," *The Pacific Monthly*, IX (May 1903), p. 299.

27. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, p. 251.

28. DeArmond, "Fur Trade of Cook Inlet," pp. 45-46; *Alaska Times*, April 30, September 18, 25, 1869; *The Sitka Post*, November 30, 1876; and Luke Sheeran, Deputy Collector, Kodiak to Collector, Sitka, January 15, 1871, U.S. Customs Service, Letters (general) Received by Collector of Customs, Sitka, Vol. 7, No. 14, Alaska Historical Library, Juneau.

Douglas near the western entrance to Cook Inlet, the first fur trading post built on the western side of the inlet by an American firm.

The *Clara L. West* served as a tender for the Douglas Station, delivering merchandise and taking away the accumulated inventory of furs several times each year. The vessel also traded along the shores of the inlet, visiting villages and sea otter camps in the highly competitive business of gathering furs, as far up the inlet as Kustatan and Tyonek and perhaps Knik Arm. During the early 1870s the *Clara L. West* was replaced successively by the *Petaluma* and the *Urania*, the latter an 80-ton schooner skipped by Captain Thomas K. Lee who had been associated with the Levy brothers in fur trading operations in Cook Inlet.

Shirpser, Haritonoff and Company suffered major blows during the mid-1870s with the death of Herman Shirpser in late 1873 and the shipwreck of the schooner *Urania* in late 1875 on her annual trip from Kodiak to San Francisco. In 1879 the firm was either completely reorganized with a new name or sold to a new firm, the Western Fur and Trading Company of San Francisco.[29]

Western Fur and Trading Company. This firm, probably the most competitive of all the early rivals of the Alaska Commercial Company, was organized at San Francisco in March 1879 with an authorized capital stock of $500,000. According to the *Alaska Appeal*, a newspaper published in San Francisco, this business transaction was "simply a change of name of the concern heretofore known as Shirpser, Haritonoff & Co." (See above.)

The new firm continued to operate Douglas Station. It manager, H.R. Bowen, used a small schooner, the *Diomedes Herman*, to make the rounds of the smaller villages and scattered sea otter hunting camps throughout the inlet. Anxious to eliminate its principal rival in the fur trade, the Alaska Commercial Company purchased Western Fur for $175,000 in March 1883. Included in the purchase was all the property of the company except for two schooners.

Fur prices dropped markedly in the Cook Inlet region as a result of this transaction, and consequently Native hunters became reluctant to engage in fur trapping.

North American Commercial Company. Organized at San Francisco on April 15, 1890, for the purpose of bidding on a new 20-year contract for the exclusive privilege of harvesting fur seals on the Pribilof Islands, the North American Commercial Company entered the high bid and won the contract, thus replacing the Alaska Commercial Company in that extensive business venture.

The general headquarters of the North American Commercial Company in Alaska was built at Dutch Harbor and their second most important station was located on Wood Island near Kodiak. By June 1892 stations had been established at Afognak and Seldovia, the latter apparently the first trading post to be established at that Cook Inlet village. The company established its second Cook Inlet trading station at or near the village of Tyonek. While the date of construction of the new post is not known for certain, it is thought to have been in 1894.

During the 1890s the company sent more vessels into Cook Inlet to accommodate its growing business. These vessels included the schooners *F.F. Feeney*, *Alexander*, *Gen'l. Siglin*, *Hero*, and *Prosper*. In addition, the 91-ton steamer *Francis Cutting*, under Captain H.R. Bowen who had been

29. DeArmond, "Fur Trading of Cook Inlet," pp. 47-49, and *Alaska Times*, October 2, 1869.

in charge of the Cook Inlet operations of the old Western Fur and Trading Company, went up and down the inlet early in the spring and late in the fall when ice was likely to hinder the schooners.

The North American Commercial Company's business on Cook Inlet was boosted during 1895-1898 by the Turnagain Arm gold rush. It carried gold seekers to the diggings, transported merchandise to the gold camps, and sold goods at wholesale to independent merchants who had established themselves at Hope and Sunrise.[30]

The Russian Orthodox priest John Bortnovsky reflected further on the plight of the Natives at Tyonek in view of the declining fur prices in Cook Inlet. During the summer of 1897 he visited the village and noted in his journal:

> At present they are experiencing many hardships. Means of existence are being exhausted more and more each year. The hunting grows poorer. Frequent forest fires caused by American prospectors either exterminate the animals or drive them to safer places. The latter would not have caused too much hardship: the Kenai Indian is accustomed to roaming in the mountains and on the tundras; he can reach the animals anywhere and catch them. But, unfortunately, another scourge fell on them and completely depressed them: the fur prices fell terribly. For instance, a black bear skin of the best quality now brings only $10, whereas a few years ago it was priced at $30-40 or more.[31]

The company lost the mail contract to the Alaska Commercial Company in 1894 and suffered three shipwrecks during the years 1895-1897. These financial reverses, together with the decline of the coastal and Cook Inlet fur trade caused the firm's prospects to plummet. It closed its two inlet posts during the late 1890s, and by 1903 it was maintaining only its depot at Dutch Harbor.[32]

Rival Independent Traders

In addition to the aforementioned fur trading companies that competed with the Alaska Commercial Company in Cook Inlet, there were also smaller independent fur traders in the region. Some of these traders operated only briefly in the inlet, sending a vessel to collect furs for one or two seasons. Faulkner and Bell, headquartered at San Francisco, owned a trading station in the vicinity of Tyonek for at least several years during the 1870s and had the schooner *Louisa Morrison* on the inlet in 1876-1877 and perhaps in other years.[33]

One of the most successful small traders was C.D. Ladd of San Francisco, who opened a trading station at the mouth of the Chuitna River near the village of Tyonek sometime around 1892. That year he purchased the 34-ton schooner *Anna Matilda* from the Arctic Fishing Company which operated a salmon cannery at Kasilof. During 1893 the schooner hunted fur seals on the lower coast, but arrived at Cook Inlet in June to pick up furs from Ladd's station and take them to San Francisco. Ladd branched out into salmon salting at his Chuitna River station in 1893, and in 1899

30. DeArmond, "Fur Trade of Cook Inlet," pp. 56ff.

31. Quoted in Townsend, "Journals of Nineteenth Century Russian Priests," p. 23.

32. DeArmond, "Fur Trade of Cook Inlet," pp. 56-58.

33. *Ibid.*, pp. 59-60.

he sold the post to the Alaska Salmon Association of San Francisco. This firm discontinued the fur operations at the post and built a cannery.[34]

RELATIONS BETWEEN ALASKA COMMERCIAL COMPANY AGENTS AND THE DENA'INA; IMPACT OF FUR TRADE ON NATIVE LIFE

Although there were exceptions, relations between the agents of the Alaska Commercial Company and its rivals and the Dena'ina of the Cook Inlet region appear to have been generally good. The Natives continued to trap furbearers and to bring the pelts to the trading posts in the fall and spring. Where possible they bargained for the best prices among the various competitors, although this practice was limited as the Alaska Commercial Company gained economic hegemony over the Cook Inlet region by purchasing its rivals during the 1870s and early 1880s. Before that time, however, a Native trapper might often be in debt to a particular trader, but did not necessarily pay back his debt with his fur at the end of the season. Rather, he sold his furs to the highest bidder regardless of debts he had incurred.[35]

The Russian Orthodox clergy assumed a paternalistic relationship toward the Dena'ina and looked upon themselves as their protectors against the misdeeds of the American traders. Russian Orthodox priest John Bortnovsky of Kenai also reported several incidents in his travel journals which show the fur traders to be opportunistic and devious. On August 2, 1896, for example, Bortnovsky noted at Seldovia:

> The storekeeper of the Alaska Commercial Company is not very popular: all the otters caught this summer were sold to Mr. Schmidt, the storekeeper of the Northern Alaska Trading Company, which donated a 76-pound bell to the chapel and helped to repair the chapel by supplying all materials at very reasonable prices.[36]

On the same journey, however, Bortnovsky reported fairly friendly relations between the traders and the people of Tyonek, although he tempered his remarks by alluding to the apparent self-deprecation of the local chief to the traders. According to Bortnovsky, the principal occupation of the Natives at Tyonek was hunting, the "furs being sold to the local stores." On June 26, 1896, the priest observed:

> Two companies have stores at Tyonek. The natives receive more humane treatment in the store of the Lad Company. The other store belongs to the Alaska Commercial Company. It is larger and has a greater variety of goods. The prices are reasonable in comparison with our Kenai store. The storekeeper, Mr. Tom Gommer [Hammer?] has a family and lives in peace with everybody. The local Indians praise him.

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34. *Ibid.*, p. 61.

35. Fall, "Patterns of Upper Inlet Tanaina Leadership," pp. 85-86. One result of these trading practices was that the white traders splintered the influence of the *toyons* with whom the Russians had done business by dealing directly with each trapper. Schneider, "Trapping Furbearers In Alaska," pp. 10-11.

36. *Ibid.*, II, p. 74.

> The chief of the village, Peter Inyhliachuliahlan, is a milk-livered man and is ready to dance to the storekeepers' pipes, especially when he sees some profit to himself.[37]

Despite the generally good relations between the white fur traders and the Natives in the Cook Inlet region, however, the effect of the fur trading posts on the Native's customs and lifeways had increasingly negative results. The fur trade perpetuated the aboriginal hunting activities of the Dena'ina but was transitional, because total subsistence hunting was abandoned for commercial hunting and partial subsistence hunting. Natives traded their fur catch for credits with which to buy manufactured goods, thereby altering their economic life, their relationship to nature, and increasing their dependence upon outsiders.[38]

In 1898 Walter C. Mendenhall, a geologist attached to a U.S. Army reconnaissance expedition from Resurrection Bay to the Tanana River, remarked on the declining status and health of the Dena'ina in the upper inlet region. He attributed this decline to the area's penetration by white fur traders:

> The native inhabitants of the region about the head of Cook Inlet belong to the true Indian stock....They are now collected into a few small villages, as at Tyonek, Ladds Station, and Knik, where their original customs have been much modified by white traders, upon whom they are becoming more and more dependent....They still depend in a measure upon the summer's catch of salmon to keep them from starvation during the winter season, but secure clothing of white manufacture and many articles of food from the stores of the various trading companies in exchange for furs....
>
> Pulmonary and inherited diseases are making constant inroads on their number, particularly at the stations, where their native customs have been modified by white influence.[39]

By the early 1900s the full impact of the negative influences of the fur trade was making itself felt on the Dena'ina way of life. In 1903 Bortnovsky, ever defending the Natives against the encroachment of modern civilization, sent a petition to the Secretary of the Interior on behalf of 24 Dena'ina, stating that they had "always been a self-supporting people." However, they were being threatened "on account of the wholesale slaughter of the fur animals by unscrupulous parties by poison and other unfair means, in the Cook Inlet district." As a result of such practices "the furbearing animals" had almost disappeared from our hunting grounds."[40]

DECLINE OF THE FUR TRADE

As the Euroamerican population of the Cook Inlet region increased and the larger villages in the vicinity became more firmly established during the late 19th century, the general merchandise store

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37. *Ibid.*, II, p. 70.

38. Morgan Sherwood, *Big Game In Alaska: A History of Wildlife and People* (New Haven and London, Yale University Press, 1981), p. 104.

39. "A Reconnaissance From Resurrection Bay to the Tanana River," p. 339.

40. U.S. Department of Commerce and Labor, Bureau of Fisheries, *Report on the Salmon Fisheries of Alaska, 1903*, by Howard M. Kutchin, Special Agent (Washington, Government Printing Office, 1904), pp. 41-42.

which merely handled furs as a side line began to replace the earlier trading post which was oriented almost exclusively toward furs. At the same time the sea otter virtually disappeared from inlet waters by the early 20th century, and the seasonal harvest of land-based furs, though still sizeable, diminished. Many of the available furs went to local merchants, while others were sold to itinerant fur buyers who began to appear more frequently as transportation facilities improved. As time passed many trappers and fur producers began making shipments by mail or express directly to fur houses in Seattle, San Francisco, St. Louis, and New York. Thus, by the early 1890s the fur trade in the Cook Inlet region had declined dramatically.[41]

41. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, pp. 251-52. Also *Annual Report of the Governor of Alaska, 1899*, pp. 10-11.

CHAPTER FIVE

AMERICAN EXPLORATION IN THE COOK INLET-LAKE CLARK REGION: 1867-1929

INTRODUCTION

When the United States purchased Alaska in 1867, most of the former Russian America was a vast *terra incognita*. Russian exploration had been spotty and uncoordinated, concentrating along coastal areas and river regions primarily in furtherance of the fur trade. The expeditions, however, had rarely extended beyond the areas immediately adjacent to bodies of water. Toward the end of the Russian period, Golovin, after surveying the North American colonies, reported officially that the "explorations that were undertaken at different times in the colonies were exceedingly superficial and wholly confined to the coast." The interior of the continent and even of Baronof Island (behind Sitka) was, according to Golovin, "still unexplored."[1]

Thus, the lands in the Cook Inlet region remained isolated, unexplored, and largely unknown. The 1880 census report, for instance, noted:

> On the western side of Cook's inlet the main Alaskan chain of mountains, called by Dall the Chigmit range, rises abruptly from the sea in steep ridges and peaks, the highest of the latter being the Rédoute and the Ilyamna mountains, both volcanic and emitting smoke. Only at two points along this coast within the inlet does low land intervene between the mountains and the shores; at Toyonok and at Kustatan, both of which localities have been utilized by the natives for establishing settlements. Up to the height of about 1,000 feet all these mountains are densely wooded. From Kamyshak gulf, situated between Mount Isaac and cape Douglas, a portage is made over a slight depression in the ridge to the basin of the great lake Ilyamna, but on the southwestern shore of the bay the mountains rise again to a considerable height, culminating in the four peaks to the westward of cape Douglas. The last-named cape is one of the most prominent and boldest in shape of the many Alaskan promontories, jutting out as it does at a right angle for a distance of several miles into the sea, with a sudden descent of over 1,000 feet into the waves of Cook's inlet.[2]

More than a decade later, *The North Star,* a monthly newspaper printed in Sitka, reported in February 1892 that the Redoubt Volcano, which it said was some 60 miles northeast of Iliamna, "has never been explored and has only been seen at a distance."[3]

Thus, when the United States purchased Alaska, basic information was needed before anything approaching an intelligent understanding of the country could be entertained. In the years that followed the Americans did a competent job of amassing knowledge of Alaska, especially in light of contemporary attitudes at home about the territory and attitudes about the role of government

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1. Quoted in Morgan B. Sherwood, *Exploration of Alaska: 1865-1900* (New Haven and London, Yale University Press, 1965), pp. 1-2.

2. *Report on the Population, Industries, and Resources of Alaska*, by Petroff, p. 86.

3. *The North Star*, February 1892.

in the primary development of virgin land. Alaska was a victim of the "icebox myth" and was generally viewed as a cold and impenetrable wasteland and isolated northern wilderness separated from the rest of the nation. During the last third of the 19th century people in the United States were hostile to the development of distant, newly acquired, vacant land, preferring instead to concentrate on pressing matters nearer home such as technological progress, rapid industrialization, economic competition, and aggrandizement of personal wealth.

These public perceptions and general socioeconomic conditions, together with considerable natural, climatological, and topographic obstacles, combined to hinder geographical discovery in Alaska. In spite of them, the government, military, and private organizations compiled an admirable record of achievement in exploration of the Far Northwest during the decades following the purchase of Alaska. This achievement made contributions to the history of American science, North American exploration, westward expansion, and Alaska.[4]

The focus of this chapter will center on American exploration of the Cook Inlet-Lake Clark region in which present-day Lake Clark National Park and Preserve is located. While the acquisition of Alaska by the United States provided an impetus to the exploration of other parts of the northern territory, it had little immediate effect on this region. Many expeditions in the 1860s, 1870s, and 1880s recorded information about Cook Inlet, but little additional information about the Lake Clark vicinity was recorded until after 1891.

EARLY AMERICAN EXPLORATION: 1867-1869

Following the ratification of the treaty transferring Alaska to the United States, the federal government realized the need for more information on its new acquisition as well as for data to educate the American public on the merits of the new national possession. Accordingly, a scientific group under the leadership of George Davidson, an employee of the U.S. Coast Survey, was sent to Alaska during the summer of 1867. General direction of the expedition was given to Captain W.A. Howard of the U.S. Revenue Service.

The expedition visited various parts of Alaska aboard the steam cutter *Lincoln*. No attempt was made to investigate the more remote regions of Alaska such as Cook Inlet or the Lake Clark area.[5] Although he did not visit Cook Inlet or the Iliamna Lake-Lake Clark region Davidson summarized available knowledge of these areas in his report to Congress. He observed:

> The western shores [of Cook Inlet] have a narrow border of low wooded land at the foot of the Alaskan mountains. Twenty miles northwest by west from the northeast point of Augustin is a small bay [Iliamna Bay] opening to the southeast, with a small islet on the south side of the mouth. At the head of this bay is a factory of the Russian-American Company, from which a trail [the Iliamna Portage] leads about seven miles through a gap in the mountains, to a series of mountain lakes [Summit Lake] discharging within a distance of fifteen miles into the great lake of Iliamna, which empties through the Kaichak river into Bristol Bay, on the northwest side of the peninsula of Alaska.

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4. Sherwood, *Exploration of Alaska*, pp. 3-14. Also see Morgan B. Sherwood, "American Explorers of Alaska," in Shalkop, ed., *Exploration in Alaska*, pp. 145-53.

5. Morgan B. Sherwood, "George Davidson and the Acquisition of Alaska," in Sherwood, ed., *Alaska and Its History*, pp. 253-70.

> The great volcanic peaks of Iliamna and Redoubt, rising to twelve thousand and sixty-six and eleven thousand two hundred and seventy feet elevation, respectively...lie in the range of compact, connected, and very high mountains binding the western shores of the inlet, but throughout these waters the shores are well wooded, and north of the Redoubt the mountains retreat well to the northwest.[6]

Two years later the steamer *Fideleter* visited Cook Inlet during the summer of 1869 with Major General George H. Thomas on board. Thomas had assumed command of the Military Division of the Pacific, with headquarters at San Francisco, on June 1, 1869, and he was on an inspection tour of Army posts in Alaska. Although the visit was not an exploration expedition as such, Thomas' aide-de-camp, Captain Alfred Lacey Hough, provided considerable detail about the Cook Inlet vicinity in his account of the *Fideleter's* travels during the summer. As the vessel entered Cook Inlet on July 29 Hough noted:

> By midday of the 29th we were in Cooks Inlet, and on the western shore a long distance off there opened up to us two groups of high snow covered mountains, Elamna [Iliamna] and St. Nicholas [Redoubt]. Both are estimated at over 12,000 ft. high and have been volcanoes. Smoke still rises from the summit of Elamna. The sun was shining on them nearly to their summits, while it was still hidden from us, causing a brilliant whiteness indescribable.

As the *Fideleter* passed up the inlet Hough observed that he could view both the eastern and western shores of the inlet. He observed that the shores were a "continuation of snow covered mountains and glaciers, or ice fields." Before leaving Fort St. Nicholas at the mouth of the Kenai River, Hough described the scenic surroundings as he looked westward across Cook Inlet toward present-day Lake Clark National Park and Preserve. He continued to be impressed by the Elamna [Iliamna] and St. Nicholas [Redoubt] volcanoes on the far horizon:

> The rain ceased in the afternoon, and the clouds clearing away gave us a most desired object, a clear view in the sunlight of Elamna in full. Though at least 50 miles away it looked to be only a few miles. The foreground of our view was the Inlet, a smooth sheet of water glistening in the sun light, from its surface rose the grand pile of snow mountains with its hundreds of peaks gradually heightening as they neared the centre, and far away towered the grand cone of Mt. Elamna, running up to a sharp peak, just below which rose the never ceasing column of smoke. The whole mass sparkled with brilliant whiteness from the suns rays. Such was my first view of a volcano. We looked at it from the deck of our Steamer moored a little way up the river and a sharp point of the bluff bank shut off a view of Mt. St. Nicholas, but this jutting out of the land in the foreground rather relieved the scene and made the whole a finer landscape view. After looking at it for some time I turned my eyes toward the east to see the retiring clouds and beheld a magnificent rainbow, an entire arch of unusual width and brilliant colors, extending from north to south, and under this the blanket of clouds reaching to the horizon.[7]

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6. U.S. Coast Survey, *Coast Pilot of Alaska (First Part), Southern Boundary to Cook's Inlet*, by George Davidson, Assistant, Coast Survey (Washington, Government Printing Office, 1869), pp. 176-77.

7. Atheam, "An Army Officer's Trip to Alaska in 1869," pp. 44-64. Several years later in 1872, A.L. Pinart, a Frenchman, made extensive explorations of the coast of the Alaska Peninsula and Bering Sea, ascending the Kvichak River to Iliamna Lake. Much of his work remained unknown and unpublished, however, with the exception of an article in a French geographical bulletin published in Paris in 1873.

C.L. McKAY OF THE U.S. SIGNAL SERVICE: 1881

C.L. McKay, a meteorological observer with the U.S. Signal Service, is generally credited as being the first American to visit the as yet unnamed Lake Clark sometime about 1881.[8] During the late 1870s and early 1880s the U.S. Army's role in scientific exploration in Alaska was dominated by the U.S. Signal Service. The Army, seeking activity and employment for the Signal Service, assumed the functions of a federal meteorological agency. When General William B. Hazen became Chief Signal Officer, he faced the need for basic research. A close working relationship was established with the Smithsonian Institution whose secretary, Spencer F. Baird, selected observers who were trained naturalists to administer the meteorological stations.[9]

Meteorological stations were established in Alaska at St. Michael, in the Aleutians, and at Fort Alexander near the mouth of the Nushagak River on Bristol Bay. Under orders issued on April 11, 1881, the Signal Service sent C.L. McKay, a trained naturalist, to establish and administer a station at Fort Alexander. During the next several years McKay reportedly made numerous trips into the interior region surrounding Bristol Bay. On one of these trips into the interior in 1881 McKay reportedly visited "Lake Iliamna and Iliamna Village" and the still unnamed Lake Clark, crossing the Chulitna Portage between the lake and Nushagak on Bristol Bay. Other exploratory trips of his included passing down the Alaska Peninsula to the Ugashik Bay area and ascending the Wood River to Lake Aleknagik, the southernmost of the Wood River lakes.

During these trips McKay collected some 400 specimens of birds and mammals which he transmitted to the U.S. National Museum in Washington, D.C., for preservation and cataloging. Some of the specimens were distributed by the Smithsonian or sent in exchange to other museums. The mammals numbered 59 specimens belonging to 23 species as recognized by F.W. True, who published an annotated list of them in the *Proceedings of the U.S. National Museum* in October 1886. Among the birds McKay collected was the snowflake (*Passerina hyperborea*), which was named the McKay snowflake in his honor. McKay also collected botanical specimens which were sent to the National Museum and formed the basis of a list of 123 species published by F.H. Knowlton in the *Proceedings of the U.S. National Museum* in 1885. During the course of his journeys McKay also acquired or purchased significant quantities of ethnological objects from Natives in the region.

On April 19, 1883, McKay went hunting near Nushagak with some Natives in a small boat. The craft capsized "in some mysterious manner," and the young naturalist drowned. McKay was succeeded by J.W. Johnson, who was ordered from Washington, D.C., to Fort Alexander on April 21, 1884. Johnson served at the post for nearly two years, continuing McKay's natural history collections and sending 125 specimens of birds to the National Museum.[10]

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8. As discussed in Chapter Four of this study, the Russians were undoubtedly aware of Lake Clark.

9. Sherwood, *Exploration of Alaska*, pp. 87, 93-96.

10. U.S. Department of Agriculture, Division of Biological Survey, North American Fauna No. 24, *A Biological Reconnaissance of the Base of the Alaska Peninsula*, by Wilfred H. Osgood (Washington, Government Printing Office, 1904), pp. 25-26; *Proceedings of the U.S. National Museum*, IX (October 1886), pp. 221-24; *Proceedings of the U.S. National Museum*, VIII (1885), pp. 213-21; U.S. Department of the Interior, Geological Survey, Bulletin 903, *The Nushagak District, Alaska*, by J.B. Mertie, Jr. (Washington, Government Printing Office, 1938), p. 4; and *Annual Report of the Smithsonian Institution*, 1883, p. 16, and 1886, pp. 6-7.

J. ADRIAN JACOBSEN OF THE MUSEUM FÜR VÖLKERKUNDE: 1883

During 1881-1883 Captain J. Adrian Jacobsen, a Norwegian ethnological collector sponsored by the Museum für Völkerkunde in Berlin, passed along the coasts and rivers of southwestern and south central Alaska. During his 1883 expedition, Jacobsen touched the Kuskokwim, Togiak, and Nushagak delta regions and negotiated the portage between Bristol Bay and Cook Inlet via Iliamna Lake. While at Fort Alexander on the Nushagak he complained that he could not "find anything for the Ethnological Museum in Berlin" because "the deceased Mr. MacKay had bought everything the natives possessed for the Smithsonian Institution."[11]

Of significance for this study was a journey Jacobsen undertook during the spring and summer of 1883. Jacobsen crossed the base of the Alaska Peninsula from Fort Alexander on Bristol Bay to Kamishak Bay near the entrance to Cook Inlet via Iliamna Lake. In late April Jacobsen left Fort Alexander and crossed to the northeast end of Bristol Bay in a skin boat with his crew consisting "of three Eskimo and a half-breed with his wife and child." On April 24 the little expedition reached the mouth of the Kvichak River and on May 29 it reached Iliamna Lake "which was of ocean-like extent and was whipped into great waves in the wake of a storm." While in the Iliamna Lake area on his way to the portage that would take him to Cook Inlet, Jacobsen recorded his impressions and experiences:

> The storm forced us to stop even though we were almost without food. During the five days we were obliged to stay here we had little success in hunting and our meals were restricted. At last the storm abated, and on 2 June, at four o'clock in the morning, we started our journey across the lake with a weak northeast wind. After seven hours of the most strenuous work we arrived at an island where we gathered 120 gull eggs that had not yet hatched....
>
> Not far away on the south shore is the Eskimo village of Kaskanak [Kakhonak?], which we passed because I was in a great hurry. We continued paddling until late in the evening, when we were completely worn out and came ashore for the night after having covered about fifty English miles that day. It was said that this region should be heavily stocked with elk, caribou, and brown bears.
>
> In the morning there was a strong breeze from the west, mingled with rain. We set sail and headed for the northeast end of the lake, where high rock formations lined the shore. We sailed past a large island that still had no name and arrived at noon at the far end of the lake at the mouth of the Nusaktolik River, which the Russians called Adematzensky. A short ride of about five English miles brought us at about two o'clock in the afternoon to the village of Iliamna, a trading post of the Alaska Commercial Company. I discovered, much to my sorrow, that the yearly trading vessel that comes to this port early in June had left three days before.
>
> The station at Iliamna consists of five huts and is the boundary between the Eskimo and the Ingalik people.

11. Sherwood, *Exploration of Alaska*, p. 83.

Jacobsen next crossed the portage between Iliamna Lake and Iliamna Bay on Cook Inlet. This portage was "a short distance of a few English miles that led in a slow climb to a steep mountain pass on the other side where one descended into the valley of Iliamna Bay."

After reaching Cook Inlet Jacobsen and his party took several boats and reconnoitered the large body of water, stopping at Tuxedni Bay, Tyonek, Kenai, Kasilof, Ninilchik, Anchor Point, Seldovia Bay, and English Bay. During his travels on the inlet Jacobsen, although concentrating on his search for ethnological objects, praised the scenery, wildlife, and recreational opportunities offered by the region in the florid rhetoric of his poetic age:

> The country along the shore is enchanting. The mountains have high, sharp peaks and are close to the sea. From here we could see in the distance smoke from the volcano Mount Iliamna. The snow that covered the highest peaks formed several glaciers, while the shoreline was covered with the lushest green. A lovely odor filled the air and seemed to come from the clusters of birch trees. The rocky coast was irregular through the action of erosion and water and fell into ravines, coves, and pillars – a painter's paradise.
>
> As we passed Sauntitas Bay [Chinitna Bay] we saw smoke pouring forth in three places under the crest of Iliamna and also noticed that the snow below the crater was a dirty gray, as though unclean water had been poured over it. In order to make tea we went as usual into the mouth of one of the many streams that emptied into the sea here, and we noticed the tracks of brown bears everywhere. We had also veered away from the shore several times during the trip because of these animals. The brown bears, however, did not show any fear of us and in one place we saw two large ones rolling on a snowfield near a cliff and playing together like young cats; and at another place a bear stood for a long time and watched our expedition until at last he plunged into the undergrowth and ran away.
>
> This region is a positive El Dorado for hunters and tourists. The landscape, the volcanic outcroppings, glaciers, fantastic rock structures, waterfalls, grottoes, and caves combine with a wealth of animal life such as I have seldom seen. The rivers swarm with salmon and other fish, the sea offers seal hunting, bears and caribou are there in quantity, the rocks are covered with gulls' nests – and on each one we passed sat a female hatching while the male flew about making so much noise that we could hardly hear each other.
>
> The 2,000-foot-high cliff on Assik [Chisik] Island is an example of such a rookery, for near the top the air is constantly dark with flying birds while on the shore is a carpet of blue and red flowers. We were detained here by stormy weather and stayed for a day on the mainland [Tuxedni Bay] opposite the island.

Hearing of an abandoned Indian village on Kachemak Bay, he traveled to the site of what he called Soonroodna and excavated a variety of earthenware and pottery pieces. This effort was the first archeological excavation effort to be undertaken in Cook Inlet. As a result of his labor, as well as that by Arthur and Aurel Krause who were simultaneously conducting intensive ethnological studies of the Tlingits in southeastern Alaska during the early 1880s, Germany by 1883 had Alaskan ethnological collections second only to those at the Smithsonian Institution.[12]

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12. Gunther, trans., *Alaskan Voyage*, pp. 187-96. Jacobsen's ventures at the Soonroodna village site are recounted on pages 197-200. Also see Sherwood, *Exploration of Alaska*, p. 83.

FRANK LESLIE'S ILLUSTRATED NEWSPAPER EXPEDITIONS: 1890-1891

During the early 1890s private enterprise stepped into the ongoing effort to explore the interior of Alaska, thus leading to the American "discovery" and naming of Lake Clark. Expeditions financed by *Frank Leslie's Illustrated Newspaper* in 1890-1891 were designed to capture the imagination and subscriptions of American newspaper readers. Although geographical research into the unknown mining opportunities of Alaska and northwest Canada was announced as the reason for the exploration, W.J. Arkell, publisher of the newspaper was primarily interested in obtaining exciting copy to enhance his readership. On April 5, 1890, for instance, *Leslie's* hinted that it was "not unlikely that the result will be second only to that of Stanley's explorations in Africa."[13]

Steps were taken to guarantee the hoped-for results of the expeditions. The executive officer and artist of the expedition was E.J. Glave, who had been with Stanley in Africa. E.H. Wells, a veteran correspondent, was named chief of the operation, and A.B. Schanz, a New York reporter and historian with scientific interests, was designated "astronomer and historian." A photographer, scout, and three "frontiersmen" made up the balance of the original party.

During 1890-1891 several parties of the expedition explored the Chilkat River Valley, Kusawa Lake, Kluane Lake, and White River Basin areas of the Yukon Territory and northern British Columbia. Meanwhile in 1890, Wells, Schanz, and the remainder of the Leslie party proceeded from Kusawa Lake to the Yukon and down to Fortymile River, the scene of recent gold strikes. Wells turned off and Schanz continued downriver. From St. Michael Schanz traveled by canoe to a Russian mission on the Yukon and portaged to the Kuskokwim, which he descended to the coast. By portages and coasting Schanz arrived at Nushagak on Bristol Bay in October 1890. After ascending the Fortymile River the Wells party traversed the Tanana and Tok river valleys, passed down the Yukon to St. Michael, and followed Schanz' route to Nushagak, where the two men were reunited just before Christmas. In January 1891 Wells crossed the Alaska Peninsula to Katmai village and from there returned to the States.[14]

Schanz began a significant expedition on January 29, the day after Wells left Nushagak. Before their reunion in December, Schanz, unaware that he was being followed by Wells, had arranged for a sledding trip with John W. Clark,[15] the agent of the Alaska Commercial Company's trading station at Nushagak, "to visit a lake known to exist several hundred miles inland in an attempt to determine the source of water supply of Iliamna Lake." After the arrival of Wells the two men agreed to pursue two routes to Katmai village. Schanz would circle inland and visit Iliamna Lake and the still unnamed Lake Clark on his way south, while Wells would take the direct route to Katmai. With

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13. Quoted in Sherwood, *Exploration of Alaska*, pp. 140-42. Also see Ro Sherman, ed., "The Village of Klukwan, By E.J. Glave of the *Frank Leslie's Illustrated Newspaper* Expedition to Alaska, An Edited Account," *Alaska Journal*, IV (Spring 1974), pp. 82-87.

14. Sherwood, *Exploration of Alaska*, pp. 140-42.

15. John W. Clark became the principal Alaska Commercial Company trader at Nushagak about 1880 and remained there until his death in 1897. During this time his trade in furs reputedly amounted to about $10,000 annually. At various times during the 1880s and 1890s the Nushagak post maintained outstations at Ugashik, Togiak, Iliamna, and the mouth of the Mulchatna River. It is possible that there were additional minor stations at various points on the Nushagak River, placed in such a manner as to control the trapping activity of the Nushagak River Eskimos. Included in the Nushagak fur trade were sea otter skins obtained by Bristol Bay Eskimos who were encouraged by Clark to hunt them in the Cook Inlet region. Kitchener, *Flag Over the North*, p. 164, and VanStone, *Eskimos of the Nushagak River*, pp. 59-60.

Clark, Innokente Shishkin, a young Russian from the station, and six "Esquimau boys," Schanz ascended the Nushagak and Mulchatna rivers and sledded to Iliamna Lake and Lake Clark, which he named for his guide and placed definitely on the map, though its existence, as previously noted, had long been known from Native and Russian reports.[16]

Schanz described the epic dog-sledding journey that he, Clark, and Shishkin undertook from Nushagak to Katmai in a series of articles in *Frank Leslie's Illustrated Newspaper* during September-November 1891. Of significance for this study is the portion of the trip in the Lake Clark region. As the men ascended the Nushagak River, Schanz noted:

> I had heard vague stories about the existence of a large lake north of Iliamna, and it seemed to Mr. Clark and myself best to follow up the tributaries of the Nushagak until we had traced one of its sources to the very water-shed separating the Nushagak drainage basin from that of the great Lake Iliamna. Accordingly...we ascended the Nushagak to its confluence with the Mulchatna, the Mulchatna to its confluence with the Kokhtuli [Kaktuli River], the Kokhtuli to its confluence with the Kogiukhtuli [Swan River], and then kept on in the bottom of this creek, until its origin lost itself in a few little pools of water fed by mountain springs active even at the prevailing low temperatures.

As the Schanz party left the headwaters of Swan River on February 11, they were already short of provisions. The men "began scrambling up hill through snow eight feet deep," aware that they "were not equipped exceptionally well" for the trip.

The journey between the Swan and Chulitna rivers just west of the boundary of present-day Lake Clark National Park and Preserve was a bitter struggle amidst a fierce raging storm for the ill-prepared party. Schanz wrote:

> When we first took to the hills the incline was so steep that it was difficult to climb with snow-shoes, and the snow was so deep that the dogs could find no footing and a man was liable to disappear from sight entirely in a snow-drift. It was therefore a perfect wallow for several hours, although I sent two Esquimaux ahead to make a kind of road. The dogs were unable to drag the sleds for lack of a fulcrum, and the men in consequence had terrible work. I never experienced any toil so exhausting as pushing a sled up hill while you are floundering in snow to your arm-pits. Then the heat generated by your exertions causes you to perspire, and the snow melts on your clothing so that the moment there is a pause in the work you are frozen as hard as a board.
>
> Finally, when we reached the top of our first hill, we saw before us a rolling country, and at it we went. Up hill and down hill, through forest and glade, over tundra, ponds, and creeks, until, at three o'clock in the afternoon, we reached a bluff forming the bank of an important river – the Chulitna, as we afterward ascertained. The trend of this stream's valley was about fifty-seven degrees magnetic, or a little north of east, but from what we could see from the top of the water-shed we concluded that it subsequently southed a little. Hence we decided that the stream must be a feeder of the lake we were seeking or a tributary of Lake Iliamna, and decided to follow its bottom. A tremendous task we had undertaken for Meander, that ancient Asiatic stream which was so tortuous as to persist

16. Ro Sherman, ed., "From St. Michael to Katmai, By E.H. Wells of the *Frank Leslie's Illustrated Newspaper* Expedition to Alaska, An Edited Account," *Alaska Journal*, V (Spring 1975), pp. 109-16, and Sherwood, *Exploration of Alaska*, p. 142.

in running into itself, "was not in it" with the Chulitna, as the sporting editor would say. Our guide, Tokuchoakh, vulgarly known as Kakwok, was very evasive in his replies to our demands for information, and we grew skeptical as to his trustworthiness. But we pegged away in the river bottom the rest of the day, and camped that night on the ice, where a punching nor'wester made our blood run cold. We ate our last bacon that evening, and our poor, shivering dogs, after their hard work all day, were reduced to half rations – that is, a piece of fish about the size of your hand. Many of the unfortunate animals were weakening, while others were losing their temper, and gauntly stalked about camp growling and snapping. When the men got out their salt fish to cook soup they were attacked by several dogs, who managed to get the salmon. A terrible dog-fight ensued, during which three of the dogs not interested shared the fish. Next morning two of them were dead and the third was unfit for work, for salted fish or meat is deadly poison for an Esquimau dog.

Now we were compelled to share with the men our fast waning stock of hard tack, itself poor food to work on. We were anxious to push on, and made a start next day, but the mercury dropped to thirty-eight degrees below, while the storm whirled snow crystals through the air which cut like particles of glass. I remember that Apangesin's fur hood left the weather side of his face exposed, and that in a few minutes the poor fellow's face looked as if it had been grated with a rasp. We could not see ten yards ahead, and our starving dogs only staggered along....

Mr. Clark froze his face badly, and his injuries later on proved very troublesome. The peculiar condition of the air at this temperature caused a thick coating of ice, like hoar frost, to settle on the skin, and after a few moments the sensation was much like that of being burned. Then the muscles became rigid and numb, and assumed the well-know [sic] waxen pallor. It may be imagined that when we managed once more to crawl under our canvas roof and into our sleeping furs we were not in the most contented mood. Our poor dogs received their last half-ration of fish.

As soon as the storm abated the party began its ascent of the Chulitna, following its "tortuous windings" with tantalizingly "slow progress." Schanz described the increasingly desperate situation of the men and their dogs:

We were aware that we could not feed our unfortunate dogs a mouthful, and there was no hope of improving our speed. On general principles we cut off some of the worst bends of the stream by portaging to a chain of three little lakes, which in a fit of bitter facetiousness we named lakes Brown, Jones, and Robinson. On these little pools we found at least a good icy road and our emaciated dogs even seemed to be a little encouraged. The night of February 13th we camped on the Chulitna between lakes Jones and Robinson. It was the first evening that our dogs were given no food at all....When we halted to make camp I sat on my sled wrapped in gloomy thoughts. My poor skeletons, who had a savage affection for their master, came up one by one and squatted in a circle about me, looking reproachfully into my face....During the night, however, there was a little rest in camp, for the teams snarled about like a pack of coyotes. At about midnight one of the brutes managed to get hold of a pair of fish-skin boots in the men's quarters and pandemonium reigned while the whole pack was fighting for the delicacy.

In the morning we had to carry the dogs from the fire to the harness. Many of them had crawled so close to the fire, indifferent to consequences, that great scars had been burned into their hides, and hugh blisters added their torment to the trials of the animals.

> Innokente Shishkin lost one dog, who, apparently mad with hunger, had run into the brush and was not seen again. Mr. Clark's magnificent leader, Kamukhpak, also was done with the world.

As their situation worsened Schanz and Clark climbed "an eminence to reconnoitre" on February 14. They concluded that the way they were traveling, they were "making four miles to gain one." When they consulted with their Eskimo guide, he confessed "that he was out of his territory, and knew nothing of the country" they were in. Clark reportedly stated that if they were "driven to extremities," he knew who would "be first in the soup." As the men viewed the terrain ahead of them they could see "a kind of 'mountain-pot' which promised to contain the much-sought-for lake."

Schanz and Clark thus made final plans to reach their goal, but at the same time they discussed alternatives should they fail. According to Schanz, the men

> decided to make a direct line for the foot of a mountain which seemed to lie at the mouth of the Chulitua. Mr. Clark and I snow-shoed it ahead ourselves, so as to have no more dilly-dallying, and it was this determined undertaking which undoubtedly saved our lives. On the 14th we traveled in a bee-line twenty-five miles, continuing until we again struck the river, and were almost due north of the mountain at which we had aimed all day. Another night passed supperless by our dogs. We saw that a crisis was imminent, and that night, in our tent, Clark, Shishkin, and I held a council of war. We decided that, in case on the morrow we did not succeed in finding the lake and one of the villages on its shores, we would lighten one sled, pick out the twelve strongest dogs, and send a couple of our men southward to try and reach one of the Iliamna villages and bring us aid. In the meantime the rest of us would go into camp and try to avoid eating dog by diligent hunting.

The men finally stumbled on to the unnamed lake they were trying to reach on February 15, and Schanz immediately named the body of icy water Lake Clark in honor of his traveling companion. Schanz described the final stages of their journey to the lake and the exhilaration of the moment of their discovery:

> On the morning of Sunday, February 15th, affairs looked extremely gloomy. Our starving dogs were hugging the remains of the camp-fire, and we had to carry the emaciated creatures to the sleds, where they stood shivering in their harness until the start at a quarter after seven. The weather was a little warmer than it had been the day before, and much to our delight, the road on the river proved exceptionally good. The dogs staggered along painfully at first, but soon warmed up and surprised me by their energy. I ran ahead of the whole expedition at the start, and after having made about five miles I waited for my sled to come up, and found the dogs tottering along at a rapid gait over the smooth ice. We were making good speed and after rushing over a portage and around two or three bends, we turned the corner of a sort of cliff, and there – Eureka! – spread out before us, was the great white expanse of Lake Clark. For so I named this beautiful expanse of water, in honor of my traveling companion. Clark and I shook hands in mutual congratulation and our boys formed a smiling group in spite of their sore trials.

Having arrived at Lake Clark the desperate men turned to an object of immediate concern to them – that of finding a Native village on the lake. Schanz would later write that this objective was most important as "the satisfaction of discovering Lake Clark would hardly have reconciled us to the fate

of starving to death on its shores." After taking their bearings with a prismatic compass, the men continued their "easterly course over the ice of the lake." According to Schanz:

> No one had any idea in what direction we were to seek the village, and we chose our road haphazard in the hope of discovering a sled or foot trail somewhere. We had not gone a mile before, in a stretch of glare ice, we discovered the faint mark of sled-runners. It was an old trail, but it was encouraging, for it was the first trace of human kind we had seen for over a week.
>
> Not to forget the purpose of our coming, however, we stopped at noon to take a meridian altitude of the sun, and at the same time had our men make tea. Near our bivouac were found a number of salmon heads and a broken snow-shoe, further signs of the proximity of natives. After tea we headed about northeast, and soon the sled track became more and more distinct, though it was at least three weeks old. The road on the lake, however, was bad, for it consisted chiefly of drifts of hard-packed snow, over which the runners grated like sandpaper. Mr. Clark and I broke through so frequently that we had to take recourse to our snow-shoes, and inasmuch as our toes were raw and my left knee was swelling from a dog-bite I had received that morning, we felt anything but comfortable.
>
> After a couple of hours we reached a point extending out from the north shore in the shape of a hook, thus forming a deep bay, bordered by a wooded, rocky mountain about 1,000 feet high. Back of this again a deep gorge seemed to cut a wedge-shaped cleft between the snow-covered granite walls. The whole lake is surrounded by bold and grand mountains from 5,000 to 7,000 feet high at the southwestern end, and increasing in height and cold severity to the northeastward, to the range on Cook's Inlet, where the two great volcanoes, Mounts Redoubt and Iliamna, rear their giddy heights.
>
> As we passed the entrance to the bay mentioned I dropped back to the rear and walked with Innokente Shishkin behind his sled. Both of us were lame, for he had sprained his ankle in a fall, and both felt cheerless and looked ahead with forebodings of misfortune.

During mid-afternoon the party encountered a Native man moving toward them over the ice. According to Schanz, the man "was a handsome young fellow with fine eyes and a decided Mongolian cast of countenance." The stranger "was dressed in a peculiar combination of jeans and fur, and looked more civilized" than Schanz had anticipated. Despite his inability to communicate the Native led the sledding party to the mouth of the Kijik River on the northwest shore of the lake where the men "came in view of a group of real Ingalik houses and fish caches." Soon they were shaking hands "with a score of friendly Indians, the wording of whose hospitable invitations, however, was lost" upon their "untutored ears."

This settlement, which Schanz called Nikhkak, was the Dena'ina village of Kijik, the site of considerable archeological and ethnological interest in recent years.[17] The headman of the village invited the hungry men to his house for tea and dried salmon. Schanz was favorably impressed by the hospitality as well as the cleanliness and marks of civilization in the village:

> The head-man of the village wore cowhide boots and a tailed coat, and, in fact, all the natives were more or less dressed in civilized garments. The houses and caches were neatly

17. See, for instance, Lynch, *Qizhjeh*, pp. 1-83.

built of hewn logs and planks, the houses having windows made of the tanned skin of mountain-sheep intestines. The whole village bore an air of respectability and cleanliness almost startling to one accustomed to the filth of Esquimau mud-huts. This impression was enhanced when, upon entering the chief's house, we found there a small box-stove with four holes for cooking. The chief had also built himself a table and a sleeping bunk. It seems that the articles of civilized clothing and furniture are obtained by these people through intertribal commerce with the natives on Cook's Inlet. The chief himself had paid repeated visits to the posts on the inlet.

Soon the "chai nik," or tea-pot, was singing on the little stove, and before long we were warming our stomachs with a cup of fragrant tea. Our host participated in the feast, for which he proudly insisted upon our using some fancy china cups of Russian design which he had in his possession. He also had his squaw offer us some dried salmon, which for cleanliness and general excellence was unexceptionable. We satisfied the cravings of our stomachs, and our crazy dogs, who had dug up half the village for offal as soon as they arrived, were also liberally fed with dried fish – the first square meal they had had for five days.

The next day the party rested their dogs and "weary limbs." Schanz and Clark made a short excursion along the lake shore to obtain some bearings. The men had intended to explore the upper end of the lake, but the scarcity of food made it essential for them to "retreat as soon as possible, and try to reach a trading-post." Thus, they obtained as much information as possible about that part of the lake during the morning and "plotted that region in dotted lines." Meanwhile, their Eskimo assistants "cooked troughs full of nourishing soup" for the dogs, "which lent the animals almost a rotund appearance."

During the afternoon and evening Schanz, Clark, Shiskkin, and one of their Eskimo assistants took a census of the village as well as of "the upper village" of Kilchikh, located "about nine miles up the stream which empties into Lake Clark at Nikhkak" and, according to Schanz, was "really the original village." Because of difficulties in communication this effort was a lengthy, convoluted process. Schanz described the occasion:

So, armed with the huge portfolio of blanks, we attacked the chief's house. The head-man as well as his fighting-bucks were at once deeply interested in the proceeding, and tried hard to understand what it was about. Then ensued a palaver in a most remarkable linguistic hash, re-enforced by all the powers of grimace and gesticulation. Finally, we managed to get the chief's name. It was Thkadatstudenchin, and that was the sort of polysyllabic ponderosity we had to wrestle with. However, the chief was a remarkably intelligent man, and knew some of the Russian terms of relationship. So we got his own family all right, and, strangely enough, it was an idea of his that made the rest of the work comparatively easy. He caused each head of a family to go out and bring, in procession, his whole retinue of relatives. The family would then be arranged in a row according to age, and as each one was pointed out the chief would give the name. After a while the rest of the bucks became anxious to assist, and toward the end each name was shouted out by a chorus of stentorian voices, while I transferred it to paper phonetically. Thus success was achieved, and after it was all over I showed my gratitude by sundry presents of leaf-tobacco and tea.

Based on the men's observations, data gathering, and limited reconnaissance during the day, they set down their thoughts about the Lake Clark vicinity on paper. North of the upper village was a

gap or pass in the mountains. The Natives, using the Telaquana Trail over this pass, portaged to the sources of the Tketikuk [Stony] River, a tributary of the Kuskokwim. The headwaters of the latter were "unknown territory" and formed "the hunting-ground of the Kalchani tribes, of which the Kilchikh [Dena'ina] Indians" were "acknowledgedly an off-shoot."

As to Lake Clark, Schanz wrote that it had "all the characteristics of an Alaskan mountain lake in a marked degree." It was

> very long, very narrow, very irregular, and very deep, and is surrounded on all sides by high mountains. It is nearly seventy miles long; it is at its widest point hardly ten miles wide; it is crooked and full of bays and bights; we tried in vain to find its bottom, and the mountains bordering it to tower from five thousand feet to an altitude of twelve thousand. The general direction of the lake is about northeast and southwest, and it extends from the base of the range bordering Cook's Inlet to the 155th meridian. The latitude of the geographical centre of the lake is about 160° 15'. It has five noteworthy affluents, and its outlet was found to be an important river of great volume, running generally almost due south, and supplying Iliamna with its vast store of crystal water. Henceforth, geographers will no longer have to consider with wonder the appearance on the map of a lake a hundred miles long and forty miles wide without "visible means of support."

On February 17 the party, somewhat recuperated, left Kijik on its journey southward over the icy surface of Lake Clark. The Natives gave the men one hundred dried salmon for which they "reciprocated with the equivalent in tea and tobacco." A blizzard "was blowing, but was losing its strength" when the men began their trek down the lake. Soon the weather cleared, and they could "plainly see the long land-tongue separating the two branches of the lake" into the Chulitna drainage down which they had come and the southern arm of the lake which pointed toward the Newhalen River and Iliamna Lake. Schanz named the landform Cape Shishkin after his "second traveling companion."

As the party headed toward the newly-named cape they stopped about one-half mile from the south shore of Lake Clark to measure its depth. The men dug a hole "through the seven-foot crust of ice" in 45 minutes, and using a 606-foot-long reel of cord line attempted to touch the bottom. They were amazed when they ran out of cord and still had not reached the bottom. Winding up the cord, the men "proceeded in wonder" on their route.

The party spent the rest of the day and early evening sledding down Lake Clark to Sixmile Lake, just outside the south border of present-day Lake Clark National Park and Preserve, and the Newhalen River which Schanz called the Noghelin. Schanz described this portion of the journey:

> The day's work was plodding and monotonous, a weary tramp over the dreary plain of ice; such a day as renders a person stupid, blind, and oblivious to his surroundings. The day's rest seemed to have reawakened the sensitiveness of tortured muscles and of bruised and frozen tissues, but in the silence of the gloomy day even pain was forgotten, and our little band marched mechanically on. For twelve hours we continued the work, the last three or four by moonlight along the icy ledge which bordered the Noghelin River's black torrent – for the waters of this formidable stream rush through their confines with such force and swiftness that even the lowest temperatures cannot congeal them into rigidity. We camped on the ice of a little pool formed where the river valley widens and lets the waters spread, and were lulled to sleep by the howlings of a pack of hungry timber-wolves, that prowled

about the fish-pots in the hope of getting a morsel without exposing their cowardly selves to chastisement. And in the morning another of Shishkin's dogs had gone.

On February 18 the party proceeded down the Newhalen River, reaching Noghelingamute village, where they "found the outposts of the Esquimau tribes." The Natives gave the men a few provisions and informed them "that falls on the lower part of the river made it impossible to reach Iliamna except by making a portage overland." Taking a Native guide the party headed for the portage. Schanz related:

> Our progress was exceedingly slow, for nearly every one was crippled, and we had lost so many dogs as to weaken our teams materially. Of the thirty-three dogs with which we had started only twenty-five were left, and many of these, poor fellows, staggered along with bleeding feet, emaciated, and so weak that their tortured stomachs could not even retain its meager food.
>
> But we were now in view of the grand ice masses which were piled up where the Noghelin Falls hurled their forbidding floods over the rocks. It was one of nature's gems of beauty, but in our condition not even the charms of such a scene could awaken adequate appreciation. I made a memorandum of Petroff Falls (after Ivan Petroff, special agent in charge of Alaska Division, Eleventh Census), and then turned to encounter the difficult task which the falls made necessary – the portage to Lake Iliamna. It began with the climbing of a steep hill, and then necessitated a wallowing progress through deep snow over a rolling country. We only made about two miles of it that day before we camped.

Febnuaty 19 was the last day of siguificant difficulty for the party because their progress brought them "to the region which was previously known to the world in general, and which had been visited previously" by Clark and Shishkin. Schanz described the trek as the men finished portaging to Iliamna Lake and then proceeded over the frozen wastes along the shore of that body of water toward the Native village of Koggiung on the Kvichak River:

> We continued on the portage, over tundra, through woods and gullies, up hill and down hill, a most miserable and hummocky region through which to force a way. Eight miles of this sort of thing in a southeasterly direction brought us to Iliamna's north shore, a most coy strand, which seemed to recede from our advances. At ten o'clock we started on our weary march over the corrugated surface of Lake Iliamna, a series of snow-drifts, sometimes hard, sometimes soft, but always trying to one's patience. It was a bad road, and therefore a disappointment to us who had expected a smooth level of ice. Besides, it compelled us all to walk over the blinding expanse, and every individual was more or less crippled. My man Tabai suffered terribly from his frozen foot which had now begun to suppurate, but he bravely stuck to his work steering the sled. Such an example left complaint out of the question, and I resignedly lashed my snow-shoes on my swollen limbs and limped ahead of the dogs. Clark's frozen face was swollen out of all semblance to himself and was assuming a bright-red, inflamed appearance, resembling erysipelas. He soon became snow-blind on the lake, in spite of the protection afforded his eyes by smoked goggles, and eventually had to be carried on his sled. My dogs were so slow that

we were generally a mile or more behind the other sleds. So all in all it was a most miserable day of this series of miserable ones.[18]

The Schanz expedition returned to Bristol Bay via the Kvichak and Nushagak river drainages and then portaged across the Alaska Peninsula to Katmai in early March 1891. As one part of the Leslie expedition that year the Schanz exploration stimulated interest in Alaska and generated considerable publicity, more than forty reports and articles on the entire expedition appearing in the sponsoring journal alone.

The actual geographic and scientific accomplishments of Wells, Glave, and Schanz, however, were disproportionate to the publicity their exploits received. Original geographical investigations were limited to Glave's passage down the Alsek River in Canada, Wells' examination of a small area near the upper Tanana, and Schanz' investigation of the Lake Clark region. Although the overall enterprise was aided by the New York Museum of Natural History and officials of the U.S. Coast and Geodetic Survey, few contributions were made either to science or to cartography and geography.[19]

MILITARY RECONNAISSANCE OF COOK INLET REGION: 1898-1899

The first military expeditions to explore portions of Cook Inlet took place in 1897 and 1898. During that period, Lt. Hugh Rodman of the U.S. Navy and the U.S. Coast and Geodetic Survey traveled into the Lake Clark District via the Iliamna Trail. He probably took the first photographs of the Iliamna portage; photographs taken during Rodman's trek depict a camp scene along the trail and views of the cemetery at Old Iliamna Village, which he called "Idinaski."[20]

Shortly afterward, a more extensive expedition came north which touched on areas north and east of present-day Lake Clark National Park and Preserve. During late 1897 the U.S. Army, anxious to participate in the exploration of Alaska, formulated its justification for exploring the region between the Yukon River and the Gulf of Alaska. Fearing commercial dependence on a British railroad to the Yukon Basin (the White Pass and Yukon Route), where gold strikes were being developed on American territory, the Army recommended that the government survey an "all-American route" north to the mouth of the Tanana River from either Cook Inlet or Prince William Sound. Congress supported the proposal, spurred in part by the gold rush occurring in the region.

Several Army expeditions were organized in 1898 and 1899 to accomplish these objectives. The 1898 expedition of most significance to this study was placed under the direction of Captain Edwin Forbes Glenn of the Twenty-Fifth Infantry. He was ordered first to Prince William Sound for the exploration of routes to the Copper and Susitna rivers and then to Cook Inlet for the reconnaissance north from tidewater to one or more crossings of the Tanana River. Based on his

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18. A.B. Schanz, "Our Alaska Expedition," *Frank Leslie's Illustrated Newspaper*, LXXIII (No. 1884, 1891), pp. 188ff; (No. 1885, 1891), pp. 208ff; (No. 1886, 1891), pp. 224ff; and (No. 1887, 1891), pp. 240ff. See the following page for a copy of a map showing the route of the Schanz expedition in the Lake Clark region. The original of this map may be seen in Record Group 76, Records of Boundary and Claims Commissions and Arbitrations, National Archives and Records Administration, Cartographic and Architectural Branch, Alexandria, Virginia.

19. Sherwood, *Exploration of Alaska*, p. 142.

20. Fred Hirschmann, "Lake Clark-Lake Iliamna Country," *Alaska Geographic* 13 (1986), 114-15.



U.S. Geological Survey, *Map of Alaska Showing Explorations By U.S. Geological Survey In 1898 Together With Principal Previous Routes of Exploration*, 1898, in U.S. Department of Interior, Geological Survey, *Twentieth Annual Report of the United States Geological Survey To the Secretary of the Interior, 1898-99* (Washington, Government Printing Office, 1900), Part VII.

exploration Glenn recommended that the most practical routes for a railroad from Cook Inlet to the Tanana were from Knik Arm up the Matanuska, Tazlina, and Delta rivers and up the Susitna River valley via Broad Pass and the Nenana River valley. However, he noted that the Susitna route would entail difficulties:

> In regard to the construction of a railroad up the Sushitna River, nothing definite is known, as no one has really attempted to go up the valley of this stream. All travel in the winter season has been on the ice of the river, and that during the summer season has been by boat up the stream itself. Such a road, to be of value, or available all the year, would have to pass down the west or north side of Cook Inlet, to some point where there is an open harbor throughout the year – certainly as far as Kanishak Bay, or even farther.
>
> From all information obtainable, a number of obstacles of a serious nature would have to be overcome in passing down the inlet, rendering the cost of construction very great. In order to pass around the bay at Kuskatan a long stretch of marshy country would have to be crossed. The country between that and Redoubt Bay, in fact for some distance farther down the inlet, is very rough. The country from Kuskatan [sic] up the Sushitna is reported to be feasible for a railroad, but it is not sufficiently well known to state anything positive in regard to it.

Glenn's 1898 exploration did not visit the west side of Cook Inlet. The party pioneered the Matanuska-Delta trail, and side trips by his men contributed to geographical knowledge. The Resurrection Bay-Turnagain Arm trail and the Crow Creek-Eagle River country were mapped, and a route traverse was run up the Matanuska to the Tanana.[21]

Glenn's expedition in 1899 was a continuation of the previous year's exploration. Of the various parties under his command, the one under the immediate supervision of First Lieutenant Joseph S. Herron made the most important contribution to geographical knowledge. The most difficult of the military expeditions that year, it provided the first official exploration of the upper Kuskokwim region. Known as the Cook Inlet Exploring Expedition, Herron and his men landed at Tyonek on May 14. With an assistant surgeon, two enlisted men, two packers, two Native guides, and a pack train, Herron passed up the Yentna River and began an ascent of the Kichatna River on July 1. From that stream's head he crossed the Alaska Range through a pass which he named Simpson and descended the Kuskokwim's South Fork. Here his Indian guides deserted. Turning northeastward he proceeded up the Kuskokwim valley formed by the East and North Forks and soon became lost in the timbered lowlands. In September, the grass having withered, Herron abandoned his pack train and decided to raft downstream in search of Native assistance. The rafts were wrecked and rations were severely depleted by the accident and by foraging bears. The party turned north again on foot and was eventually overtaken by a Native, who guided the weary explorers to Telida village. After a two-month layover, Herron, directed by Natives, continued north past Lake Minchumina and the upper Kuskokwim to the Cosna River, which he followed to the Tanana. He finally arrived at the junction of the Yukon and Tanana rivers on December 1.

He recommended the general course of the route he had traversed as the best practicable route for a wagon road and railroad for freight and passenger travel from tidewater on Cook Inlet to the

21. "Alaska – 1898. Tanana River Exploring Expedition, Capt. E.F. Glenn, Twenty-fifth United States Infantry," in *Compilation of Narratives of Explorations in Alaska* (Washington, Government Printing Office, 1900), pp. 627-48.

Yukon River. The only negative point about the route, according to Herron, was the projected railroad terminus at Tyonek. Herron observed:

> The arguments contrariwise touch only the initial point of the route, Tyoonok, which for about four months in the year has the defect of floating ice in the anchorage and channel approaches. This objection does not apply to points below the East and West Forelands and can be overcome by the selection of a terminal farther down the coast at some point below the West Foreland, such as Redoubt Bay of Cook Inlet, situated less than 40 miles south of Tyoonok. Kustatan is favored with a superior, 10-fathom, sheltered harbor, free from ice all the year, and is easily accessible by land from Tyoonok.
>
> Kustatan is situated in a coal region, is used as a cannery station, and has one of the best harbors in Alaska.[22]

HARRIMAN ALASKA EXPEDITION: 1899

The Harriman Alaska Expedition was a noted achievement in Alaskan natural history that matched the quality of work done by the U.S. Geological Survey in interior exploration. Conceived and financed by railroad magnate Edward Henry Harriman, the expedition signalized the entrance of large-scale private philanthropy into Alaskan scientific research. While it was planned as a big game hunt and holiday outing for the Harriman family and could thus be classed as a variety of tourism that produced incidental benefits to science, the expedition was staffed by scientific personnel from government, privately-endowed research, and university circles.

The main body of the party left New York in a special train of palace cars. At Seattle the entire group boarded the recently overhauled and refurbished *George W. Elder*, an Alaskan cruise ship 250 feet in length with a 38.5-foot beam, registered at 1,709 tons. The *Elder* carried a crew of 65 officers and men.

The vessel stopped at Metlakatla, Wrangell, Juneau, Skagway, Sitka, Glacier Bay, Yakutat, and Prince William Sound. After briefly entering Cook Inlet, the expedition touched at the Shumagin, Aleutian, and Pribilof islands, and visited Bering Strait. The *Elder* returned by approximately the same route though with fewer stops, and the journey ended in Seattle on July 30. In two months the *Elder* had cruised some 9,000 miles and made about 50 stops for sightseeing or scientific investigation.

The Harriman Expedition spent only one day in Cook Inlet. On June 30, 1899, the *Elder* dropped anchor at Homer. John Burroughs, the noted nature writer, observed:

> We entered it on the 30th, under bright skies, and dropped anchor behind a low sandspit in Kachemac [Kachemak] Bay, on the end of which is a group of four or five buildings making up the hamlet of Homer. There was nothing Homeric in the look of the place, but grandeur looked down upon it from the mountains around, especially from the great

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22. U.S. Congress, Senate, *Exploration In Alaska, 1899, for An All-American Overland Route from Cook Inlet, Pacific Ocean, to the Yukon, by First Lieut. Joseph S. Herron, 8th Cavalry, Commanding Expedition, March, 1901*, 60th Cong., 2d Sess., 1909, S. Doc. 689, pp. 50-51. Also see Sherwood, *Exploration of Alaska*, pp. 163-67, and "Alaska – 1899, Cooks Inlet Exploring Expedition by Capt. Edward F. Glenn, Twenty-fifth U.S. Infantry, Commanding," in *Compilation of Narratives of Explorations in Alaska*, pp. 711ff.

volcanic peaks, Iliamna and Redoubt, sixty miles across the inlet to the west. The former rises over 12,000 feet from the sea and, bathed in sunshine, was an impressive spectacle. It was wrapped in a mantle of snow, but it evidently was warm at heart, for we could see steam issuing from two points near its summit.

The stay in Cook Inlet was brief. According to Burroughs, the expedition's hunters

> had hoped to kill some big game here, but after interviewing an experienced hunter who had a camp on shore they concluded that on our return in July the prospects would be better.

The *Elder* then left Cook Inlet and headed for Kodiak.[23]

Following the conclusion of the expedition, the various members of the scientific community aboard the *Elder* agreed to publish their observations and findings. The result was a 12-volume set of books, handsomely printed, bound, and illustrated, that was published under the auspices of Harriman and the Smithsonian Institution. The set, entitled *Harriman Alaska Expedition*, included two volumes devoted to the narrative, and to glaciers, Natives, history, geography, and resources. Other volumes were concerned with glaciation, geology and paleontology, cryptogamic botany, insects, crustaceans, land and fresh-water mollusks and hydroids, shallow-water starfishes, and sea moss animals and sea and shore worms.[24]

Although the 12-volume set devoted little attention to Cook Inlet, Bernhard E. Fernow, formerly chief of the Forest Service, discussed forest issues on the inlet in Volume II. Concerning the interchange of the coast and interior floras in Cook Inlet which centered in the Iliamna Lake-Lake Clark region, he observed:

> The separation of the coast and interior floras seems in general complete, although an exchange of species may occur here and there across the mountain passes and along the river courses. Thus, a paper-barked birch appears in numbers at the head of Lynn Canal, 1,000 feet above sea level, and again at the head of Cook Inlet, where the traders state that birch canoes are used by the Indians on Knik River, without its apparent existence in intermediate localities. This distribution would indicate a species from the interior that has crossed the range....
>
> The greatest interest in regard to this approach or interchange of the two floras would center in the region around Iliamna Lake, at the base of the Alaska Peninsula. Here the Pacific coast flora finds its western terminus, and the interior or Atlantic forest flora descends along the Mulchatna and Nushagak Rivers almost to the very shores of Bering Sea, while the low passes between Cook Inlet and Lake Clark and Iliamna should favor transmigration of the two floras, unless other impediments bar their progress.

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23. *Harriman Alaska Expedition*, I, pp. 76-77, 115.

24. Sherwood, *Exploration of Alaska*, pp. 182-86, and *Harriman Alaska Expedition* (12 vols., New York and Washington, Doubleday, Page and Company and Smithsonian Institution, 1901-1914). Also see the unabridged republication in one volume of the first two volumes of the 12-volume set – *Alaska: The Harriman Expedition, 1899*, by John Burroughs, John Muir, *et al.* (New York, Dover Publications, Inc., 1986).

The prime component of the forest along the shores of Cook Inlet was spruce. According to Fernow, the spruce formed "forests or open groves." Avalanches had "ploughed through the forest slopes to the water's edge" in places. The "hot ashes of Iliamna Volcano, near Cook Inlet," were "credited with the destruction of a considerable area of spruce forest."[25]

WILFRED H. OSGOOD OF THE U.S. BIOLOGICAL SURVEY: 1900-1902

The U.S. Department of Agriculture's Division of Biological Survey took increasing interest in Alaska's flora and fauna during the late 1890s and early 1900s. Before 1896 the Biological Survey had been chiefly concerned with the economic relations of birds to insects and plants. Beginning about 1896, biological explorations of North America became the division's principal activity, and in the summer of 1899 Wilfred H. Osgood and Louis Bishop carried the Biological Survey's investigation to the Yukon River, describing nine new species and subspecies.[26]

During the summer of 1900 Osgood and his assistant Edmund Heller first investigated the Queen Charlotte Islands of British Columbia before going to Cook Inlet, "the only general district of consequence on the Pacific coast of Alaska that had not been recently visited by naturalists." According to Osgood the "important bearing which collections from this region would have on problems connected with the general natural history of Alaska was strongly realized" by his superiors.[27]

Osgood and Heller spent more than a month in the Cook Inlet country, but his only landfall on the Inlet's western shore was at Tyonek. They stayed there from September 13 to 28. Osgood, moreover, collected few plant specimens in Cook Inlet. However, he compiled a list of 31 "important trees and woody plants" with brief annotations based on his field notes. From his reconnaissance work he developed some general conclusions concerning the flora in the region:

> The flora of Cook Inlet region is quite different in its general character from that of the coast farther south, although many species are common to both regions. The difference is largely in the reduction of the number of coniferous trees in the Cook Inlet region and the corresponding increase in deciduous trees; but other features somewhat transitional between the heavy saturated forest of the southern coast and the treeless tundra of the north are numerous....
>
> The flora on the northwest side of the inlet in the vicinity of Tyonek is somewhat different in character. With the exception of considerable areas occupied by lakes and peat bogs,

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25. *Harriman Alaska Expedition*, II, pp. 236-37, 248, 256.

26. Sherwood, *Exploration of Alaska*, p. 154.

27. According to Osgood, Ferdinand Bischoff made a small collection of birds and mammals at Kenai which were sent to the U.S. National Museum in 1869. Thirteen years later in 1882 Tarleton H. Bean, while connected with an expedition of the U.S. Coast and Geodetic Survey, made several stops near the mouth of the inlet, recording and collecting species of birds that had been sent to the U.S. National Museum. In 1898 a few specimens were taken near the mouth of the inlet by C.H. Townsend and B.W. Evermann during a brief stop of the U.S. Fish Commission steamer *Albatross*. Two sportsmen had also collected faunal specimens in the inlet during the late 1890s. Dall DeWeese collected a series of moose and Dall sheep for the U.S. National Museum, while Andrew J. Stone had secured numerous specimens, including the type of *Rangifer stonei*, for the American Museum of Natural History in New York.

the whole country is covered with comparatively open forest. Deciduous trees greatly outnumber conifers, of which but two species occur.

In addition to his observations on the flora Osgood identified 33 mammals, 77 birds, and one land vertebrate during his 6½ weeks in Cook Inlet. Concerning the fauna in the region he noted:

> The mammals of the Cook Inlet region are essentially the same as those of the interior of Alaska. Nearly all the species of the lower Yukon Valley are found among them, and none show any marked peculiarities not possessed in their interior habitat. With the exception of widely distributed species, such as the black bear, no specie are common to the Cook Inlet region and the Sitkan region. Thus while the mammals of Cook Inlet are not peculiar to the region, the mammal fauna, as a whole, is peculiar, as contrasted with that of the coast farther south....As in the case of the mammals, no birds are peculiar to the Cook Inlet region, but several interior species are found which do not occur on the Alaskan coast south of Cook Inlet.[28]

During July-October 1902, Osgood conducted another biological reconnaissance of the base of the Alaska Peninsula, including the Iliamna Lake-Lake Clark region. During this trip Osgood employed Alfred G. Maddren as his assistant and Walter Fleming as camp hand. M.W. Gorman, a botanist from Portland, Oregon, accompanied the men during July on Iliamna Lake and Lake Clark.[29]

The men traveled chiefly by canoe. Occasionally, Natives were employed as carriers and guides. Employees of the Trans-Alaska Company, a railway firm that was surveying a route in the region, assisted the reconnaissance. Osgood prepared a map based on his exploration activities (a copy of the map may be seen on page 111), but he acknowledged its deficiencies:

> Much of the region has seldom been visited by white men, and such of the streams and lakes as were shown on published maps were indicated on little more basis than hearsay or the unreliable sketches of natives and prospectors. The accompanying map, made from rough sketches and estimates, is doubtless incorrect to a great degree, but will show the points to which it is necessary to make special reference. Until actual surveys are made in the region, it may prove helpful to future travelers.

During the biological reconnaissance the Osgood party landed at Iliamna Bay on the west shore of Cook Inlet, on July 10, portaged across the mountains to Iliamna Lake and thence to Lake Clark where the men spent several days. On August 10 the party began its ascent up the Chulitna River and on the 18th reached the river's small south fork. From there the men crossed to Swan Lake and on August 27 began their descent of the Swan River, arriving at Nushagak on September 12 via the Kakhtul and Nushagak rivers. On September 26 the men started for Egegik, crossing Bristol Bay in a sailboat. After passing up the Ugaguk River, they crossed Becharof Lake to the head of its southwest arm on October 7. Continuing from there over the mountains to Kanatak on Portage

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28. U.S. Department of Agriculture, Division of Biological Survey, North American Fauna No. 21, *Natural History of the Queen Charlotte Islands, British Columbia; Natural History of the Cook Inlet Region, Alaska* (Washington, Government Printing Office, 1901), pp. 51-81.

29. For further information on Gorman's contributions to this expedition one should consult his manuscript report at the University of Oregon. Martin W. Gorman, "Report on the Botanical Survey of the Lake Iliamna Region During the Summer of 1902," Ms., Archives, Main Library, University of Oregon, Eugene.

Bay, the party skirted the coast to Cold Bay [Puale Bay], arriving there on October 13. The group took passage on a small steamer on the 27th, heading back to the States.[30]

In his published report of the 1902 reconnaissance Osgood described the geographical, botanical, and scenic features of the region traversed. Of significance for this study are his observations in the Iliamna Lake-Lake Clark region:

> The portage trail [from Iliamna Bay to Iliamna Lake] leads up the narrow valley of a small stream flowing into the head of the bay, and after 3 or 4 miles crosses a low mountain pass possibly less than 1,000 feet high. On the other side it runs down through several mountain meadows, around a small lake, and along a stream draining toward Lake Iliamna. Passing for 3 or 4 miles through a good growth of spruce timber, it terminates at Iliamna River, opposite the native village of Iliamna. From the head of Iliamna Bay to Iliamna village is about 12 miles. Outfits and supplies are easily taken across by pack horses, or natives from Iliamna village may be secured to "pack" them. The Iliamna River is a stream of fair size flowing from the mountains east of Iliamna Pass, and at the village is about 50 yards wide. Six miles farther on it enters Lake Iliamna. The timber in this vicinity is of the characteristic type found throughout the Hudsonian zone in northern Alaska. The white spruce...is the dominant tree, and with it are found its usual deciduous neighbors, the balsam poplar and the paper birch. Alders abound on the hillsides and willow thickets border the streams. Mosses, lichens, and small woody plants, chiefly Ericaceae, cover the ground. A few small ponds near the river are bordered with grasses and sedges, and, where conditions favor, are filled with large yellow pond lilies.

Upon reaching Iliamna Lake Osgood noted somewhat incorrectly that the body of water was "about 60 miles long and from 15 to 25 miles wide." After crossing some 30 miles of the northern portion of Lake Iliamna the men prepared to pass over the "Nogheling Portage" to Lake Clark. Osgood described the 6-mile portage from Iliamna Lake to Lake Clark as being "necessary in order to avoid the Petroff Falls in the lower part of the Nogheling River." The portage began about ten miles east of the mouth of the Newhalen and crossed

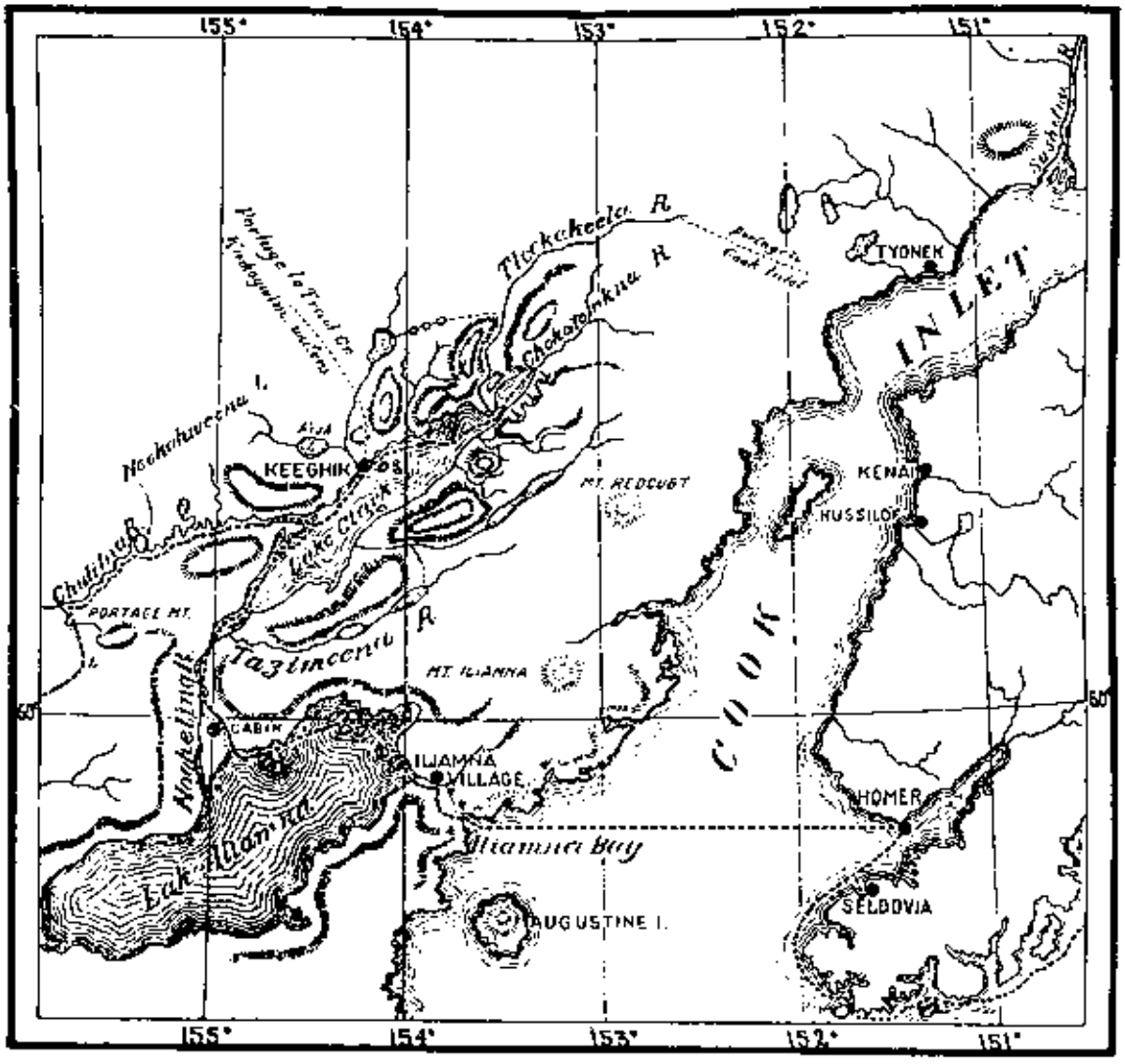
> the triangular peninsula to the river above the falls. The first half of the trail is over rather swampy open country and the last through open forest on comparatively hard ground. Above the portage there is one stretch of a third of a mile of swift water, easily descended by canoes but difficult of ascent except at low water when "tracking" is practicable: otherwise the river is ascended without great difficulty although the current is strong. The entire length of the Nogheling is from 25 to 30 miles. In the vicinity of the portage it flows in one general direction between banks from 50 to 75 feet high, but toward its upper end

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30. In an article published in the *National Geographic Magazine* in 1904 Osgood described the known routes to Lake Clark. He noted:

> There are two practical routes to the lake, one by way of Iliamna Pass, where it is necessary to cross the mountains between Iliamna Bay and Lake Iliamna, and another, almost entirely by water, by way of Bristol Bay, and thence up the Kvichak River to Lake Iliamna, which receives the waters of Lake Clark through the Nogheling River. It is also possible to go in summer or winter by the route of Clark and Schanz by way of the Nushagak and Chulitna rivers; but this is rather an arduous trip at either season. The natives use all three routes, although the last named has been rarely traveled in recent years.

Wilfred H. Osgood, "Lake Clark, A Little Known Alaskan Lake," *National Geographic Magazine*, XV (August 1904), p. 327.



Sketch Map of Lake Clark and Vicinity

Map showing the route of Wilfred Osgood's 1902 expedition for the U.S. Biological Survey. Source; Osgood, "Lake Clark, A Little Known Alaskan Lake," p. 330.

it traverses lower country and its course is more devious. Near Lake Clark it expands in two places, the larger being about a mile wide by 3 miles long. Low mountains, somewhat sparingly covered with small spruce timber, rise on both sides of the river, those on the west being higher and reaching an approximate altitude of 1,500 feet.

Upon arriving at Lake Clark Osgood described the scenic setting and topographical features of that body of water. He commented:

Our first view of Lake Clark from the low ground near the head of the Nogheling River was not an impressive one, as we were so situated that only the lower end, where the shores are comparatively low, could be seen. When once on the lake itself, however, with an unobstructed vista of the greater part of its length, the view was magnificent. The mountains, which are from 500 to 1,000 feet in height at the lower end, extend along each side of the narrow stretch of water, and gradually become higher and higher and more and more rugged. In reality the peaks are not very high, but their gradual increase from the lower end of the lake to the upper, with the misleading vista effect, causes them to appear quite lofty. The higher peaks immediately surrounding the head of the lake are possibly of an altitude of 5,000 feet: others, farther back, which may be seen at a distance, are somewhat higher.

All mountains on the south side of the lake and most of the others also are of eruptive origin and evidently date from no very remote geological period. Those about the upper end are steep and but slightly eroded, being too precipitous in most places to hold large snow banks. On the south side near the upper end, however, several small, high-hanging glaciers may be seen at the head of narrow canyons. On the north side for about 5 miles at the upper end, the mountains are slates, which are possibly exposures of similar formations known to occur to the northward in the main part of the Alaskan Range. At the lower end of the lake and also on the north side of the Nogheling River are several terraced beach benches, the apparent evidence of former occupation by salt water at receding levels. Much of the valleys of the Chulitna and Nushagak rivers is of a recent sedimentary character, doubtless once part of an old lake or inland arm of the sea. The whole region is only a little above the present sea level. A very slight areal depression would allow the waters of Bristol Bay to occupy the basins of Lakes Iliamna and Clark and the greater part of the valleys of the Chulitna and Nushagak rivers.

Several fair-sized streams empty into Lake Clark at its upper end. All carry more or less silt and glacial wash, which give the waters of the entire lake and its outlet, the Nogheling River, a brownish-gray color. One of these streams, called by the natives the Tleekakeela, which comes in on the north side near the head of the lake, has deposited sand and silt in such quantity that a wide delta is formed which effectually blocks this side even at high water. As a result, the water above the delta is virtually cut off as an individual basin. Along the south side of the delta there is a strong current from the upper basin into the main lake through a channel not more than 200 yards wide. The Tleekakeela is navigable for a considerable distance for canoes or bidarkas. At some point on its upper course there is a difficult portage which is sometimes used in going to Cook Inlet in the vicinity of Tyonek. At the extreme head of the lake is another stream of fair size called the Chokotonkna. Various other streams drain to the lake on both sides from the upper to the lower end, the most important being Achteedeedung or Portage Creek, Keejik Creek, Koonthrashiboona River, and Chulitna River. We estimated the entire length of Lake Clark to be between 50 and 60 miles. The width varies from 2 to 8 or 10 miles, the widest

part being about opposite the mouth of the Chulitna River. No soundings were made, but the water must be of a considerable depth, particularly on the south side, where the mountains rise abruptly from the water's edge.[31]

Osgood noted that a "good growth of timber" surrounded Lake Clark and "runs up the mountain sides from 500 to about 1,500 feet." The forest growth was "of much the same character as that at the head of Lake Iliamna." The biologist went on to state:

> The black spruce...which was not found about Lake Iliamna, however, is quite abundant on Lake Clark. This is particularly the case about the lower end of the lake, from the head of the Nogheling River to Keejik, where there is more or less low, moist ground suited to the tree. The aspen...is also found in a few places near the Nogheling and about Lake Clark. On the steep mountain sides south of the lake the white spruce is the principal tree, and in many places composes the entire forest. On the north side it is also abundant, but the deciduous poplars and birches are largely mixed with it. This difference in the timber of the two sides is doubtless due to slope exposure. Many of the small, low peninsulas projecting into the lake on the north side are almost entirely occupied by groves of poplars...many individual trees slightly exceeding 12 inches in diameter. A beautiful open forest of birch and spruce is found in some localities, and much of the ground in such places produces tall grass...in great abundance. Devil's club...occurs in a few dark, sheltered places near the head of the lake, and perhaps reaches the northwestern limit of its range there. Willows and alders abound in their respective relative positions, while smaller shrubs and boreal plants are in characteristic profusion.[32]

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31. According to Osgood's aforementioned article in the *National Geographic*, the portage to Tyonek crossed "at least one glacier and is probably rather a difficult one." This portage went through present day Lake Clark Pass and was called Qizhjeh Vena Tustes by the Dena'ina. The last time a Dena'ina walked through this pass was in the 1920s. The glaciers in this pass have since receded. Another portage, which was "much used by the natives," was the Telaquana Trail which connected historic Kijik Village with Telaquana Village. It extended

> in a northwesterly direction from the village of Keeghik through several low passes in the mountains to Trail Creek, a tributary of the Kuskokwim River. The trip is made in 2 or 3 days without heavy impedimenta, or, as the natives say, it is a case of "tree day, spose no paack; fi day, spose paack." Several white men have crossed this portage and report it not difficult. An expedition to the upper waters of the Kuskokwim River might find this a desirable route.

Osgood, "Lake Clark," p. 328; Priscilla Russell Kari, James Kari, and Andrew Balluta, "Dena'ina Place Names in the Lake Clark National Park and Preserve Study Area," in Linda J. Ellanna, ed., *Lake Clark Sociocultural Study: Phase I* (Anchorage?, NPS, 1986), pp. 7-38 and 7-39.

32. In the aforementioned article in the *National Geographic* Osgood commented on the map sketches and photographs he had taken at Lake Clark. He observed:

> The general contour of the lake, particularly the upper part of it, we found quite different from that usually shown on maps of Alaska, and I have been unable to ascertain the origin of the large T-shaped arm, which does not exist, but which appears on all maps where the lake is indicated at all. Our time was so occupied by other work that we were unable to attempt anything in the nature of an accurate map of the lake, but a few hasty sketches were preserved. Our photographs were also none too good, as the films were not developed until several months after the exposures were made, and meanwhile were carried in a canoe on a long trip during continuous wet and very stormy weather.

Osgood, "Lake Clark," p. 331.

After having spent several days at Lake Clark Osgood and his party prepared to leave for Nushagak on Bristol Bay on August 10. He noted that the "route now most frequently traveled between Lake Clark and Nushagak is by way of the Nogheling River to Lake Iliamna, and thence by the Kvichak River to Bristol Bay and around the coast or across country from Koggiung to Nushagak." The route he chose, however, was "more practicable for summer travel," taking the party "by the Chulitna River, across to the Nushagak drainage, and on down to the coast." According to Osgood, this route had been "formerly used to a considerable extent when the region was inhabited by many more natives than at present." At present the route was "well known to the older natives only, and signs of travel along it are few and obscured by time." By coincidence the same Native who had accompanied McKay on his exploration from Lake Clark to Nushagak on Bristol Bay some 20 years earlier accompanied Osgood from Lake Clark to Swan Lake.

Osgood described the course of their journey up the Chulitna River, hampered as it was by almost continuous rain. He commented:

> The Chulitna is the largest stream emptying into Lake Clark. It enters on the northwest side, about 15 miles above the outlet of the lake. Its waters are of the dark amber color, characteristic of northern streams which drain tundra and semitundra areas; and its mouth, where the current is scarcely evident, might be mistaken for an arm of the lake, but for the sudden change in the color of the water. Looking upstream from the mouth of the river, the country appears comparatively level, as far as can be seen. On the right are a few low hills, spurs from the higher range along the lake; on the left also are scattered hills, outliers of the ridges which extend down the northwest side of the Nogheling River and Lake Iliamna. For several miles above the mouth of the river the country is low and swampy. At one place there are several channels traversing a wide, grassy swamp, the habitat of various waterfowl. Several days were spent here, while a fresh supply of provisions was brought up from a cache made on the Nogheling River.[33]

U.S. COAST AND GEODETIC SURVEY: 1906-1910

Although the U.S. Coast and Geodetic Survey, and its predecessor the U.S. Coastal Survey, had undertaken exploratory coastal and mapping operations in Alaska since 1868, it was not until July 1906 that the bureau began actual charting work in Cook Inlet.[34] On July 1 a party aboard the steamer *McArthur*, under the command of H.W. Rhodes, arrived at Port Chatham to begin work

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33. U.S. Department of Agriculture, Division of Biological Survey, North American Fauna No. 24, *A Biological Reconnaissance of the Base of the Alaska Peninsula*, by Osgood, pp. 9-26.

34. The first map of Alaska, entitled *Northwestern America*, to be published after American acquisition of the territory was compiled for the Department of State by the U.S. Coastal Survey in 1867. While much of Alaska's interior was still unknown, the map depicted more detail for Cook Inlet, southeastern Alaska, and the Aleutians. With increased American interest in Alaska and Cook Inlet there was a need for more accurate charts and these were produced and updated periodically by the U.S. Coastal Survey during the next several decades.

In 1884, for instance, the Coast and Geodetic Survey, which had received its new name designation six years before, compiled a map of "Alaska and Adjoining Territory." The map had few details of Cook Inlet or the area of present-day Lake Clark National Park and Preserve. The map delineated the range of "Alaskan Mountains" along the west side of the inlet and noted the locations of the Redoubt and Iliamna volcanoes. U.S. Coast and Geodetic Survey, "Alaska and Adjoining Territory," 1884, in Interior Department Territorial Papers, Alaska, 1868-1911, Letters Relating to District of Alaska: February 3 and December 3, 1869, April 20, 1880 – December 21, 1889, Alaska Historical Library, Juneau.

on the topographic, hydrographic, and triangulation measurements from the Barren Islands near the entrance of Cook Inlet to the Chiswell Islands in the Gulf of Alaska. The *McArthur* returned to Seldovia on June 2, 1907, and four days later began the survey of Iliamna Bay on the west side of Cook Inlet just south of present-day Lake Clark National Park and Preserve.[35]

The survey of Iliamna Bay was completed on July 19, 1907, and the Coast and Geodetic Survey produced a new chart, No. 8665, for the bay and vicinity. During the late spring and early summer of 1908, the agency completed further hydrographic, topographic, and triangulation work in the inlet. Rhodes, the skipper of the *McArthur*, discussed the work:

> A self-registering tide gauge was installed at Seldovia, and the topographic and hydrographic survey of the harbor was completed. A base line was measured in Port Graham, and a reconnaissance was made for a triangulation to cover that harbor. In May and June the reconnaissance was extended in Cook Inlet northward from Cape Douglas and the Barren Islands, and observations began at the stations as the joint operation of the parties on the ships *McArthur* and *Explorer*.
>
> Sixty-seven miles of lines were sounded in Cook Inlet, a tide station was occupied in Port Graham, and the triangulation of this port was completed.[36]

The Coast and Geodetic Survey continued its exploration and hydrographic, topographic, and triangulation work in Cook Inlet from July to early October 1908. The "main triangulation was extended up the inlet to the Forelands, a distance of about 100 miles, before September 8, when the topographic and hydrographic survey of Port Graham was begun." This work, some of which was conducted off the coast of present-day Lake Clark National Park and Preserve, was completed on October 7, and the *McArthur* returned to Seattle for the winter.

On April 28, 1909, the *McArthur* sailed from Seattle for Cook Inlet, via Kodiak, to get the launch *Delta*, and arrived at Port Graham on May 16. According to the Survey's annual report for fiscal year 1909, triangulation work northward from the Forelands was completed between that date and June 30.[37]

In the second edition of *Alaska Coast Pilot Notes From Yakutat Bay to Cook Inlet and Shelikof Strait*, published by the Coast and Geodetic Survey in 1910, the agency summarized the extent of its work to date. The triangulation had "been extended up the inlet and the greater part of both shores" was "surveyed from East and West Forelands northward to Point Possession and the lower part of Knik Arm." Aside from the survey of Port Graham, Seldovia, and Iliamna bays no hydrography had "been done except on a few reconnaissance lines." Nevertheless, considerable data had been compiled by

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35. U.S. Department of Commerce and Labor, Coast and Geodetic Survey, *Report of the Superintendent of the Coast and Geodetic Survey Showing the Progress of the Work From July 1, 1906, to June 30, 1907* (Washington, Government Printing Office, 1907), p. 41.

36. U.S. Department of Commerce and Labor, Coast and Geodetic Survey, *Report of the Superintendent of the Coast and Geodetic Survey Showing the Progress of the Work From July 1, 1907, to June 30, 1908* (Washington, Government Printing Office, 1908), pp. 10, 39, 65, 108.

37. U.S. Department of Commerce and Labor, Coast and Geodetic Survey, *Report of the Superintendent of the Coast and Geodetic Survey Showing the Progress of the Work From July 1, 1908, to June 30, 1909* (Washington, Government Printing Office, 1909), pp. 11, 46-47.

the Coast and Geodetic Survey, some of which provides information on areas within or near present-day Lake Clark National Park and Preserve.[38]

U.S. GEOLOGICAL SURVEY EXPEDITIONS IN COOK INLET AND THE LAKE CLARK-ILIAMNA LAKE REGION: 1898-1929

By the mid-1890s the interest of the U.S. Geological Survey (USGS) in Alaska exploration had quickened. In 1895 Congress authorized the Geological Survey to report upon the gold and coal resources of Alaska, and a sum of $5,000 was appropriated for the fieldwork. G.F. Becker, a specialist in coal resources, was appointed to head the study, and he suggested that William H. Dall, a naturalist and paleontologist who had developed expertise in coal and lignite during his years of service with the U.S. Coastal Survey, U.S. Geological Survey, and Smithsonian Institution, join him on the exploration journey.[39]

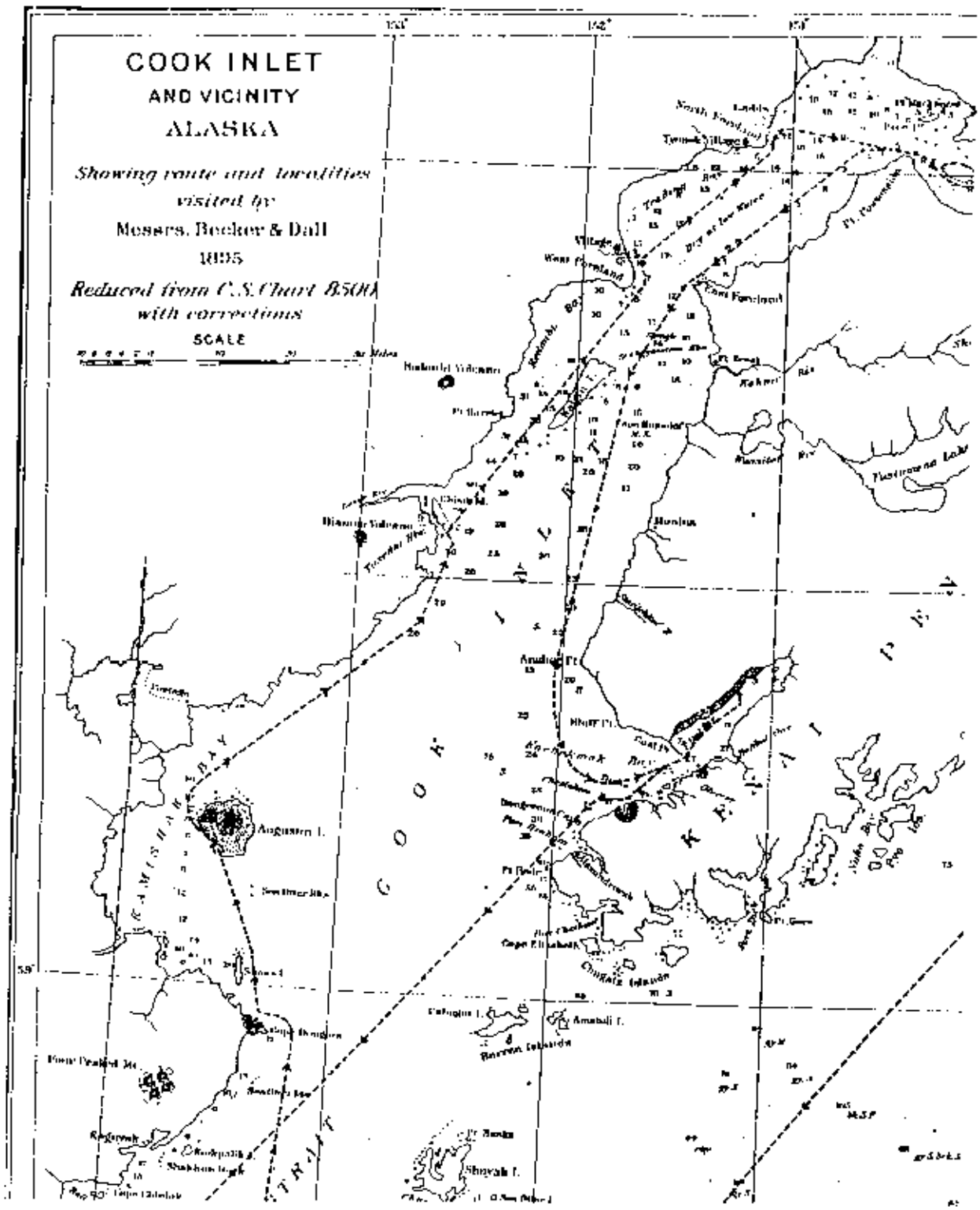
During an exploration of Cook Inlet in the summer of 1895 Becker, Dall, and their fellow geologists stopped at Tuxedni Harbor "between the peninsular shore and Chasik [Chisik] Island." Dall noted his observations of the harbor and its vicinity in an article published in the *Bulletin of the American Geographical Society*. His comments reveal a wide-ranging interest in the area's characteristics:

> That a snug harbor is to be found here is noted on a sketch chart of the U.S. Hydrographic Office, but that the bay is five or six miles long, free from dangers, and forming a spacious anchorage, would hardly be supposed from the very imperfect indications given on the best charts. Chasik Island is narrow, and rises over 2,000 feet in height, with bluff shores, the water bold-to. There is a small, round, high rocky islet outside of Chasik which forms a convenient landmark for vessels feeling their way along shore in fog, which sometimes conceals the entrance. The southern end of Chasik is high and narrow, with no reef or rocks off it, as has been erroneously stated. The strata are somewhat inclined to the south near the entrance, but in the main are nearly horizontal and composed of heavy beds of sandstone and conglomerate of varying hardness, so that the upper part of the island weathers into steps like terraces on a grand scale, offering a remarkable castellated appearance to the spectator. The scenery here is very fine and peculiar in its features. The splendid volcanic peak of Iliamna rises among the mountains SW. by W. from the harbor at a distance of some fifteen miles. Its upper part is set with glaciers, but the conical form and scenic beauty of the peak can only be fully realized from a greater distance. The fairway of the harbor is nearly straight, with high and singularly weathered cliffs rising on either hand. Toward the head it widens a little. Here good holding ground may be had in 18 fathoms. At this point the vessel which carries down the product of the salmon canneries from the inlet is anchored for the summer. The canned salmon is brought to her by small, light-draught steam tenders, which can cross the shallow water on the bars of the rivers at Kassiloff and Nenilchik, where the salmon are taken.

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38. U.S. Department of Commerce and Labor, Coast and Geodetic Survey, *Alaska Coast Pilot Notes From Yakutat Bay to Cook Inlet and Shelikof Strait, Second Edition* (Washington, Government Printing Office, 1910), pp. 41ff.

39. Sherwood, *Exploration of Alaska*, pp. 143-44. Further data on the eruption of St. Augustine may be found in George Davidson, "Notes on the Volcanic Eruption of Mount St. Augustin, Alaska, October 6, 1883," *Science*, III (February 15, 1884), pp. 186-89, and "Note," *Science*, III (June 27, 1884), p. 798. See the following page for a copy of the map showing the route taken by Becker and Dall in Cook Inlet.



Becker & Dall, Cook Inlet and vicinity map. Source; G.F. Becker, "Reconnaissance of the Gold Fields of Southern Alaska, With Some Notes on General Geology," in *Eighteenth Annual Report of the United States Geological Society to the Secretary of the Interior, 1896-1897; Part III, Economic Geology* (Washington, D.C., GPO, 1898), Plate XXVI.

Sailing up the inlet the party anchored off West Foreland, where there was a small village of "Kootena Indians." Here the shore consisted "of bluffs, apparently about fifty feet high, of gravel and sand, wooded above, with some high mountains distant in the interior." Trading Bay, between West and North Forelands, drew considerable comment from Dall. After reconnoitering the Turnagain and Knik Arms, the party passed down the inlet, visiting Port Graham and Kachemak Bay where they compiled geographical charts and explored coal deposit seams. In early August the party left Cook Inlet, heading southwestward along the coast of the Alaska Peninsula.[40]

The USGS investigations of 1895 demonstrated the interest of Congress in Alaska's developing mineral industry. Spurred by the various mining rushes that occurred in Alaska, including the gold rush that struck Cook Inlet during the mid-1890s, the primary emphasis of USGS exploration on the economics of mineral deposits set the tone for all Survey operations in Alaska through the end of the 1920s. The Geological Survey in Alaska thus became the scientific arm of the prospector and mining engineer. For Alaska, appropriation bills specified "investigation of the mineral resources." In response, the USGS provided useful, untechnical reports, some even containing recommendations for the amount and type of provisions and the outfit with which the prospector should furnish himself. The stress on mineral resources, however, had little effect on the progress of USGS geographic exploration or general geologic investigation. Fundamental research in geology did not suffer, because individual investigators performed general geological work anyway and it was difficult to separate applied from basic research, especially in a largely unexplored wilderness.[41]

Josiah E. Spurr and W.S. Post (1898)

The longest Geological Survey expedition (about 1,300 miles) made in 1898 was led by Josiah E. Spurr, geologist, and W.S. Post, topographer. The party included four "camp hands," a rather misleading label. F.C. Hinckley was an experienced naturalist, and Oscar Rohn was a graduate of the University of Wisconsin and qualified to act as an assistant geologist or assistant topographer.

Setting out on May 4, 1898, Spurr and Post left Tyonek and using light cedar Peterborough canoes passed up the inlet to the mouth of the Susitna River. They traced the Susitna to the Yentna and the Yentna to the Skwentna, then traversed a portage across the crest of the Alaska Range that would later become known as Merrill Pass to the Styx River, an upper tributary of the Kuskokwim's south fork. The Kuskokwim was followed to Bethel at the river's mouth, thence to where the Kanektok River empties into Kuskokwim Bay. The Kanektok was ascended and a portage was made to Togiak Lake and over the mountains to Nushagak. There the men hired skin bidarkas and paddled across Bristol Bay to the Naknek River. The party took the 6-mile Naknek Lake portage over Katmai pass to Katmai on the Alaska Peninsula, arriving there on October 17.

According to their original plans Spurr and Post had intended to cross from the Kuskokwim to the Yukon and to return to Cook Inlet by way of Lake Clark and Iliamna Lake. The plans had been abandoned, however, because of delays during the journey, the difficulty of traveling on water in

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40. William H. Dall, "Geographical Notes In Alaska," *Bulletin of the American Geographical Society*, XXVIII (March 1896), pp. 1-20, and U.S. Treasury Department, Coast and Geodetic Survey, Bulletin No. 35, *Alaska, General Information Relating to the Vicinity of Chatham and Peril Straits...and Cooks Inlet and the Region to the Westward...* (Washington, Government Printing Office, 1896), pp. 162-70.

41. Sherwood, *Exploration of Alaska*, pp. 171-73.

early October, and the heavy winds buffeting the region. Thus, the party had ascended the Kanektok and taken the portage to Togiak Lake and over the mountains to Nushagak.[42]

Although the expedition did not reach the Iliamna Lake-Lake Clark region it compiled data on the area from various unidentified sources. Spurr commented:

> These two lakes are the largest in Alaska, Lake Iliamna being half as large as Lake Ontario....They have the same general trend and are connected by a broad river. They are drained by the Kvichak, which is not navigable for steamers. These lakes are surrounded on nearly all sides by high mountains. Along the southeast side of both rise the volcanic peaks of the Chigmit Range, of which the chief are Mounts Iliamna and Redoubt. The Iliamna volcano was active in 1778-1779, and again in 1876. The St. Augustine volcano, in the sea near by, had a violent eruption in 1883, and is still steaming. North of Lake Clark rise the peaks of the Tordrillo Range, which forms the Sushitna-Kuskokwim divide.
>
> From Kamishak Bay a portage route extends along the valley of a small river across the mountains to Lake Iliamna. By another gap in the mountains the inhabitants of Lake Clark cross to Cook Inlet at Kustatan....
>
> Iliamna Village, on the lake of that name, is populated by half-breed Russian Eskimos, whose progenitors settled here from the Island of Kadiak. The other inhabitants of Lake Iliamna are Eskimo as far as the Nogheling River, while the inhabitants of Lake Clark are purely Indian.
>
> A trading post for Natives has been maintained for some time at Iliamna Village, the provisions being taken over the portage across the Chigmit Range. Last summer some prospecting was also done by people who reached the lake by the same route. Lake Clark, on the other hand, has been very little visited by white men.[43]

This expedition, although carrying only a line traverse across the southern Alaska Range, acquired a considerable body of information concerning the geology and geography of a wide area along its line of travel. The published report and maps "furnished the first authentic description of a great area that up to that time had been entirely unknown."[44]

G.C. Martin and F.J. Katz (1909)

The first systematic USGS survey of the Lake Clark-Iliamna Lake region was conducted by two geologists, G.C. Martin and F.J. Katz, in 1909. This geological and topographical survey covered the area between the Mount McKinley region on the north that had been reconnoitered by Spurr

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42. "A Reconnaissance In Southwestern Alaska in 1898," by Josiah Edward Spurr, in U.S. Department of the Interior, Geological Survey, *Twentieth Annual Report of the United States Geological Survey....1898-99* (Washington, Government Printing Office, 1900), Part VII, pp. 31-264.

43. J.E. Spurr, "Lakes Iliamna and Clark," in U.S. Department of the Interior, Geological Survey, *Maps and Descriptions of Routes of Exploration In Alaska In 1898*, p. 118.

44. U.S. Department of the Interior, Geological Survey, Bulletin 862, *The Southern Alaska Range*, by Stephen R. Capps (Washington, Government Printing Office, 1935), p. 6.



Frank J. Katz took this photograph of geologist George C. Martin and topographer C. E. Giffin during their 1909 reconnaissance of the Iliamna region. The photo also shows two Peterborough canoes rigged with sails embarking from the eastern side of Lake Clark, a few miles east of Tanalian Point.

F. J. Katz #24, USGS Photo Library, Denver

and Post in 1902 and the Alaska Peninsula on the south. Much of the survey included lands within present-day Lake Clark National Park and Preserve. Prior to 1909 "accurate maps and knowledge of the geology and the distribution and occurrence of the mineral resources" of this region, "except for the shores of Cook Inlet, were almost entirely lacking." Little work had been done in this part of Alaska because of its inaccessibility and lack of relative mineral wealth.

The published report of the Martin-Katz expedition was based on four months of field work in 1909. During that time D.C. Witherspoon and C.E. Giffin, topographers, mapped some 5,150 square miles, including the areas of Lake Clark and Iliamna Lake. Martin and Katz completed geological mapping of some 3,000 square miles. As a result of this survey the "precise" position, shape, and area of Lake Clark and Iliamna Lake were determined, and the major geological features of the southern Alaska Range were delineated. USGS surveys of the oil fields between Iniskin and Chinitna bays by G.C. Martin in 1903 and of the west coast of Cook Inlet from Tuxedni Bay to Cape Douglas and on the southern coast of the Alaska Peninsula by T.W. Stanton and G.C. Martin in 1904 were utilized to extend the mapped area to the east. The survey by Martin in 1903 covered lands just south of present-day Lake Clark National Park and Preserve and that by Stanton and Martin in 1904 included areas within the boundaries of the park and preserve.

The field work on which the expedition's published report was based included a combined topographic and geologic reconnaissance by a party of 12 men in charge of D.C. Witherspoon. The party landed and began work at Iliamna Bay on Cook Inlet on May 16, 1909. After crossing the mountains to Iliamna Village two subparties were organized. One of these, in charge of Witherspoon and accompanied by Katz, consisted of six men and was equipped with a pack train of eight horses. This party traversed the area north of Iliamna Lake and east of Lake Clark. The other party, in charge of Martin and accompanied by Giffin, also consisted of six men and was equipped with three Peterborough canoes. This party traversed the shorelines of Iliamna Lake and Lake Clark, mapping as much of the topography and geology as could be reached from the shore, and made an exploratory trip down the Kvichak River to Koggiung. Field work for both parties ended at Iliamna Bay on September 28.

The published report of the expedition contained data on the geographic features of the region, including its topography, lakes, rivers, glaciers, volcanoes, and climate. Of particular interest for this study was the expedition's conclusion that many of the area's streams could "be used for water power whenever the development of the region creates a demand for it." One of the most promising "water powers" was on the Tanalian River, which had "a fall of 60 feet in a single drop at the outlet of Kontrashibuna Lake" and "descends about 340 feet in the 4½ miles between Kontrashibuna and Clark lakes." Other possible sources of water power identified by the expedition included the Tazimina River, which descended "about 430 feet in about 8 miles from the lip of the hanging valley containing the Tazimina Lakes to Sixmile Lake," the Newhalen River, which dropped "nearly 170 feet in its lower rapids" over a distance of six miles, and Meadow and Kakhonak lakes which drained into Iliamna Lake. These streams were "all large," and their flow was "regulated by natural storage in lakes." Many of the "smaller streams could also doubtless be used if local power should ever be needed."

Martin and Katz devoted attention to the transportation routes to the Lake Clark-Iliamna Lake region. They noted that the area was "accessible only by water, there being two well-traveled routes leading to it." One route was from the east by way of Iliamna Bay on Cook Inlet and the other was from the west by way of Koggiung. The geologists commented further on the types of transportation routes and means of communication in the region:

The steamers from Seattle to Prince William Sound and Cook Inlet and also the local steamers from Valdez westward and from Seldovia and Port Graham to the upper Cook Inlet ports will land at Iliamna Bay whenever weather permits and sufficient business warrants it. Iliamna Bay is about a day's sail from Seward or 6 to 12 days from Seattle. There is usually about a boat a month from May to October, inclusive, and occasional boats during the winter. A good horse trail leads from the head of Iliamna Bay to Iliamna village, a distance of about 12 miles. This trail crosses a 900-foot summit 3 miles west of Iliamna Bay. Another trail leads from the head of Cottonwood Bay to Iliamna village, about 20 miles, crossing three summits at elevations of 1,700, 1,500, and 1,975 feet, at 4, 5½, and 15 miles from Cottonwood Bay, descending to 1,400 and 600 feet between the summits. A good wagon road has been built for the first 2 miles and from the fifth to the fourteenth mile, or as far as the Dutton copper prospect. These trails can usually be used by horses from June 1 to November 1. Dogs are used during the rest of the year.

From Iliamna village all parts of Iliamna Lake and Kvichak River can be reached in boats, there being several large sailboats and a gasoline launch at the village. Horses can also be taken from Iliamna village throughout the greater part of the region, except in the high mountains. The shores of Lake Clark are impassable for horses east of longitude 154° W.

Bristol Bay is visited by cannery vessels about May 1, and by a passenger steamer from Valdez once a month in June, July, August, and September. Part of the supplies for the stores at Iliamna village are brought in by this route, which has the advantage of being all water and avoiding the portage from Iliamna Bay to the village.

Iliamna Lake can also be reached by a portage from the head of Kamishak Bay to the head of Kakhonak Bay. This route is said to be easy, the pass being low. It is, however, not much used except by Natives, because of the difficulty of having supplies landed on this uncharted part of the coast.

Many of the supplies for Lake Clark and the Mulchatna country west of it are taken in from Iliamna village by dogs in the winter. Summer transportation to Lake Clark may be accomplished either with horses or by boats to a point on the shore of Iliamna Lake 4 miles east of Newhalen River, by a 5-mile portage from that point to Newhalen River above the lower rapids, and then by boat up the Newhalen. Native packers are usually available at this portage.

While the expedition did not visit the Mulchatna region, it collected observations for its publication from prospectors and traders who were personally familiar with the area. Lying between the "valleys of Lake Clark and of the Kuskokwim River," the Mulchatna River rose "opposite the south fork of the Kuskokwim River, in the mountains north and northeast of Lake Clark," which were an extension of the Tordrillo Mountains. Three main branches of the river, known as the Big, Middle, and Small, flowed "southwesterly to a point about 25 miles north of the west end of Lake Clark," where they united "to form the main Mulchatna." From there the stream flowed some 60 miles southwest to its confluence with the Tikchik from the northwest, receiving in this distance one important tributary, the Koktalee or Kakhtul. The Nushagak River, formed by the confluence of the Tikchik and Mulchatna, took a southwesterly-westerly course for 90 miles to Bristol Bay. Above the forks of the Mulchatna the country was "mountainous with moderate relief." Below the forks it was "low with broad gravel-covered, pond-dotted plains and detached hills or mountains."

The geologists also compiled data on transportation routes and supply points in the Mulchatna. They noted:

> Canoes can be taken from Bristol Bay up to the Koktalee and, it is reported, to the forks of the Mulchatna and even beyond in high water. The usual route, however, is from Iliamna, generally from Iliamna Bay on Cook Inlet by portage trail to Iliamna village, thence by boat to Newhalen River and Lake Clark. From Lake Clark the trail is either overland from Portage Bay or by boat up Chulitna River, and thence overland. From Koggiung on Bristol Bay another boat route ascends the Kvichak and crosses Iliamna Lake. There are boats and boatmen for hire at Koggiung, Iliamna, and on Lake Clark, and pack animals or natives are usually available for work on the portages. Supplies of all kinds can be purchased at Iliamna, and the local traders have stocked caches with provisions on Lake Clark and on the Mulchatna. It is reported that the trails are good, that horses can be readily used, and that on the whole the region is more accessible than others in Alaska which have received more attention.[45]

Philip S. Smith (1914)

In 1914 a USGS survey party, under the direction of Philip S. Smith, geologist, and R.H. Sargent, topographer, undertook exploration of the Lake Clark-Central Kuskokwim River region. The purpose of the survey was "to tie together the surveys of the Iliamna region on the east" conducted by Martin and Katz in 1909 and "those of the Kuskokwim on the west" carried out by Spurr in 1898. Thus, much of this survey would concentrate on the region to the north and west of Lake Clark. According to Alfred H. Brooks the exploration survey in 1914 resulted in considerable accomplishments. It

> traversed a field that was almost unknown except through the reports of a few prospectors and fur hunters, and therefore its results replace a nearly complete blank in our knowledge of the geography and geology of Alaska. For this reason, rather than because the region gave any special promise of yielding mineral wealth, its exploration was undertaken. In spite of the difficulties of traversing by pack train the great swampy lowland east of the Kuskokwim the surveys were carried out as planned.

Smith elaborated further on the purpose and scope of the 1914 survey. He commented:

> In a part of the country so little known as the Lake Clark-Central Kuskokwim region the geographic facts of relief, drainage, climate, settlements, population, animals, and vegetation are of prime importance. These facts will therefore be stated more fully than would similar facts about a better-known region. The geologic data will also be presented in full, for the determination of the geologic character and history of the area was the principal object of the investigation.

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45. U.S. Department of the Interior, Geological Survey, Bulletin 485, *A Geologic Reconnaissance of the Iliamna Region, Alaska*, by G.C. Martin and F.J. Katz (Washington, Government Printing Office, 1912), pp. 1-133. For further data on this USGS survey see Field Notebook 203, "Iliamna and Clark Lakes, 1909, No. 2, G.C. Martin," and Field Notebook 204, "Iliamna and Clark Lakes, 1909, No. 1, G.C. Martin," at U.S. Geological Survey, Branch of Alaskan Geology, Alaska Technical Data Unit, Anchorage.

> In addition to or coincident with the strictly geologic studies, Survey parties have examined the mineral resources of the Lake Clark-Central Kuskokwim region; and although these resources are not so abundant nor so valuable as those of certain other parts of Alaska, complete data concerning the known deposits are given.

The expedition party consisted of seven men whose supplies and equipment were carried by a pack train of 20 horses. The party arrived at Iliamna Bay in Cook Inlet on June 4 aboard a coastwise steamer from Seattle. The men portaged to Iliamna Village, and then divided into two subgroups. Smith, taking most of the supplies, passed down the Iliamna River and along Iliamna Lake to the Newhalen portage by boat. He then went up the valley of the Newhalen River to the outlet of Sixmile Lake. Sargent passed overland around the east slopes of Roadhouse Mountain to the lower end of Sixmile Lake.

On June 20 the expedition started northward from Sixmile Lake, crossing portions of present-day Lake Clark National Park and Preserve on their northwestward route. Because of the large quantity of supplies to be transported "the pack train made double trips over the route to the camp of August 2, an air-line distance from the starting point on Sixmile Lake of about 90 miles." Throughout this part of the journey, according to Smith, "the route lay mostly in broken country, which afforded good traveling except where the lowland flats adjacent to the larger rivers, such as those of the Mulchatna and the Hoholitna, were crossed."

Beyond the camp of August 5, however, the passage through the lowlands of the Kuskokwim and Stony rivers became more difficult. Smith noted:

> In this area the difficulties of travel increased so much that in the 50 miles from that camp to the Kuskokwim more than 50 fills and bridges had to be built and horses repeatedly had to be pulled bodily out of impassable morasses. The water in all the streams and sloughs was abnormally high and the party was therefore compelled to take a circuitous course.
>
> The Kuskokwim was safely reached on August 21 at a point where a feasible crossing with rafts could be made. With the help of six or seven natives from the adjacent country the party felled trees and moved them to the river preparatory to building rafts, but when one raft had been completed a small river boat bound for the gold diggings on Takotna River appeared. Arrangements were made by which this boat carried the party and outfit across to the north side of the Kuskokwim, where the expedition arrived on August 23, ready for the last stage of the journey to Iditarod.

The exploration party moved westward down the Kuskokwim, crossing the George River about two miles above Georgetown on September 2. The men followed the Iditarod-Georgetown Trail to Iditarod, reaching that spot where field work terminated on September 10. They then returned up the Yukon River to Dawson and Whitehorse, thence via railway to Skagway, and then by steamer along the "inside passage" to Seattle.

Altogether the party had reconnoitered a distance of 280 miles from Sixmile Lake to Iditarod. As a result of the trip some 4,800 square miles of previously unsurveyed country was mapped topographically.

The expedition's publication represented a compilation of geologic, physiographic, and geographical data about the Lake Clark-Central Kuskokwim region. Considerable detail was provided on the principal river basins in the area – the Kvichak, Mulchatna, and Kuskokwim.[46]

Several years later, in 1918, the USGS published a geological map of the Lake Clark-Central Kuskokwim region. The map included all of the data compiled by Martin and Katz in 1909 and Smith in 1914.[47]

Fred H. Moffit (1920-1921)

During 1920-1921 a USGS survey of Chisik Island, Snug Harbor, and the Chinitna and Iniskin peninsulas was conducted by Fred H. Moffit, geologist, and C.P. McKinley, topographer. Chisik Island is just off the west shore of Cook Inlet adjacent to the Chinitna Peninsula which lies within present-day Lake Clark National Park and Preserve, and the Iniskin Peninsula lies just south of the southern boundary of the park and preserve. The mapping of this region was in greater detail than that of earlier Survey expeditions and consequently covered a rather small area.

The Oil Bay vicinity on the south side of the Iniskin Peninsula had been the scene of extensive petroleum exploration and drilling during the early years of the twentieth century. Shortly before the Alaskan oil lands were withdrawn from entry in 1910, the oil properties were abandoned, and no further attention was paid to them until the new leasing law was passed in 1920. This law renewed interest in the district and much of the ground was restaked, thus making it necessary to collect data on the areal geology and structure of the entire area likely to be prospected for oil.[48]

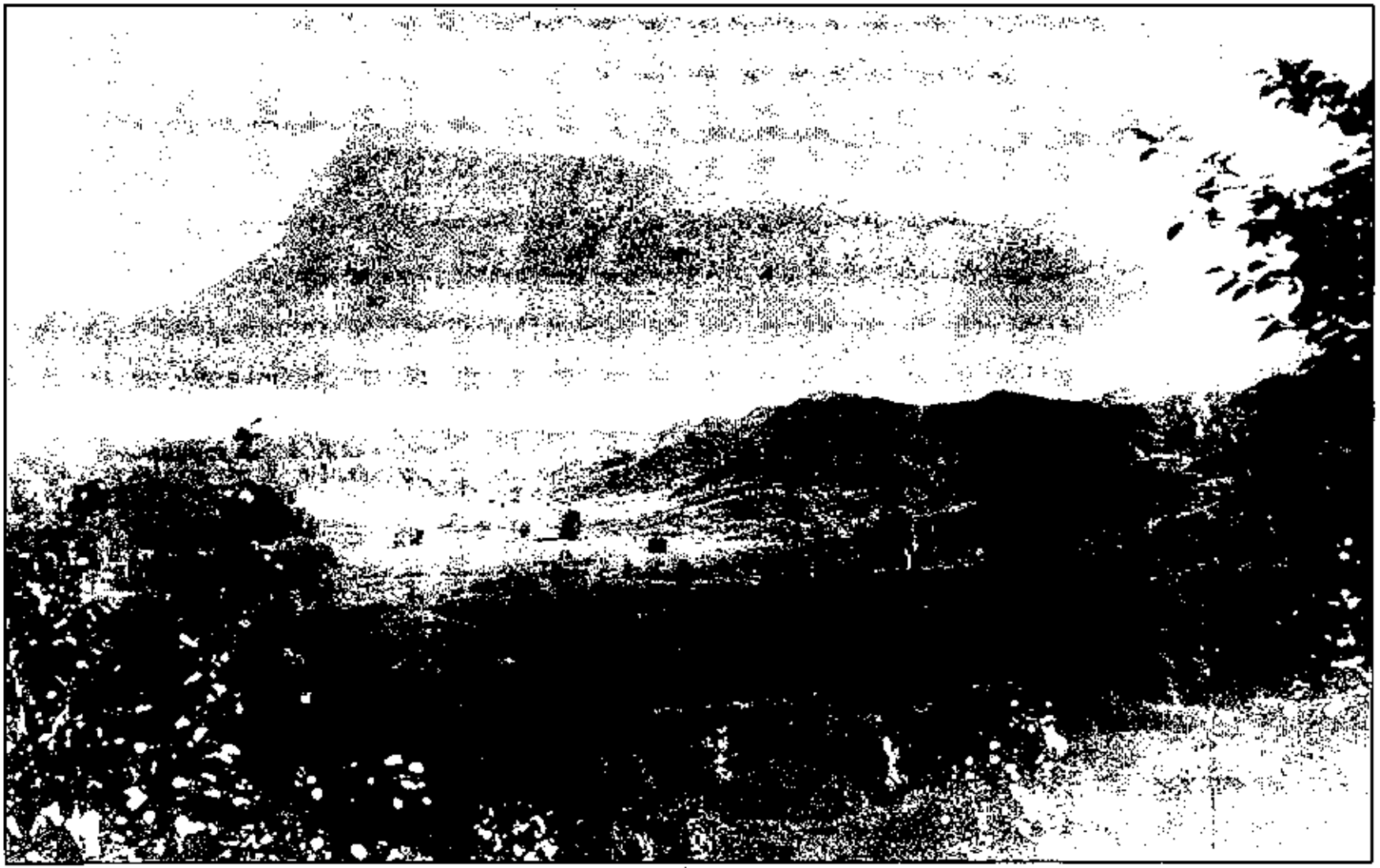
Moffit and McKinley and a party of five assistants conducted a preliminary topographic and geologic reconnaissance of the Snug Harbor vicinity during the summer of 1920. Although the waterway between Chisik Island and the mainland was designated as Tuxedni Harbor by the U.S. Geographical Board, it was commonly known as Snug Harbor. Moffit observed that interest in this area lay "chiefly in the relation of its rocks to the oil-bearing sediments of Oil and Iniskin bays, to the south, and the possibility of oil production within it." The purpose of the exploration of 1920 was to prepare a topographic map of the coast of Cook Inlet from Tuxedni Bay to Iliamna Bay and a study of the area's geology "with reference to the possibilities of producing oil." These goals, however, were only partially accomplished in 1920. In a brief outline of the geographical features of the rugged and remote area, Moffit noted that it extended "from the shore of Cook Inlet westward to Mount Iliamna and the high mountains on the north-northeast." He described the region:

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46. U.S. Department of the Interior, Geological Survey, Bulletin 655, *The Lake Clark-Central Kuskokwim Region, Alaska*, by Philip S. Smith (Washington, Government Printing Office, 1917, pp. 1-157. For further data on this USGS survey see Field Notebook 342, "Lake Clark-Iditarod, Book 2, 1914, P.S. Smith," and Field Notebook 341, "Lake Clark-Iditarod, Book 1, 1914, P.S. Smith," at U.S. Geological Survey, Branch of Alaskan Geology, Alaska Technical Data Unit, Anchorage.

47. U.S. Geological Survey, *Geologic Reconnaissance Map of Lake Clark-Central Kuskokwim Region, Alaska, 1918*, in Joseph Ulmer Collection, Maps, Box 13, Archives and Manuscripts, Alaska and Polar Regions Department, Elmer E. Rasmuson Library, University of Alaska, Fairbanks.

48. U.S. Department of the Interior, Geological Survey, Bulletin 789, *The Iniskin-Chinitna Peninsula and the Snug Harbor District, Alaska*, by Fred H. Moffit (Washington, Government Printing Office, 1927), pp. 1-2.



Chisik Island, looking east. Photo taken by geologist Fred H. Moffit, in 1920 or 1921, from the trail located on the divide between Johnson River and Bear Creek, near Tuxedni Channel. On the island is the site of the Surf Packing Company cannery at Snug Harbor.

F. H. Moffit #789, USGS Photo Library, Denver

> It is a rugged country that consists principally of the flanking mountains of the main range and includes little flat land except the valley of Johnson River. The maximum relief is 10,017 feet (Iliamna Peak), but the average elevation, exclusive of Mount Iliamna and the ridge north of it, is under 4,000 feet. The flanking mountains trend parallel to the west shore of Cook Inlet and conform with the trend of the major geologic structure. These mountains consist chiefly of sandstones and soft shales dipping from 10° to 25° or possibly 30° ESE. Their gentle eastern slopes are dip slopes, and their abrupt western slopes are scarp faces. Erosion has dissected them deeply, and they are profoundly glaciated.

The marshy ground and dense forests of the area made travel with pack horses virtually impossible, especially in view of the unusually wet summer weather that year. Moffit observed:

> The chief stream within the area is Johnson River, which heads in a large glacier on the side of Mount Iliamna and flows eastward into Cook Inlet. The level valley bottom on each side of the river is crossed by small sluggish streams and dotted with numerous beaver ponds. Most of the valley bottom is impassable for pack horses because of marshy ground, so that considerable time and labor may be required in crossing the valley. In times of high water during the warm summer days Johnson River is difficult to ford with horses because of swift water and quicksands.
>
> Up to an elevation of about 2,000 feet the area is covered by a dense growth of alders, which make travel with horses absolutely impossible until a trail has been cut. Through the alders, both on the hill slopes and in the valley bottoms, are scattered cottonwoods in groves and as individual trees. Spruce, except a few scattered trees on Chisik Island and at Fossil Point, does not grow on the shores of Tuxedni Harbor, but it occupies much of the narrow coastal plain extending southward from the mouth of Johnson River to Chinitna Bay, and in the vicinity of Chinitna Bay it furnishes pilings for fish traps and for the wharf at the cannery in Tuxedni Harbor.[49]

In 1921, Moffit and McKinley conducted geologic and topographic mapping efforts of the Chinitna Peninsula between Iniskin and Chinitna bays. The contiguous mainland and the north shore of Chinitna Bay, much of which is within the boundaries of present-day Lake Clark National Park and Preserve, were included to round out the map and join the work done in previous surveys. Because of a strike by marine engineers only a part of the exploration party, without horses, was able to leave Seattle and reach the area to be mapped at the beginning of the field season. The remaining members of the party with the horses did not arrive until July. Thus, more progress was made with the topographic mapping than with the geologic.

The field force consisted of a topographic mapping party led by McKinley and a geologic mapping party headed by Moffit. McKinley was assisted by five men and Moffit by four.

On June 2 McKinley's party, accompanied by two of the geologic mappers, landed at the cannery in Snug Harbor. They were taken by the cannery tender to Camp Point in Chinitna Bay the

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49. "Geology of the Vicinity of Tuxedni Bay, Cook Inlet," by Fred H. Moffit, in U.S. Department of the Interior, Geological Survey, Bulletin 722, *Mineral Resources of Alaska, Report on Progress of Investigations in 1920* (Washington, Government Printing Office, 1921), pp. 141-42. For further data on the 1920 USGS survey see Field Notebook 511, "Snug Harbor, 1920, Fred H. Moffit," Field Notebook 512, "Snug Harbor, 1920, Herbert Insley," and Field Notebook 2986, "Field Diary, 1914-1921, Moffit," U.S. Geological Survey, Branch of Alaskan Geology, Alaska Technical Data Unit, Anchorage.

following day. Moffit, with the rest of the men and 11 horses, arrived in Snug Harbor on July 2 and in Chinitna Bay on July 5. Field work for both parties continued until August 29, when the men had to return to Snug Harbor to take the last boat of the season to Seattle.

In the published report of the expedition Moffit described the geological, geographical, and drainage features of the peninsula, as well as its timber, vegetation, and game. Of particular interest were his comments on the routes and trails of the area and the difficulty of travel through the heavily-overgrown terrain. He observed:

> Travel to Chinitna and Iniskin Bays is more or less inconvenient and at times is difficult, for no boats call at ports on the west side of Cook Inlet except during the summer, when the cannery on Chisik Island in Tuxedni Bay is in operation. The nearest regular stopping place for Alaska steamers is at Seldovia, near the mouth of Kachemak Bay, on the east side of Cook Inlet. This town is almost 65 miles from Iniskin Bay and is the nearest post office. The cannery on Chisik Island is about 60 miles by sea from Iniskin Bay and 26 miles from Chinitna Bay. It has no post office, and there are no accommodations for travelers except such as are furnished through the courtesy of the cannery people.
>
> Iniskin Bay has deep water and furnishes shelter for large boats. The anchorage, however, is nearer the west shore than the east shore and freight under present conditions must be discharged by lighter. This bay was formerly used at times by boats seeking shelter from storms while discharging freight in Iliamna Bay, but has not been entered by the larger boats in recent years. Chinitna Bay is shallow in its upper sheltered part and is not used by large boats.
>
> The district under consideration is without trails. When drilling was in progress at Oil and Dry Bays a wagon road was built between Iniskin and Oil Bays for transporting supplies and equipment to the wells. There was also a trail from Oil Bay to Right Arm and another to Dry Bay. These trails have not been used in recent years and are now grown up with alders and willows, so that in most places they are difficult to find. Where they ran through the timber and were blazed, or where they were graded or had bridges built over the gulches, they can be followed, but for the most part they furnish slight assistance, and in many places there is no advantage in trying to use them.[50]

Stephen R. Capps (1926-1929)

During 1926-1929 several USGS expeditions were conducted in the southern Alaska Range by Stephen R. Capps, a prominent bureau geologist. The expeditions were concentrated in a 27,000-square-mile area lying between the Skwentna River and Rainy Pass on the north, the Mulchatna, Stony, and Kuskokwim drainages on the west, Iliamna Lake on the south, and Cook Inlet on the east. Until 1926 much of this area was unexplored, and even after his expeditions Capps observed that "there are still many unsurveyed patches." However, the "major topographic and geologic features of this great mountain area" were discovered and mapped as a result of the 1926-1929 explorations.

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50. U.S. Department of the Interior, Geological Survey, Bulletin 789, pp. 1-47. For further data on this USGS survey see Field Notebook 513, "Iniskin-Chinitna, 1921, Fred H. Moffitt," Field Notebook 514, "Iniskin-Chinitna, 1921, Arthur A. Baker," and Field Notebook 2986, "Field Diary, 1914-1921, Moffit," at U.S. Geological Survey, Branch of Alaskan Geology, Alaska Technical Data Unit, Anchorage.



The Tusk is located in Merrill Pass between the Neacola and Another rivers at the north end of the park. Stephen R. Capps, who visited the area in the late 1920s, was likely the first to photograph this landmark.

S. R. Capps #1332, USGS Photo Library, Denver

As he explored the headwaters of the Skwentna, Stony, Mulchatna, and Chakachatna rivers, Capps found a rugged and isolated land that he characterized as "an unexplored wilderness, entirely uninhabited, much of which had never been visited by white men." He commented:

> This portion of the Alaska Range, though nowhere reaching the altitude of Mount McKinley, is nevertheless of impressive grandeur, with many peaks reaching heights of 10,000 to 12,000 feet, and includes a labyrinth of ragged mountain crests that nourish great valley glaciers, interspersed with timbered valleys studded with magnificent glacial lakes. In it the wild animals, including moose, caribou, bighorn sheep, and grizzly bears, live in a primitive wilderness almost undisturbed by man.

The area was difficult for the USGS teams to reach. Capps noted:

> In order to carry out continuous areal surveys it is necessary that the surveying parties have available some means of transportation that will enable the supplies to be moved frequently from camp to camp as the work progresses. The most serviceable means of transportation for summer work in this country has proved to be the pack horse. Yet the time required to get horses into the difficultly accessible unmapped parts of this region and to travel back to the coast after the work is done has now become so great that only a very short working field season would remain, and, as a consequence, the cost of the surveys per square mile will be high.

In 1926 the opportunity for USGS exploration of this region came about when William N. Beach, a prominent New York sportsman and game photographer, offered to cooperate in a joint expedition into the headwaters of the Skwentna River and adjacent portions of the Kuskokwim River Valley. Under this arrangement a USGS party under the leadership of Capps, with K.W. Trimble as topographer, assembled at Anchorage in early June 1926. The horses and some of the supplies were landed at the mouth of the Beluga River and proceeded overland to the Skwentna River. The major portion of the provisions and equipment were taken by launch to the mouth of the Skwentna and thence up that river by small boat as far as the mouth of the Happy River. There the two groups were united and from that time until the completion of the field work they traveled by pack train, returning over the same route in the fall. As a result of that season's work an area of some 1,200 square miles was mapped geologically and topographically, and it was discovered that feasible passes led from the head of the Skwentna south and west into the basins of streams that drained into Cook Inlet.

Another expedition was organized at Anchorage in early 1927 with Capps in charge. He was assisted by R.H. Sargent, as topographic engineer, and four camp men. The party, with 15 pack horses, was taken by launch and barge to Trading Bay, and on June 10 the journey westward to the mountains began. The party followed a ridge to the south flank of Mount Spurr, ascended the Chakachatna River to Chakachamna and Kenibuna lakes, the latter on the northeast border of present-day Lake Clark National Park and Preserve. Since travel with horses along the lakes was impossible, the party ascended the Nagishlamina River, a stream flowing southeastward into Chakachamna Lake. Capps observed:

> Up this valley the party proceeded, but only with difficulty, for the brush is heavy and the flat of the stream is so strewn with great boulders that it was barely possible to take horses through. By dint of much trail cutting and some grading a route was opened to a point 6 miles above the lake, where a second glacier from the northeast blocked the valley, and several days of trail work was necessary before it could be crossed. About 4 miles still

> farther northwest a third glacier crosses the valley, but this was passed with less delay. From the head of the Nagishlamina the party crossed by a high but easy pass into the basin of Chilligan River [which cuts through the northern corner of the present-day park and preserve], and thence southwestward across another pass to the Igitna, where the lateness of the season forced the party to turn back. The return trip to the coast was made over the trail already established.

Capps also commented further on the route and transportation difficulties of the expedition:

> The route above described is the only one that has been opened from Cook Inlet into the upper basin of the Chakachatna River, and so far as known no horses except those of the 1928 Survey expedition and only a few foot travelers have been over it since it was opened in 1927. At that time it was just passable for hardy mountain horses, and many stretches of soft ground were so badly cut up by the passage of the horses that they could barely flounder through. Future travelers who may contemplate using this route with horses should realize this fact; moreover, much of the trail laboriously cut through alder thickets would soon become overgrown again, and much trail that was graded along cut banks or over moraines has no doubt already been washed out. No doubt anyone able to follow the Survey trail would have much less difficulty in making progress than if no trail had been made, but many stretches should be relocated, and much labor would even now be necessary to take a pack train over that route.

The work of the 1927 expedition resulted in the geologic and topographic mapping of some 2,000 square miles of previously unexplored area. It determined the relationship "of the streams that flow to the Skwentna River to those that flow by way of the Chakachatna to Cook Inlet." The surveys also "opened the possibility that a way could be found by which horses could be taken from Cook Inlet westward across the Alaska Range far south of any pass that had been previously discovered."

As soon as the Chakachatna River Valley and Kenibuna and Chakachamna lakes had become known as a result of the expedition Russell H. Merrill, an airplane pilot with the Anchorage Air Transport Company, began "pioneering" that route by plane and used it frequently during flights between Anchorage and points on the Kuskokwim River. Merrill reported a pass across the crest of the range that from the air looked passable for pack horses.

The third Capps expedition in 1928 was planned to reconnoiter what became known as the Merrill Pass area. To speed the expedition's work the three professionals and about a ton of the expedition's provisions were flown to Kenibuna Lake on May 10-11, 1928, there to await the arrival of the pack train that followed the trail from Cook Inlet. The trip by air from Anchorage to Kenibuna Lake took little more than one hour, while the pack train led by two packers and a cook, starting overland from Trading Bay on the trail blazed the previous year, took three weeks to reach the rendezvous. The pack train was hampered by poor trail conditions, much snow on the ridges above timber line, rainy weather, and absence of adequate grass for horse feed due to the late spring.

After leaving Kenibuna Lake in early July the expedition crossed the present-day boundary of Lake Clark National Park and Preserve, proceeded westward to the head of Another River and on toward Merrill Pass. According to Capps this pass was

> low, having an altitude of 3,180 feet, and is approached from both east and west by easy grades. The pass itself, however, is obstructed by coarse granitic talus slides that extend

> down from the cliffs on both sides and that in three places meet along the valley axis....In their natural state these accumulations of coarse blocks offered little difficulty to the passage of a man on foot but were entirely impassable for pack horses. Several days' work by all members of the expedition was required to fill in the interstices with fine material and to grade out trail on steep slopes before the horses could be taken through.

Once across the crest of the range the USGS party continued westward down a tributary valley to the Necons River and then down that river to Two Lakes. From the head of Two Lakes a "well-traveled game trail" was followed westward across a high ridge to the valley of the Stony River. Ascending that stream to its head, the party crossed the northwest boundary of the present-day park and preserve and discovered an easy pass leading northward into the basin of a northward-flowing stream that the men thought was either the South Fork of the Kuskokwim or the Hartman River. Because of the lateness of the season, however, the party turned back and returned via its earlier trail to Trading Bay on Cook Inlet. Despite the considerable trail work required to reconnoiter the area and continuous heavy rains, an area of 1,000 square miles was mapped topographically and geologically. Much information was gained concerning the relationship of the drainage systems that carried water from this mountainous region to the sea by way of the Skwentna, Chakachatna, Kuskokwim, and Nushagak rivers and Lake Clark.

In 1929 a final USGS expedition was organized by Capps, the principal purpose being to connect "the earlier surveys carried west and northwest from Iliamna Bay with those carried into the region in preceding years by way of the Skwentna River and from Trading Bay on Cook Inlet." Capps was assisted by Gerald FitzGerald, as topographic engineer, and four camp men. The party, with its 15 pack horses, landed in early June 1929 at the mouth of Iliamna Bay in an open barge towed by a launch supplied by the Alaska Railroad. The men proceeded across the pass to Iliamna Village "on the Iliamna River some 4 miles above the point where that stream flows into Iliamna Lake." From the village most of the supplies and three of the men traveled by boat to Severseh's trading post at the foot of the portage to the Newhalen River, while the pack horses were taken around the north shore of Iliamna Lake to the same point. From Severseh's post the united party went by pack train to the foot of Sixmile Lake, where the horses swam across the head of the Newhalen River.

The journey between Iliamna and Sixmile lakes was difficult and treacherous. Writing to his wife on June 24 Capps described the hazards of the trek:

> Yesterday, the outfit being all together again, we started northward from Iliamna Lake toward the foot of Lake Clark, about 18 miles air line, and much farther by the [strenuous] route that we must travel through a jumble of moraine ridges and dodging lakes and swamps. It was our first real jaunt across country for the good trail to Iliamna Village from the beach didn't count as such. And this was tough going – deep moss and brush, marshy ground, and oodles of mosquitoes and black flies. Our day's travel took us 8½ miles air line, and fully 50% more than that in actual distance travelled, and we were all plenty tired when we finally pitched camp....
>
> Now we are camped on a steep little knoll beside a small lake with very little horse feed and more than enough bugs....
>
> The packers are just coming in with the horses. The poor things are surrounded by a cloud of bugs, and their tails make just a blur as they stumble and stamp and shake and rattle their bells like mad. Whitey is mixing up some lard and pine oil to grease eyes, nose, ears



Frederica DeLaguna, Fred H. Moffit, Stephen R. Capps, Gerald FitzGerald and John B. Mertie, Jr. on the steamship Yukon en route to Seattle in June 1935. Each of these individuals made significant contributions gathering archeological and geological data in and around present-day Lake Clark National Park and Preserve. DeLaguna did pioneering archeology on Cook Inlet and the others helped to map the Iliamna-Lake Clark area.

J. B. Mertie #2076, USGS Photo Library, Denver

and other tender parts, and that will help a little, but they will catch a lot of grief these next few weeks in spite of anything we can do.[51]

The following day (June 25) Capps wrote his wife from Sixmile Lake, which he described as the foot of Lake Clark. He noted:

> Today we moved from an unattractive, bug-infested camp with poor horse feed to the foot of this beautiful lake and are camped just outside a native fishing village [Nondalton]. This place is equally buggy, but there is more grass, and after the boys go back for the second load of stuff tomorrow we will be through with "double tripping" for a month, and possibly for all summer. I have made arrangements with a squaw man here to take some 1500 lbs. of supplies up Lake Clark for 40 miles to a trappers' [Brown Carlson] cabin, so from here on we can go straight ahead, and in a couple days will be at the edge of the work done by Sargent and P.S. Smith in 1914 and onto virgin ground. There our real work will begin. It will be a great relief to travel straight ahead, without relaying, and everybody will feel that we are getting somewhere. The packers have been on the go every day since we landed two weeks ago and from now on, when we stop for more than one day in a camp, they and the horses will have a chance to rest up a bit.

Capps went on to describe his impressions of the Natives in the vicinity and their reaction to his party's horses:

> Our arrival here was the cause of great excitement among the few native families at this place, as none of them under 15 years of age had ever seen a horse. Then, soon after we had made camp, a boat load of ten of them came down from another village above here, not to see us, but to see the horses. "Red" gave several of the kids a short ride, and it was "the thrill that comes once in a lifetime" for them.

As he prepared for the upcoming field work Capps commented:

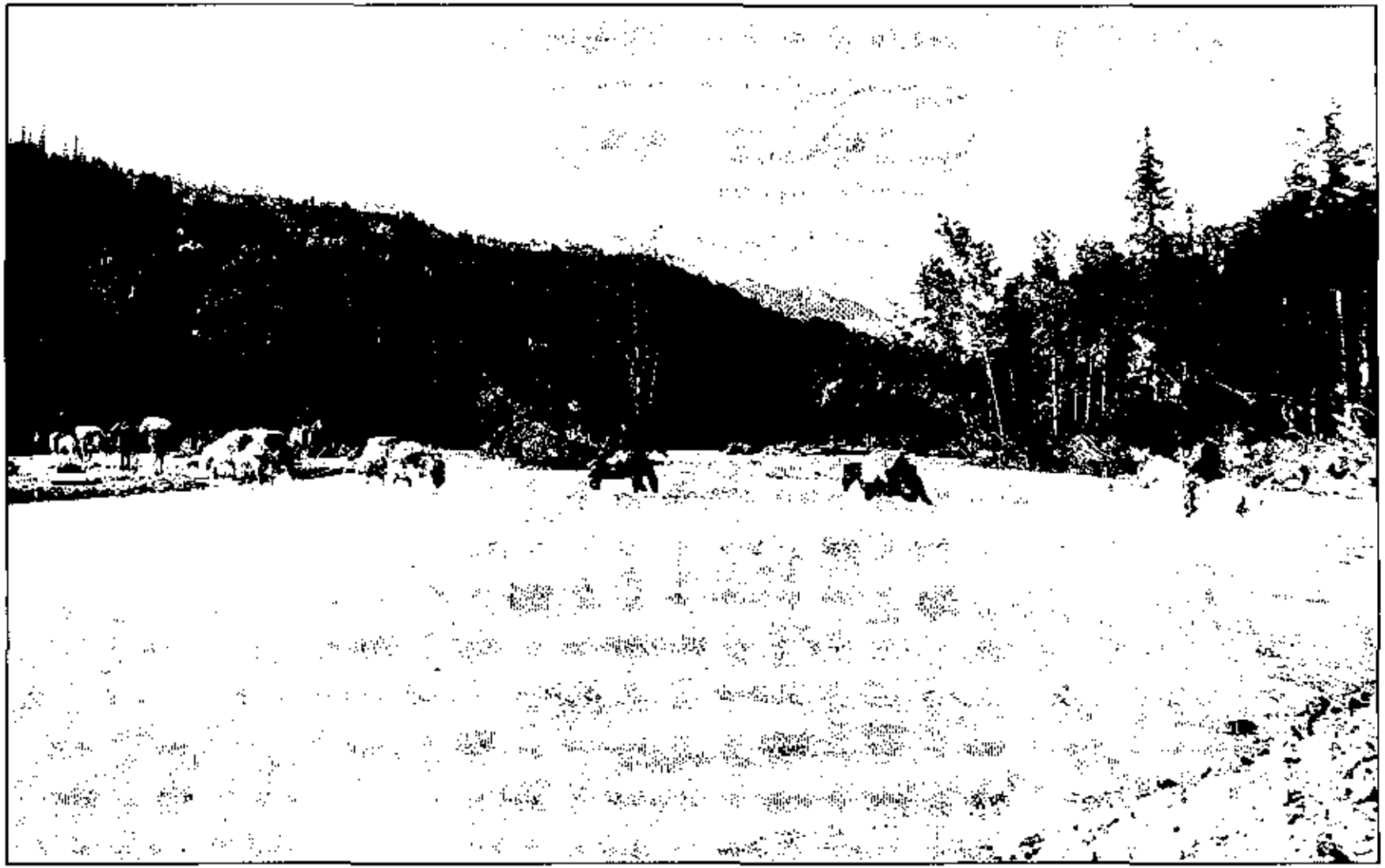
> The next 10 weeks are going to be tough ones for us. We face a bad bug season, I'm afraid, and every night we will be dog tired, but to compensate this is the kick of filling in another patch of new country on the map....For myself, I know now that I have two very capable packers, an excellent cook, and without exception a group of men who will all do this work well and stay agreeable. An attractive country in which to work lies only a couple of days ahead of us, and we will be comfortable and happy in doing that work, in putting the job behind us and in making all possible haste to get back to our homes.[52]

After arrangements were completed for the Natives to transport provisions to Brown Carlson's cabin on the north shore of Lake Clark for use of the party during the last part of the season, the Capps expedition pushed northwest from Sixmile Lake. An old Native trail was followed to the Chulitna River in the vicinity of the southwest boundary of the present-day park and preserve. Field

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51. [Capps] to Dearest, June 24, 1929, Stephen R. Capps Papers, Series 2: Personal Correspondence, 1908-1941, Box 4, Folder 8, May-July, 1929, Archives and Manuscripts, Alaska and Polar Regions Department, Elmer E. Rasmuson Library, University of Alaska, Fairbanks.

52. [Capps] to Sweetheart, June 25, 1929, Capps Papers, Series 2: Personal Correspondence, 1908-1941, Box 4, Folder 8, May-July, 1929, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks.



Stephen R. Capps' 1929 USGS survey party crossing the Kijik River at SOB Creek (also known as Tuvughna Ten, or Tyonek Peoples Trail). This location is along the Telaquana Trail which connected Kijik village with Telaquana village 50 miles to the north. Capps mapped the approximate route of the trail on this trip.

S. R. Capps Collection, Univ. of Alaska Fairbanks

work was commenced in a previously unexplored area in the hills north-northeast of Long Lake. The party pressed northeastward through the Bonanza Hills and along the face of the main range in the western reaches of the present-day park and preserve as far as Telaquana Lake. En route to that lake the party camped on the Chilikadrotna River just west of Twin Lakes where Capps wrote to his wife on July 28, describing the course of the mapping work:

> The packers are starting today to go back to Lake Clark to pick up additional provisions from the cache we sent up there....
>
> Its not an especially cheerful account of our doings that I have to offer. After the first two weeks of beautiful weather, while we were on the trail coming in, the weather turned bad, and has been rotten ever since we really started to work. It has been rainy or foggy over half the time, and as a consequence we have covered about half the area that we would have under fair weather conditions. Then the bugs – mosquitoes, gnats, black flies, etc. – have been very bad, and will continue so I'm afraid.

Although the men wore "nets, gloves, wristlets, etc., all the time," they were "covered with welts." The bugs were "fierce for the horses." A "big smudge" was kept "going all the time," and the horses would "scarcely leave it to graze."

Capps was surprised that there were "very few fish to be had in this country." There was "a little game, and we have had two caribou and are ready for another if we can get one. They are not plentiful, but there are a few scattered about." The blueberries were "very late," but he expected to "have them in another week or two."

Capps was impressed by the isolation of the uninhabited region he and his men had traversed. He noted:

> Of course we have learnt nothing of outside news, and have seen not a soul, white or native, since we left Lake Clark. The packers will probably see the lone prospector at Lake Clark tomorrow or next day, but the rest of us will get another month without sight of a human being other than ourselves.
>
> The two or three magazines we brought along have been completely exhausted long ago, ads and all. Fitz luckily brought along a volume of Shakespeare's works complete, and I've already read more Shakespeare this summer than for many years.[53]

Field work ended at Telaquana Lake with connection of the mapping with the surveys of the 1928 season. The journey back to Lake Clark followed an old Native trail, popularly known as the Telaquana Trail. When the party arrived at Lake Clark the men stopped at Brown Carlson's cabin several miles northeast of the mouth of the Kijik River. From there the pack train and three men followed the northwest shore of Lake Clark down to Sixmile Lake to the head of the Newhalen River, while the other members of the party passed down the lakes by boat. After crossing Iliamna Lake, the men portaged to Iliamna Bay where a launch supplied by the Alaska Railroad met them and transported them up Cook Inlet to Anchorage.

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53. Steve [Capps] to Dearest, July 28, 1929, Capps Papers, Series 2: Personal Correspondence, 1908-1941, Box 4, Folder 8, May-July, 1929, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks.

As a result of the work during the 1929 season an area of some 1,400 square miles was mapped both topographically and geologically. The "position and headward courses" of the eastern tributaries of the Mulchatna River were determined. A connecting link was obtained between the surveys of 1909 and 1914 and those of 1926-1928 that were carried westward to the west slope of the Alaska Range by way of the Skwentna, Chakachatna, and Stony rivers.

While his USGS explorations during 1926-1929 had accomplished much, Capps acknowledged some of the shortcomings of his mapping efforts. He observed:

> The geologic outlines given on these maps are believed to represent the major features of the geology of the region with as great accuracy as the time given to the work warrants. Nevertheless the reader should bear in mind that all this work was done under difficult conditions of travel, when a large amount of the energy of all members of the expedition was devoted to the cutting or grading of trail or to the overcoming of such handicaps to travel as are common to exploration of mountainous countries in high latitudes. Few of the geologic boundaries were actually traced out over long distances, but they have in part been drawn in between disconnected points of observation. Fossils, by which the age of the formations could be accurately determined, are almost completely lacking, only a few collections having been obtained in several seasons of field work. Moreover, many portions of the region are so rugged, so lofty, and so filled with active glaciers that they can be reached only by severe alpine climbing, or not at all. Furthermore, the geologist worked under the handicap of having no topographic map in hand as he worked, for the topographic mapping was carried on concurrently with the geologic mapping, and the map of a given area was frequently available to the geologist only after he had finished his own work there. Nevertheless, reconnaissance work of this type is a necessary precursor of the more detailed work that will sometime be done when funds are available and conditions justify it.

In Capps' report of his surveys he provided detailed data on the geographical features, climate, glaciers, vegetation, and game he had traversed. Of significance for this study were his comments on the beauty, surroundings, and tributaries of Lake Clark. Among other things, he noted:

> Lake Clark is a magnificent body of water surrounded, except at its lower end, by lofty mountains. It is 44 miles long, averages about 4 miles in width, and is separated by short stretches of river from Sixmile Lake, below, and Little Lake Clark, above. Its surface is 220 feet above sea level, and depths of as much as 606 feet have been sounded. In beauty of setting it deserves a place among the famous mountain lakes of the world, though it has been little visited by white men, and its shores are inhabited by only half a dozen white men and less than a hundred natives.
>
> The largest tributary of Lake Clark is the Tlikakila River, which enters its head from the north. Though the basin of that river is unmapped and little known the stream is said to rise in glaciers and to be bordered by rugged mountains throughout its length. A fairly low pass over a glacier is said to be passable on foot for winter travel from the head of the Tlikakila River to the head of Kustatan River and thus to offer the only route across the range between Mount Spurr and Iliamna Bay.
>
> The Kijik is tributary to Lake Clark from the north at a point some 17 miles below the head of the lake. The Kijik heads in rugged mountains, and although the extreme head of its basin was not mapped, its cloudy waters show that there are active glaciers at its head.



The Capps Expedition on the shores of Lake Clark during 1929.[54]

> The low pass northeast of Ingersol Lake that gives access to the valley of the Tlikakila River suggests either that the upper part of the Kijik Basin may once have drained to that stream but was diverted to the southeast by a great glacier that once filled the Tlikakila Valley, or that the low pass was excavated to its present level by ice flowing westward from the great glacier that formerly filled the Tlikakila Valley.
>
> The Chulitna River, which enters Lake Clark from the west at the head of Chulitna Bay, is a large clear-water stream that drains a lake-dotted lowland between the Mulchatna and Lake Clark and for most of its length is sluggish and too deep to ford with horses. It is said that the only feasible ford is that used by the Geological Survey party, just south of the center of Long Lake. The Chulitna is navigable for shallow-draft boats for a long distance above Lake Clark and forms a route long used by the natives in crossing to the Nushagak River.

Capps also summarized the difficulties of transportation in the Iliamna Lake-Lake Clark region:

> There is no good summer trail along the lake [Iliamna Lake] shore, and considerable soft ground and brushy country must be traversed. Practically all travel in this country going by boat in summer and by dog sled in winter. There are a number of medium-sized gas boats on Iliamna Lake that are available for hire. From Seversen's trading post, at the Iliamna Lake end of the Newhalen portage, there is a trail across to the Newhalen River

54. Stephen R. Capps Collection (Acc. #83-149-2814N), Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks.

at a point above the falls. For summer transportation all supplies for the country contiguous to Lake Clark are backpacked across this portage, a distance of about 6 miles. From the head of the portage, and in fact generally throughout the country to the north, there are only faint native trails for land travel. One of these may be followed from Nondalton village northwestward to the Chulitna River, and another follows the north shore of Lake Clark, for the most part keeping to the beach and so being submerged during periods of high water. Another faint trail, formerly much used by the natives, leaves the shore of Lake Clark at the mouth of the Kijik River and continues northward through the foothills to Telaquana Lake. These are the only trails of consequence on the west face of the mountains, but pack horses can be taken almost everywhere without serious difficulty.[55]

CONCLUSION

Exploration of Alaska and the Lake Clark-Cook Inlet region during the 1867-1929 period was an achievement of the federal government almost exclusively. Virtually every significant exploration was accomplished by a federal agency or assisted by the government. The large-scale private expedition financed by Harriman was aided by the Smithsonian Institution and was staffed partly by government specialists. The extensive private endeavor conducted by *Frank Leslie's Illustrated Newspaper*, while of significance for this study because of its American "discovery" of Lake Clark, made few contributions to either geographic discovery or science and the part played in it by scientific societies and the universities was minor.

Thus, the national government was, according to Sherwood in his *Exploration of Alaska*, "indisputably the First Estate of science and exploration in Alaska during the last one-third of the nineteenth century." The same can be said for the first third of the twentieth century. During the 1867-1929 period much of Alaska, and especially the Lake Clark-Cook Inlet region, remained an isolated, sparsely populated wilderness. Yet the U.S. Signal Service, Army, Biological Survey, Coast and Geodetic Survey, and Geological Survey – all federal agencies – undertook significant explorations in the region.

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55. With the exception of the quoted letters from the Capps Papers, data for the Capps expeditions during 1926-1929 was obtained in U.S. Department of the Interior, Geological Survey, Bulletin 862, pp. 1-34. Detailed information of the 1928 exploration can be found in Stephen R. Capps, "The Chakachamna-Stony Region," in U.S. Department of the Interior, Geological Survey, Bulletin 813, *Mineral Resources of Alaska, Report on Progress of Investigations in 1928* (Washington, Government Printing Office, 1930), pp. 97-123, and of the 1929 exploration in Stephen R. Capps, "The Lake Clark-Mulchatna Region, Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 824, *Mineral Resources of Alaska, Report on Progress of Investigations in 1929*, by Philip S. Smith and Others (Washington, Government Printing Office, 1930), pp. 125-54. Also see Howel Williams, ed., *Landscapes of Alaska: Their Geologic Evolution* (Berkeley and Los Angeles, University of California Press, 1958), p. 50. For further data on the USGS surveys of 1926-1929 see Field Notebook 615, "The Mount Spurr Region, 1927, S.R. Capps," Field Notebook 616, "The Chakachatna-Stony Region, 1928, S.R. Capps," and Field Notebook 617, "Lake Clark-Stony Region, 1929, S.R. Capps," at U.S. Geological Survey, Branch of Alaskan Geology, Alaska Technical Data Unit, Anchorage.

Photographs of the Capps explorations may be found in Album No.11, "Mount Spurr, Alaska, 1927, June; Chakachatna-Stony Region, Alaska, 1928, June: Lake Clark-Stony Region, Alaska, 1929, June," Capps Papers, Series 7: Photographic Scrapbooks, Box 14, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks. See the following page for a photograph of the Capps party and pack horse train on the shores of Lake Clark in 1929.

This exploration was conducted despite the socioeconomic atmosphere in the United States which militated against heavy federal expenditures for scientific study in advance of population or economic needs. Given the small population, remoteness, and limited inducement for development of Alaska, and especially of the Lake Clark-Cook Inlet region, as well as the national political, intellectual, and economic atmosphere, federal exploration of the territory was relatively fast, extensive, and progressive. The exploration embodied high personal and national achievement and was a memorable chapter in the history of American science and geographical discovery.[56]

56. Sherwood, *Exploration of Alaska*, pp. 191-92.

CHAPTER SIX

COMMERCIAL FISHING INDUSTRY IN THE COOK INLET-BRISTOL BAY REGIONS AND ITS IMPACT ON THE LAKE CLARK-ILIAMNA LAKE REGION

INTRODUCTION

Fishing and the processing of fishery products have been a major industry on both Cook Inlet and Bristol Bay since the early 1900s and were of growing commercial importance for two decades before that time. Before the 1880s the quest for furs was the dominant incentive for exploration and settlement in Alaska both by the Russians and the Americans. It was not until after the rich natural bounty of furbearing animals had been exploited to a point near extinction that economic conditions became favorable for large-scale commercial development of the territory's salmon resource, long-noted in the journals of explorers as having possible future commercial value.[1]

Since the turn of the twentieth century dozens of fish-packing plants have been erected on the shores of Cook Inlet and Bristol Bay and on the banks of rivers flowing into them. Fishery vessels by the hundreds have crossed and recrossed every mile of those two bodies of water. As in many places along the Pacific Coast of the United States and Canada the salmon fishery has been the one providing the greatest dollar value and, in some cases, the greatest poundage as well. Herring, halibut, crabs, and clams have also contributed to the economy of the Cook Inlet and Bristol Bay regions.

Since present-day Lake Clark National Park and Preserve lies between these two bodies of water, the development of the Cook Inlet and Bristol Bay fisheries is an integral part of the history of the region in which the park is located. The Bristol Bay fishery has impacted the lives of the Native population in the Lake Clark-Iliamna Lake region by providing employment, thus introducing into their lifestyles a wage economy component. Since the salmon from Bristol Bay travel upstream as far as Lake Clark, government agencies have devoted increasing attention to its fishery habitat during the last sixty years. Clamming and clam processing on the Cook Inlet side of the park and preserve in the Snug Harbor, Tuxedni Bay, and Polly Creek areas has been a significant industry during various periods of the twentieth century.[2]

FISHING ENDEAVORS IN COOK INLET AND BRISTOL BAY: 1867-1880

When the United States purchased Alaska in 1867, the fishing resources of the new territory were only marginally known. The fishery resources in Cook Inlet and Bristol Bay would draw increasing

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1. For a brief overview of Russian fishing activities on Kodiak Island, which became their principal source of salmon, see Patricia Roppel, *Salmon From Kodiak: An History of the Salmon Fishery of Kodiak Island, Alaska* (Anchorage, Alaska Historical Commission, 1986), pp. 2-4.

2. For an overview of the historical development of the salmon fishing industry in Alaska see Richard A. Cooley, *Politics and Conservation: The Decline of the Alaska Salmon* (New York, Evanstone and London, Harper & Row, Publishers, 1963), pp. 23-68; Jim Rearden, "Alaska's Commercial Salmon Fisheries: Their History and Status In Brief," *Alaska*, XLI (February 1975), pp. 18-21, 51; and State of Alaska, *1951 Annual Report, Alaska Fisheries Board and Alaska Department of Fisheries* (Juneau, 1951), pp. 71-84. A considerable body of documentary materials relating to the fisheries in Alaska may be found in the John Nathan Cobb Papers in the Manuscripts Section at Suzzallo Library at the University of Washington, Seattle.

attention during the next few years. For instance, when Captain Alfred Lacey Hough accompanied Major General George H. Thomas to Cook Inlet during the summer of 1869 he commented on the salmon catch. While visiting Fort St. Nicholas at Kenai, he noted:

> The officers and men here are more cheerful and happy looking than at any other Post I have seen in Alaska. I attribute this to the brighter climate they have here. I fear however they will not be so happy looking by next spring after six months of night and eight of snow and rain. We are just too late for the salmon fishing which I regret, as the salmon here are the largest on the coast. The troops have laid in a winter's supply, the average weight of the catch was 40# each, the heaviest one weighed 75#. I saw them in the casks cut up like mess pork and packed like it.[3]

The following year William H. Dall reported in his *Alaska and its Resources* on the salmon fishery in Alaska. He observed:

> The salmon are of many species. Those best suited for food are called by the Russians *chowichee*...korbuska...and góltséh....Other kinds, with large heads and many bones...are dried for the use of the dogs....The number of salmon annually consumed by the natives of Alaska cannot be less than twelve million, at the lowest estimate. At the fisheries on Kodiak's and Cook's Inlet, 465,000 salmon were caught annually.

Substantial quantities of cod according to Dall had also been taken in Cook Inlet and Bristol Bay.[4]

By the early 1870s the salmon fishery in Alaska was drawing increasing attention. On March 19, 1872, for instance, the *Alaska Herald* reported:

> Alaskan waters abound with salmon of different qualities, each strongly marked according to the locality and the temperature of the water. In the not very distant future the salmon fisheries of Alaska will be celebrated throughout the world. The article is being gradually introduced into market and received with great favor. But little is yet known of the immense resources of Alaskan waters in this branch of trade.

Cook Inlet and Nushagak, or Bristol Bay, salmon were, according to the article, "among the choicest qualities known." "Scientific gastronomers" had proven "that the Nushagak and Yukon river salmon is an article much superior to the Columbia river salmon." The Nushagak salmon was "delicate and relishable" and had "a delicious flavor."[5]

In his *Report on the Population, Industries, and Resources of Alaska* for the Tenth Census in 1880 Ivan Petroff drew described the fishery resources and expanding fish industry in Cook Inlet and Bristol Bay. Petroff devoted considerable attention to the fishery resources and their utilization in the Cook Inlet region. Among other things he noted:

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3. Athearn, "An Army Officer's Trip to Alaska in 1869," pp. 44-64.

4. William H. Dall, *Alaska and its Resources* [1870] (Reprint ed., New York, Arno & The New York Times, 1970), pp. 484-85.

5. *Alaska Herald*, March 19, 1872.

> The shores of Cook's Inlet are inhabited by about 800 natives and a few families of creoles, who are engaged exclusively in fishing during the whole summer season, from May to September and October. During this time the furbearing animals are not in good condition, and consequently the whole population, down to the small boys, turn their attention to fishing. In addition to the native fishermen, white men are engaged in salting salmon at two points in the inlet, at the mouth of the Kenai or Kaknu river and that of the Kasilof.[6]

The large decrease in the production of the salmon fisheries along the Pacific Coast between San Francisco and Puget Sound during the late 1870s and early 1880s caused the salmon packers of those areas to turn their attention to the lucrative fisheries in Alaska. By the late 1880s the U.S. Commissioner of Fish and Fisheries reported that large "and fully equipped salmon canneries have already been established at many places in that territory, and an important and profitable industry has thereby gained a strong foothold in what is otherwise almost a primitive wilderness."[7]

DEVELOPMENT OF COMMERCIAL FISHING OPERATIONS IN COOK INLET AND BRISTOL BAY, 1878-1890

The first commercial salmon fishery operation in Cook Inlet was a saltery established in 1878 by the Alaska Commercial Company. It was located on the Kenai River, where the company had a fur trading station. The station agent, Captain James Wilson, was also in charge of the fishery. A second salmon saltery was established by the Western Fur and Trading Company in Cook Inlet at the mouth of the Kasilof River, some 12 miles south of Kenai, in 1879. Captain H.R. Bowen was in charge of both the trading station and saltery at Kasilof. Salting of salmon continued at various locations on Cook Inlet for some years. After 1882, however, a large proportion of the catch was canned and packed in tin cans instead of being salted in barrels.[8]

The first two salmon canneries established in Alaska had been built in 1878. One was located at a site then known as Hamilton's Fishery on the west side of Prince of Wales Island – a place that would soon become more commonly known by its Indian name, Klawock. The other was at Old Sitka, about six miles north of the present town and the site of Baranov's original fort and trading post built in 1799.[9]

During 1882 two new canneries were built and placed in operation in Alaska. The firm of Smith & Hirsch, which had been engaged in salmon salting at Karluk Spit on the northwest side of Kodiak Island, erected the first cannery on that island. About the same time the Alaska Packing Company was organized in San Francisco and acquired the cannery machinery and equipment at Old Sitka.

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6. *Report on the Population, Industries, and Resources of Alaska*, by Petroff, pp. 16, 70-71.

7. U.S. Commission of Fish and Fisheries, *Report of the United States Commissioner of Fish and Fisheries for the Fiscal Year Ending June 30, 1889* (Washington, Government Printing Office, 1889), pp. LXXIV-LXX.

8. For more information on the historical development of fish canning see John N. Cobb, *The Canning of Fishery Products* (Seattle, Miller Freeman Publisher, 1919).

9. Jefferson F. Moser, "The Salmon and Salmon Fisheries of Alaska: Report of the Operations of the United States Fish Commission Steamer Albatross for the Year Ending June 30, 1898," in *Bulletin of the United States Fish Commission*, Vol. XVIII, for 1898 (Washington, Government Printing Office, 1899), p. 16.

It was decided to transport the machinery to Cook Inlet and build a plant near the mouth of the Kasilof River, the site of the aforementioned salting operation. This would be the first salmon cannery in the Cook Inlet region. Available data has not determined whether there was any connection between the Alaska Packing Company, also a San Francisco firm, and the company that had established the saltery at Kasilof in 1879.[10]

The equipment at Kasilof was probably supplemented with new machinery from San Francisco, although the operation probably required little mechanization. The Kasilof cannery made packs of 6,044 cases in its first season, 14,818 cases in 1883, and 21,141 cases in 1884. A cannery at that location continued to operate until 1922.[11]

During the early years of commercial fishing on Cook Inlet a small fishery was operated at Port Graham, near the southwestern part of the Kenai Peninsula. During the early 1870s the Alaska Commercial Company opened a fur trading station in the vicinity, and thereafter the settlement around the post was usually known as English Bay. Apparently, the Alaska Commercial Company opened a saltery in connection with the station. The saltery appears to have operated from 1883 to 1885. The operation then moved up the inlet to Kenai.[12]

A new salmon cannery was built by the Northern Packing Company near the mouth of the Kenai River in 1888.[13] The cannery was built in the village of Kenai, some twelve miles north of Kasilof, where the Alaska Commercial Company had operated a fur trading post on the site of the old Russian Nikolaevsk Redoubt.[14]

In 1890 a third salmon cannery was built on Cook Inlet by George W. Hume, a San Francisco-based pioneer in salmon canning on the Sacramento and Columbia rivers. The cannery was constructed on the Kasilof River a short distance above the plant of the Arctic Fishing Company on the south bank of the river about one-half mile above its mouth.[15]

Commercial fishing boats entered Bristol Bay in 1882 and the following year the Arctic Packing Company, a San Francisco-based firm, established a salting station on the east bank of the Nushagak River at Kanulik near the mouth of the river some 2 miles above Fort Alexander. In 1884 the salting operation was expanded into a salmon cannery.

Three other canneries were built along the Nushagak River by San Francisco-based firms during 1886-1887. In 1886 the Bristol Bay Canning Company established a cannery on the west side of the Nushagak River nearly opposite Fort Alexander. In 1886 the Alaska Packing Company, which had

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10. Marshall McDonald, "Report on the Salmon Fisheries of Alaska," in *Bulletin of the United States Fish Commission*, Vol. XII, for 1892 (Washington, Government Printing Office, 1894), pp. 1-3.

11. Robert N. DeArmond, "The Cook Inlet Fishing Industry," [1969], p. 6, File – DeArmond Research Material, ASA DeArmond #11, Cook Inlet Fisheries, Box V-29, Record Group 03, Cook Inlet Case Records, 1960s-1970s, State Archives and Records Center, Juneau.

12. *Ibid.*, pp. 7-8.

13. Moser, "Salmon and Salmon Fisheries, 1898," p. 17.

14. DeArmond, "Cook Inlet Fishing Industry," pp. 11-12.

15. Moser, "Salmon and Salmon Fisheries, 1898," p. 17.

been organized at Astoria, Oregon, established a cannery near the village of Kanakanak on the west shore of the Nushagak some 1½ miles below its junction with the Wood River. In 1888 the Nushagak Canning Company built a cannery on the east bank of the Nushagak River, at Stugarok near Clark Point, some 5½ miles below Fort Alexander. It was managed by John W. Clark, for whom Lake Clark would be named in 1891, and J.L. Wetherbee.[16]

The rapid development of the salmon fishing and canning industry resulted in the severe depletion of salmon in Cook Inlet by the early 1890s. This occurrence posed a significant hardship for the Native Dena'ina in the area since salmon was a staple of their traditional subsistence economy and diet. There are frequent references to hunger among the Natives of Cook Inlet during the 1880s, especially in the late winter and early spring. Reports of hunger among the Dena'ina, created by the low supplies of dry fish, continued during the 1890s. Thus, by the mid-1890s extensive commercial fishing operations had undermined the basis of the Dena'ina subsistence economy on Cook Inlet.[17]

EARLY EFFORTS TO REGULATE THE SALMON FISHING INDUSTRY

As the salmon industry grew in Alaska some local residents became increasingly alarmed by the practices of the canneries. There was particular concern over the erection of traps or barricades across rivers, such as the Nushagak, whereby salmon were captured easily and thus prevented from moving up those streams to their spawning grounds. Such practices not only had an impact on the food supply of the Natives but also had the potential for exterminating the salmon fishery. Thus, Congress passed legislation on March 2, 1889, prohibiting barricades and giving the Secretary of the Treasury authority to regulate the obstructions.[18]

The first challenge to this law involved construction of a salmon trap by the four canneries on the Nushagak River. It is of particular interest because it involved John W. Clark, namesake for the Lake Clark National Park and Preserve. According to the U.S. Commissioner of Fish and Fisheries "most of the salmon entering the Nushagak make their way for the purpose of spawning in the two large lakes [Lake Clark and Iliamna Lake] at its head." Lt. Commander Z.L. Tanner of the U.S. Navy was authorized to investigate the trap being built by the canneries to see if it was in violation of the law. On June 15, 1890, Tanner issued a report after visiting the four Nushagak canneries and conferring with John W. Clark and others concerning the construction of traps on the Nushagak and Wood rivers:

> Wood River at that point is a stream of pure cold water between 700 and 800 feet in width and 10 feet deep at low tide; rise, 3 to 4 feet.

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16. U.S. Commission of Fish and Fisheries, *Report of the Commissioner for 1889 to 1891* [From July 1, 1889 to June 30, 1891] (Washington, Government Printing Office, 1893), Part XVII, pp. 280, 284-87, and *Bulletin of the United States Fish Commission*, Vol. IX, for 1889, p. 202. For more information on the employment of Chinese to work in the Alaskan salmon canneries see Sue Ellen Liljeblad, "The Men Who Packed the Harvest," *Alaska in Perspective*, I (No. 1, 1978), pp. 1-6.

17. *Documents Relative to the History of Alaska*, II, p. 82, and Fall, "Patterns of Upper Inlet Tanaina Leadership, pp. 159-61.

18. U.S. Commission of Fish and Fisheries, *Report of the United States Commissioner of Fish and Fisheries for the Fiscal Year Ending June 30, 1889*, pp. LXXV-LXXVI.

The work of trap-building was in progress, a group of ten piles having been driven about 300 feet ashore, and lying on the bank were a portion of the nets required to mount the finished structure. Operations were not sufficiently advanced to enable me to judge their intention, and I can only give the plan as detailed to me by the builders. Mr. Clark stated that the plans contemplated two 40-foot square traps, with wings extending to the shore on either side, an open channel of 100 feet being left in midstream for the passage of the salmon; that he had joined the enterprise with the stipulation that this passage should be left unobstructed at all times.

In reply to a question, he said that he had lived in the country many years as a fur-dealer, and the thickly populated region on Wood River contained many of his best customers; hence he would have no hand in anything that would injure them. An obstruction in the river preventing the run of salmon would result in actual starvation to the majority of the natives.

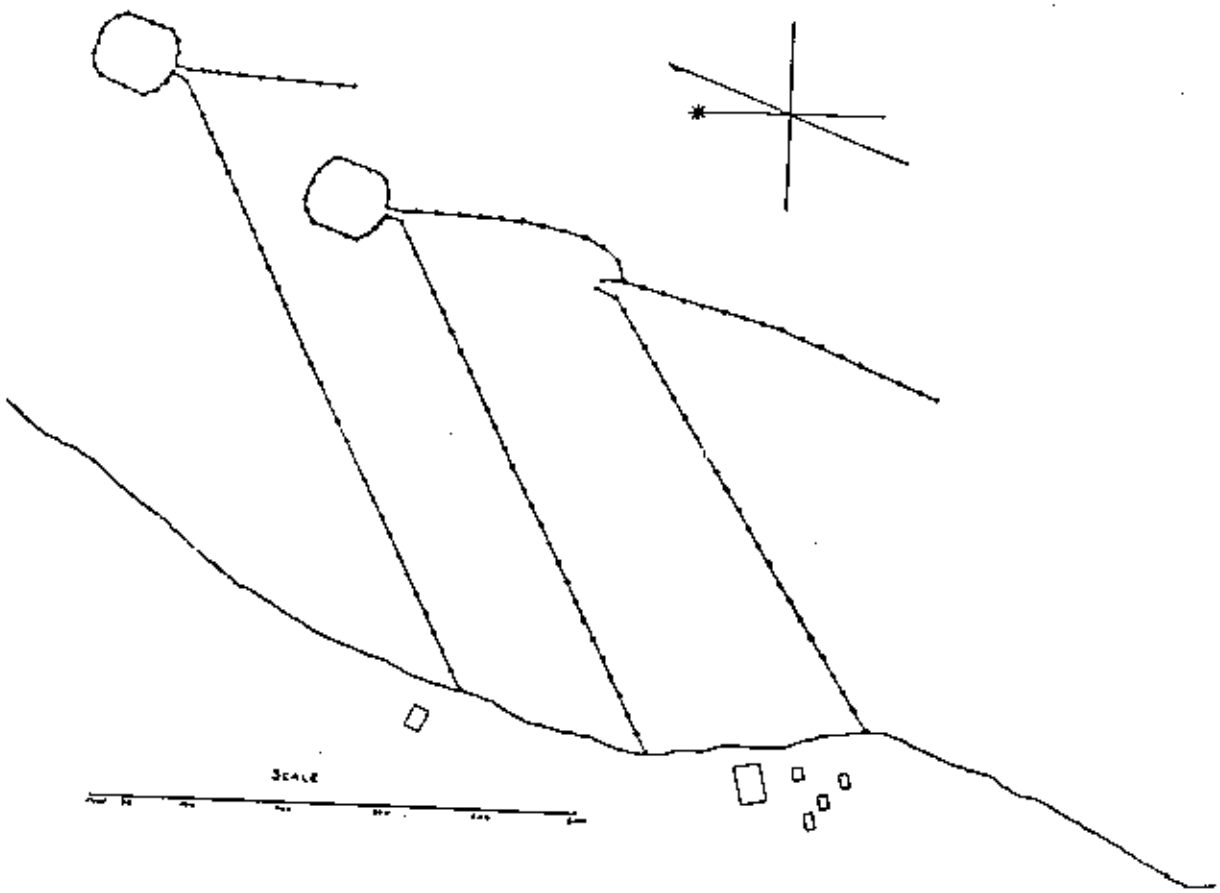
Mr. P.H. Johnson, the prime mover in the affair, described the plans precisely as Mr. Clark had done. He considered the traps as an experiment involving too much money to be expended by either of the canneries singly; hence, he had endeavored to interest all four, and finally succeeded, Mr. Clark having joined them with the provision that a free passage of at least 100 feet should be left in the middle of the river. He said this stipulation was agreed to willingly, as they never had an idea of barricading the stream. The inclosed sketch shows the plan as given to me by the gentlemen mentioned; and the blue prints [not reproduced] give an accurate idea of the present state of the structure. It will be observed that, while a 100-foot channel will serve for the ascent of salmon, complete barricade of the stream can be accomplished with a net of that length, 12 to 15 feet in depth. Whether this simple appliance will be used depends, in the absence of a Government inspector, upon the canners themselves. [See the following page for a copy of enclosed sketch of the trap.]

The U.S. Commission of Fish and Fisheries, however, strenuously objected to the trap on the Wood River, arguing that few salmon would probably swim in midchannel, and most of those that did could be caught in netting as described by Tanner.

On August 13, 1890, O.F. Spaulding, Acting Secretary of the Treasury, signed a statement supporting the commission's position. He observed "that it is the decision of this Department that the erection of traps as described by Capt. Tanner, or any other permanent fences, dams, or barricades in any of the rivers of Alaska, whether they extend wholly or only in part across said stream, is an impediment to the ascent of salmon or other anadromous species to their spawning grounds, and is clearly a violation of the act of March 2, 1889."

When the canneries were apprised of this decision, they reverted to other entrapment schemes that excluded salmon "from their spawning grounds as effectually as if permanent obstructions were maintained in the rivers."[19]

19. McDonald, "Report on the Salmon Fisheries of Alaska," pp. 4-12.



Wood River salmon trap, about 15 miles from Nushagak Bay, 1900. Source; Jefferson Moser, "Salmon Investigations of the Steamer Albatross in the Summer of 1900," p. 200.

ESTABLISHMENT AND OPERATION OF THE ALASKA PACKERS ASSOCIATION

The year 1892 witnessed a significant event in the development of the Alaska salmon industry with the commencement of the Alaska Packers Association. The organization, which was finalized in 1893, incorporated canneries from the southern part of southeastern Alaska to Bristol Bay into a commercial conglomerate that would exert both economic and political power in the territory for years to come.

Because of the rapid expansion of the Alaskan salmon fishery, overstocked markets, and declining prices of canned salmon more than 80 percent of the Alaska canneries, under the banner of the Alaska Packing Association, agreed in 1892 "to make a combination and curtail the fishing," thus limiting output "to one-half of the usual quantity." To revive the industry the companies in the association agreed to pool their canned salmon packs and reduce the number of operating plants.[20]

The association was incorporated on January 13, 1892. Of the 31 canneries in the association, 9 were operated, while the others were closed, the Alaska pack being reduced by 50 percent. On

20. *Ibid.*, pp. 9-11.

February 9, 1893, the Alaska Packers Association (APA) was incorporated. The new organization was formed from the canneries that had joined the Alaska Packing Association in 1892, except for two canneries in Prince William Sound and on the Copper River.

All of the canneries on Cook Inlet and Bristol Bay (with the exception of the Bering Sea Packing Company plant opened at Ugashik in 1891) joined the Alaska Packers Association. Two of the three canneries on Cook Inlet remained closed. The Northern Packing Company cannery at Kenai was kept on a stand-by basis, to be operated if needed, for several years. After that the machinery was removed, although the buildings were kept for gear and boat storage. The oldest cannery on the inlet, the Arctic Fishing Company plant at Kasilof, was selected for continued operation, and the machinery and equipment from the cannery that had been operated by George W. Hume during 1890-1892, also located at Kasilof, was moved there.[21]

The 1893 production of the Arctic Fishing Company cannery at Kasilof on Cook Inlet was 31,665 cases of canned salmon and 200 barrels of salted fish. A sailing vessel of 1,376 tons, under charter, carried the crew and supplies north in the spring and took back the pack in the fall. During the summer the vessel was anchored across the inlet at Tuxedni Bay. That same year three canneries and one saltery were operated in the Bristol Bay region. The three canneries on the Nushagak River were those of the Bristol Bay Canning, Alaska Packing, and Arctic Packing companies, the latter firm also operating a saltery on the Naknek River.[22]

During the years 1894-1897 salmon cannery operations on Cook Inlet continued under auspices of the Alaska Packers Association. The fishing industry on the inlet continued without major change. In addition to the cannery production C.D. Ladd, a fur trader who had his station near Tyonek, had begun packing salt salmon in 1893. The salted fish were primarily reds, and it was noted that they were salted for local use because "the run is not large enough to maintain a cannery."[23]

Compared with Cook Inlet the salmon fishery in Bristol Bay expanded rapidly during 1893-1897. Two new canneries were opened four miles above the mouth of the Naknek River in 1895 by the Arctic Packing Company, an APA affiliate, and the Naknek Packing Company, a non-affiliated firm that had been incorporated in California. In 1894 the Point Roberts Packing Company, an APA affiliate, opened a saltery and two years later a cannery at Koggiung on the Kvichak River. In 1895 the APA established a saltery and fishing station at Egegik, 34 miles south of Naknek, and the association opened a saltery in 1893 and a cannery and fishing station in 1896 at Ugashik, 70 miles south of Naknek. During 1894-1896 the Bering Sea Packing Company, a branch of the Alaska Improvement Company, operated a cannery at Ugashik.[24]

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21. DeArmond, "Cook Inlet Fishing Industry," p. 17.

22. "Report of Special Agent Murray on the Salmon Fisheries in Alaska," February 1, 1895, in U.S. Treasury Department, *Seal and Salmon Fisheries and General Resources of Alaska, In Four Volumes* (Washington, Government Printing Office, 1898), II, p. 420.

23. Moser, "Salmon and Salmon Fisheries, 1898," pp. 21, 52, 60, and DeArmond, "Cook Inlet Fishing Industry," p. 18.

24. Moser, "Salmon and Salmon Fisheries, 1898," pp. 17, 21, 52, 60.

STATUS OF THE SALMON FISHERIES IN COOK INLET IN 1897

During the summer of 1897 the steamer *Albatross*, operated by the U.S. Fish Commission, was sent to Alaska to investigate the conditions of the salmon fisheries. While in Alaska the *Albatross* under the command of Jefferson F. Moser, a captain in the U.S. Navy, visited Cook Inlet and collected data on Bristol Bay. Moser and Fish Commission staff examined the canneries, compiled research data on their production, investigated their operations for compliance with federal legislation, and evaluated their impact on the local economy and Native way of life.

Moser noted that three canneries had been in production in Cook Inlet in 1891, but since that year only the Arctic Fishing Company plant at Kasilof had operated. His report contained data on the district at large, the fisheries in the Kenai and Kasilof rivers, and the operations of the cannery.

In his description of the fishing and canning operations at Kasilof, Moser wrote:

> The Chinese contract of the Arctic Fishing Company was 42½ cents a case. The fishermen received board, $30 a month, and ¾ cent a case. A number of these men remain in the country during the winter, and hunt and trap; some are squaw men. The cannery ship remains at anchor in Tuxedni Harbor, under Chisick Island, on the western shore of the inlet, as the anchorage of the cannery is unsafe.
>
> This cannery commences to pack when the ice leaves the inlet so that the nets and traps can be used, usually about May 25, and closes about August 14. The first catch consists of king salmon and redfish, the latter in small numbers, but the combined product is sufficient to yield 50 to 100 cases a day. By July 1 the cannery generally has a pack of 8,000 to 9,000 cases, of which two-thirds are king salmon and the rest redfish. During July they expect to pack from 19,000 to 25,000 cases, of which 2,000 cases are king salmon, 2,000 cases cohoes, the remainder redfish; in August, to the 14th, they count on from 2,000 to 4,000 cases, nearly all of which are cohoes.

In addition to the cannery at Kasilof, Moser noted that C.D. Ladd operated a saltery a short distance above Tyonek. On the western shore, below Tyonek in the vicinity of Trading Bay, these "streams of considerable size" emptied into Cook Inlet. Moser noted that the streams were "no doubt known to the cannerymen, as the gill-net fishermen drift their nets from Kalgin Island to Tynonek." Little was known about the fishery in Kamishak Bay which was "difficult of access" and was "reported to be foul and dangerous to navigate."

EXPANSION OF THE SALMON INDUSTRY IN COOK INLET: 1898-1900

During the years 1898-1900 the salmon fishing industry expanded in Cook Inlet with the opening of two new canneries. By 1900 Cook Inlet was producing 4.1 percent of Alaska's salmon pack, up from 3.6 percent in 1897.

The year 1898 saw a new salmon producer, the Pacific Steam Whaling Company, at Kenai. The only other operating plant that year in Cook Inlet was the Arctic Fishing Company, still affiliated with the Alaska Packers. Both canneries operated in 1899 and 1900 as well.[25]

A third operating salmon cannery, the fifth to be built on Cook Inlet, was established in 1900 on the left bank of the mouth of the Chuitna River, six miles above the village of Tyonek. The previous year the Alaska Salmon Association of San Francisco had purchased the saltery owned by C.D. Ladd at that site.

In 1900 Moser again visited the Cook Inlet fisheries aboard the *Albatross*, the U.S. Fish Commission's vessel sent to Alaska to investigate the fisheries in the territory. In his report he described the machinery, fishing operations, employees, vessels, and output for each of the three operating canneries on the inlet. As part of that trip, he visited the Chuitna River cannery above Tyonek, then in its first year of operation; the Pacific Steam Whaling Company's cannery at Kenai; and the Arctic Fishing Company cannery at Kasilof.[26]

During the years 1898-1900 the Bristol Bay salmon fishery expanded with the opening of five new canneries and expansion of the facilities of the existing plants. By 1900, Bristol Bay had 12 canneries in operation.

In 1900 there were five operating canneries, one reserved cannery, and one saltery on the Nushagak River. Two canneries, both affiliated with the APA, were operating on the Kvichak River, the outlet to Lake Clark and Iliamna Lake and "purely a redfish region." The cannery operated by the Point Roberts Packing Company had been enlarged in 1898 "so that the plant now practically consists of a six-filler cannery and a saltery." In 1900 the Kvichak Packing Company, an APA affiliate, built a cannery on the eastern shore of Kvichak Bay about six miles below the cannery of the Point Roberts Packing Company. The three-filler cannery was operated under one management with the Point Roberts Packing Company "in a manner similar to those of the association on the Nushagak."[27]

THE SALMON FISHING INDUSTRY IN COOK INLET: 1901-1910

The salmon fishery and cannery operations on Cook Inlet were confronted with periods of prosperity and adversity during the first decade of the 20th century. Starting out with three operating canneries producing modest quantities of canned salmon, disasters soon struck, sweeping away every cannery from the inlet. By the end of the decade new canneries had been constructed at Kasilof and Kenai, giving rise to hopes for a more prosperous future for the industry.

One of the first events of the new century was the sale of all six canneries in Alaska by the Pacific Steam Whaling Company, including the ones at Kenai and Nushagak, to the newly-organized Pacific Packing and Navigation Company. The new firm was incorporated in New Jersey during the spring

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25. U.S. Treasury Department, *Report on the Salmon Fisheries of Alaska, 1898*, by Howard M. Kutchin, Special Agent (Washington, Government Printing Office, 1899), pp. 1ff; "Salmon Fishing Grounds and Canneries," by Capt. Charles P. Elliott," in *Compilation of Narratives of Explorations in Alaska*, p. 738.

26. Moser, "Salmon Investigations of the Steamer Albatross in the Summer of 1900," pp. 249-51, 312.

27. Moser, "Salmon Investigations of the Steamer Albatross in the Summer of 1900," pp. 189, 201-17, 312.

of 1901. Backed by eastern capitalists, the company, with headquarters in Seattle, consolidated "into one corporation the properties and privileges" of five canneries in the Puget Sound region of Washington and 18 canneries in Alaska. This firm was patterned after the Alaska Packers Association, which at that time operated 22 canneries in Alaska and packed about 70 percent of the territory's salmon pack.[28]

The three salmon canneries at Kasilof, Kenai, and the Chuitna River on Cook Inlet produced a total of 60,351 and 93,867 cases of canned salmon in 1901 and 1902, respectively. A price war between the Alaska Packers Association and the Pacific Packing and Navigation Company sent prices plummeting by as much as 20 percent and forced the Alaska Salmon Association to abandon the Chuitna River site at the end of the 1902 season.[29]

The two remaining canneries on Cook Inlet at Kasilof and Kenai experienced profitable runs of fish in 1903. At Kenai the Pacific Packing and Navigation Company was working on a record pack when on July 19 the cannery caught fire and was completely destroyed, only the dock being saved. Since the company was on the verge of bankruptcy, this loss contributed to its demise and the firm went out of business within months.

The only cannery operating in Cook Inlet during 1904 was the Alaska Packers Association plant at Kasilof.[30] The Kasilof plant continued to operate for the remainder of the decade. An entry in the *Pacific Fisherman* in April 1907 indicated the wage schedule for the white workers at the cannery that year as worked out between the Alaska Packers Association and representatives of the Alaska Fishermen's Union, a recently established organization to promote better wages and working conditions for while fishermen in the territory.[31]

A new firm, the Northwestern Fisheries Company, purchased many of the canneries of the bankrupt Pacific Packing and Navigation Company during the mid-1900s. Among the assets acquired by the new company in 1905 was the cannery site at Kenai where the plant had been destroyed by fire in 1903. But the company did not rebuild on the Kenai site until 1910. During 1907-1908 the site was leased by the San Juan Fishing & Packing Company of Seattle, and buildings were erected for a saltery under the direction of J.H. Mason, a "well-known mild-cure expert." The San Juan company

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28. Jefferson F. Moser, "Salmon Investigations of the Steamer Albatross in the Summer of 1901," in U.S. Fish Commission, *Bulletin of the United States Fish Commission*, Vol. XXI, for 1901 (Washington, Government Printing Office, 1901), pp. 350-51.

29. During August 1901 Howard M. Kutchin, special agent of the U.S. Treasury Department, inspected the Cook Inlet canneries. For his report see U.S. Treasury Department, *Report on the Salmon Fisheries of Alaska, 1901*, by Howard M. Kutchin, Special Agent (Washington, Government Printing Office, 1902), pp. 20, 34-35, 38-39. During the summer of 1902 Colonel Claude Cane, an Englishman, visited the Kasilof cannery. For his observations on the cannery operation see Colonel Claude Cane, *Summer and Fall in Western Alaska: The Record of a Trip to Cook's Inlet After Big Game* (London, Horace Cox, 1903), pp. 33-36.

30. U.S. Department of Commerce and Labor, Bureau of Fisheries, *Report on the Salmon Fisheries of Alaska, 1905*, by Howard M. Kutchin, Special Agent (Washington, Government Printing Office, 1906), pp. 5, 15.

31. "Wage Schedule for Alaska Fishermen," *Pacific Fisherman*, V (April 1907), pp. 31-32, and U.S. Department of Commerce and Labor, Bureau of Fisheries, *The Salmon Fisheries of the Pacific Coast* (Washington, Government Printing Office, 1911), p. 36.

concentrated on king salmon which were mild-cured for the smoked fish trade, but after the king run had passed it put up a small pack of hard-salted reds and cohoes.[32]

During the years 1907-1910 J.A. Herbert & Co. operated a saltery at English Bay on the inlet, putting up barrels of reds and silvers. This was the first time there had been a commercial salmon pack in that area since 1885. Declining demand for salted salmon, unfavorable market conditions, and declining salmon runs in Cook Inlet, however, appear to have caused both the San Juan [Kenai] and J.A. Herbert salteries to close.[33]

THE SALMON FISHING INDUSTRY IN BRISTOL BAY: 1901-1910

While the salmon fishery on Cook Inlet struggled during the first decade of the 20th century, the industry boomed in the Bristol Bay region. In 1901 the aforementioned Pacific Packing and Navigation Company acquired the cannery formerly owned by the now bankrupt Pacific Steam Whaling Company at Nushagak. That same year witnessed the construction of five new canneries and the enlargement of two existing plants. The Portland-Alaska Packers Association built a cannery at Snag Point on upper Nushagak Bay, a short distance above the Alaska Packers Association plant operated by the Alaska Packing Company. The Columbia River Packers' Association constructed a cannery at the mouth of Clark Creek, above the APA Nushagak Canning Company's reserve plant. The Alaska Salmon Company erected a canning plant on the right bank of Wood River, about two miles from its mouth. The Red Salmon Packing Company built a cannery on the Ugashik River, about one-half mile above the site of the old Bering Sea Packing Company plant that the APA had closed in 1897. For its part the APA built an additional three-filler cannery at the site of the Bering Sea Packing Company plant, thus reopening the plant that had been held in reserve. Under the firm name of the Guardian Packing Company the APA constructed a four-filler cannery on the Naknek, about two miles below its old cannery operated by the Arctic Packing Company. The association also laid the foundation for a large addition to its cannery below Koggiung, which had been constructed and operated by the Kvichak Packing Company in 1900 but whose operator was changed to the Horseshoe Fishing and Mining Company in 1901. The addition was to have four fillers for the 1902 season.[34]

During the summer of 1906 the Bureau of Fisheries conducted a thorough inspection of the Bristol Bay fishery. The investigation included visits to every river on which salmon fishing was carried on, an ascent of the Wood and Kvichak rivers to the lakes at their head, and examination of those lakes to determine the location of the salmon spawning beds and the best sites for establishment of hatcheries. As a result of the investigation, it was recommended that a hatchery be constructed on the Wood River chain of lakes to enable the region's fishery to be replenished on a continuing basis.

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32. "News Items From the Fisheries Districts: Alaska," *Pacific Fisherman,* V (April 1907), pp. 18-19, and *Pacific Salmon Fisheries,* by Cobb, 1921, pp. 50-51.

33. *Pacific Salmon Fisheries,* by Cobb, 1921, p. 51, and "The Fisheries of Alaska in 1908," by Millard C. Marsh and John N. Cobb, in U.S. Department of Commerce, Bureau of Fisheries, *Report of the Commissioner of Fisheries For the Fiscal Year 1908 and Special Papers* (Washington, Government Printing Office, 1910, p. 29.

34. Moser, "Salmon Investigations of the Steamer Albatross in the Summer of 1901," p. 353.

Of interest for this study is the description of the Bureau of Fisheries investigation of the Kvichak River drainage up to Lake Iliamna. The report, which was the first official inspection of the river's fishery by the bureau beyond a point several miles above its mouth, contained observations on the impact of commercial fishing on the lives of Natives in the Lake Iliamna-Lake Clark region. The report also provided data on the fishing and cannery operations on the Kvichak as well as the salmon spawning grounds in the river drainage. Concerning the investigation of Lake Iliamna and the fishing activities of the Natives along its shores, the report stated:

> It was impossible, owing to the lack of time and a suitable boat, to carry the investigation further than Lake Iliamna. According to trustworthy information this lake, which is said to be the largest in Alaska, is about 90 miles long and about 30 miles wide. About midway on the northern side is a tributary, Noghelem River, 20 miles in length, connecting Lake Iliamna with Lake Clark, the latter itself being about 80 miles long and with an average width of about 10 miles. The northeastern end of Lake Iliamna extends to within 17 miles of Iliamna bay on Cook Inlet, between which bodies of water there is an overland trail, and this route is frequently followed by Indians, traders, and prospectors in going from Cook Inlet to Bristol Bay. There are 5 Indian villages on, or in the immediate vicinity of Lake Iliamna, practically all of which are dependent upon the run of salmon for the winter's supply of food for themselves and their dogs. Mr. Emil Anderson, a prospector from the Nushagak, who made the above passage in July of this year, states that the Indians on Lake Iliamna had a fair season, but the reverse was the case with the Indians of Kaskanak village. At the time of the visit to the latter place the chief reported that the season just closed had been most disastrous, although they had fished faithfully with their wicker traps.

The report noted that J.P. Haller, president of the North Alaska Salmon Company which operated two canneries on the Kvichak, had traveled from Bristol Bay to Cook Inlet via Lake Iliamna in August 1904. According to his reminiscences of that trip he:

> journeyed up the right-hand shore of the lake and about 12 or 15 miles from the outlet he found a small stream leading up into a fair-sized lake, which was a seething mass of spawning fish. At the head of the main lake, where most of the Indian villages are located, he found thousands of salmon drying, while plenty were to be seen in the river ascending to the lake above. He thinks that the red salmon spawn all among the shores of Iliamna Lake, especially at the head, but that a great part of the fish go up into a long and narrow arm extending out from the upper part of the lake and into Lake Clark. But few spawning fish were to be seen in the Kvichak River, or in the lake near the outlet.[35]

All told, the pack of canned salmon from the Bristol Bay canneries increased by nearly 200,000 cases during the period 1901-1910. The pack for 1910 was 914,138 compared with 719,643 for 1901. The number of canneries, however, declined from 21 to 19 during that same period.

Eight of the 19 canneries were affiliated with the APA, four were owned by the North Alaska Salmon Company, and one at Nushagak was operated by the Northwestern Fisheries Company. The 19 operating canneries in Bristol Bay during 1910 represented more than one-third of the total (52)

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35. John N. Cobb, "Report on the Fisheries of Alaska," U.S. Department of Commerce and Labor, Bureau of Fisheries, *Report of the Commission of Fisheries for the Fiscal Year 1906 and Special Papers* (Washington, Government Printing Office, 1970), pp. 31, 36-39, 43-44.

for Alaska, and the 914,138-case pack amounted to just under 40 percent of the total pack (2,413,054) for the territory.[36]

THE SALMON FISHING INDUSTRY IN COOK INLET: 1911-1920

The decade between 1911 and 1920 witnessed increasing interest in the salmon potential of Cook Inlet. In 1911 there were two salmon canneries operating on the inlet at Kenai and Kasilof. Seven new canneries were built during the decade. Not all of these new plants survived, however, and at the end of the decade there were only seven.[37]

The Northwestern Fisheries Company was sold in 1911 by the Alaska Syndicate, whose business was largely oriented to mining. The purchaser was Booth Fisheries Company, a nationwide organization, but the name Northwestern was retained for the cannery operations at Kenai. Northwestern's Kenai plant, including the main cannery, two warehouses, and the net house, were burned on May 22, 1916. The company rebuilt the cannery for the 1917 season, thus enabling it to participate in the boom in salmon canning that was generated by the war.[38]

The first of the seven new canneries on the inlet was built at the village of Seldovia, on the southeastern shore of Cook Inlet, in 1911. The cannery was operated until 1918, but was then closed and held in reserve for several years.[39]

Two new salmon canneries were built in Cook Inlet during 1912. The Fidalgo Island Packing Company built its cannery at Port Graham, a short distance north and west of Seldovia. A second new cannery that year was constructed at Kenai by Seattle-based Libby, McNeill & Libby, a nationwide packing concern.[40]

Libby, McNeill & Libby, as well as Northwestern Fisheries and the Alaska Packers, used big square-rigged sailing vessels for transports during the pre-World War II period. They generally started north about April 1, taking several weeks for the trip. After the ships were unloaded at their respective canneries, they were moved to an anchorage on the western shore of Chisik Island until it was time to load them with the salmon packs in the fall.[41]

In 1915 the Deep Sea Salmon Company built a cannery at Goose Bay in Knik Arm, across from the site where the city of Anchorage was just beginning to get its start. The cannery was closed in 1917.[42]

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36. U.S. Department of Commerce and Labor, Bureau of Fisheries, *The Salmon Fisheries of the Pacific Coast*, p. 135.

37. DeArmond, "Cook Inlet Fishing Industry," p. 26.

38. DeArmond, "Cook Inlet Fishing Industry," pp. 26, 29-30.

39. *Pacific Salmon Fisheries*, by Cobb, 1921, p. 51, and DeArmond, "Cook Inlet Fishing Industry," p. 27.

40. DeArmond, "Cook Inlet Fishing Industry," p. 28, and *Pacific Salmon Fisheries*, by Cobb, 1921, p. 51.

41. DeArmond, "Cook Inlet Fishing Industry," p. 29.

42. *Ibid.*, and *Pacific Salmon Fisheries*, by Cobb, 1921, p. 51.

Three additional canneries were established on Cook Inlet during 1919-1920. In 1919 the Surf Packing Company put up a small plant at Snug Harbor on Chisik Island across Tuxedni Channel from present-day Lake Clark National Park and Preserve.[43] This cannery processed both salmon and clams, packing 1,695 cases of the former and 3,207 cases of the latter in 1919. The following year its pack was 11,826 cases of salmon and 249 cases of clams. That year the Snug Harbor plant was one of two establishments in Alaska to pack clams, the other being at Cordova.[44]

In 1920 the Arctic Packing Company built a plant at English Bay on Port Graham, near the former trading station of the Alaska Commercial Company, while the Seldovia Canning Company opened a new operation at Seldovia.[45]

In addition to the packs of canned salmon several salteries operated on Cook Inlet during 1911-1920 with both mild cure and hard salt packs being produced. In 1916 Knut A. Kyvig of Anchorage opened a salting operation, under the name Kyvig Packing Company, at Swanson Creek. During 1917-1918 the Beluga Whaling Company, whose principal business was catching beluga whales for their oil and hides, salted salmon at the mouth of the Beluga River, several miles above Tyonek. In 1918 the company packed 670 barrels of salt salmon. Other salt salmon production on Cook Inlet that year included the Fidalgo Island Packing Company at Port Graham, 37 barrels; K. McCullough, Halibut Cove, 250 barrels; and G.W. Mitchell, Kachemak Bay, 200 barrels.[46]

One of the principal controversies associated with the salmon canning industry on Cook Inlet during the 1911-1920 period was the installation and regulation of fish traps and the "wanton waste of salmon and other food fishes." During 1912, for instance, there were 27 fish traps on Cook Inlet, 14 of which were operated by the Alaska Packers Association cannery at Kasilof. After hearings in Washington in October 1912 the Department of Commerce and Labor prohibited "all commercial fishing for salmon, or other commercial fishing in the prosecution of which salmon are taken or injured" in "all streams flowing into Cook Inlet, together with their lakes and tributary waters." The purpose for the order was to make the streams and their catchment basins "salmon breeding reserves."[47]

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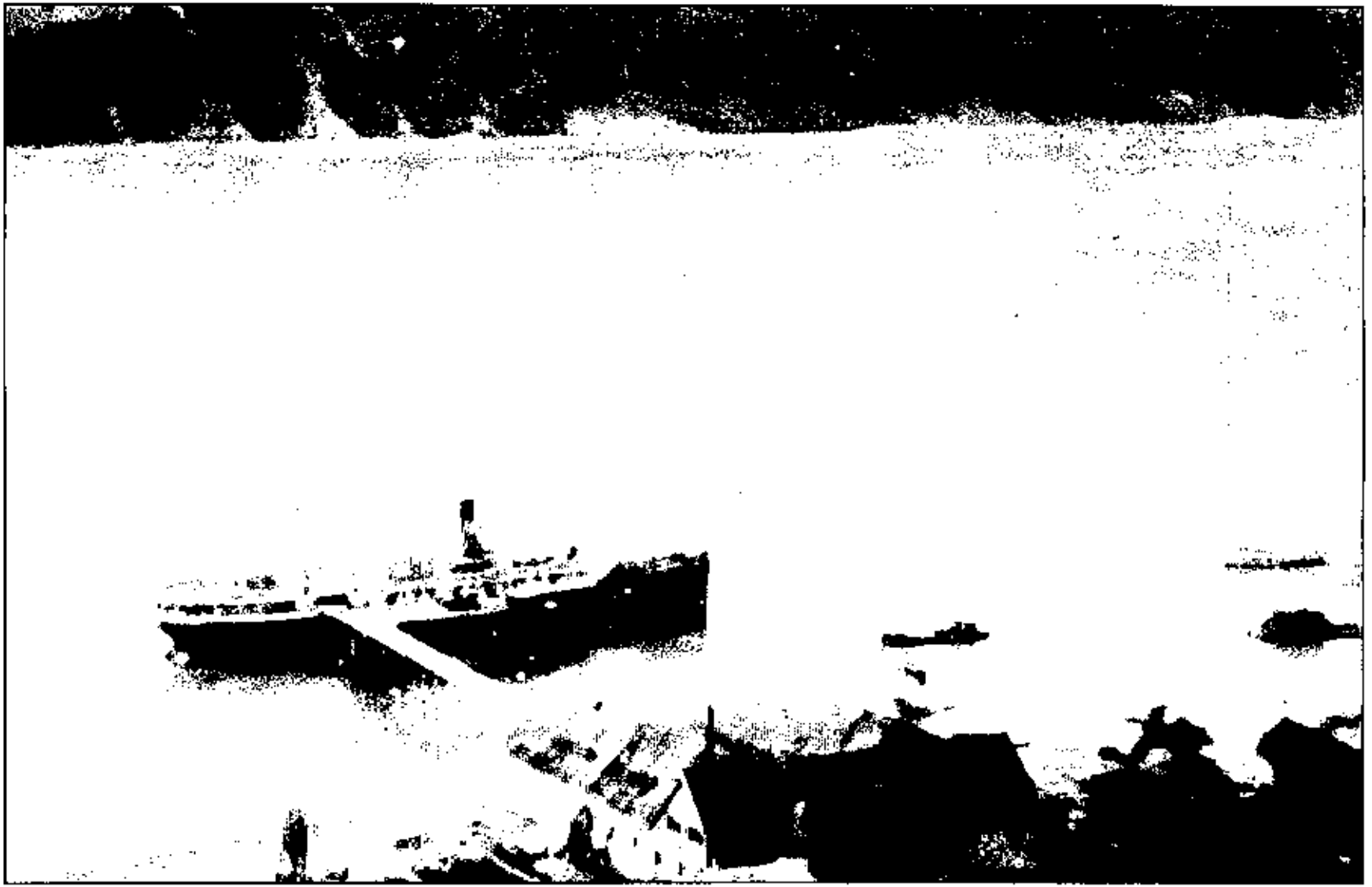
43. The Surf Packing Company had operated for several years at Aberdeen, Washington. It moved the equipment from there to Snug Harbor. In conjunction with the company's move north, George Palmer built a trading post. "Surf Packing Co. Builds at Snug Harbor," *Pacific Fisherman* 17 (April 1919), p. 86; Robert N. DeArmond, "Alaskana," *Alaska Sportsman* 34 (June 1958), 35; Moffit (USGS), "Field Notebook 2986; Field Diary, 1914-1921," Branch of Alaska Geology, Alaska Technical Data Unit, Anchorage.

44. *Pacific Fisherman Year Book, 1920,* XVIII (1920), p. 81; "Clam Canning in 1920," *Pacific Fisherman Year Book, 1921,* XIX (1921), pp. 91, 93; and DeArmond, "Cook Inlet Fishing Industry," p. 30.

45. DeArmond, "Cook Inlet Fishing Industry," p. 30, and "Pacific Canned Crab Pack, 1920," *Pacific Fisherman Year Book, 1921,* XIX (1921), p. 93.

46. *Pacific Salmon Fisheries,* by Cobb, 1921, p. 51; *Pacific Fisherman Year Book, 1919,* XVII (1919), pp. 124-25; and *Pacific Fisherman Year Book, 1920,* XVIII (1920), p. 131.

47. Barton W. Evermann, "Alaska Fisheries and Fur Industries in 1912," in U.S. Department of Commerce and Labor, Bureau of Fisheries, *Report of the Commissioner of Fisheries for the Fiscal Year 1912 and Special Papers* (Washington, Government Printing Office, 1913), p. 27. For more data on traps used in Cook Inlet see C.H. Buschmann, "Traps: Their Purpose and Their Place in the Pacific Coast Salmon Industry," *Pacific Fisherman,* XII (November 1914), pp. 12, 14.



View of a steamship at Snug Harbor; photo looks west from Chisik Island to the mainland, circa 1920. Surf Packing Company, at this time, operated the salmon cannery in the foreground.

G. C. Martin #1042, USGS Photo Library, Denver

As a result of the continuing complaints and litigation over fish traps in Cook Inlet and elsewhere in Alaska, the Bureau of Fisheries consulted with the Corps of Engineers to develop a solution. In March 1916 the Corps issued regulations under which it would henceforth grant permission for the construction of "fish weirs, traps, or pounds" in Alaskan waters. The Corps used as its authority an 1899 law giving it regulatory authorization over the erection of obstructions in navigable waters of the United States.[48]

THE SALMON FISHING INDUSTRY IN BRISTOL BAY: 1911-1920

The Bristol Bay fishery began the 1911-1920 decade with 21 canneries in operation, including a newly constructed plant on Kvichak Bay. The aggregate production for 1911 amounted to 743,206 cases of packed salmon (roughly 25 percent of Alaska's total), valued at more than $4,600,000. Approximately, one-half of the salmon pack for the region was produced by the eight APA-affiliated canneries operating at Nushagak, Kvichak, Naknek, and Egegik.

Throughout much of the 1911-1920 decade the Bristol Bay salmon fishery continued to be heralded as the "great redfish producing section of the world."[49] The intensive fishing operations and cannery facilities continued to expand throughout the decade as the war fueled increases in the demand for salmon at ever-rising prices. Following the war in 1919, however, there was "the most complete failure in the history of Bristol Bay," thus leading to fears that the region had been overfished.

For the disastrous salmon pack of 1919 the Bureau of Fisheries investigated the Bristol Bay fishery to determine the reasons for the debacle and made recommendations for its resolution. The following year, the Bureau implemented many of those recommendations in the Bristol Bay region. Beginning on January 1, 1921, all commercial fishing was prohibited "in all salmon streams, their tributaries and lakes, and within 500 yards of the mouths of such streams, flowing into the Pacific Ocean or Bering Sea" with the exception of the Ugashik River. The "driving salmon down stream and the causing of salmon to go outside the protected area at the mouth of any salmon stream" was "expressly prohibited." It was "unlawful to can or salt for food any salmon more than 48 hours after it" was "killed." "Wanton waste or destruction of salmon," including the "curing of salmon bellies, resulting in waste of a large part of the fish" was also prohibited. Fish trap regulations were also tightened to enable salmon in reasonable numbers to reach their spawning grounds.[50]

In addition to the new restrictions placed on the Bristol Bay commercial salmon fishery operations, the Bureau of Fisheries began a cooperative program with the region's cannery operators and the Alaska Territorial Fish Commission in 1920 to destroy "the predatory fishes in certain waters of the district." This program was initiated because it had been found that an "important element" in the "serious depletion of the salmon runs" was the result of "predatory enemies":

> The so-called salmon trout or dolly varden together with other predatory fishes prey upon the eggs and fry. Owing to the lessened quantity of this food available as compared with

48. Bower, "Alaska Fisheries and Fur Industries In 1916," pp. 14-16.

49. U.S. Department of Commerce, Bureau of Fisheries, *Pacific Salmon Fisheries*, by John N. Cobb (Washington, Government Printing Office, 1917), p. 62.

50. "Alaska Salmon Fishing Regulations," *Pacific Fisherman Year Book, 1921*, XIX (January 1921), pp. 75, 77.

their number the rapacious depredations of these enemies are having a telling effect upon the future welfare of the species. Their consumption of eggs is enormous, estimated to be many hundred each day for every individual during the spawning season and their feeding upon the fry both before and during the migratory period is exceptionally heavy. Specimens of stomachs examined showed from twenty to sixty fingerlings, and up to two hundred fry have been found in others. When it is understood that the feeding and digestive process is constantly going on it can easily be imagined the great destruction to the salmon which is being caused by these fishes.

Under the direction of Dennis Winn, the bureau's superintendent of fish cultural services, three camps were established on the Naknek River, Lake Aleknagik, and Iliamna Lake during the summer of 1920. The purpose of the camps was to survey the salmon spawning streams, provide for their improvement, and exterminate predatory fishes in their vicinities. All told, 50,000 predatory fish in the lakes and streams of the Bristol Bay fishery were destroyed in 1920.[51]

Of significance for this study was the bureau's survey of the Lake Clark vicinity during late August and early September 1920. Supplies and equipment were packed over the portage from the camp at the mouth of the Iliamna River to the intersection of the Newhalen River and Iliamna Lake. The bureau personnel had to do much of their own packing. According to Winn, "the Indian packers who perform this kind of work are absolutely undependable, especially as they had considerable money from the summer's work at the canneries, and most of their time was occupied in celebrating." The men proceeded up the Newhalen River, arriving at Lake Clark on August 28. An account of their activities in the vicinity provides insights into the fishery resources and Native fishing operations at the lake:

We learned from natives and prospectors that no Dolly Varden trout are ever taken in Lake Clark, and that there is but one stream in that locality which is inhabited by this species, namely, Kegik Creek.

A thorough survey was made of the entire lake and tributaries, our party passing up the east shore and returning on the opposite side. No trout in quantities were observed, and the possibilities of stream spawning were found to be very limited. It was noticed that the salmon spawn earliest near the outlet of the lake and later as they proceed up the lake. The prospectors and natives were fishing the mouths of the creeks and also directly on the spawning grounds preparing dog feed. Streams were visited in the following order:

Taziuina River is an ideal salmon stream with suitable sloughs for spawning red salmon, but not more than 50 were noticed. A high waterfall about 5 miles from the mouth blocks the ascent of fish.

Tamalia River is a good stream but contained no salmon. We were advised by prospectors living at its mouth that few salmon ever enter, even in good years. There are falls about 4 miles up and no fish above.

Current Creek is a good spawning stream for the first mile, but unsuitable further up. It contained no fish.

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51. Territory of Alaska, *Report of the Alaska Territorial Fish Commission for the Year Ended March 3, 1921* (Juneau, 1921), pp. 11-13.

A small creek at the head of Little Lake Clark could accommodate fair numbers, which are in evidence in good years, but none have appeared for the last two seasons.

Big River, at the junction of Big and Little Lake Clark, is the largest stream tributary to the lake. It is glacial fed and few salmon ever enter.

Portage Creek is small, with no possibilities.

Kegik Creek is a fair-sized stream with good possibilities. It has a lake at its head and is recognized as the best salmon stream in that locality, the fish ascending into the lake. A trip was made to the lake and but few salmon noticed, none being found in the small tributaries at its head which are thoroughly suitable for spawning. I was advised by prospectors in the vicinity that some spawning red salmon were noticed in the lake in December and spawned-out fish still active in January of some years, which would indicate an extremely late run.

Chulitna River has no salmon possibilities. It is a shallow river and heads in a marsh containing large numbers of pike.

Practically all the salmon spawn along the shore of the lake and nearly the entire shore is suitable. Many miles of ideal spawning grounds were noticed along the lake shore. The Indian fish villages, now deserted, scattered along gave positive evidence as to the best spawning locations in former years. Lake trout, especially during the spring months, are numerous and easily taken; specimens reported weighing 40 pounds or more were common. Very little use is ever made of them by the natives, and only in emergency cases are they ever considered. As our time was limited and lake trout were not abundant, we continued back to Iliamna and finished the season with a survey of that lake, with the exception of the west shore, which was too dangerous at that time of year to undertake in a small boat.

The Newhalen River, which connects Iliamna Lake and Lake Clark, has a series of falls and rapids about 2 miles from its mouth, but these are not of sufficient size to hinder the ascent of the fish. The formation, however, renders it easy for the Indians to catch their supply with large hooks on the end of long poles, as the fish must of necessity pass through certain small channels between the rocks. The rapids are about 500 yards long, passing through narrow channels at the upper end and widening to about 300 feet in rapids below, which end in a further widening of the river to about one-half mile. This portion of the river is shallow for about one-quarter of a mile, with ideal spawning bottom, in which some fish were spawning. The major portion of the fish taken by the natives in this locality were captured either in the rapids or on these spawning grounds.[52]

The year 1919 witnessed another event that had ramifications for the fishing season in Bristol Bay as well as for Natives in the Iliamna Lake-Lake Clark region, some of whom traveled to Bristol Bay each year to work at the canneries. During the spring and summer that year the ravages of influenza spread along the coast of Alaska in the wake of World War I. The dreaded flu struck

52. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1920," in U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1921 With Appendixes* (Washington, Government Printing Office, 1922), pp. 31-37.

Native villages particularly hard, because their desperate living conditions provided impetus to the spread of the contagious disease. Because there were no other facilities for treatment in western and southwestern Alaska the Alaska Packers Association, with nine operating canneries in the Bristol Bay region, provided some $90,000 in food, fuel, drugs, clothing, and bedding to the stricken Natives in the area where nearly 200 Natives died. Free medical care was given to APA employees and Natives who lived in the Bristol Bay vicinity at three APA hospitals – a 200-bed hospital at Nushagak established in 1896, an 8-bed hospital built at Kvichak in 1900, and a 40-bed hospital opened at Naknek in 1902. Each of the hospitals was staffed by a physician and one or two nurses. In addition to this medical care the APA sent teams to surrounding Native villages to provide treatment and hopefully halt the spread of the disease.

The epidemic ran rampant throughout the Bristol Bay area from May to August. The report of the physician at Kvichak, where the APA operated two canneries, provides a graphic description of the raging epidemic that struck the Kvichak River drainage and general Iliamna Lake vicinity:

> On arrival of the Alaska Packers Association's steamer Kvichak at Naknek anchorage from San Francisco on May 22, 1919, the vessel was boarded by Mr. William Nielsen, United States Commissioner. Mr. Nielsen was convalescing from an attack of influenza and gave the information that this disease had made its appearance on May 19, at the native village of Koggiung on Kvichak Bay....
>
> On May 23 the steamer Kvichak arrived at the Diamond J cannery and a sanitary survey was at once instituted by the medical officer of the station, Dr. Isaac B. Wilson. It was found that three whites and four natives were suffering from the disease. The epidemic spread rapidly among the natives, and immediate measures for its control were taken. As at this time of the year, it is customary for the natives to go to their outlying camping places, there were not a great many in the Koggiung village – only about sixty. The natives were destitute and debilitated and their inertia and lack of understanding of the necessity of action made it unusually hard to handle the situation.
>
> Commissioner Neilsen, who has resided in Alaska for many years and speaks the language of the natives, headed a food and sanitary patrol. Frequent trips were made daily through the village, and all natives, whether sick or well, were provided with warm, wholesome food. The native huts were cleaned and disinfected and a general cleaning-up was given the entire village.
>
> Natives, apparently in good health, were constantly returning from their outside camps. A beach patrol was established to meet each boat or bidarka on approach. The conditions of the village were stated, the natives given a free supply of food fully sufficient for ten days and advised to go back to their outside camps....
>
> The bodies were buried in coffins and clothing, bedding, etc., destroyed by fire.
>
> Not knowing what complications would set in among the cannery crews, it was not considered wise to use the Alaska Packers Association's Kvichak medical station hospital for natives. A well-situated, unoccupied, Government school building was taken possession of and converted into a hospital on May 25. Berths were installed in the schoolroom and furnished with new mattresses and bedding. The building was equipped with all necessary facilities. Dr. Wilson, the Alaska Packers Association's medical officer, and Mr. Andrews, his hospital steward, assumed charge and visited the hospital several times daily. Two other

> of our employees who had had some experience as orderlies in Marine Hospitals acted as nurses, and a cook was sent from the cannery. From the company's supplies, ample medicines, food and fuel were made available and everything at our command done to insure sanitation and to relieve suffering. One part of the school house was occupied by eighteen native orphan children and six adults. The building was roped off and held in strict quarantine....
>
> The 1919 cannery expeditions of the Alaska Packers Association had been, as usual, furnished with provisions, medical and other supplies in the most liberal manner, but the company availed itself of the first opportunity to make additions for our possible wants. For its three Bristol Bay stations about fifty tons of medicines, fresh vegetables, etc., were sent on the steamer Libby Maine from Seattle. This vessel arrived at Naknek anchorage on July 9.

At the conclusion of the fishing season in mid-August, sixteen destitute Native orphans at Koggiung were transferred to a government hospital at Dillingham and the APA winter caretaker at Kvichak was left with instructions to provide food and other necessities to the Natives in the area.[53]

Despite the problems facing the Bristol Bay fishery during the post-World War I years its salmon production continued to comprise a significant part of the Alaska pack. In 1920, for instance, some 28 canneries (out of a total of 146 in Alaska) were operating in the region – 9 by the Alaska Packers Association, 6 by Libby, McNeill & Libby, 2 each by the Portland-Alaska Packers Association, Northwestern Fisheries Company, and the Red Salmon Canning Company, and 1 each by the Alaska Salmon Company, Bristol Bay Packing Company, Carlisle Packing Company, Columbia River Packers' Association, Everett Packing Company, Naknek Packing Company, and Pacific American Fisheries.[54]

THE SALMON FISHING INDUSTRY IN COOK INLET: 1921-1930

The decade 1921-1930 began with an economic slump, resulting from the government's dumping upon the market of large quantities of canned salmon that it had purchased during the war years and general overproduction during 1919-1920. From an opening price of $3.25 per dozen cans for Alaska reds in 1920 the market slid to a $2.85 opening in 1921 and $2.25 by the end of the year. Pink salmon, quoted at $1.50 in 1920, fell to 90 cents in 1921.[55]

The price decline brought about the closing of many canneries on Cook Inlet in 1921. The Alaska Packers plant at Kasilof remained closed that year for the first time since its rebuilding after the

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53. Alaska Packers Association, *"Service": The True Measurement of Any Institution Lies in the Service it Renders* (N.P., Alaska Packers Association, [1923]), pp. 5-31. In 1920 the Bureau of Education completed an orphanage for the care of native children whose parents had died during the influenza epidemic. "New Orphanages at Dillingham," *The Pathfinder*, 1 (September 1920), p. 31.

54. Bower, "Alaska Fishery and Fur-Seal Industries In 1920," in U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1921*, pp. 46-61.

55. DeArmond, "Cook Inlet Fishing Industry," p. 33a.

1905 fire. The Northwestern Fisheries plant at Kenai did not operate, and most of the Libby cannery buildings there burned on July 21 after packing 25,000 cases.[56]

In 1922 the salmon market firmed, and the overall prospects for the industry improved with a generally continuing rise in prices throughout the decade. This year witnessed the beginning of a boom in the salmon industry that would result in the construction of 25 new salmon canneries in the Cook Inlet region during the next nine years. With the exception of a single cannery--the Kamishak Canning Company plant at Kamishak Bay--all of the facilities established between 1922 and 1928 were located on the east side of Cook Inlet. In 1929, however, six new plants were built, and four of them were located on the inlet's western shoreline. They included the Kustatan Packing Company at Kustatan, Harvey Smith at West Foreland, West Coast Canning Company at Polly Creek, and Wik & Berg at Redoubt Bay. The latter company, in 1930, was operated by Redoubt Bay Packing Company.

Of these 25 canneries the one at Polly Creek was inside the present-day boundaries of Lake Clark National Park and Preserve and the ones at West Foreland and Redoubt Bay were within twenty miles of the park's eastern boundary. Many of the new canneries were small, some packing fewer than 1,000 cases per season. Some operated for only short periods, while others, although continuing in operation, changed owners frequently.[57]

The annual salmon pack on Cook Inlet increased substantially during the 1921-1930 decade. The number of operating canneries increased from 5 in 1921 to 22 in 1930 and the corresponding number of traps from 22 to 92. By the latter year the Bureau of Fisheries had determined that Cook Inlet was "overfished."[58]

Several important changes took place in the salmon canning industry on Cook Inlet during the 1921-1930 decade. The 1923 season was the last year of operation for the inlet's original cannery – the Alaska Packers plant at Kasilof. Since its construction in 1882 it had missed only three seasons of operation – 1890, 1892, and 1921. While pack figures are unavailable for many seasons, it is estimated that its aggregate pack was some 975,000 cases having an estimated value of more than $7,000,000.[59]

In 1922 the airplane arrived on Cook Inlet to speed both transportation and communication for the canneries. The first airplane arrived at Anchorage that year and was put into charter service. Before long the seaplane or float plane was a common sight at the salmon canneries and fishing grounds of the inlet.

The year 1923 was also the last in which square-rigged sailing ships were used to carry cannery supplies to Cook Inlet and to transport salmon packs from the inlet to market. No longer was Chisik Island used to shelter them during their layovers in the inlet. After this date all cannery operators would use motorized ships or steamers, either common carriers or chartered vessels. A

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56. *Ibid.*

57. *Ibid.*, p. 34, and U.S. Department of Commerce, Bureau of Fisheries, *Pacific Salmon Fisheries*, by John N. Cobb (Washington, Government Printing Office, 1930), pp. 452-53.

58. DeArmond, "Cook Inlet Fishing Industry," p. 36, and Cobb, *Pacific Salmon Fisheries*, 1930, p. 453.

59. DeARmond, "Cook Inlet Fishing Industry," p. 35.

few sailing vessels continued to appear on the inlet for some years, but they were employed primarily in the salt herring business.[60]

THE SALMON FISHING INDUSTRY IN BRISTOL BAY: 1921-1930

During the 1920s the prospects of the salmon industry on Bristol Bay were generally unfavorable as the declining fish resources led to ever smaller catches during the decade. This decline was exacerbated by the economic downturn of the Great Depression in 1929.

The decade began with an upturn in the salmon fishery in Bristol Bay as the total pack (more than 95 percent being reds) of the area's 27 canneries and salteries reached 1,224,587 cases of canned salmon and 10,528 barrels of salted salmon in 1923. However, the pack declined in 1924 by more than 33 percent.[61] The pack of the 28 canneries declined even further in 1925.[62] The pack recovered during the 1926-1929 period, but the 1930 fishing season was an economic disaster. Although 22 canneries operated that year in the Bristol Bay region the total pack fell by more than 62 percent from the 1929 total. The pack in 1930 was less than one-half of the total for 1920. Of the 22 canneries operating in 1930, 7 were operated by the Alaska Packers Association, 5 by Libby, McNeill & Libby, and 2 each by the Portland-Alaska Packers Association, Northwestern Fisheries Company, and Red Salmon Canning Company.[63]

At Bristol Bay, as in Cook Inlet, the 1920s witnessed the introduction of power boats for fishing. Before 1920, few local fishermen had owned their own boats. When the introduction of powerboats threatened to free locals, both Native and white, from cannery fleets in 1922, the packers quickly saw that a law was passed prohibiting anything but sailboats in Bristol Bay. Ultimately, in search of increased speed, cannery interests attempted to circumvent their own law, using powerboats to tow their sailing fleets to the fishing grounds. In the face of this breach of what had been hailed as a "conservation measure," the ban on powerboats was removed in 1951. During the 1930s and 1940s local unions gained power in the region, and with the scarcity of labor during World War II the cannery operations were forced to hire local labor for cannery work during the fishing seasons, a practice that would continue during the postwar years.

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60. *Ibid*, pp. 35, 37.

61. U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1925 With Appendixes* (Washington, Government Printing Office, 1926), pp. 129-30, and Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1923," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1924 With Appendixes* (Washington, Government Printing Office, 1925), p. 55.

62. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1925," in U.S. Department of Commerce, Bureau of Fisheries, *Report of U.S. Commissioner of Fisheries For the Fiscal Year 1926 With Appendixes* (Washington, Government Printing Office, 1927), p. 96.

63. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1930," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1931 With Appendixes* (Washington, Government Printing Office, 1932), pp. 45-46, 51-52.

Much of the decline of the Bristol Bay fishery during the 1921-1930 period resulted from depletion of the fishery resources through overfishing.[64] During the early years of the decade some of the alarmed packers voluntarily limited their catch in the hope of increasing the percentage of escapement to spawning areas and thus replenishing the diminishing salmon runs in the future. After a poor salmon escapement in 1925 the 30-day commercial fishing season was shortened to 8-10 days.[65] The cutbacks, however, do not appear to have been overly effective. Instead, the packing interests commenced support of the Bureau of Fisheries' annual efforts to survey the spawning areas, destroy predatory fish, remove obstructions from streams and enforce fishing regulations.[66]

In 1921 the Bristol Bay cannery operators voluntarily subscribed $25,000 and provided boats for the bureau's efforts. Under the direction of Dennis Winn, four bureau personnel and two "practical fishermen" conducted the work that year. As to their reconnaissance in the Lake Clark region Winn reported:

> All the streams in this section were visited, but very little spawning was observed in the upper reaches of the lake. Spawning salmon were noticed in good numbers along the entire length of Newhalen River, and each of the several small tributaries contained some fish. Aleck C. Creek, a tributary near the head of the river, contained fair numbers of fish. Early in the season a large run passed up this stream to a lake at its head, and the natives seined about 8,000 fish at its mouth in a few days and prepared them for dog feed.
>
> A small number of fish were seen in Tazimina River, beginning about 3 miles from its mouth and extending to the falls 4 or 5 miles farther up. Fish became scarcer advancing up the lake, and in the upper reaches the only specimens noticed were on the spawning grounds along the south shore in the vicinity of Tarnalia River, about halfway up the lake, and in Kegik Creek and Kegik Lake on the north shore. Few fish were seen in the creek, for the water, like that of nearly all the streams in this system, was greatly discolored because of warm weather and because it was glacier fed. Proceeding to Kegik Lake encouraging numbers were seen spawning and schooling near the mouths of two excellent creeks at the head of the lake. None had as yet entered the creeks, which presented ideal spawning possibilities. According to the natives late runs enter here and live fish are observed through the ice in January.[67]

A more extensive reconnaissance of the Lake Clark region was conducted by the Bureau of Fisheries in 1922. The results of the survey of the spawning grounds in the lake and its tributaries were reported as follows:

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64. For an analysis of the problems facing the Bristol Bay fishery during the 1920s see Rich and Ball, "Statistical Review of the Alaska Salmon Fisheries. Part I: Bristol Bay and the Alaska Peninsula," pp. 41-73.

65. Dennis Winn, "Spawning Conditions and Prospects In Various Areas," *Pacific Fisherman Year Book, 1928,* XXVII (January 25, 1928), pp. 100, 102-103.

66. Territory of Alaska, *Report of Alaska Territorial Fish Commission for the Year Ended March 31, 1922* (Juneau, 1922), pp. 16-17.

67. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1921," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1922 With Appendixes* (Washington, Government Printing Office, 1923), pp. 16-23.

On the trip to and through the Lake Clark section great numbers of salmon, either spawning or spent, were noted along the entire Newhalen River, and extensive spawning was in progress along the shore of Lake Clark to Tarnalia. Fish seemed to be everywhere, and in localities where none were seen the two preceding years.

Visits were made in turn to Tarnalia River, Current Creek, and Big River; thence to the head of Little Lake Clark. Return was made along the opposite lake shore to Kegik Creek. Tazimina River was visited last. Trips were made upstream at each creek and river visited, but the discoloration of the streams caused by glacial water and floods precluded all possibility of intelligent observation, with the exception of Kegik Lake and Tazimina River. The trip was somewhat early for the run in the upper reaches of the lake, but red salmon were observed jumping at the entrance to Little Lake Clark.

From information obtained from reliable residents relative to last year's run in this section it was learned that "very few fish reached the upper portion of Little Lake Clark, and the only fish of consequence were noted in Kegik Lake, where fair numbers were seen earlier in the season. Signs of a few thousand fish were seen in the sloughs of Current Creek about 10 miles upriver, but the brown bears had cleared off every fish from their spawning beds," and it is felt that the results from spawning here were negligible. At Tarnalia, where great numbers were noted the present season and are numerous in all good years, "there were no dead fish found along the lake shore, where previously many were picked up for garden fertilizer." On arrival at Kegik on August 23 a trip was made to the lake, where several thousand red salmon were noted milling along the upper shores near the mouths of several small streams. All fish noted were silvery and fresh, as though they had just arrived, and no spawning was in progress....

A survey was made of Tazimina River to the falls, and salmon were found in its entire length of about 8 miles. This fall is impassable, has a perpendicular drop of about 75 feet, and is about 50 feet wide. And on the date visited the stream was low, about 2 feet of water passing over. The rush upstream was under way in the river, and some spawning at various points was in progress. An unbroken line of fish from 1 to 3 feet wide was passing near the river mouth, with seemingly no limit to the numbers.

The natives had their winter's supply cured, and it is estimated that about 60,000 fish, divided between 30 families, was their Lake Clark quota. About 50,000 fish would be required for the local families around Iliamna Lake.

During the season a total of 3,697 predatory trout weighing more than 9,000 pounds were taken in the Iliamna Lake-Lake Clark region. Of this total 90 percent were Dolly Vardens, 5 percent were lake trout, and 5 percent were steelheads, rainbow trout, and pike.[68]

In 1925 the inspection of the Iliamna Lake-Lake Clark area revealed an extremely small escapement into those lakes. The poor escapement totals not only meant discouraging prospects for the Bristol Bay fishery as a whole but desperately low food supplies for the area's Natives during the coming winter. The bureau reported:

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68. Bower, "Alaska Fishery and Fur-Seal Industries In 1922," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1923 With Appendixes* (Washington, Government Printing Office, 1924), pp. 25-34.

> Very few fish were seen in the entire Lake Clark district, and 40 bundles (1,600 salmon) were the greatest number any single fish village had dried. The only places where any numbers were reported were Taziminia and Kegik Rivers, but even there only a few fish had been dried. About 40 bundles (1,600 salmon) had been dried at Kegik and 24 bundles (960 salmon) at Taziminia, which comprised the major portion of all salmon reaching these streams. No salmon were seen along the lake shore, and on the Tarnalia Beach in the lake, near the mouth of Tarnalia Creek, there was a total failure, the first in 30 years to the knowledge of white men living there. These men endeavored to get the winter supply of salmon for themselves and dogs from Kegik, but had salted only 1¼ barrels in two weeks, after which they discontinued fishing. On the date of our visit (September 1) two families of natives were fishing, who took but one or two salmon a night from several nets set at advantageous locations in and near the mouth of the Kegik River...according to old residents who have fished in the lakes for over 30 years. The natives had killed more than half of their sled dogs up to the time of our visit, and many more dogs will go before snow falls. In years of scarcity such as this the natives require for home use nearly all the salmon that escape the commercial fishermen, which results in the utter wiping out of the runs of some streams. This, together with the small size of the fish that filter through the commercial nets, which constituted most of the escapement and were mainly males, presents a most discouraging prospect. The natives and local residents of both Iliamna and Clark Lakes, after work over the entire spawning area, will probably cure about 30,000 red salmon, which is 20 per cent of the usual number. They contemplate centering their activities on trout fishing to supplement their winter food supply, and every encouragement was given them even to the extent of lending them some of our small gill nets.[69]

In contrast to the dismal escapement of salmon to the Iliamna Lake-Lake Clark area in 1925, the escapement to the two lakes in 1926 was the best since 1918. The results of the bureau's reconnaissance during September that year contained interesting insights into the spawning areas and Native fishing activities:

> Many new fish villages had been established along the [Newhalen] river, but all were deserted at the time of this visit. The heavy early run permitted the natives to get their supply of salmon cured for home use and dog feed near the beginning of the season, after which they moved back to their winter quarters at Nondalton. All reported the heaviest run since 1922, and possibly even larger than that year. On the trip up the lake some salmon were noted schooling at various points along the south shore, and large schools were in the vicinity of Tarnalia Point. Tarnalia Creek had broken into the lake over the flats through several channels, which seemed to hold more attraction for the salmon, as there were large schools at each channel mouth. Before breaking into channels, this stream was not suitable for spawning salmon. No spawning was noted in the east or upper portion of the lake, although in the west or lower end it was nearly over. All local families on the lake had discontinued fishing and removed their nets from the water, having obtained sufficient salmon for their own use. Locals along the west end of the lake had dried 140 bundles (5,600 salmon) for home use, and at the lower end of the lake they had 708 bundles (28,320 salmon).

69. Bower, "Alaska Fishery and Fur-Seal Industries in 1925," pp. 92-98.

Continuing the trip to the head of Little Lake Clark, a stop was made at Current Creek. This stream has changed its bed many times over the flat valley extending back several miles from its outlet and enters the lake through several small channels along about ½ mile of shore line. No salmon were seen in the vicinity, but spawning here is not extensive, and only near the headwaters several miles back is any spawning possible. The salmon had not reached here yet.

The streams at the head of Little Lake Clark and Big River, at the entrance to Lake Clark, were in flood, but no salmon had as yet made their appearance this far up the lake. Along the north shore and beginning a few miles from Little Lake Clark, salmon were breaking occasionally. Brown Carlson, at whose home the night was spent stated that the fish had reached his place only about two weeks before, and they were only then en route to the head of the lake. Observations bore out this statement. Mr. Carlson had obtained all the fish needed for home use and dog feed in a few days. He regarded the run as the best since 1918.

The north shore was inspected as far as Kegik Creek on September 3, and salmon were noted breaking in numerous places along the lake shore. Kegik Creek was also in flood and discolored. Salmon were seen outside, but none in the stream though possibly they had passed up the Kegik Lake. Two beaver dams, one partly and the other entirely complete, were found about 2 miles above the outlet. They were about 300 feet long and backed the water over about half a mile of flat, but the height of the water offered no barrier to the salmon. However, as the water spilled evenly over the entire length of the dam, it was thought the ascent would be difficult in low water, and a section of about 30 feet was broken out. Beaver workings were noted in all streams throughout the flats. It is believed that the opening of the beaver season in the spring will remove this menace to the ascent of salmon, but all streams where beaver are reported should be inspected each year.

On September 4 a trip was made over the portage to Kegik Lake. More salmon were in evidence here than ever had been noted before. Almost the entire west shore or head of the lake was well covered with salmon. Around the mouth of the four small creeks it was estimated there were 2,000, 5,000, 10,000, and 10,000 red salmon, respectively, and salmon also were milling along the lake shore between the streams preparatory to spawning, and were jumping in the lake over a quarter of a mile from shore. None had entered the creeks as yet or had begun spawning. It as estimated that at least 50,000 red salmon were in sight from the shore, which, of course, does not represent all the salmon that entered the lake, but only the early fish. This is a late-spawning area, and salmon had reached it only two weeks before. Also, no check was possible around the lake, as the sides are almost perpendicular bluffs. The return was made to Tamalia Point and the portage reached on September 6.

Only a casual inspection was made of Taziminia, but apparently there was an adequate supply of salmon for thoroughly seeding the 8 miles of river available for spawning below the falls....

The inspection as a whole was very satisfactory and encouraging. The escapement was the best since 1918, with the exception of 1922, and except in a few areas the numbers were considered adequate for proper seeding. Not all of the available area was covered, however, and some good areas were but sparsely covered, as compared with other good

years. Certain areas will receive ample numbers one year and few another, while other areas are satisfactorily seeded every year; although a year like 1925 would be an exception to this latter rule as there were not enough salmon to cover the grounds of any area. As the result of observations year after year it appears that even in a satisfactory year, such as this, as much suitable area remains vacant as is used for spawning.

It is believed that Lake Clark received the larger portion of the escapement this year, while in 1921, 1922, and 1923 the greater bulk of the escapement appeared to enter in Iliamna Lake. Returns from this year's spawning will also probably be better because the water in the lakes was low, with consequent less likelihood of the water receding and leaving the spawning beds bare, as occasionally occurs. The streams emptying into Iliamna Lake also were low and securely bedded, thus eliminating most of the shallow sloughs, where in some years great losses undoubtedly occur when the water recedes after the eggs are deposited, and leaves them dry.

Throughout the district the local whites and natives took their full supply of salmon early when the fish were good, and discontinued fishing, except for occasional fresh salmon for themselves and their dogs. Rehabilitation of the runs has also caused the reestablishment of fishing camps by the natives. Several camps had been located at Kokhonak Creek and along the Newhalen River, and one near the mouth of the Kegik River on Lake Clark. Camps and villages formerly existed at these places but were discontinued, primarily on account of scarcity of salmon. The total number of red salmon dried by local whites and natives in the Iliamna and Lake Clark districts was 1,909 bundles (76,360 fish). Probably the number used fresh and the few barrels salted would bring the total catch to 100,000 salmon, which is about the average number used in years when salmon are plentiful.[70]

Although Bureau of Fisheries personnel continued to reconnoiter the Iliamna Lake-Lake Clark area during the late 1920s their reports of such excursions became less detailed, particularly in the case of Lake Clark. Beginning in 1928 a bounty of five cents was offered for every predatory trout taken in the Bristol Bay district including the two lakes. Funds for the bounty were provided from a special appropriation by the territorial legislature "for improving conditions of the salmon spawning grounds." The Natives would catch the trout, and after using the remainder of the fish for home use and dog food, dry the tails, assemble them by the hundred on strings, and delivery them to a representative of the Bureau of Fisheries, who prepared an affidavit provided by the territorial government. The Bureau of Fisheries furnished the Natives with trout webbing and provided some fishing skiffs. Arrangements were made whereby the owners of various trading posts and stores accepted the trout tails as cash for purchases of winter groceries and other necessities by the Natives.[71]

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70. Bower, "Alaska Fishery and Fur-Seal Industries In 1926," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1927 With Appendixes* (Washington, Government Printing Office, 1928), pp. 261-65.

71. Bower, "Alaska Fishery and Fur-Seal Industries In 1929," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1930 With Appendixes* (Washington, Government Printing Office, 1931), , p. 259. Also see Dennis Winn, Agent, Bureau of Fisheries to George A. Parks, Governor of Alaska, March 4, 1930, Record Group 101, Office of the District and Territorial Governor, 1884-1958, General Correspondence of Alaskan Territorial Governors, 1909-1958, File 26-2, Fish and Game, Clearing Salmon Streams, 1930, Alaska State Archives and Records Center, Juneau.

In 1929-1930 territorial government payments "to bona fide residents of the Bristol Bay district" for bounties amounted to $12,500 for some 251,000 predatory trout. Most of the people participating in the predator destruction program were Natives, although a few white people were "interested in the work" and benefitted "from the amounts they receive as bounty."[72]

FISHERIES RESERVATIONS AND THE WHITE ACT, 1922-1924

A new era in Alaskan fisheries management began in 1922 with the establishment of two fisheries reservations in western Alaska by executive order of President Warren G. Harding. The purpose of the reservations was "to more effectively insure the protection of the fisheries" and promote "their encouragement and development." One reservation covered the Aleutian Islands and much of the Alaska Peninsula. The other, established by Executive Order 3752 on November 3, 1922, included Cook Inlet, Bristol Bay, Kodiak Island and surrounding waters and was known as the Southwestern Alaska Fisheries Reservation. On December 16, 1922, the Secretary of Commerce issued regulations, which had been primarily written by Dr. C.H. Gilbert of Stanford University, for the administration of the latter reservation which was divided into three districts – Bristol Bay, Cook Inlet, and Kodiak-Afognak.

The regulations specified the boundaries of the Bristol Bay and Cook Inlet districts. The former included "all that portion of the reservation lying within the Bering Sea, the coast line extending from Cape Menshikof to Cape Newenham and thence northward to 59° 15' north latitude." The latter included "all that portion of the reservation east of Bristol Bay and north of the latitude of Cape Douglas (approximately 58° 50'); including the Barren Islands, the shores and outlying islands of the Kenai Peninsula and all the shores and waters of Cook Inlet."

Intended to curtail salmon fishing because of the rapidly depleting runs, the regulations provided that no "individual shall engage in the business of catching, canning, or preparing salmon, except for personal or family use and not for sale or barter." The regulations included the following:

> Permits shall specify the amount of pack allowed, if that be limited, and the character, extent, and locality of fishing operations to be conducted.
>
> The use of purse seines in fishing for salmon will not be permitted within the reservation.
>
> Nothing in these regulations shall prevent the purchase of salmon from natives, local inhabitants, or other individuals who have secured permits to fish within areas properly tributary to the cannery, but fish so purchased shall not be in excess of the pack limit which may be allotted.
>
> No fishing for salmon shall be permitted in Chinik Inlet, Kamishak Bay, within a line which joins the outer headlands of the inlet and passes outside the two small islands which lie near its entrance. Markers shall be placed on the headlands to designate the closed area.

72. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1930," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1931 With Appendixes* (Washington, Government Printing Office, 1928), p. 19.

In addition, special regulations were effected for Bristol Bay, occasioned in part by the introduction of the first motor powered boats and purse seiners in 1922. These new developments in equipment had proven to be extremely efficient fish catching devices, thus requiring regulation to preserve the fishery.

During 1923 fishery operations on Bristol Bay and Cook Inlet operated under the permit system. On Bristol Bay fishing limitations were implemented by specifying the number of gill net boats which could be operated by each cannery, a number determined by the number of lines of machinery operated in preceding seasons.

The permit system was used during 1923 and 1924 until Congress passed a bill containing a series of amendments and additions to the Act of June 26, 1906. The bill became known as the White Act and was approved by President Calvin Coolidge on June 6, 1924. The following day the President ordered the dissolution of the Alaska Peninsula and Southwestern Alaska Fisheries reservations.

The White Act greatly strengthened the authority of the Secretary of Commerce in the field of fishery regulation and included the power to create fishery districts and special rules for each district. The Act declared it to be the policy of Congress "that in all waters of Alaska in which salmon run there shall be an escapement of not less than 50 per centum," and it established a minimum period each week during which there would be no fishing to assure escapement throughout the fishing season. The Act also guaranteed to all citizens of the United States equal rights in taking fish in the waters of Alaska. The law became the basic fishery law of Alaska from its enactment until the coming of statehood in 1958.

In compliance with the provisions of the Act the Secretary of Commerce on June 21, 1924, issued regulations for the 1924 season. The new regulations included the establishment of fishery districts, two of which were Bristol Bay and Cook Inlet. In the Bristol Bay area, commercial fishing for salmon was limited to drift gill nets. The use of salmon traps, beach seines, and purse seines was expressly prohibited.

Regarding Cook Inlet, the regulations contained rules for both salmon and herring fishing. The salmon regulations stipulated, among other things, that commercial fishing for salmon was prohibited in Chinik [Chenik] Inlet of Kamishak Bay. The regulations also prohibited the use of purse seines and floating traps for the capture of salmon.

Later, on December 2, 1924, the regulations were revised to prohibit commercial salmon fishing after August 10 and within one mile of salmon streams and two miles of the mouths of the Kasilof and Kenai rivers.[73]

THE SALMON FISHING INDUSTRY IN COOK INLET AND BRISTOL BAY: 1931-1940

Although the salmon canning industry suffered less than other industries during the Great Depression, its economic impact was nevertheless felt on Cook Inlet and Bristol Bay. The stock

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73. Bower, "Alaska Fishery and Fur-Seal Industries In 1924," in U.S. Department of Commerce, Bureau of Fisheries, *Report of United States Commissioner of Fisheries For the Fiscal Year 1925 With Appendixes* (Washington, Government Printing Office, 1926), pp. 68-70, 74-89.

market crash in October 1929 ushered in a decade of retrenchment that impacted the lives of many in both regions.

Cook Inlet

One of the major impacts of the depression on the salmon industry in Cook Inlet was the virtual halt in new cannery construction. During the years 1921-1930 a total of 26 canneries had been built on the inlet, but between 1931 and 1940 there were only three new plants. The new canneries, which were small operations, were built at Ninilchik, Seldovia, and Kenai by the Enterprise Seafood, Puget and Alaska Canning, and Anchor Line Packing companies, respectively. The Ninilchik plant operated only one season. In addition, the Anchor Line Packing Company operated a floating cannery in Redoubt Bay during 1936.[74]

At least a dozen small canneries on the inlet, most of them built during the 1920s, closed during the 1930s, including one of the largest and oldest plants in the region. The latter was the Kenai cannery of the Northwestern Fisheries Company. After the company went bankrupt the canneries were closed in 1932.[75]

The number of canneries operated on Cook Inlet each season declined dramatically during the depression years. In 1930 there were 22 canneries in operation, the number dropping to 17 in 1931 and 9 in 1932. Thereafter, 8 to 10 canneries operated on the inlet each season through 1940.[76]

Although Cook Inlet had been fished commercially for some 50 years, and fished intensively for nearly 30 years, salmon swarmed into the inlet in unprecedented numbers during the 1930s. Bumper harvests were recorded in 1936 and 1940. All told, the inlet canneries produced 2,258,033 cases of canned salmon during the 1931-1940 period, compared with the sum of 1,463,921 cases in the previous decade.[77]

The increasing efficiency of the canneries was evidenced by the fact that seven Cook Inlet canneries packed approximately 150,000 cases of salmon in 1920 while in 1940 eight canneries packed slightly more than 341,000 cases. This was attributable partly to faster and more modern canning machinery and partly to faster cannery tenders and better communications. The radio telephone came into common use in the canneries during the 1930s, enabling them to better schedule a steady and adequate flow of fish through their machinery.[78]

During the depression the canneries commenced consolidation efforts as an economy measure, a practice that would become more common during the war years in the early 1940s as a manpower conservation measure. This practice, begun on Cook Inlet in 1932, consisted of packing the fish of

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74. DeArmond, "Cook Inlet Fishing Industry," p. 41.

75. *Ibid.* Beginning in 1936 the Pacific American Fisheries firm made joint packs with the Snug Harbor Packing Company in the latter's cannery on Chisik Island.

76. *Ibid.*

77. *Ibid*, pp. 42-43.

78. *Ibid*, pp. 43-44.

two or more separate companies in a single plant. As an example of the practice, Farwest Fisheries, Inc. of Anchorage sent its fish in 1932 to the plant of the Snug Harbor Packing Company on Chisik Island for processing.

The center of salmon canning on Cook Inlet tended to shift during the 1930s from the Kenai-Kasilof area, which had dominated the inlet cannery scene from the earliest years. Although the large Libby cannery continued to operate at Kenai, the Anchorage canneries in the north and those in the south around Seldovia and Port Graham produced increasing amounts of the inlet's total salmon pack each year.[79] Plants on the inlet's west side remained relegated to a minor role.

The fluctuating fortunes of salmon fishing and cannery operation continued to have a significant impact on the lives of Natives in Cook Inlet during the 1930s. Many Natives had become dependent on the fishing industry in recent years as they made the transition from a subsistence lifestyle to a partial wage economic system. Thus, their livelihoods increasingly reflected the ups and downs of the fishery business. In 1934, for instance, William B. Berry, the Bureau of Fisheries warden for the inlet, reported:

> The Natives north of Anchor Point were in better financial condition this last season than they have been for some time past, so I am informed by grocery store and business men.
>
> This is due mainly to following reasons: the Kustatan Company moved its plant from Kustatan [near Tyonek] to Anchorage where larger quarters were obtained and more Native men and women employed. There were many more men employed fishing this past season as the Emard Packing Company and Kustatan Packing Company put out all the gill nets they had on hand. There were fairly large runs of both king and Red salmon with a fair price being paid for them.
>
> The Natives will do quite a little trapping this winter and this will add substantially to their increase.[80]

Berry elaborated on the dependence of the Cook Inlet Natives on the cannery operations and the impact of that dependence on their welfare in 1935 and 1936. In the former year he noted that the Tyonek Natives were

> in a fair financial condition, as they own and operate a fish trap or lease it each year, it brings a good income to them. Have been told by business men of Anchorage that these Natives have several thousand dollars in the bank. They also operate a community store and trading post.

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79. DeArmond, "Cook Inlet Fishing Industry," pp. 44-45.

80. U.S. Department of Commerce, Bureau of Fisheries, "1934 Annual Report, Cook Inlet District, William B. Berry, Warden," p. 12, U.S. Fish and Wildlife Service, Annual Reports, Cook Inlet Region, 1930-1959, Microfilm, University of Alaska, Anchorage, Consortium Library.

> There are just a few Natives in the upper Inlet and they were practically all employed in the canneries or at fishing.[81]

In 1936 Berry observed that the "most progressive natives" on the inlet were those at Tyonek. Most of them were employed in gill net fishing or on the community-owned trap which produced some $8,400 in income. The rest worked for Libby, McNeill and Libby. Several worked in the Anchorage canneries.[82]

During the 1930s the U.S. Bureau of Fisheries was active in Cook Inlet, administering fishing regulations, making stream improvements, and facilitating fishery operations. During 1937 and 1938, for instance, the bureau administered a predatory trout destruction program in the Kasilof River, English Bay, and Kalgin Island streams. Bounties of 2-1/2 cents each were paid for Dolly Varden trout tails out of funds supplied by the territorial legislature and the canneries. Less than 10,000 tails were taken in Cook Inlet in 1937, but more than 36,000 were vouchered in 1938. Eight stream guards using small power boats were posted in Cook Inlet during 1938 to enforce fishery regulations. In addition aerial patrol was provided by three chartered airplane trips "made from Anchorage, covering sections most extensively fished on the east and west coasts of the Cook Inlet area."[83]

Bristol Bay

Despite the effects of the Great Depression the Bristol Bay salmon industry boomed during the early 1930s. The years 1932-1934 were especially "big years," with the 1934 season pack of 1,739,677 cases (almost entirely reds) setting an all-time record to date. The record pack was attributed to the conservation efforts and predatory trout destruction programs initiated during the 1920s. All told, 19 canneries operated on Bristol Bay in 1934.[84]

Because studies had shown that there was a "recurrent scarcity of red salmon" in the Bristol Bay region "in calendar years divisible by five," the Bureau of Fisheries prohibited commercial fishing in the district during 1935. As the season advanced, however, larger salmon runs appeared than had

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81. U.S. Department of Commerce, Bureau of Fisheries, "1935 Annual Report, Cook Inlet District, William B. Berry, Warden," p. 20, U.S. Fish and Wildlife Service, Annual Reports, Cook Inlet Region, 1930-1959, Microfilm, University of Alaska, Anchorage, Consortium Library.

82. U.S. Department of Commerce, Bureau of Fisheries, "1936 Annual Report, Cook Inlet District," pp. 16-17, U.S. Fish and Wildlife Service, Annual Reports, Cook Inlet Region, 1930-1959, Microfilm, University of Alaska, Anchorage, Consortium Library.

83. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1938," in U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1939* (Washington, Government Printing Office, 1940), pp. 93-96.

84. "Alaska Red Salmon Pack Near Record; All Species Exceed 1933 Figures," *Pacific Fisherman*, XXXII (August 1934), pp. 9-11, and "1934 Canned Salmon: Great Pack Is Made at High Cost and Under Unusual Difficulties," and "1934 – Pacific Canned Salmon Pack – 1934," *Pacific Fisherman Year Book, 1935*, XXXIII (January 1935), pp. 43, 45, 47, 50, 53, 55 and 63, 67, 73, 78-79, respectively.

been anticipated, and certain waters were opened for limited fishing after July 3. As a result, only seven canneries were operated that year with an aggregate pack of 238,892 cases.[85]

The Bristol Bay salmon fishery recovered in 1938, with 17 canneries packing 1,833,227 cases of canned salmon.[86] In 1939 and 1940 the salmon production for Bristol Bay declined dramatically to a disappointing 1,133,952 cases and 454,553 cases, respectively.[87]

During the 1930s the Bureau of Fisheries continued its activities in the Bristol Bay region, investigating and monitoring the salmon spawning grounds, administering the predatory fish destruction program, and patrolling the area to enforce fishery regulations. In 1931, for instance, 339,748 predatory fish were taken in the Bristol Bay district. That year the first aerial survey of the region's spawning grounds was conducted, but bad weather and fog prevented the bureau from flying over Lake Clark. The inspection of the Lake Clark spawning area was thus conducted on the ground in early September:

> The examination of the Lake Clark system was begun on September 3. Several hundred salmon were noted in the upper ponds of Roadhouse Creek. In the Newhalen River a continual school of fish was seen from the landing to Big Lake Clark. The water was very discolored, and it was impossible to estimate the number of salmon; but there appeared to be thousands on their journey to the upper spawning grounds. Natives and white residents of Nondalton stated that this has been the largest salmon escapement in the district to their knowledge, not excepting 1917, 1918, or 1922. All the sloughs and tributary creeks were filled with milling salmon. The portion of the lake that fronts Nondalton was alive with salmon, and it was reported that this condition had existed since late July. All the residents had prepared their supplies of dried fish. The water in the river was unpleasant to the taste, and as fish were continually arriving it would soon be unfit for drinking purposes.
>
> On the morning of September 4 departure was made from Nondalton to Tamalia Point. Salmon were in evidence the entire distance. A trip was then made over the portage to the falls below Brooks Lake. According to local residents it has been observed that fish school below the falls in considerable numbers during good years, but salmon have never been known to ascend the falls. No salmon were observed below the falls or in the three forks of the river. At the mouth of each branch, and extending for long distances on each side, large schools of salmon were noted. The entire shore line from Nondalton to Little Lake Clark, with but few exceptions, is a vast spawning area.

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85. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries, 1935," in U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1936 With Appendixes* (Washington, Government Printing Office, 1937), pp. 29, 35. Also see "Bristol Bay Will Be Closed Next Year, Declares Commissioner Bell," *Pacific Fisherman*, XXXII (August 1934), pp. 12-13, and "Salmon Spawning Conditions of Former Years in Alaska, as Bearing on the Outlook For 1935," *Pacific Fisherman Year Book, 1935*, XXXIII (January 1935), pp. 99, 101.

86. Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1938," in U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1939 With Appendixes* (Washington, Government Printing Office, 1941), pp. 126, 132, 134-35.

87. "Salmon Canning: Conditions of the 1939 Season," and "1939 - Pacific Canned Salmon Pack," *Pacific Fisherman Year Book, 1940*, XXXVIII (No. 2, 1940), pp. 41, 43, and 57, 74, respectively.

> The inspection was continued to Kijik Lake on the following day, via Kijik Portage. Red salmon were schooled at the mouths of the three creeks at the head of the lake. The estimated escapement to these streams was placed at 18,000. The fish had not acquired the reddish tinge that is associated with spawning activities. Although good numbers of salmon were seen at the entrances of these creeks, only a very few were in evidence in their main courses. Approximately 160 bright salmon, with a few dead ones, were found in the creek.
>
> On the morning of September 6 observations were made at Big River, and as no fish were found there the trip was continued to the stream at the head of Little Lake Clark. Here, as at Big River, salmon had not yet arrived. The immediate mouth of the stream is not very suitable for spawning, but the river proper affords ideal seeding area. It was felt that this inspection was made approximately three weeks too early, for on the morning of September 7 about 50 salmon were seen leaping in the air at the lower end of Little Lake Clark, which appeared as bright and green as the fish when they first arrive in Bristol Bay. The journey was continued to Current Creek, and no salmon were passed en route, with the exception of the few mentioned above. The spawning ponds and sloughs of Current Creek were barren of salmon. A broken shaft on the outboard motor made it necessary to row to Tarnalia Point, where repairs were made. On September 9 the trip was resumed to Pickerel Creek, which is located just above the islands between Nondalton Lake and Lake Clark proper. An immense beaver dam forms an obstruction to the ascending salmon, thus cutting off considerable spawning area. Hundreds of salmon were noted below the dam. The trip of inspection was concluded at Roadhouse Portage, Lake Iliamna....
>
> The run of salmon from Kijik to the head of the lake was far behind its usual time, the first salmon appearing at Tarnalia Point on June 13 and at Kijik on July 16.[88]

The predatory fish destruction program continued during 1931-1933 with a $25,000 appropriation from the territorial legislature and a voluntary $8,000 contribution by the Bristol Bay canneries. The price for each trout over 6 inches in length was five cents and for those under 6 inches two cents. Dennis Winn, the bureau agent in the Bristol Bay district, reported to Governor George A. Parks on February 24, 1933, that the program not only aided in improved salmon runs but also "contributed immeasurably to the support and welfare of the local permanent population, both whites and natives." He commented:

> The people of the various localities in Bristol Bay were well organized and well supplied with fishing gear from previous operations; and due to the scarcity and poor market of fur, as the local inhabitants depend almost wholly on fishing and trapping for a livelihood, practically all the permanent local inhabitants either fished personally for predatory trout or benefited from this activity. Economic conditions stimulated this work far beyond expectations.

Anthony Dimond, Alaska's Delegate in the House of Representatives, estimated that "at least 4,000 residents of Alaska" were "dependent upon the earnings of those employed in the Bristol Bay fisheries for their livelihood." To relieve the distress of the unemployed people affected by the fishery's closing, he proposed that $1,500,000 in public works projects be undertaken, including

88. Bower, "Alaska Fishery and Fur-Seal Industries in 1931," pp. 26-32.

construction of schools, hospitals, roads, airfields, and water supply systems. Among the projects he advocated were roads at Iliamna Lake, Lake Clark, and Iliamna Bay on Cook Inlet and an airfield at Iliamna.[89]

While Dimond's recommendations received little attention, he devoted his energies to another issue that affected the Bristol Bay fishery during the late 1930s. During the middle of the decade Bristol Bay cannery interests were angered when it became widely publicized that Japanese floating canneries were anchoring well beyond the 3-mile limit and using great nets through which few salmon could pass. The nets extended a mile or more in length and stretched from the bottom of the sea to the surface. As the Japanese commercial fishing operations promised to have a serious impact on the Bristol Bay fishery, the cannery interests pressed Dimond to introduce legislation

> to establish proprietary interest of the United States in Alaskan salmon through extension of this country's jurisdiction beyond the present 3-mile limit by the establishment, when found necessary by the President, of fishery law-enforcement areas in waters east of the international boundary line in Bering Sea, and under 100 fathoms in depth, and enforcement in those areas of the applicable provisions of all laws and regulations respecting the salmon fishery of Alaska.

Hearings were held on the proposed legislation, and Dimond participated actively on behalf of the aggrieved cannery operators.[90]

While the proposed legislation was pending, however, the U.S. Department of State entered into diplomatic negotiations with the Japanese government. As a result of the negotiations the State Department released a statement on March 25, 1938, in which Japan promised to issue no floating cannery licenses for the Bristol Bay region. The agreement, while offering a temporary solution to the problem, led to demands by the Bristol Bay canneries for a formal treaty that would provide a permanent resolution to the issue, but the outbreak of World War II ended such efforts for a period of years.[91] Finally, as a result of the peace treaty ending the war Japan was forced to join Canada and the United States as a party to the International North Pacific Fisheries Convention that was signed and ratified by all three nations in 1954. At this convention Japan agreed not to fish for salmon east of a provisional line which in general followed the meridian of 175 degrees west longitude. In addition the convention provided for research to be conducted to determine if there

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89. Anthony J. Dimond, Delegate to Ernest Greuning, Director, Division of Territories and Island Possessions, Department of the Interior, May 11, 1935, Record Group 126, Records of the Office of Territories, Central Classified Files, 1907-1951, Box 323, File 9-1-37, Alaska, Salmon Fisheries, National Archives and Records Administration, Washington, D.C. A study of employment and income in the Bristol Bay region's salmon fisheries reported that of 8,227 employed in the industry at that time 496 were natives and 1,387 non-native residents of Alaska. George W. Rogers, "A Study of the Socio-Economic Impact of Changes in the Harvesting Labor Force in the Alaska Salmon Industry," Fairbanks, University of Alaska, Institute of Social, Economic and Government Research, December 1972, pp. 35-36.

90. U.S. Congress, House, *House Salmon Fishery: Hearings Before the Committee On Merchant Marine and Fisheries, House of Representatives, Seventy-Fifth Congress, Third Session, on H.R. 8344, February 1 and 2, 1938* (Washington, Government Printing Office, 1938), and "Statement of Anthony J. Dimond, Delegate from Alaska," February 1 and 2, 1938, RG 126, Central Classified Files, 1907-1951, Box 324, File 9-1-37, Alaska, Salmon Fisheries, Legislation (February 1 and 2, 1938), Hearings, National Archives and Records Administration, Washington, D.C.

91. Homer F. Gregory and Kathleen Barnes, *North Pacific Fisheries With Special Reference to Alaska Salmon: Studies of the Pacific No. 3* (San Francisco, New York, and Honolulu, American Council Institute of Pacific Relations, 1939), pp. 281-307.

were areas of intermingling of Asian and American salmon and to relocate the provisional line to better divide the fish if it was found necessary.[92]

THE SALMON FISHING INDUSTRY IN COOK INLET AND BRISTOL BAY: 1941-1950

The salmon fishing industry in Alaska escaped from the economic woes of the Great Depression only to plunge into the frustrations of the World War II period. Even before the United States entered the war in December 1941 the demand for canned salmon was high, and in 1941 prices for the product climbed back to the levels they had reached in the mid-1920s. The year 1942 brought even heavier demands for canned salmon for use by the military services, Lend Lease program, and the civilian market. With the demand, however, came serious impediments to production which impacted cannery operations both on Cook Inlet and Bristol Bay, thus leading to increasing use of freezer ships.

As a result of these problems the Cook Inlet salmon production declined during the war years from its prewar totals. The number of canneries operating during 1941-1945 ranged between 10 and 12, and the total pack between a low of 212,379 cases in 1941 and a high of 327,914 in 1944. One new cannery was opened at Homer in 1941, and three small plants were established in 1943 at Ninilchik, Nikiska Bay, and West Foreland.[93]

The Bristol Bay fishery operations showed tremendous fluctuations during the war years. There was a definite trend in reduced numbers of canneries, attributable to economic consolidation, other types of operations such as freezer ships and floating canneries, and reduced catches. After a disastrous year in 1940 when only eight canneries packed 454,553 cases of salmon, the year 1941 witnessed an upturn. Although impeded by a light salmon run, 16 canneries operated with a total pack of 623,848 cases. After a decline to less than 470,000 cases in 1941, the total pack for Bristol Bay was 1,320,286 and 982,802 cases in 1943 and 1944, respectively. Some 644,072 cases were packed in 1945 by eight canneries.[94]

Once the war was over and price ceilings were removed canned salmon prices skyrocketed to new highs. Red salmon went to $19.55 a case in 1946 and by 1950 had reached the unprecedented price of $29.43. This bonanza attracted a number of new small packers. On Cook Inlet a new cannery was built in 1946, a plant that had packed only shellfish was converted to salmon canning in 1947, and two new canneries were established in 1947 and 1948. The cannery which opened in 1948 was built

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92. Cooley, *Politics and Conservation*, pp. 188-189, and James E. Hawkins and Elizabeth A. Daugherty, comps., *The Silver Fleece: An Economic Study of the Bristol Bay Region* (Juneau, Alaska Rural Development Board, April 1958), p. 25.

93. *Ibid*, p. 47, and "Salmon Canneries on Cook Inlet, 1882-1960," File – DeArmond Research Material, ASA DeArmond #11, Cook Inlet Fisheries, Box V-29, RG-00, Alaska State, Archives and Records Center, Juneau. For the reminiscences of Dorothy B. Friback concerning the operation of the pile driver and fish traps associated with the cannery at Snug Harbor during the late 1940s and 1950s see Kenai Historical Society, comp., *Once Upon the Kenai* (Kenai, Walsworth Publishing Company, 1984), pp. 387-94.

94. "Records Are Broken By 1941 Production of Various Canned Salmon Items;" "Salmon Canning Conditions Encountered in Fishing Districts;" "Western Alaska Red Run Fails Again;" and "1941 – Pacific Canned Salmon Pack – 1941;" *Pacific Fisherman Year Book, 1942*, XL (No. 2, 1942), pp. 41, 43; 45, 47; 47; and 64, 79, respectively; Territory of Alaska, *1950 Annual Report, Alaska Fisheries Board and Alaska Department of Fisheries, Report No. 2* (Juneau, 1950), p. 44; and Alaska Department of Fish and Game, Division of Commercial Fisheries, *Bristol Bay Biography: A Reference Source to the Red Salmon Fishery of Bristol Bay*, by Kenneth R. Middleton, November 30, 1961, p. 3.

by W.N. Woods at Redoubt Bay. The plant was operated in 1949 and 1951 by the Point Redoubt Packing Company.[95]

The Bristol Bay canneries showed large fluctuations in production during the postwar years, the result primarily of spotty and unpredictable salmon runs. During these years many of the canneries were rebuilt or modernized with the latest up-to-date equipment, and one new plant was built at Egegik by the Egegik Packing Company. In 1946 the total pack of the 16 operating canneries was 682,180 cases. The total packs for 1947 and 1948 were 1,370,722 and 1,316,168, respectively, with 17 canneries operating in the former year and 20 in the latter. The years 1949-1950 witnessed severe declines in production to 563,000 and 601,423. Of the 14 canneries operating during 1950 the Alaska Packers Association ran five at Nushagak, Naknek, Kvichak, Egegik, and Ugashik for a total pack of 176,374 cases and Libby, McNeill and Libby owned three at Ekuk, Koggiung, and Egegik for a total pack of 91,525 cases.[96]

During the 1930s growing numbers of Natives gradually had been able to obtain employment in the canneries of Bristol Bay despite considerable prejudice against them and their abilities as workers. Nevertheless, it was not until after World War II that Natives began to participate fully in the industry. In 1947 the cannery at Koggiung operated by Libby, McNeill and Libby inaugurated a new era in employment in the Bristol Bay region when it operated with an all-Native crew, except for a small number of craftsmen and supervisory personnel. This practice would become more widespread among other canneries in the area, thus providing more jobs for Natives, including those of the Lake Clark-Iliamna Lake region. The company decided on this policy after several years of experimentation at its Ekuk cannery. The *Pacific Fisherman* reported that the Libby effort had met with satisfactory results:

> This step has been taken primarily as a means of providing more regular employment for the natives of the region, thus cooperating with the territory in helping to improve their condition and build up a stable, self-supporting population – at the same time developing a local source of help and obviating the necessity of bringing in so many seasonal workers from the outside, which many Alaskans have regarded as objectionable.
>
> The natives – mainly of Eskimo stock – are drawn from a large area, extending a considerable distance into the interior back of Bristol Bay and along the Kuskokwim River, to whom modern air transportation makes summer employment in the canneries available. Considerable numbers have been employed in many of the Bristol Bay plants for some years, but Ekuk is believed to have been one of the first, if not actually the first, to use an all-native labor crew; and about 130 were employed at the Koggiung plant.

The Native cannery workers on Bristol Bay had formed their own local union, an affiliate of the International Fishermen and Allied Workers of America at Seattle. During the succeeding years

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95. For more data on the Alaska salmon canning industry during the postwar years see Pat Conover, "The Salmon Canning Industry," *Alaska Life*, X (March 1947), pp. 6-8, 27-30.

96. "Salmon Canning," *Pacific Fisherman Year Book, 1947*, XLV (No. 2, 1947), pp. 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105; "Salmon: Alaska" and "Salmon: Western Alaska," *Pacific Fisherman Year Book 1951*, LIX (No. 2, 1951), pp. 83, 89, 91 and 93, 95, respectively; "1948 Season," Alaska Packers Association Records, Bristol Bay Operation, 1921-1962, Box 55, Folder 2, Bristol Bay Fish Catch, 1944-1955, Alaska Historical Library, Juneau; and U.S. Department of the Interior, Fish and Wildlife Service, *Alaska Fishery and Fur-Sealing Industries: 1950* (Washington, Government Printing Office, 1953), pp. 39-40.

the commercial fishery in Bristol Bay was responsible for bringing about major seasonal fluctuations of population which brought Natives from even the remotest villages to the area and into direct contact with many different races and nationalities.[97]

THE SALMON FISHING INDUSTRY IN COOK INLET AND BRISTOL BAY: 1951-1960

The decade 1951-1960 brought significant political and economic changes to Alaska that had a major impact on the salmon canning industry in Cook Inlet and Bristol Bay. In January 1959 Alaska achieved statehood, and one of the earliest acts of the first state legislature was the outlawing of salmon traps which had been fixtures of the canning industry since its inception.[98] Many canneries had depended on traps for the greater part of their salmon catch. When the traps were eliminated, Libby, McNeill and Libby, which had owned one cannery at Kenai since 1912 and operated three to five canneries in Bristol Bay for several decades, quit the salmon business and sold its canneries in Alaska.[99]

Six new canneries were opened on Cook Inlet between 1951 and 1955, but all of them were small and none survived until the end of the decade. A number of small canneries that had started operations in earlier years went out of business during the 1950s, the result of fast-rising production costs and uncertain markets. Ownership changes were frequent during the 1950s, and a single cannery often made the packs for two or more canneries. All told, the 1951-1960 decade began with 16 canneries in operation and ended with only eight. The total pack ranged between a low of 100,541 cases in 1959 and a high of 381,831 in 1954. The approximate value of the total pack for Cook Inlet during the decade was some $64,000,000.[100]

On the shores of Bristol Bay, the number of canneries decreased during the early to mid-1960s. The number of canneries operating in Bristol Bay was 16 in 1951, 21 in 1952, 15 in 1953, 12 in 1954, and 10 in 1955.[101] By 1959 only eight canneries were operating in Bristol Bay.[102]

A significant development in the Bristol Bay salmon industry during the 1950s was the growth in private ownership of fishing boats and gear. Prior to 1951 private ownership of fishing boats and gear was only a small fraction of the fishing equipment operating on the bay. The canneries owned the boats and gear and hired fishermen to man them, usually bringing the great majority from the

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97. "Libby Cannery Uses All-Native Crew," *Pacific Fisherman*, XLVI (January 1948), p. 51, and James W. VanStone, "Historic Settlement Patterns in the Nushagak River Region, Alaska," in *Fieldiana Anthropology, Volume 61* (Chicago, Field Museum of Natural History, 1971), p. 22.

98. "Fish Traps Eliminated," *Alaska Call*, I (July 1959), p. 19.

99. DeArmond, "Cook Inlet Fishing Industry," p. 49.

100. *Ibid.* Also see U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries, Alaska Region, *Progress Report On Alaska Fisheries Management and Research, 1958*, pp. 15-17.

101. "Salmon," *Pacific Fisherman Year Book, 1956*, LIV (January 25, 1956), pp. 31, 83, 85, 87, 89, 91.

102. "Salmon," *Pacific Fisherman Year Book, 1960*, LVIII (January 25, 1960), pp. 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, and State of Alaska, *1959 Annual Report, Alaska Board of Fish and Game and Alaska Department of Fish and Game* (Juneau, 1959), p. 115. Also see U.S. Department of the Interior, *Progress Report On Alaska Fisheries Management and Research, 1958*, pp. 24-28.

states. Locally hired fishermen were very much in the minority. The number of privately owned boats in the bay increased rapidly during the early 1950s from 20 in 1952 to 150 in 1955.

Despite the beneficial impact of the growing numbers of independent fishermen on the Bristol Bay economy the salmon fishery continued to be operated largely by outsiders. A report prepared in 1954, for instance, found that of a total of some 6,000 men employed in the area's fishing industry about 4,000 were brought in from the United States, 1,000 were recruited from other parts of Alaska, and only 1,000 were local residents.[103]

THE SALMON FISHING INDUSTRY IN COOK INLET AND BRISTOL BAY: 1960s-1980s

During the first session of the state legislature the Alaska Department of Fish and Game was established. On January 4, 1960, the department commenced management of the state's commercial fisheries in accordance with provisions in the statehood act. Two of the management districts established by the department were the Cook Inlet-Resurrection Bay Management Area and the Bristol Bay Management Area.[104]

By the early 1970s general agreement existed among state authorities and commercial fishermen that there was a need to limit entry into Alaska's fisheries. To resolve these issues the state legislature passed a limited entry bill in April 1973 which went into effect starting with the 1974 fishing season. Beginning in January 1974 all fishermen who wished to fish commercially in Alaska were required to buy an interim-use permit from the Commercial Fisheries Entry Commission. Under the law a separate interim-use permit was issued for each fishery resource, type of fishing gear, and area. The administrative areas and gear combinations adopted by the commission closely paralleled the management areas in use by the Alaska Department of Fish and Game. During the 1974 season there was no restriction on the number of interim-use permits issued except in three fisheries – the drift net fisheries of Bristol Bay, Cook Inlet, and Prince William Sound. In these three fisheries an applicant must have fished as a gear license holder prior to January 1, 1973. This restriction, which disqualified some Natives in the Lake Clark-Iliamna Lake region from obtaining the new interim-use permits because they had not obtained the earlier gear licenses, was established because the three fisheries were "severely impaired" and required immediate gear limitations. Interim-use permit fees varied, but, in general were higher for more productive gear and lower for less productive gear. An applicant whose income fell below federal poverty guidelines qualified for a reduced permit fee. The new permits were used to monitor the level of activity in a fishery and provide an indication of when limited entry might be necessary.[105]

The limited entry system was fully implemented in 1975. When a fishery became limited, a ranking system was developed by the commission which rated fishermen according to levels of past participation in and economic dependence on the fishery. Fishermen were issued permits by this

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103. Rogers, "Study of the Socio-Economic Impact," pp. 34-36.

104. State of Alaska, Department of Fish and Game, Informational Leaflet 69, *Status of the Cook Inlet-Resurrection Bay Commercial Salmon Fishery, 1965*, by Jim Rearden, October 14, 1965, pp. 2, 4-5, 28. Between 1960-1964 a state commercial fisheries management staff, consisting of one area biologist and two assistant area biologists, was charged with the management of all Cook Inlet commercial fisheries.

105. State of Alaska, *A Limited Entry Program for Alaska's Fisheries: Report of the Governor's Study Group on Limited Entry*, February 1973, pp. 1-31.

point system, until all the available permits had been granted. Subsequently, persons acquired permits primarily through the transfer of previously issued permits.

The limited entry system impacted adversely the lives of Natives in the Lake Clark-Iliamna Lake region, many of whom were dependent on the Bristol Bay fishery as their only source of cash income other than welfare. During the years 1975-1985 there was a significant decline in permits held by rural Alaskans, particularly Natives, living in proximity to their fishery, due to transfer, while the total number of permits held by urban Alaskans and nonresidents increased. The Bristol Bay fisheries absorbed the largest proportion of the loss – 39 percent. The decline of Bristol Bay permits was most severe "in the interior lakes communities of the region"--including the Iliamna and Lake Clark area villages--which lost significant numbers of both drift and set gill net permits.

The reasons for declining participation of rural Alaskan fishermen in the commercial fisheries under the limited entry system were

> believed to be a consequence of the initial criteria for entry into the fishery, which resulted in a higher percentage of permits issued to "marginal fishermen" in rural areas. As permit prices rise, the incentive for "marginal fishermen" to drop out increases, which as prices rise explains why the transfer trend continues over time.

Cook Inlet: 1960-Early 1970s

In 1975, *Alaska* magazine assessed the history and status of the Cook Inlet commercial salmon fishery in cooperation with the Alaska Department of Fish and Game. The inlet was not considered important as a salmon feeding and rearing area, but it remained a major migration route for five species of salmon. The red salmon continued to be the primary commercial species as it had been since the late nineteenth century. During 1960-1974 sockeye accounted for 50 percent of the total salmon value to fishermen, while pinks and chums represented 20 and 19 percent, respectively.

By the mid-1970s most red salmon were caught in the inlet by gill nets between Anchor Point and Anchorage. The Kenai River was the most important producer of reds in the inlet. A stream on Kalgin Island supported a small run of reds. On the west side of the inlet at least six drainages, several of which were within the present boundaries of the park/preserve, supported small runs of reds, while some 14 streams on the west side between Chinitna Bay and West Foreland contributed salmon of various species and numbers to the commercial fishery. The inlet gill-net fishery was one of the most widespread fisheries in Alaska, because fishermen were scattered over nearly 150 miles of the inlet.

Chums, which had been considered economically unimportant until the 1950s, became sought after as a supplement to red salmon during the 1960s and early 1970s. Prior to the 1950s they had been taken incidentally to other salmon, but after drift gill nets were used in large numbers in the inlet they became more valuable. Chinitna Bay on the southern border of the park/preserve produced largely chums which appeared to move into the bay briefly before continuing on up the inlet. From two to six seine boats commonly fished in the bay for about two weeks each season, the bay being the only portion of the inlet between Chinitna and West Foreland open to seining. Two of the peak

years for chums were 1964 and 1972 when 1,400,000 and 1,000,000 were taken, respectively, in the gill-net districts.[106]

Cook Inlet: Early 1970s-1980s

Cook Inlet's commercial salmon fishery continued to be a major factor in the region's economy during the 1970s and early 1980s. During the ten-year period between 1973 and 1982 the inlet's commercial salmon fishermen caught an annual average of some 4,600,000 salmon, or about 6 percent of the statewide catch. The total commercial salmon catch of the inlet generated some $15,500,000 for fishermen in 1980.[107]

During the 1973-1982 period red, or sockeye, salmon continued to be the principal lure for inlet fishermen. The inlet's red salmon catch, on average, was the second largest for that species in Alaska, coming only after that of Bristol Bay, although the inlet produced only about 8.5 percent of the reds caught in Alaska during the years 1973-1982. Major runs of reds swam into the Kenai, Kasilof, Susitna, and Crescent rivers, the latter being located in present-day Lake Clark National Park and Preserve just north of Tuxedni Bay. The Kenai and Susitna rivers, however, were the largest producing streams in the inlet region.

Chum salmon, which made up about 19 percent of the Cook Inlet salmon catch during 1973-1982, were caught mostly in the upper inlet by gill-net fishermen who were seeking the more valuable sockeye. The average annual catch of chums in the inlet was some 871,000 during this period, about 85 percent of which were caught north of Anchor Point. The balance was caught by hand purse seiners fishing in the sheltered bays of the lower Kenai Peninsula and Kamishak Bay on the west side of the inlet. The Susitna Basin produced about 90 percent of the chums of the gill-net fishery of the inlet. Chinitna Bay, Kamishak Bay, and several bays on the lower Kenai Peninsula also produced chums. Peak catches of chums in the inlet occurred in 1977 (1,300,000) and 1982 (1,500,000).

Bristol Bay: 1960-Early 1970s

The Bristol Bay salmon fishery continued its cyclic pattern during the 1960s and early 1970s. Research and improved management programs during the 1950s led to a recovered annual average catch of 9,000,000 fish in the 1960s. The early 1970s witnessed another disastrous decline in the salmon catch after one of the largest catches in 1970. The harvest amounted to approximately 22,100,000 fish in 1970. Two severe winters in 1970-1971 and 1971-1972 severely depleted stocks, and in 1973 uncontrolled Japanese high seas fishing cut deeply into the Bristol Bay runs. Thus, the salmon catch declined to 10,400,000 in 1971, and then dropped to 2,400,000 in 1972 and 1,500,000 in 1973, the latter being the worst catch on record.

Under state management beginning in 1960 the Bristol Bay region was divided into five major fishing districts which encompassed the area immediately adjacent to the mouths of the region's

106. Jim Rearden, "Alaska's Commercial Salmon Fisheries: Their History and Status In Brief," *Alaska*, XLI (April 1975), pp. 15-17, and State of Alaska, Department of Fish and Game, Informational Leaflet 69, pp. 9-12, 22-23, 26-27, 32.

107. Alaska Geographic, *Anchorage and the Cook Inlet Basin*, Vol. 10, No. 2, 1983, p. 143.

major river systems. The districts were the Naknek-Kvichak, Egegik, Ugashik, Nushagak, and Togiak. The Naknek-Kvichak district, which is particularly important to this study since the Kvichak River system drains Iliamna Lake and Lake Clark, was the largest producer of red salmon, the most important species of the region. During the 1960s this species accounted for 86 percent of the region's total salmon catch. Some 63 percent of all red salmon caught in Bristol Bay were taken in the Naknek-Kvichak district, with about 85 percent of the district run being fish bound for the Kvichak.

Canned salmon continued to be the primary product of the Bristol Bay region during the 1960s and early 1970s. During this period an average of 10 to 13 shore-based canneries geared up annually to process the salmon harvest. More than 95 percent of all salmon caught in the 1960s was canned, and in 1970-1971 about 90 percent of the catch was canned. Other salmon products from Bristol Bay included fresh, frozen, and cured salmon and salmon roe.

The Bristol Bay fishery had a significant impact on the socioeconomic development of the region during the 1960s and early 1970s. This aspect of the fishing industry is of particular importance for this study since an increasing number of Natives in the Lake Clark and Iliamna Lake areas traveled to Bristol Bay for employment in fishing and fish processing during the annual salmon seasons.

A new element in the Bristol Bay fishery beginning in 1961 was the employment of Eskimo gill-net fishermen by the canneries. Although Eskimos had long been employed in the canneries, this was the first year that they were hired even in moderate numbers to fish. Most of the Eskimo fishermen came from the Bethel area on the Kuskokwim as did a substantial proportion of the Eskimo cannery crews. For cannery work, however, the villages of Nelson Island and the Yukon delta area also sent substantial numbers, supplementing the residents of the Bristol Bay communities such as Dillingham, Naknek, Egegik, and Pilot Point as well as those in the Iliamna Lake and Lake Clark areas.

Studies showed that unemployment was high in the Bristol Bay region except during the salmon season. For instance, the unemployment rate was estimated by the Alaska Department of Labor to be 26.3 percent during February 1970, compared to a statewide average of 10.4 percent. That same month only 43.3 percent of the total population of the Bristol Bay region 18 years old and older was employed, compared with 69.4 percent for the state.

Bristol Bay: Early 1970s-1980s

Bristol Bay continued to be the most valuable salmon fishery in Alaska and the principal red salmon fishery in the world during the ten-year period between 1973 and 1982. The average annual sockeye catch during those years was 11,400,000, a total that represented nearly half the U.S. production, about one-fourth of the catch for the entire Pacific Rim, and approximately 61 percent of all red salmon caught in Alaska. The large salmon catch was made entirely with gill nets; in 1983 there were 958 set gill net permits and 1,824 drift gill nets.

Of the five fishing districts in the Bristol Bay region during the 1970s and early 1980s the Naknek-Kvichak continued to be the greatest producer of red salmon. Research by state fishery scientists found that sockeye runs to Iliamna Lake and Lake Clark were cyclic, peak years were separated by years of lower production. In recent years the peak runs had occurred on a bi-decade basis – i.e., 1965, 1970, 1975, and 1980. Thus, a variable-cycle year escapement strategy for the Kvichak River

system was developed by state fishery scientists to provide greater production spread over more years to minimize the "boom or bust" harvest brought about by a single peak.[108]

The Bristol Bay salmon fishery continued to be a major factor in the livelihood of the region's Native population, including that of the Iliamna Lake and Lake Clark areas, during the 1970s and early 1980s. In a survey of Bristol Bay region Natives in 1980 some 83.1 percent reported an overall dependence on earnings from salmon fishing, and 58.4 percent indicated that salmon fishing was their only source of income. In 1980 the population and number of limited entry permits for three villages in the Iliamna and Lake Clark areas were:

	Population	Drift Permits	Set Permits
Iliamna	94	12	21
Newhalen	87	6	3
Nondalton	170	12	13
	351	**30**	**37**[109]

THE CLAMMING INDUSTRY ON COOK INLET: 1919-1980s

While the salmon fishery comprised the principal portion of the commercial fishing industry on Cook Inlet other fishery operations also were conducted on its waters. Among these were herring, crab, and clam production.[110] Of significance for this study is the development of clamming and clam canning on the inlet, because some of its operations were conducted on lands within and adjacent to present-day Lake Clark National Park and Preserve.

Most of the clams in Cook Inlet are razor clams. They are found primarily on the beaches along the west side of the inlet from Cape Douglas northward to the vicinity of Tuxedni Bay. Heavy concentrations occur within and near the park/preserve boundaries in the Polly Creek vicinity and

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108. Alaska Geographic, *Alaska's Salmon Fisheries*, pp. 100-09. Examples of the studies of the Kvichak River system including Iliamna Lake and Lake Clark undertaken during the period from the early 1960s to the early 1980s include: Fisheries Research Institute, College of Fisheries, University of Washington, Seattle, Circular No. 66-13, *Abundance and Size of Juvenile Sockeye Salmon and Major Competitor Species in Iliamna Lake and Lake Clark, 1964 and 1965*, by Orra E. Kerns, Jr., July 26, 1966, pp. 1-25; State of Alaska, Department of Fish and Game, Informational Leaflet 95, *Iliamna Lake Watershed Freshwater Commercial Fisheries Investigation of 1964*, by Howard Metsker, February 28, 1967, pp. 1-30; Robert L. Burgner, Charles J. DiCostango, Robert J. Ellis, George Y. Harry, Jr., Wilbur L. Hartman, Orra E. Kerns, Jr., Ole A. Mathisen, and William F. Royce, "Biological Studies and Estimates of Optimum Escapements of Sockeye Salmon in the Major River Systems," *Fishery Bulletin*, LXVII (April 1969), pp. 405-59; Fisheries Research Institute, College of Fisheries, University of Washington, Seattle, Circular No. 69-5, *Studies of Lake Clark and its Sockeye Salmon Runs, 1961-1968*, by Ole A. Mathisen and Patrick H. Poe, April 14, 1969, pp. 1-20; State of Alaska, *A Limited Entry Program for Alaska's Fisheries: Report of the Governor's Study Group on Limited Entry*, February 1973, pp. 1-246; Steve Langdon, *The 1980 Salmon Season and Bristol Bay Native Fishermen: Performance and Prospects*. Prepared for Bristol Bay Native Association, June 10, 1981, pp. 1-54; Van Ray and Paulus, "Alaska Fisheries," 14-15, 20; and James Calvin Olsen, "Studies of Sockeye Salmon Lake Spawning Grounds in Iliamna Lake, Bristol Bay, Alaska" (Unpublished M.S. thesis, University of Washington, 1964).

109. Langdon, *The 1980 Salmon Season*, pp. 1-54.

110. See DeArmond, "Cook Inlet Fishing Industry," pp. 54-58, and Territory of Alaska, *1954 Annual Report, Alaska Fisheries Board and Alaska Department of Fisheries* (Juneau, 1954), pp. 34-42, for more information on herring and crab production, respectively.

north side of Chinitna Bay. Razor clams are also found along the eastern beaches of the inlet between the Kasilof River and Homer, the greatest abundance occurring in the Clam Gulch and Deep Creek-Stariski Creek areas.

Clams have been significant to the peoples living on Cook Inlet for several centuries. Early villages were often located near good clam beds. Captain George Dixon, the British fur trader, is credited as being the first Euroamerican to discover and identify the razor clam during his voyage to Cook Inlet in 1786.[111] The processing of clams for export from the inlet, although assuming some commercial importance at times during the last 70 years, never became a major industry there as it did at Cordova on Prince William Sound. Clams from some of the inlet's beaches, particularly in the vicinity of Cape Douglas, have also been transported for processing to plants on Kodiak Island or at Kukak on the Alaska Peninsula.[112]

Commercial canning of Cook Inlet clams began in 1919, three years after Alaska's clam canning industry was initiated at Cordova. That year Surf Packing Company built a cannery at Snug Harbor on the southwest side of Chisik Island.[113] Piling for the wharf at the cannery was cut from spruce timber on Chinitna Bay.[114] This was primarily a salmon cannery, but in 1919 the company made an experimental pack of clams as well. The experiment was evidently successful because it was followed up in 1920 and 1921 with packs of 249 and 1,420 cases, respectively. In the latter year the Surf Packing Company production comprised the entire Alaskan pack of canned clams, its value estimated at $9,940.[115]

During 1920-1921 a USGS exploratory party led by geologist Fred H. Moffit visited the Snug Harbor area. In his report of the expedition Moffit described the cannery:

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111. Clarke Harding Brooke, Jr., "The Razor Clam (*Siliqua Patula*) of the Washington Coast and Its Place in the Local Economy" (Unpublished M.A. thesis, University of Washington, 1950), p. 12. This thesis provides considerable data on the growth, development, and characteristics of razor clams as well as a historical sketch of the clam canning industry.

112. For more data on the historical development of the Alaska clam canning industry see Robert J. Browning, *Fisheries of the North Pacific: History, Species, Gear, and Processes* (Rev. ed., Anchorage, Alaska Northwest Publishing Company, 1980), pp. 16-19, and Franklin L. Orth, Charles Smelcer, Howard M. Feder, and John Williams, *The Alaska Clam Fishery: A Survey and Analysis of Economic Potential* (Fairbanks, University of Alaska, 1975), pp. 13-22.

113. The cannery site, which is outside the boundaries of Lake Clark National Park and Preserve, consists of several dozen gable-roofed structures, all sided and roofed with corrugated cannery tin. Cannery buildings are complemented by residential and other auxiliary structures. By the early 1980s the site served as a camp for a commercial fishing operation based in Kenai. Historic American Buildings Survey, *A Survey of the Historic Architectural Resources in Lake Clark National Park and Preserve*, by Alison K. Hoogland, Summer 1982, p. 13.

114. U.S. Geological Survey, Bulletin 739, p. 118. During the early years of the cannery's operation the wharf was often carried away in the winter by ice, but was rebuilt by the cannery company crews in the spring. U.S. Department of Commerce, Coast and Geodetic Survey, *United States Coast Pilot, Alaska, Part II, Yakutat Bay to Arctic Ocean* (3d ed., Washington, Government Printing Office, 1931), p. 132. Later in 1948 Public Land Order 484 awarded a 19.64-acre parcel on Chisik Island to the Fribock family. U.S. Department of the Interior, Bureau of Sport Fisheries and Wildlife, *Wilderness Study Area Tuxedni National Wildlife Refuge, Alaska*, March 1967, pp. 1, 7.

115. DeArmond, "Cook Inlet Fishing Industry," p. 59, and Ward T. Bower, "Alaska Fishery and Fur-Seal Industries In 1921," p. 48, in U.S. Department of Commerce, Bureau of Fisheries, *Report of the United States Commissioner of Fisheries For the Fiscal Year 1922 With Appendixes* (Washington, Government Printing Office, 1923).

> A cannery on Snug Harbor, at the south end of Chisik Island, is the only settlement in this part of Cook Inlet. A wharf facilitates the loading and unloading of freight, but there is no business aside from that of the cannery, and there are no accommodations for travelers except those furnished through the courtesy of the cannery officials. The cannery is closed in winter, and only the caretaker remains. Even the timbers are removed from the wharf, for the ice drifting back and forth through Snug Harbor carries away the piling and makes it necessary to renew the wharf each spring.[116]

During its early years of operation the Snug Harbor cannery was operated under the superintendance of Otto Sutter. Eric Fribock served as foreman of the operation.[117] To gather the clams the cannery employed Natives from as far away as Iliamna, Seldovia, Kodiak, Ninilchik, Tyonek, and Kenai. The company scow would transport the workers to the clam beds at the mouth of Polly Creek. The workers pitched tents on the beach, and gathered clams on the flats. The company kept a scow near the clam beds to collect the clams for which the workers were paid $1.25 per box. When the tide rolled in a company boat would come from Chisik Island to the scow to collect the clams. The clams were generally canned within 24 hours of being gathered. When the season was over a company vessel would return the Native workers to their home villages.[118]

In 1922 the Surf Packing Company was reorganized by Guy P. Halferty and under its new name, Polar Fisheries Company, the firm packed 10,634 cases of clams along with 6,228 cases of salmon. The Snug Harbor production that year accounted for nearly 50 percent of Alaska's total production of canned clams.[119]

Pioneer Canneries, Inc., a new firm established by Halferty and his associates, took over the Snug Harbor plant in 1923, packing 16,473 cases of ½-pound cans and 5,679 cases of 1-pound cans of minced clams. The company also packed 6,646 cases of salmon. That year C.B. Meyers, apparently a small independent operator, packed 1,504 cases of whole clams at Polly Creek.[120] The production of slightly over 500,000 pounds of canned clams in 1923, largely from 1¼ square miles of beach on the western side of the inlet between Chisik Island and Harriet Point, represented the peak of commercial exploitation of razor clams in the inlet.[121]

During the summer of 1923 the clam beds on Cook Inlet as well as elsewhere in Alaska were investigated by F.W. Weymouth and H.B. Holmes of Stanford University for the Bureau of Fisheries. Concerning the Snug Harbor beds, which stretched along the west shore of the inlet from Tuxedni Bay to Harriet Point, the scientists stated:

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116. U.S. Geological Survey, Bulletin 789 p. 59.

117. Field Notebook 2986, "Field Diary, 1914-1921, Moffit," U.S. Geological Survey, Branch of Alaskan Geology, Alaska Technical Data Unit, Anchorage.

118. James Kari and Alan Boraas, *A Dena'ina Legacy (K'tl'egh'i Sukdu); The Collected Writings of Peter Kalifornsky* (Fairbanks, Alaska Native Language Center, University of Alaska), 1991.

119. "Pacific Clam Canning Industry in 1922," *Pacific Fisherman Year Book. 1923*, XXI (January 1923), p. 87.

120. Bower, "Alaska Fishery and Fur-Seal Industries For the Fiscal Year 1923," p. 57.

121. State of Alaska, Department of Fish and Game, comp., *A Fish and Wildlife Resource Inventory of the Cook Inlet-Kodiak Area, Volume 2, Fisheries*, p. 106.

> Similar conditions are found to exist elsewhere in Alaska. Near Chisik Island in Cook Inlet observations were made during the summer of 1923. The clams appeared fullest, or "fat," in late July. Evidently spawning started between July 25 and 30. After August 1 it proceeded more rapidly and continued as long as specimens were obtained. On September 25 a few showed the presence of a very small amount of reproductive material, but it is doubtful if any spawn was being cast....
>
> The condition of the Snug Harbor beds, lying between Chisik Island and Harriet Point on the west side of Cook Inlet, is more like that at Swickshak than at Cordova. The tidal range over these beds is greater than elsewhere. Since the beach slopes very gradually, it is wide, the tide going out nearly 3 miles in one place. It was estimated that about 1½ square miles of beach were being dug during the summer of 1923. While this bed is not constantly being changed by the shifting of bars and channels, as at Cordova, portions of it are seriously menaced at times by deposits of glacial silt, which covers the beds and destroys the clams.[122]

Among other things the investigators found that the clam beds in Cook Inlet and other Alaska districts had been overdug and had reached the maximum extent of commercial development. To prevent depletion of the beds by too intensive digging the investigators recommended conservation measures, such as a system of rotation for digging, a minimum size limitation for clams collected, and a limit on the quantity of clams to be taken from specified beds.[123]

During the 1924 season the Bureau of Fisheries established regulations for clamming in Alaska. The rules established "a minimum size of 4½ inches in total length of shell," and permitted not more than five percent of the clams taken to be under that size. Revised regulations issued on December 2, 1924, reduced the percentage "to not more than 3 per cent." From 1925 to 1931 clamming was prohibited for six weeks each year from July 15 to August 31.[124]

During 1924 the Snug Harbor cannery was taken over by the Chisik Island Corporation which packed clams exclusively. It produced 5,236 cases in its only year of operation. Neither clams nor salmon were packed at Snug Harbor during 1925 and 1926, and no clam canning was conducted anywhere on the inlet during those years.[125]

In 1927 the Snug Harbor Packing Company was organized in Seattle and took over the cannery on Chisik Island, making packs of both clams and salmon that year. The clam pack was relatively small, consisting of only 1,052 cases, while salmon production amounted to 15,259 cases.[126]

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122. F.W. Weymouth, H.C. McMillan, and H.B. Holmes, "Growth and Age at Maturity of the Pacific Razor Clam, *Siliqua patula* (Dixon)," in U.S. Department of Commerce, *Bulletin of the United States Bureau of Fisheries*, Vol. XLI, 1925 (Washington, Government Printing Office, 1927), pp. 209, 231.

123. *Ibid.*, pp. 201-35.

124. Bower, "Alaska Fishery and Fur-Seal Industries For the Fiscal Year 1924," pp. 139-40, and Seton H. Thompson and F.W. Weymouth, "Condition of Razor Clam Fishery in Vicinity of Cordova, Alaska," in U.S. Department of Commerce, Bureau of Fisheries, *Investigational Report No. 29* (Washington, Government Printing Office, 1935), pp. 1-5.

125. DeArmond, "Cook Inlet Fishing Industry," p. 60.

126. *Ibid.*, and Bower, "Alaska Fishery and Fur-Seal Industries for the Fiscal Year 1927," p. 141.

Although the Snug Harbor Packing Company continued packing salmon on Chisik Island through 1952, it discontinued packing clams after 1927. Clam canning was not resumed on the inlet for several years, in part because of market conditions and the depletion of the clam beds. A clam canning operation was conducted at Kukak Bay during the early 1930s, and some clams from the "Snug Harbor" area were processed there.[127]

Clam canning was resumed on Cook Inlet itself in 1932. Two new clam canneries were established – a small hand-operated plant at Ninilchik and a fully automated cannery at Seldovia. In addition, the Kustatan Packing Company, formerly an exclusive salmon operation on West Foreland, packed 300 cases of clams, and the West Coast Canning Company cannery at Polly Creek packed 483 cases before being destroyed by fire on June 24. The clams for the Seldovia and Polly Creek plants were secured from the Polly Creek area, while those for the West Foreland plant were from "Redoubt Bay, south of Drift River." The clams for the Seldovia plant were dug between May 3 and August 19, using "upwards of 100 diggers" all "of whom were local residents." The number of workers was reduced by one-half when the salmon season opened.[128]

In 1933 five firms on Cook Inlet packed razor clams, but all were small producers. Only one plant, the Kustatan Packing Company at West Foreland, was on the west west of the inlet. The company produced 131 cases of clams that year. It also engaged in salmon canning.[129] Canned clam production on the west side of the inlet did not resume until 1937 when O.G. Tiede of Anchorage operated a clam canning plant at Polly Creek.[130]

During the next ten years several clam packing outfits operated on the inlet's eastern shore. Then, in 1947, the Kester Packing Company operated a floating cannery at Polly Creek. The company, which produced 90 cases that year, was one of two firms active in the inlet that year.[131]

Hand-dug razor clam operations continued on the Polly Creek beach area through he 1950s and early 1960s. In 1950 the Whiz-Halferty Company operated a reefer ship with a cooling system for hauling clams from Polly Creek to its cannery at Kodiak. Air Transport Associates Inc., hauled clams from Polly Creek to Homer and thence by air freight to Seattle. Orin Diamond operated a tender to gather clams for air shipment to Seattle for crab bait. This latter operation proved unsuccessful and the entire take was sold to the Seldovia Fisheries Company. The Whiz-Halferty pack of canned clams was 5,604 cases, while the gross poundage of clams dug for the other two operators was about 80,000. The number of diggers employed at Polly Beach during the 1950

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127. Bower, "Alaska Fishery and Fur-Seal Industries For the Fiscal Year 1932," p. 54. In 1954 the Snug Harbor Packing Company was consolidated with the Cook Inlet Packing Company, the new firm canning salmon on Chisik Island until 1956. Photograph collection 212 at the Alaska Historical Library in Juneau contains miscellaneous views of the cannery buildings and fishing activities of the Snug Harbor cannery on Chisik Island from the early 1930s to the mid-1960s.

128. U.S. Department of Commerce, Bureau of Fisheries, "Annual Report of Operations in the Cook Inlet District, 1932," pp. 6-7, 15, Microfilm, U.S. Fish and Wildlife Service, Annual Reports, Cook Inlet Region, 1930-1959, University of Alaska, Anchorage, Consortium Library.

129. DeArmond, "Cook Inlet Fishing Industry," p. 61.

130. U.S. Department of Commerce, Bureau of Fisheries, "1937 Annual Report, Cook Inlet Region," p. 44, Microfilm, U.S. Fish and Wildlife Service, Annual Reports, Cook Inlet Region, 1930-1959, University of Alaska, Anchorage, Consortium Library.

131. *Ibid.*

clamming season, which extended from late May to early July, totaled 113: Whiz-Halferty, 59; Air Transport Associates, 24; and Orin Diamond, 30.[132]

In 1951 the only plant processing clams in substantial numbers on Cook Inlet was the Whiz-Halferty Company. Some 28 men were recruited in Washington to dig razor clams in the Polly Creek area. The clams were transported to Kodiak for processing. A total of 4,680 cases of clams was produced during the clamming season from May 5 to July 8.[133]

Sporadic catches of razor clams continued in Cook Inlet through 1962. That year a harvest of approximately 171,000 pounds was harvested.[134]

In 1963 the Alaska Department of Health and Welfare declared all beaches in Alaska suspect of containing poisonous shellfish, and commercial utilization of clams, mussels, and similar shellfish species was forbidden unless the harvest areas were approved and certified by the department. During the next seven years all clam growing areas in Alaska remained technically closed and unapproved for commercial utilization due to insufficient funds, equipment, personnel, and testing facilities essential for the establishment of a proper shellfish sanitation program.[135]

In 1970 the Alaska Department of Health and Social Services approved the flats along the north shore of Tuxedni Bay in the vicinity of the Crescent River and Polly Creek as one of three state commercial clamming areas. It was estimated that there were 6,700 tons of razor clams in the area. The other two areas were the Cordova flats, adjacent to Prince William Sound, and Swikshak, on the Alaska Peninsula northwest of Kodiak Island. Of the approximately seven miles of beach area in the Polly Creek vicinity, three miles (between Redoubt Point and a point in the mouth of the Crescent River) were approved for human-consumption harvesting because they met the required sanitary conditions for a state-certified area.[136]

Once the Polly Creek area was reopened to razor clam commercial harvest in 1970, no closed season was imposed by the state authorities. Virtually all of the annual harvest was normally made, however, from May through July, prior to July-August spawning. While the certified areas were the only places where commercial harvesting of razor clams for human consumption was permitted, bait clam could be taken from any area not closed to commercial fishing. Although both mechanical and

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132. U.S. Department of Commerce, Bureau of Fisheries, "1950 Annual Report, Cook Inlet Region," pp. 70-76, microfilm, U.S. Fish and Wildlife Service, Annual Reports, Cook Inlet Region, 1930-1959, University of Alaska, Anchorage, Consortium Library.

133. "Cook Inlet Annual Report, 1951 Season, Fish and Wildlife Service, Thomas J. Costello, Fishery Management Biologist," Record Group 22, Records of the Bureau of Commercial Fisheries, General Records, General Classified Files, 1902-1965, File No. 552.33 – Cook Inlet, Entry 269, Box 326, National Archives and Records Administration, Washington, D.C.

134. Alaska Department of Fish and Game, comp., *A Fish and Wildlife Resource Inventory of the Cook Inlet - Kodiak Areas, Volume 2, Fisheries*, p. 106.

135. *Ibid.*, pp. 106-07.

136. Orth, Smelcer, Feder, and Williams, *The Alaska Clam Fishery*, pp. 23-24, 51-56, and Jim Rearden, "Alaska's Razor Clams – An Unexplored Fishery," *Alaska Sportsman*, XL (September 1974), pp. 24-25.

hydraulic clam harvest equipment was allowed for the first time in Alaskan waters west of the Kenai Peninsula, most clams continued to be taken by hand-operated shovels.[137]

Beginning in 1971 a small commercial operator harvested razor clams in the Polly Creek vicinity for several years. The reported harvest for 1971 was 15,151 pounds, and the value of the 1972 and 1973 harvests to the fishermen was $3,300 and $3,500, respectively.[138]

The early 1980s witnessed a rise in clam production on the inlet. In 1981, for instance, 443,144 pounds of razor clams were harvested, most of the total coming from the Polly Creek area. The majority of the clams taken from the certified area was sold for human consumption, while clams harvested from other areas were used as bait in the Dungeness crab fishery on the inlet's east side.[139]

137. State of Alaska, Department of Fish and Game, comp., *A Fish and Wildlife Resource Inventory of the Cook Inlet – Kodiak Areas, Volume 2, Fisheries*, pp. 106-07.

138. *Ibid.*

139. Alaska Geographic, *Anchorage and the Cook Inlet Basin*, p. 143.

CHAPTER SEVEN

PROSPECTING AND MINING OPERATIONS IN THE LAKE CLARK REGION

EARLY PROSPECTING ACTIVITIES IN THE COOK INLET REGION UNDER AMERICAN RULE: 1867-1890

Soon after the transfer of Alaska from Russia to the United States some Americans began making searches for placer gold in the Cook Inlet region, particularly in the streams of the Kenai Peninsula and along the Knik and Susitna rivers. The prospecting endeavors were undoubtedly encouraged by the reports of Peter Doroshin's findings and the Russian-American Company's mining efforts during the 1850s.[1] Despite these efforts, however, Vladmir Stafieff, an employee of the Alaska Commercial Company at Fort Kenai, wrote in a letter dated June 1, 1870, that "our gold-digging soldiers came back without having found anything."[2]

That summer a correspondent for the *San Francisco Chronicle,* writing under the name "Polaris," visited Fort Kenai. He too headed out on a gold hunting expedition; he, reluctantly, came to the same conclusion as Stafieff.[3]

The next references to American searches for gold in the Cook Inlet region appear in the 1880s. George Holt, who was reported to have been the first white man to cross Chilkoot Pass and who prospected widely in Alaska, reconnoitered along the Kenai River. Holt, who would later be shot and killed by an Indian while working as the agent of the Alaska Commercial Company post at Knik, wrote to Major M.P. Berry of Sitka that he had "found nothing that would pay over $2 a day."[4]

Holt was followed in April 1886 by a six-man party that was getting ready to ascend the Kenai River.[5] Later that year the newspaper reported that "all our prospectors on Cook's Inlet and in the Alaska Peninsula and Bristol Bay region have been unsuccessful this year."[6]

The following spring, on May 7, 1887, *The Alaskan* reported that J.W. Cooper and a party of some 20 men would spend the summer on Cook Inlet, "prospecting for gold, coal, and minerals

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1. An overview of early mining activity in Alaska after its transfer to the United States may be found in Billie Baines Jensen, "Alaska's Pre-Klondike Mining: The Men, the Methods, and the Minerals," *Journal of the West,* VI (July 1967), pp. 417-31.

2. "Letter, Vladmir Stafieff to Stephen Miklaylovich, June 1, 1870," trans. by Moira Dunbar, in *Alaska Sportsman,* XXXI (February 1965), p. 2.

3. *San Francisco Chronicle,* December 26, 1875, quoted in Sherwood, *Cook Inlet Collection,* pp. 87, 91.

4. Quoted in A.W. Reeder, "Knik," *Alaska Sportsman,* XXX (January 1964), p. 10.

5. *The Alaskan,* July 17, 1886.

6. *Ibid.,* November 6, 1886.

generally."[7] This expedition, however, was no more successful than earlier ones. On September 8, 1887, the newspaper reported:

> Considerable prospecting has been done in this section during the summer, but as far as known, without success. C.P. Shell and a partner, who formerly mined on the Stewart River, have explored the Sushetno River, Cook's Inlet, in vain, and washed out about a dollar's worth of dust in Beluga Creek where the murdered man, Holt, first found gold. A prospecting party under the leadership of Cooper have met with failure.

While the Americans were engaging in their pursuit for gold in the Cook Inlet region, they also exploited the coal deposits in the area, particularly on the south side of Kachemak Bay in the vicinity of Port Graham and on the north side of the bay southward and eastward from Anchor Point. The Russians had established a coal mine in the Port Graham area during the mid-1850s following Doroshin's mineral reconnaissance of the region.

Some minor prospecting was also going on near the future site of Hope along "one of the streams emptying into Turnagain arm from the south." A "few white men" were "mining for gold, which is found in small quantities among the gravel, boulders, and other débris carried down the mountain sides by the action of the rain or avalanches." The total output of this effort, however, did not exceed $1,000, the "miners eking out their scanty income by hunting and fishing."

Along the west coast of the inlet between the mouth of the Susitna River and West Foreland strata of coal were visible. Although the surface croppings produced poor quality lignite, fragments of better quality coal were sometimes "washed up from submerged veins by the tides."

The 1890 census noted that there was "considerable reason to believe that the headwaters of the Nushagak River, as well as some of the creeks feeding Lake Clark, may reveal some fine deposits of placer gold." The report noted:

> Prospects which have been made on the Mulchutna have shown extensive gravel banks, every panful of dirt taken from which showed a good "color". Several prospectors and placer miners have been sent up recently to see what they can do with these prospects, and have reported that the gold, although in numerous places found in pay quantity, is everywhere as fine as flour and can not be saved by ordinary mechanical means. A number of gentlemen interested are now in communication with the California Gold-saving Company, several of whose machines will probably be sent up this spring to experiment in the new territory. The latter, if it proves anything of a new Eldorado, will have numerous and apparent advantages over the bleak Arctic diggings on Forty Mile creek, 1,500 miles up the Yukon.[8]

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7. *Ibid.*, May 7, 1887.

8. *Report on Population and Resources of Alaska at the Eleventh Census: 1890*, pp. 69-71, 96, 236-37.

COOK INLET GOLD RUSH: 1895-1898

Despite the failure of prospectors to find gold in paying quantities around the shores of Cook Inlet during the 1870s and 1880s, they continued their searches during the early 1890s. Gold was discovered on Palmer Creek near the vicinity of Hope by George Palmer in 1894, and his discovery led "to prospecting on neighboring streams." This discovery led to several mining rushes in the Turnagain Arm region beginning in 1895 as reported by Fred H. Moffit of the U.S. Geological Survey. Moffit noted that

> In July, 1895, an assembly of miners from streams in the Sixmile drainage basin formed the Sunrise mining district and elected a local recorder. This recording precinct was distinct from the older Turnagain Arm district, which included the Resurrection Creek drainage system, and later, the creeks north of the arm.[9]
>
> The discoveries on Mills and Canyon creeks brought about during the following season (1896) the first considerable rush of prospectors to this field. Several thousand men, some state the number as high as 3,000, are said to have landed at Tyonok en route for Turnagain Arm and Sushitna River, while a considerable number crossed by way of Portage Glacier from Prince William Sound. This was the banner year on Canyon Creek, 327 men being engaged in mining its gravels during the summer. Crow Creek, tributary to Glacier Creek, was also staked about this time, but did not produce any gold till two years later. A second rush into the Turnagain Arm field took place in 1898. This was partly an overflow from the Yukon stampede and was not entirely due to the successes on Resurrection and Sixmile creeks.[10]

As a result of the Turnagain Arm mining rushes prospectors fanned out over much of the Cook Inlet region in search of precious metals. Several prospecting efforts were initiated on the west coast of Cook Inlet. During the late 1890s, for instance, an attempt was made to develop the gravels along the beach between Tyonek and Ladds Station, but the experiment ended in commercial disaster.[11]

On April 1, 1896, a gold-seeking expedition landed at the end of Homer Spit from the steamer *Excelsior*. This may have been the first trip north for the vessel, probably the largest commercial steamer that had entered the inlet to that time. The expedition, promoted by the Alaska Gold Mining Company, sent up a small steam tug for the use of its members. Under the leadership of Homer Pennock, whose Christian name was chosen as the name for the new post office established that year, the expedition's vessel made trips from Homer Spit to Anchor Point, across the inlet to Snug Harbor, and up the inlet to Turnagain Arm.[12]

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9. U.S. Department of the Interior, Geological Survey, Bulletin 277, *Gold Fields of the Turnagain Arm Region*, by Fred H. Moffit (Washington, Government Printing Office, 1906), pp. 8-9. Further data on the Turnagain Arm mining rushes may be found in Captain B.F. Hand, "The Cook Inlet Country," *Alaska's Magazine*, I (May 1905), pp. 147-50.

10. U.S. Department of the Interior, Geological Survey, Bulletin 277, p. 9. Also see "A Reconnaissance from Resurrection Bay to the Tanana River, Alaska, 1898," in U.S. Geological Survey, *Twentieth Annual Report*, Part VII, pp. 318-21.

11. "A Reconnaissance from Resurrection Bay to the Tanana River, Alaska, 1898," in U.S. Geological Survey, *Twentieth Annual Report*, Part VII, pp. 320-21.

12. DeArmond, "Cook Inlet Shipping, pp. 12-13.

During the summers of 1897 and 1898 Hugh Rodman, a lieutenant in the U.S. Navy and an assistant with the U.S. Coast and Geodetic Survey, reconnoitered the west coast of Cook Inlet and the Lake Clark region, prospecting for gold. In 1897 Rodman and a white companion left "the beaten track of the inlet's eastern shore with its coal seams and flour gold for the unknown region lying about and beyond the mountains of the west coast." The two men spent "some months exploring and prospecting from Chinitna Bay to Kamishak Bay penetrating at all practical points to the Bering Sea and Pacific watersheds and making a hurried trip to Idinaski, now called Old Iliamna." The following year Rodman returned with five white men, "crossed the range from Iliamna Bay, made a base camp and cache on the south shore of Iliamna Lake about fifteen miles from its northeast end, then made side trips as far as possible in all directions."

While at Iliamna village in July 1898 Rodman received word from Nicolai Richterof, leader of the Lake Clark people, that one of his Kijik men had found "a vein of white rock in which were small bits of yellow metal as soft as lead and the color of the sun." The man had found the rock while hunting caribou "in the clouds" and he was dying at Kijik on the shores of Lake Clark. Thus, Rodman, Nicolai, and Michaeli, chief of the Iliamna people, agreed to go to Kijik via bidarka. After paddling to the mouth of the Newhalen River the men camped "at the west end of the Kijik trail, near enough to the falls of the Nahgaling River to hear their roar." Breaking camp early on July 21 the Rodman party traversed the portage to the base of Sixmile Lake, which he mistakenly referred to as a "ten-mile lake." In his diary Rodman noted:

> We broke camp at seven next morning. There was no land visible to the southwest, the Iliamna Volcano to the northeast was throwing out large clouds of steam. All hands packed over the nine miles of moss and grass between Iliamna Lake and the navigable water of the Nahgaling River, two men carrying a bidarka on their shoulders with their heads in the hatches.
>
> The river was 150 yards wide and very deep, showing eight or ten feet of water near the banks. Along these banks went a never-ending procession of salmon, all hugging the shore to avoid the swift midstream currents.
>
> An hour of hard upstream work, a portage of a mile to avoid rapids, another hour upstream, four miles across a lake and four or five miles of constant paddling up the river brought us, completely done in, to the foot of a ten-mile lake where we camped for the night. That river was a terror! With three men paddling it was just possible to make headway close along the banks, and often it was necessary to pull the craft along by the overhanging bushes. At one place where a small stream came in from the west there was a shallow lagoon of several acres' extent that, from top to bottom and side to side, was literally jammed tight with salmon. The water was glacial, light green in color and very cold.

On July 22 the men paddled across Sixmile Lake to Lake Clark, which Rodman called "Kejik Lake." The party remained in the Lake Clark vicinity until July 30 when they returned to Iliamna Lake. Although his prospecting ventures proved unsuccessful Rodman's experiences provide a glimpse of life in the Lake Clark area as well as the travails of elusive prospecting in the region just before the turn of the century. Rodman described his adventures in considerable detail:

> Next morning we paddled across the small lake and up a short bit of river that brought us onto Kejik Lake, a long stretch of water five to ten miles wide with heavily wooded shores and surrounding mountains rising to six or seven thousand feet. The shores were

beautiful with violets, flags, wild peas and other flowers unfamiliar to me. With the mountains in the varying greens of spruce, alder, birch, grass and moss, it made a picture not soon forgotten.

At 4 pm., about twenty-five miles from our last night's camp, Nicolai stopped at the base of the mountain. Beyond that mountain, he said, was a lake, and somewhere beyond the lake was the mountain we sought. Peter, his paddler, would stay to guide my two paddlers and me. And away went Michaeli and Nicolai for upper Kejik Lake.

There had come up a fine mist that turned each bush into a shower bath and quite hid the upper reaches of the hills. Off to the right, however, was the sound of falling water which we rightly judged to be the outlet of the "lake beyond the mountain," and by that we picked our way. It wasn't pleasant. Over logs, through brush and clouds of mosquitoes, with the men falling into moss holes and the bidarka hanging up in trees. But we finally made the four miles over the mountain slope, found ourselves on the calm water of the lake's outlet, and paddled seven or eight miles along the lake shore before eleven o'clock, when we made camp for the night.

Whatever the name of that lake is, I don't know, but I called it Onion Lake because of the great beds of wild onions growing all about it. We broke camp at 10 am. July 23, leaving the bidarka and most of our provisions cached in a tree. We hiked all day, first through woods, then on moss, then all afternoon over granite and shale that would slip under our feet and go sliding into the valleys with a roar like thunder. It was impossible to see much because of the fog, but as we crossed old snow beds every now and then I knew we must have got fairly well up in the hills. We pitched camp in a gully where some scrub alder about two feet high furnished firewood of a sort. A caribou stuck his head out of the fog to have a look at us, but left in a hurry.

A clear morning showed us a region of small glaciers lying among granite peaks, with a sea of mountaintops in all directions but eastward. There the view was cut off by a mass of ice and rock rising 1,500 to 2,000 feet above us, no doubt one of the high mountains west of Iliamna Volcano.

Peter said it was the gold mountain, but after a "pleasant" hike of three hours over slide-rock and ice, he said he was wrong. Finally, under pressure he doled out the cheerful information that he had become mixed up sometime before and was now lost.

Two hours' work along the slopes showed no sign of quartz, so we set out for camp. We had about reached it when Peter, carrying the rifle, saw and shot a bull caribou. They skinned it quickly and with a single slash of the hunting knife cut through its belly and almost all the way through the mass of viscera. No matter. The natives hacked out the bloody, steaming liver and ate it almost before the animal was entirely dead....

When morning came we returned to Onion Lake, planning to go on to Kejik next day for a talk with the sick man who had hunted in the hills and found the soft, sun-colored metal.

Onion Lake was twenty miles long, with great stretches of gravel beach literally cut to pieces by moose, caribou and bear tracks. Bucks were everywhere, and in the dense woods were numberless grouse which gave way to ptarmigan as the ground rose. There

were no salmon in the lake, its outlet being impassable, but Vassili said it was full of trout weighing ten, fifteen and twenty pounds, and other fish with duck-like snouts which I suppose were pike. Except for the mosquitoes, this was truly the happy hunting ground. Those little pests were everywhere, and they went through moosehide gloves with the calmness and ease of a needle. In the daytime we wore tarleton veils, and at night we would close the tent tight, take a lighted candle and burn up the little visitors as they clung to the wet canvas.

On July 27 we packed over the mountain slopes to Kejik Lake, and after paddling eight or ten miles along the beach decided, by the minority vote of one white man and in spite of bad weather, to cross the lake to Nicolai's village....

I found the sick man dying from tuberculosis, as indeed were most of the natives. He said we had taken the wrong valley from Onion Lake, and that Peter was no good. It was arranged that the three natives would go next day for a specimen of the rock, while I stayed and prospected around the village.

Next day was fair, and the natives got away early.

Nicolai's capital, Nikhkak [Kijik], was not very impressive. Two barabaras, two or three caches built on posts, a bainya or sweat-house, Nicolai's palace, a small church and an extensive cemetery with many new graves. The barabaras were filthy and noisome, with two or three families and dogs galore living in each. Nicolai's house was much better, having a floor of hewn logs, a chimney and a window of translucent bear gut. But like the others it was filled with the odor of all creation dead....

The church was a small log affair built by the natives when there were more of them alive – fewer of them dead from tuberculosis or smallpox. Once in two or three years, when the ice is good, a Russian Orthodox priest comes from the Bering Sea side to hold services. During his absence the necessary affairs of the church are performed by a native....

The men returned from Onion Lake with a good specimen of soft yellow iron pyrite, which the sick man said was the right rock. So it was fool's gold I had chased across lakes and portages and shale slopes. Ah, well, I would never have been satisfied until I knew for certain.

On July 30 we started back to Iliamna. It was a hard three-day trip with little but fish to eat. We shot the upper rapids of the Nahgaling River, where we had portaged before, and for a few minutes were in such water as I'll never be in again if I can help it. The force of the current threw up waves which, striking at the bow, would roll aft over us as we lay with our faces closely pressed to the deck, and would twist the boat like a string of kelp.[13]

13. "Fool's Gold: By Hugh Rodman As Told to Della Murray Banks," *Alaska Sportsman*, XV (May 1949), pp. 6-9, 28-33. Also see U.S. Treasury Department, Coast and Geodetic Survey, Bulletin No. 35, *Alaska: General Information*. . . . (Washington, Government Printing Office, 1896).

The Turnagain Arm mining rushes produced a total of some $780,000 in placer gold between 1895 and 1900. The production statistics for each year were: 1895 – $50,000; 1896 – $120,000; 1897 – $175,000; 1898 – $150,000; 1899 – $150,000; and 1900 – $135,000.[14] By the late 1890s the Klondike gold rush had diverted the attention of most prospectors from the relatively small diggings on Turnagain Arm and the Kenai Peninsula.

In the aftermath of the Turnagain Arm and Kenai Peninsula gold rushes, a small placer gold operation was attempted on the Beluga River north of Tyonek. Fine gold had long been known to occur in the river's alluvium, and in 1902 an attempt was made to mine it with the aid of a hydraulic plant. This effort was soon abandoned as were some preliminary operations "in prospecting for dredging ground" in 1909.[15]

During the early twentieth century individual prospectors continued to traverse the Cook Inlet region looking for gold in paying quantities. One such individual was H.P. Gallagher, an independent spirit born in Warren, Pennsylvania, and probably reared in Jamestown, New York. In mid-July 1904 he arrived at Tyonek by steamer from Seward in company with C.G. Van Houk and Amos Palmer. During the next several months he and his companions passed along both the western and eastern shores of the inlet, looking for but apparently not finding any gold bonanzas. At the mouth of what may have been the Crescent River just north of Tuxedni Bay within the boundaries of the present-day park, Gallagher observed in his diary:

> We were previously informed by a party who was driven ashore here two years ago in a small boat, that he had found gold in the bars of the river, but we failed to find any traces of that elusive metal though we panned along the bars and made a pretty thorough test for two or three miles up the river. The river is a mountain stream 15 miles long which drains the country in the vicinity of Mt. Redoubt.

Passing into the mountains in the vicinity of Mount Redoubt, Gallagher noted that they were "of solid granite." There was no indication "of mineral," however, "except some small grains of copper sulphide found in the panning."

Crossing the inlet to Kasilof, Gallagher and his companions moved southward along the shore to Anchor Point. He observed that the men found "fine gold about evenly distributed and in small quantities the entire length of the coast to Anchor Point," but not in sufficient "quantities to warrant any extensive work."[16]

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14. U.S. Department of the Interior, Geological Survey, Bulletin 857B, *Past Placer Gold Production from Alaska*, by Phillip S. Smith (Washington, Government Printing Office, 1933), p. 96.

15. U.S. Department of the Interior, Geological Survey, Professional Paper 70, p. 163.

16. Norman F. Thomas, "Cook Inlet In 1904: H.P. Gallagher Journal," *Alaska Review*, III (Spring and Summer 1969), pp. 261-72.

DEVELOPMENT OF COOK INLET COAL RESOURCES: 1890s-1900s

During the 1890s and early 1900s there was renewed interest in developing the coal resources of Alaska, including those on Cook Inlet. The development of coal veins in the inlet region took place, for the most part, on the north side of Kachemak Bay. In 1895 William H. Dall, an eminent scientist who had been associated with Alaskan exploration and development for nearly thirty years, visited this area while making a survey of the territory's coal resources for the United States Geological Survey. At the time of Dall's reconnaissance two corporations, the Alaska Coal Company and the North Pacific Mining and Transportation Company, were active in developing the coal fields.[17]

The two firms conducted development work in the Kachemak Bay coal fields until 1897. Two years later the Cook Inlet Coal Fields Company, a subsidiary of the Standard Oil Company, acquired title to the coal fields in Kachemak Bay and began underground work at the present site of Homer where its headquarters were located.[18]

While development of the coal fields in the Kachemak Bay area was the principal focus of Cook Inlet coal development in the 1890s there was also renewed interest in the low-grade lignite deposits near Tyonek. On his exploration for the U.S. Army in 1898 Captain E.F. Glenn commented on the coal beds he had seen about two miles from that village. He observed:

> It is to all appearances a lignite, but partially consolidated. An examination of it shows that it retains very perfectly the original woody structure. The amount of ash from it is large and contains a number of impurities. Nevertheless, this coal has been frequently used by the steamer *Perry* for steaming. The engineer of that vessel informed me that it was entirely satisfactory for that purpose, although not quite so good as that taken from "coal point" in Kachemak Bay.

That same year a U.S. Geological Survey team reported on the coal deposits in the Tyonek region. According to G.H. Eldridge and Robert Muldrow, the Tyonek fields were easily accessible and its

> outcrops have for some time afforded coal for use in a small local steamer and for domestic purposes at the agency of the Alaska Commercial Company at this point. The area of this field was not investigated, but from independent accounts by prospectors and Indians it is inferred that it extends for several miles inland and at least as far north as the Theodore River; outcrops are reported on this stream and on the Beluga and the Chulitna to the south of it. This would make a length for the field on the strike of approximately 30 miles, with a width as shown at the beach of about 4 miles....The

17. "Report on Coal and Lignite of Alaska by William Healey Dall," pp. 784-97, in U.S. Geological Survey, *Seventeenth Annual Report of the United States Geological Survey to the Secretary of the Interior, 1895-96* (Washington, Government Printing Office, 1896), Part I, pp. 784-97.

18. Ralph W. Stone, "Coal Resources of Southwestern Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 259, *Report on Progress of Investigations of Mineral Resources of Alaska In 1904*, by Alfred H. Brooks and others (Washington, Government Printing Office, 1905), pp. 151, 154-60.

seams vary in thickness from a few inches to 16 feet, interrupted, however, in their solidity by frequent clay partings and layers of coal of lower grade than the average.[19]

On his Cook Inlet Exploring Expedition in 1899 Glenn again commented on the coal seams in the Tyonek and Beluga River regions as well as in the Susitna, Yentna, and Talzlina river drainages north of the inlet. He stated:

> In Cook Inlet there is an abundance of very satisfactory coal, when the price is considered. That used by us was mined by the Indians just below Tyoonok from a vein that crops out from above the high-water mark. The vein reaches as far down as low-water mark, and probably farther. The seam above high water is fully 6 feet thick. There is another outcropping of coal near Homer that is of better grade, but more expensive than that obtained at Tyoonok. A short distance up the Beluga River some specimens of very good coal have been found, said to be about 6 or more feet in thickness and readily accessible.[20]

Although the coal deposits along the western shore of Cook Inlet would receive little attention until the post-World War II era, USGS geologists would periodically report on seams at Tyonek and along the Beluga River. In 1949, for instance, coal-bearing sandstone and shale exposed in a thickness of several hundred feet were reported in beach cliffs at Redoubt Bay just south of Point Harriet in the vicinity of the present-day southern boundary of Lake Clark National Park and Preserve. It was reported that coal had been mined on Kalgin Island in the 1940s, and coal-bearing sandstone and siltstone were observed north of the entrance to Chinitna Bay within the present park boundaries during the mid-1950s.[21]

DEVELOPMENT OF INISKIN PENINSULA OIL RESOURCES: 1890s-1950s

While the Turnagain Arm gold rush and the development of the Kachemak coal fields were underway during the 1890s, oil prospecting was initiated in the Oil Bay area of the Iniskin Peninsula. On the west shore of Cook Inlet between Chinitna and Iniskin bays the peninsula is just south of present-day Lake Clark National Park and Preserve.

Indications of petroleum were discovered by the Russians in the Iniskin Peninsula area during the 1850s, but the first oil samples were not taken out of the ground until 1882 by a Russian named Paveloff. A man named Edelman staked the ground near the head of Bowser and Brown creeks draining into Oil and Dry bays in 1892, but his claims were subsequently abandoned. In 1896 two oil prospectors, Pomeroy and Griffin, staked claims at Oil Bay, and the following year the two men organized the Alaska Petroleum Company and began preliminary work on the ground in 1898. The Alaska Oil Company was organized in 1901 and commenced drilling

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19. G.H. Eldridge and Robert Muldrow, "Report of the Sushitna Expedition," in U.S. Department of the Interior, Geological Survey, *Maps and Descriptions of Routes of Exploration In Alaska In 1898*, pp. 22-23.

20. "Alaska – 1899, Cooks Inlet Exploring Expedition," by Glenn, in *Compilation of Narratives of Explorations In Alaska*, p. 720.

21. U.S. Department of the Interior, Geological Survey, Bulletin 1094, *Geology of Possible Petroleum Provinces In Alaska*, by Don J. Miller, Thomas G. Payne, and George Gyre (Washington, Government Printing Office, 1959), pp. 49-50.

operations at Dry Bay the following year. By 1904 four oil wells had been drilled at Oil Bay and two at Dry Bay. Two of the oil wells at Oil Bay reportedly produced from 10 to 50 barrels of oil per day for a short period. As a result of low production levels, problems encountered with gas springs, difficulties in getting machinery to the well sites, and several cave-ins and accidents, drilling was discontinued after 1906, and the claims were abandoned in 1909. The following year Alaskan oil lands were withdrawn from entry, and no further attention was paid to the Iniskin Peninsula petroleum resources until a new leasing law was passed in 1920. This law led to renewed interest in the district, and many of the oil lands were restaked. During the early 1920s oil claims were also staked on the shores of Chinitna Bay where oil seepages were reported.[22]

Little petroleum exploration and production occurred on the Iniskin Peninsula during the 1920s. In November 1931, however, it was reported that the "Ramsey Petrol Organization" of Oklahoma City would commence geological investigations of the peninsula the following summer. The inspections by a party of oil engineers would be directed by Carl Beal, reportedly the largest single oil property holder in the Oklahoma fields. The Ramsey company had acquired options to the prospective oil properties and had "already pocketed a neat contract calling for annual deliveries of 2,000,000 barrels to the Doi Shoten Company, of Japan, from [the] Iniskin oil fields – if oil fields there be." The Japanese firm was interested in the arrangement "because of the shorter haul from the Alaska fields to the Oriental market," and thus had agreed to the contract contingent upon oil development on the peninsula and at Cold Bay.[23]

Despite the high expectations for the Iniskin oil fields no development occurred as a result of the Ramsey investigations. In 1934 a geological party conducted exploratory work on the peninsula. As a result the Iniskin Bay Association was formed and took options on approximately 51,000 acres. Equipment was moved into the area, and drilling was begun in 1936. By 1939 the oil fields were attracting attention as test wells were drilled by the Iniskin Drilling Company. The drilling efforts, which revealed no commercially profitable pools, were frustrated by high development costs, the incursion of salt water, and lack of financial inducements associated with prospecting regulations. Thus, the drilling was discontinued after the 1939 season. Regarding the 1936-39 exploration and drilling efforts on the peninsula, USGS geologists reported:

> This drilling work was carried on by the Iniskin Drilling Co., which had extensive holdings in the Iniskin-Chinitna district on the west coast of Cook Inlet, in the Alaska Peninsula region, and by a combination of oil companies that had united in their efforts to test part of the known geologic structure in the vicinity of Jute Bay, northeast of the settlement of Kanatak on Cold Bay. Drilling in the Iniskin area was a continuation of the work started on a structure near Fitz Creek in 1936 and that had been carried to a depth of 7,156 feet when work was discontinued for the season in 1938. Work was

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22. George C. Martin, "Notes On the Petroleum Fields of Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 259, pp. 133-38; U.S. Department of the Interior, Geological Survey, Bulletin 250, *The Petroleum Fields of the Pacific Coast of Alaska With An Account of the Bering River Coal Deposits*, by George C. Martin (Washington, Government Printing Office, 1905), pp. 37-49, 58-59; U.S. Department of the Interior, Geological Survey, Bulletin 789, pp. 1-2, 48-54; Sherwood, *Cook Inlet Collection*, pp. 133-37; U.S. Department of the Interior, Geological Survey, Bulletin 719, *Preliminary Report On Petroleum in Alaska*, by George C. Martin (Washington, Government Printing Office, 1921), pp. 42-55; and Fred H. Moffit, "The Iniskin Bay District," in U.S. Department of the Interior, Geological Survey, Bulletin 739, *Mineral Resources of Alaska: Report on Progress of Investigations In 1921*, by A.H. Brooks and others (Washington, Government Printing Office, 1923), pp. 117-32.

23. Unidentified newspaper clipping, November 28, 1931, in "Journal 1932," O.B. and Theresa G. Millett Collection, Diary/Weather Journals, Illiamna, 1917-1933, Manuscript No. 42, Alaska Historical Library, Juneau.

resumed in 1939 at this depth, and before the work for that season was stopped drilling had been carried to a depth of approximately 8,775 feet. Unfortunately, salt water was encountered some distance above the bottom of the hole, and as they lacked suitable equipment for handling it or closing it off and as it was late in the season, the operators felt impelled to discontinue the work.

Although showings of oil and gas had been noted at several horizons in the lower 1,000 feet of the drill hole, no commercial pools were disclosed, and the incursion of the salt water prevented adequate testing of even those showings that were noted in the hole. That oil actually occurs in the area was demonstrated by the fact that some was collected from the drill holes and used in the operation of the trucks and in the heating apparatus at the camp. . . . The work so far has been very expensive, costing perhaps four times as much as similar drilling would have cost in many of the oil fields in the States. Therefore, unless especially favorable terms can be arranged, it is likely that further drilling at this place will not be resumed in the near future.[24]

Exploration for oil and gas was not renewed on the Iniskin Peninsula until 1953 when Russell Havenstrite, president of the Iniskin Bay Association, formed a new group called Iniskin Unit Operators to drill additional wells. During 1953 the firm built dock facilities, oil storage tanks, and an air strip on Chinitna Bay and reconstructed an earlier nine-mile road to the interior. In 1954 a well was drilled just east of Fitz Creek where a 3,600-foot airstrip was built, but although exploratory drilling was continued through 1957 the results were not encouraging. In 1958 the Alaska Consolidated Oil Company took over the lease option from Iniskin Unit Operators and continued drilling operations on the well for two years. During 1958-60 the new firm drilled a second well nearby, but its operation was suspended at a total depth of 11,200 feet.[25] Although these efforts revealed oil and gas shows, they were not completed as commercial producers. By the late 1970s exploratory drilling had not resumed.

RELATIONSHIP OF ALASKA MINING RUSHES TO PROPOSED RAILROAD DEVELOPMENT IN THE LAKE CLARK REGION

The discovery of gold on Seward Peninsula and the founding of the town of Nome at the end of the nineteenth century focused new attention on Cook Inlet as the Turnagain Arm mining rush was subsiding. This was because the Nome area is ice-locked during six months or more each year and required an overland winter route to an ice-free port, where it could connect with a steamship service. Cook Inlet was one of the closest locations that could provide such a port. Further, a portion of a Cook Inlet-Seward Peninsula route already existed. This route had been used for trade since prehistoric times. It extended from the head of Iliamna Bay, around Lake Iliamna, and down the Kvichak River to Bristol Bay. Thus, the stage was set for several efforts to construct a stage line and railroad from Iliamna Bay across the Lake Clark region toward the Yukon River and Norton Sound.

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24. Philip S. Smith, "Mineral Industry of Alaska in 1939," in U.S. Department of the Interior, Geological Survey, Bulletin 926A, *Mineral Resources of Alaska: Report on Progress of Investigations In 1939* (Washington, Government Printing Office, 1940), pp. 90-91.

25. U.S. Department of the Interior, Geological Survey, Professional paper 512, *Geology of the Iniskin-Tuxedni Region, Alaska*, by Robert L. Detterman and John K. Hartsock (Washington, Geological Survey, 1966), p. 1-6, 71-76.

Following the discovery of gold in the Klondike in 1896 and the great stampede the following year, Congress passed legislation on May 14, 1898, encouraging construction of railroads to open up the vast inaccessible interior expanses and resources of Alaska for further exploration and exploitation. The law promoted railroad construction by permitting use of timber and stone for building rail lines and providing for establishment of terminals and stations and granting rights-of-way.[26]

Following passage of this legislation the Trans-Alaska Company was established in San Francisco. During 1901-02 the firm employed Norman R. Smith, a Seattle engineer, to conduct a survey from St. Michael on Norton Sound to Iliamna Bay. The company wanted to inaugurate a horse-drawn winter sled line, with roadhouses at intervals, to precede construction of a railroad that would tap the mining region around Norton Sound then experiencing a mining boom at Nome. The 559-mile sled line trail was explored and laid out during a hazardous 75-day trek between October 7, 1901, and January 12, 1902. The surveying team included Smith as director, Webster Brown, U.S. Deputy Surveyor, E. Coke Hill, U.S. Commissioner for the recently formed Korserefsky district, several chainmen, axmen, carpenters, and roadhouse keepers, and a cook, photographer, correspondent, auditor, and pack man. Leaving Nome by ship the men arrived at St. Michael on October 5 with six horses, 16 dogs and 100 tons of provisions. After making arrangements for trail and roadhouse construction on the northern division of the line between St. Michael and Holy Cross on the Yukon River, the exploring party set out for the Kuskokwim on October 31. Locations for roadhouses were established 23 miles south of Holy Cross and on the Kuskokwim near its intersection with the Aniak River. At this point the sleds were lightened and "the party reduced to twelve men, with two horses, four sleds and 600 pounds of provisions, 300 pounds of oats and the bedding and one tent, 10x18 feet." By December 5 the trail was cut through to the Mulchatna River, where the famished men were given food by W.D. Keefer and L.E. Bonham, two prospectors who had established a winter camp. The party then trekked to the mouth of the Nushagak River to replenish its depleted provisions, arriving there on December 11.

The remainder of the harrowing trip, as described by J.M. Shawhan, correspondent for the survey team, provides a glimpse into the hazards of early winter exploration in the Lake Clark region. Shawhan related:

> After replenishing the stock of provisions and horse feed from the company stores and arranging for the immediate forwarding of roadhouse stock to points up the river, a fresh start was made up the Nushagak to Kakwok. On the way warm weather set in, the ice in the river broke up and Mr. Smith who was on the north side of the river, was unable to proceed farther than Kakwok until December 26, when the river froze over. By this time but six days' provisions remained. Notwithstanding this fact a start was made for Iliamna on an almost due east course.
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> Two days through dense willows and sparsely grown spruce and four days over an open country through and over a chain of some thirty small lakes brought the party to the shores of Iliamna lake. From that point to Iliamna village all the actual hardships encountered on the trail were endured. The first day's travel was for sixteen and one-half miles over the surface of the lake, involving two miles of hummocky ice piled up in broken masses from two to ten feet high over which superhuman efforts alone

26. C.L. Andrews, "Uncompleted Railways in Alaska," *Alaska Life*, V (October 1942), pp. 9-10.

dragged sleds and horses. The next day, after making seventeen and one-half miles over cakes of ice that were almost floating, the party camped at a portage used by Indians, distant forty-one miles from Iliamna.

From the time the party left Kakwok to the arrival at the portage the weather had been exceptionally good for travelling, the thermometer ranging from 15 to 40 degrees below zero, with a clear sky and no wind. Notwithstanding a gradually decreasing diet, culminating in three day's subsistence on tea, strengthened with pepper and mustard, the spirits and health of the men kept up fairly well.

On the morning of January 6, just after leaving the portage, a fierce blizzard was encountered, which made sport of the party and blew men, horses and sleds about on the ice like puppets, at times almost burying them in the scudding snow. It was impossible to see ahead for any distance, and after proceeding nine miles, during which nearly every member of the party was badly frost-bitten, Mr. Brown's hands became so badly frozen that making camp became imperative. We camped in a fairly sheltered spot on the shore of the lake in a clump of willows where we had to stay five days on account of the blizzard.

On the night of the third day after pitching the tent one of the horses was frozen to death in consequence of falling and being unable to arise, on account of the snow balls which had formed on his feet. This seemingly unfortunate circumstance furnished the famished members of the party with fresh meat for the following two days, when clear weather set in and they were enabled to pursue their way with renewed zigor to Iliamna village, which was reached on January 11, and the bay on January 12.

Later, according to Coke, the men made one or two trips to Lake Clark "near the western end of which they established a roadhouse."

After the survey was completed the trail was hailed by Shawhan in a newspaper article as a harbinger of "a new era commercially so far as Nome and the contiguous region is concerned."[27] He observed that in addition "to establishing a horse trail, with road houses thirty miles apart, making a safe route in the depth of winter for travelers, mail and freight, the party secured a good deal of topographical information in regard to the country traversed." In somewhat exaggerated fashion, Shawhan summed up the accomplishment of the trail survey:

The completion of this trail marks a new era in Alaska's progress, as it will open the great valleys of the Nushagak, Tickchik, Kuskokwim and Yukon rivers to settlers, and provide for them a regular mail service during the season of closed navigation. This is the first survey party to make the trip across Alaska, and the only organized body of men properly equipped to report the actual conditions obtaining in this region. The map of Alaska will undergo many changes from the date obtained; courses of streams will be changed, supposed lakes and rivers eliminated, and the general topography of the country shown to better advantage than ever before.

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27. The trail struck the northwest edge of Iliamna Lake, crossed the Newhalen River below Sixmile Lake, skirted the southern edge of Roadhouse Mountain on the border of present-day Lake Clark National Park and Preserve, and passed along the northern edge of Iliamna Lake before connecting with the long-used portage to Iliamna Bay. There are three photographs (#1506, 1508, 1510) of the first station built by the Trans-Alaska Railroad company at Koserefski in the E.A. Hegg Photograph Collection in the Suzzallo Library at the University of Washington, Seattle.

> Instead of the dreary, icebound country pictured by geographers and now accepted as the popular opinion of Alaska's interior, it will be shown as a country possessing wonderful agricultural, mining, stock raising and timber possibilities, with a climate more moderate than some of the far northern points in the United States, and with scenery unsurpassed in the world. In fact, I think it no exaggeration to say that the interior of Alaska offers a better place for settlement than some of the Northern, Middle and Western states of the Union.[28]

In April 1902 the *Valdez Prospector* reported that the Trans-Alaska Company had "a number of men at work in the timber cutting ties and sleepers for the railroad they are preparing to build from Iliamna to Nome." During the next winter the company planned to keep a force of men at work on the sled line trail to keep it open all season from Iliamna Bay to Norton Sound.[29]

By late 1902, however, the mining rush at Nome was beginning to subside. The "falling off of travel to the gold fields" at Nome, together with the "concentration of [business] interests at Nome and at northern points of Alaska," dampened the enthusiasm of the Trans-Alaska Railway promoters. Thus, the projected railway, as well as the roadhouse enterprise, fell through.[30]

During 1903 a second proposed railway venture was commenced from Iliamna Bay to Anvik on the Yukon River. Although never built, the railroad, known as the Alaska Short Line Railway and Navigation Company with offices in Seattle, was one of the most ambitious and persistent attempts to cross southwest Alaska with a rail line to date.[31] As planned the railroad was to extend from Iliamna Bay to Anvik on the Yukon River, a 400-mile distance that would take the line around the northeast edge of Iliamna Lake, cross the south end of Lake Clark, and pass through the Mulchatna and Kuskokwim river valleys. The railroad, which was incorporated in the state of Washington on December 3, 1903, with a capital stock of $15,000,000, was intended to eventually cross the Seward Peninsula and have "a terminus on Bering Sea and another at Nome," thus providing that region with an open port in winter.[32]

During 1904-05 the new firm employed Warriner E. Smith as chief engineer to survey a route for its line. With some self-congratulatory fanfare, a promotional booklet was published by the

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28. Unidentified newspaper article, dated January 30, 1902, in Webster Brown Collection, Folder 11, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks. Reminiscences of the survey trip were also prepared by Webster Brown, E. Coke Hill, and Shawhan. Those by Brown may be found in several of his letters in his aforementioned collection. Coke's reminiscences may be found in *Stollers Weekly*, August 17, 1929, in Alaska Newspaper Clippings, Vol. I, p. 302, Alaska Historical Library, Juneau. The reminiscences by Shawhan may be found in J.M. Shawhan, "Christmas In Uncle Sam's Colonial Possessions," *Overland Monthly*, XL (December 1902), pp. 510-16.

29. *Valdez Prospector*, April 17, 1902.

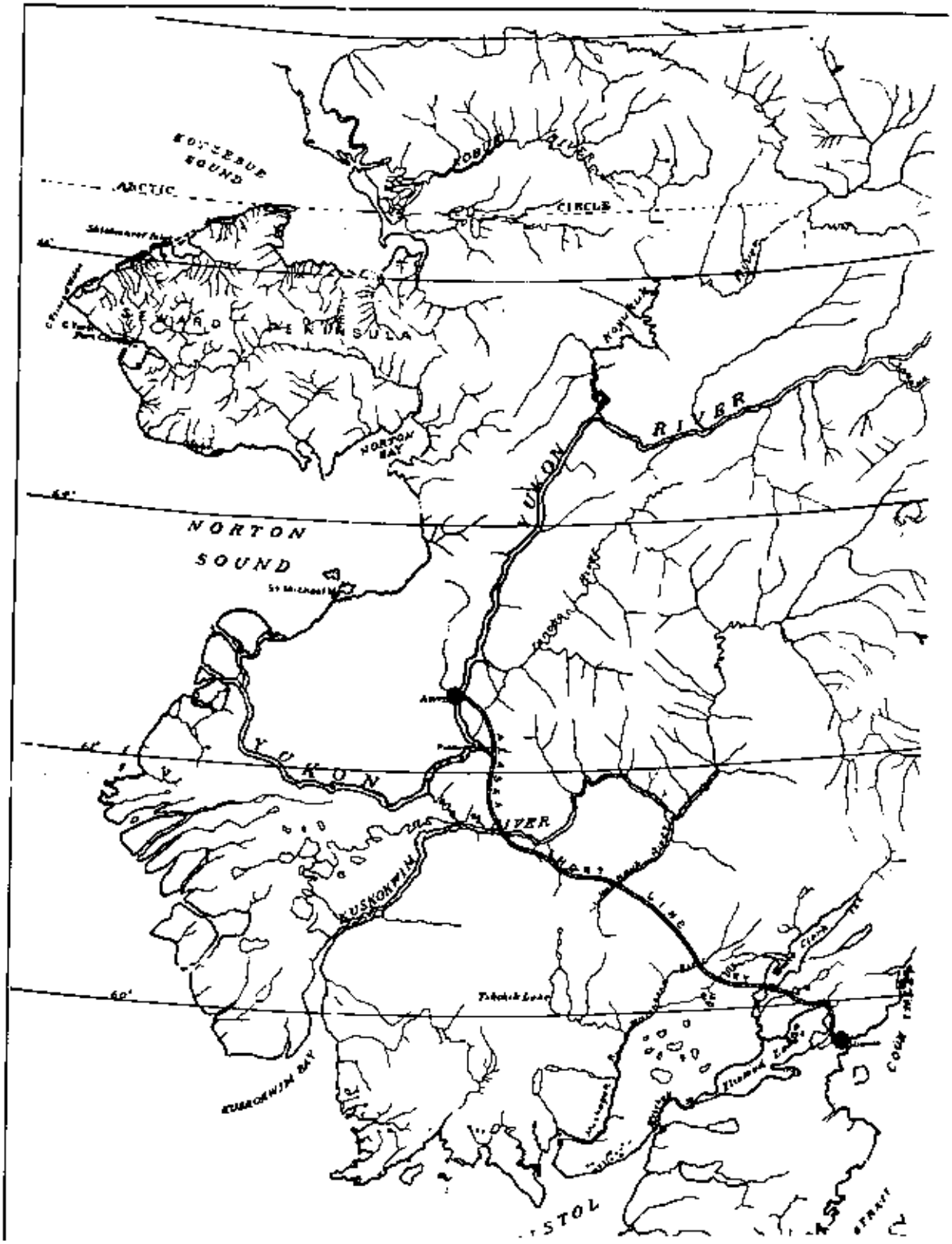
30. Shawhan, "Christmas In Uncle Sam's Colonial Possessions," p. 510. Also see Nichols, *Alaska: A History of Its Administration*, p. 253.

31. Frank Ward Burch, "Alaska's Railroad Frontier: Railroads and Federal Development Policy, 1898-1915" (Unpublished Ph.D. dissertation, Catholic University of America, 1965), pp. 89-90.

32. "Certificate of Incorporation," December 3, 1903, Record Group 49, Records of the Bureau of Land Management, Division F, Railroad Right-of-Way Files, Act of 1875, Box 62, File – "Alaska Short Line Ry. & Navigation Co. of Wash.," National Archives and Records Administration, Washington, D.C.

MAP OF SECTION OF ALASKA, SHOWING THE

ALASKA SHORT LINE RAILWAY



Source; Alaska Short Line Railway and Navigation Company, *The Alaska Short Line and Navigation Company* (Seattle, the Commonwealth), 1904.

company in 1904 to interest Eastern and European capitalists in the venture. The booklet described the route and its advantages and assessed the company's intentions in overly optimistic terms. According to the company the route commenced

> at Iliamna Bay, on the west shore of Cook Inlet, just north of Kamishak Bay, with an open port the year round and a fifteen foot tide. Its course is from Iliamna Bay to Iliamna Lake around the northeast end; thence across the Noghlin River at the foot of Clarke Lake; thence northwesterly across the Chulitna River, up the Kok-Set-No River to a pass through the Kee-Gik range; thence down and across the Malchatna River; thence over a low divide on the head waters of the Ho-Link-Nuk River; thence over another low divide to the head waters of O-Loo-kok River; thence, down the latter stream and on to the Kuskokwim River, crossing the latter it skirts the St. Sergis mountains; thence on the Piamute trail to Piamute and Anvik on the Yukon, a distance of 369 miles. From here to Bering Sea the course is up the Anvik River by way of Anvik trail to Klihatalik; thence skirting Norton Sound to Council; thence to Port Clarence, the most western harbor in Bering Sea. The Coast Range is avoided by building a tunnel at an elevation of only 475 feet. The greatest elevation in the interior is 975 feet, thus giving easy gradients and favorable alignments.

The booklet elaborated on the promising prospects of the railway:

> This Railway is intended by its promoters to serve that portion of Alaska lying between Cook Inlet and the extreme western portion of the Seward peninsula with a terminus on Bering sea and another at Nome. From the Bering sea terminus it is intended to connect with the trans-Siberian railway. It is in every way a trunk line and the topography of the country traversed is such that it can never have a rival or serious competitor. It passes through one of the richest countries on earth and no other railway projected in Alaska can ever hope to serve the same, or even an equal, amount of territory as this. It has as great a future as any trunk line built in the United States....
>
> It occurs to us that the building of the Alaska Short Line Railway is the best proposition that has yet been put forth to interest capital. This road is approved by the best engineers and those who have built many miles of railroads in Alaska. Here is Southwestern Alaska, a new, unexploited country, wonderfully rich. Perhaps the richest country on earth. And here is an opportunity to build the first railroad through that country; practically the only road that can be built running from tide water to the great Yukon and from there again to tide water on Seward Peninsula.
>
> There can be no competition, no interference, no dictation from legislatures, commissioners or capitalists.[33]

More objective analyses of the route were offered by other professionals. One such evaluation was provided by USGS geologist Alfred H. Brooks:

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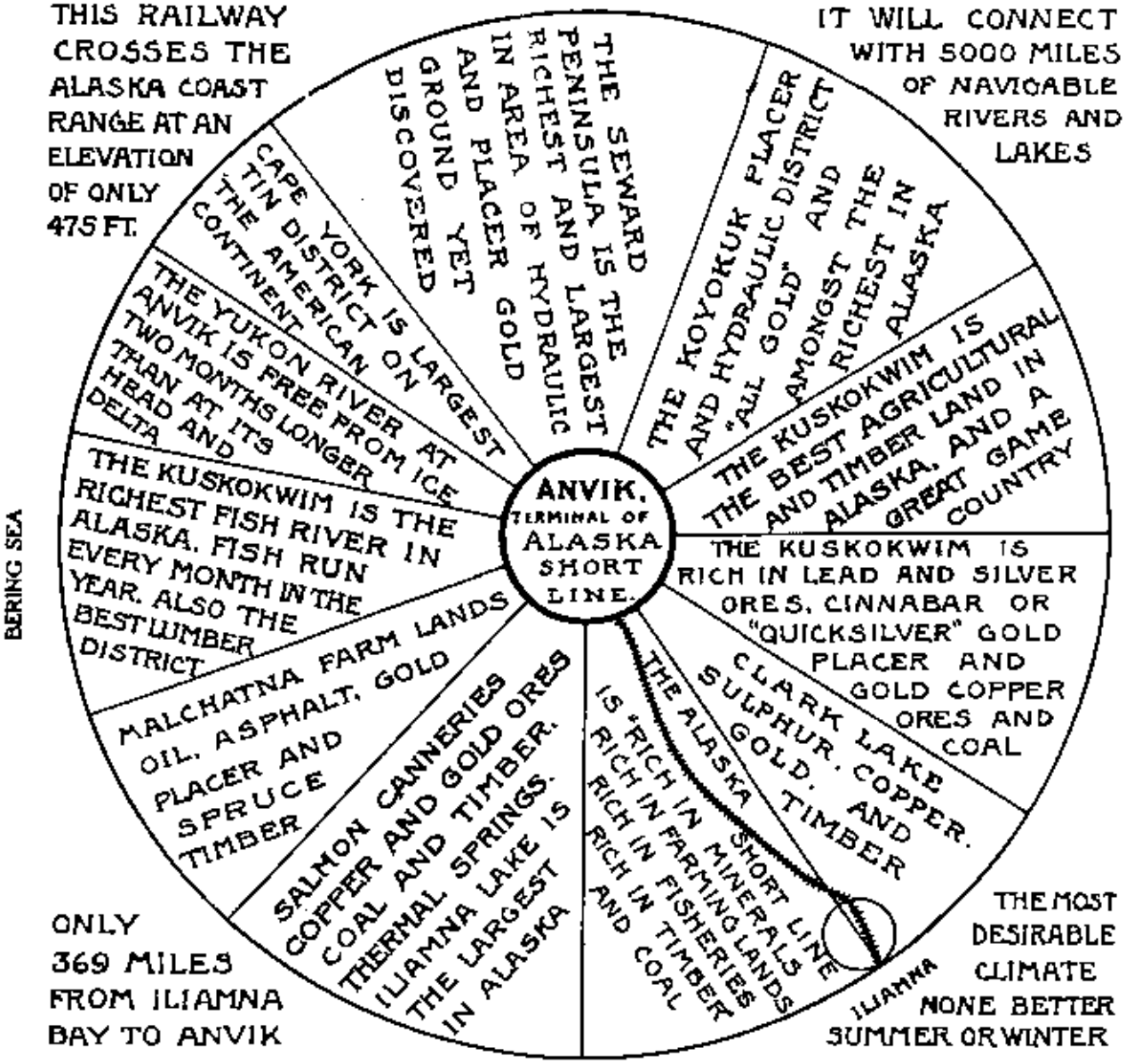
33. Alaska Short Line Railway and Navigation Company, *The Alaska Short Line Railway and Navigation Company. . . .* ([Seattle, The Commonwealth, 1904]), pp. 8, 30. See the following pages for a graph listing the advantages of the railway and a map of its route. In the Lake Clark area the projected railway route turned northward from the Newhalen River, crossed the waterway between Lake Clark and Sixmile Lake, skirted the northwest shore of Lake Clark, and continued across the flat of the Chulitna River, following that valley northwestward toward the Koksetno River.

AN ALL AMERICAN ROUTE

This Circle Shows the Many Districts and Interests Tributary to the

ALASKA SHORT LINE RAILWAY

Iliamna Bay is the Only All Year Deep Water Harbor From Which a Railroad Can Reach This Richest Portion of Alaska



The Terminals are Iliamna on Southwest Coast of Alaska, Running In a Northwest Direction to Anvik on the Yukon River

GENERAL OFFICES: 604 BAILEY BUILDING
SEATTLE, WASH

Source; Alaska Short Line Railway and Navigation Company, *The Alaska Short Line and Navigation Company* (Seattle, the Commonwealth), 1904.

> Though little is known of the region which would be traversed by such a railway, it is certain that there are no mountain ranges to cross. The distance to the lower Yukon is about 450 miles and to Nome about 300 miles farther. The lower end of Cook Inlet is free from ice throughout the year and there are several bays which could be used as coastal terminals. So far as known, the first divide to be traversed within 20 miles of Cook Inlet is said to be only 800 feet above the sea. A second divide, about 100 miles beyond, between Bristol Bay and Kuskokwim waters, is probably less than 2,000 feet high. Little is known of the resources of that part of the Kuskokwim basin which would be traversed by this route. There is, however, a fair grade of bituminous coal on the lower Yukon, and Seward Peninsula is one of the great centers for placer mining in the Territory. It must be born in mind, however, that during the open season water transportation would come in direct competition with any railway built to Nome.[34]

Despite the initial enthusiasm of its promoters the Alaska Short Line Railway venture languished. Unable to attract sufficient capital during 1904-06 the company suffered from the economic effects of the Panic of 1907. As a result, by 1908 $150,000 had been spent on surveys and exploration, but only one map of definite location for the first 20 miles of the route westward from Iliamna Bay had been filed.[35] When the House Committee on the Territories examined the proposed railway's work to date in February 1909 it noted:

> The experience of all companies seeking to build railroads in Alaska appears to have been repeated in the case of this company. It is difficult to induce the investment of capital in a distant country about which investors have little accurate information as to resources capable of sustaining permanent and profitable transportation enterprises.[36]

Despite continuing efforts to attract capital, complete final surveys, and obtain formal approval for rights-of-way the Alaska Short Line Railway never commenced construction and apparently ceased to exist sometime in 1912.[37] The death knell of the project occurred when the Alaska Railroad Commission examined the route as part of its study of all proposed railroad routes in the territory. While the commission found the route to possess promising mineral and water resources, it noted that the region contained no high-grade coal deposits and few timber and agricultural possibilities, and its hope of obtaining tonnage from the Bristol Bay fisheries was remote. Thus, the route held little promise of immediate value and was "too far to the southwest to permit its use as a trunk line into the interior." The commission evaluated Tuxedni, Iliamna,

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34. Alfred H. Brooks, "Railway Routes," in U.S. Department of the Interior, Geological Survey, Bulletin 284, *Report on Progress of Investigations of Mineral Resources of Alaska In 1905* ((Washington, Government Printing Office, 1906), p. 16.

35. U.S. Congress, House, Committee on the Territories, *Railroads in Alaska, Letter from the Secretary of the Interior . . .*, 60th Cong., 2d Sess.., 1908, H. Doc. 1201, p. 5.

36. U.S. Congress, House, Committee on the Territories, *Alaska Short Line Railroad*, 60th Cong., 2d Sess., 1909, H. Rept. 2095, p. 2. Also see U.S. Congress, Senate, Committee on Territories, *Extending Time for Construction of Alaska Short Line Railroad*, 60th Cong., 2d sess., 1909, S. Rept. 885, pp. 1-2, and U.S. Congress, Senate, Committee on Territories, *Alaska Short Line Railroad, In Alaska*, 60th Cong., 2d Sess., 1909, S. Rept. 1072, pp. 1-3.

37. Theodore Flammer, Fiscal Agent, The Alaska Short Line Railway and Navigation Company to the Hon. Secretary, Department of the Interior, April 1, 1912 (and enclosures), RG 49, Division F, Railroad Right-of-Way Files, Act of 1875, Box 62, File – "Alaska Short Line Ry. & Navigation Co. of Wash.," National Archives and Records Administration, Washington, D.C.

and Iniskin bays as potential terminals for the route. While the last two-named harbors were not suitable "for deep-draft vessels engaged in large commerce," Tuxedni Harbor, while ample for shipping, was an impractical terminal because the rugged topography around its perimeter prohibited construction across the mountains to the Lake Clark shore. The commission estimated the cost of constructing the Alaska Short Line Railway to be $22,199,000, or $55,400 per mile of track, well above the original estimates and capitalized stock of the company.[38]

MINING OPERATIONS IN THE MULCHATNA RIVER REGION

Although the Mulchatna River diggings are not within the present borders of the park and preserve, work there represents a significant part of the Lake Clark region's mining activity. The Mulchatna operations played a role in the early prospecting of the Lake Clark-Iliamna Lake region, because they contributed to the influx of miners into the area.

There is an undocumented report of mining in the Mulchatna basin in 1887-88 by a party of Yukon prospectors who crossed over to the Kuskokwim, coasted Bering Strait and Bristol Bay, and ascended the Nushagak and Mulchatna rivers. The pioneers built a water wheel to convey water to wash their sandbar diggings. Fine gold existed in the black sands, but shoveling by four men quickly buried the riffles, making it almost impossible to amalgamate the gold. The heavy black sand prevented the gold from reaching the quicksilver in the riffles.[39]

When Josiah E. Spurr conducted an expedition through southwestern Alaska in 1898 he gathered data on the Mulchatna gold placer operations. He noted:

> As early as 1890 three prospectors, Harry Mellish, Percy Walker, and Al King, are said to have ascended the Mulchatna 200 miles and there to have found gold, which, however, was too fine and flaky to save. A few prospectors have been wintering on the Mulchatna the past season (1898), but the results of their explorations are not yet known. From one of them, Mr. Murkle, who came back after a month or two, the writer learned that fine colors had been found on the Mulchatna but none on the Swan.[40]

The *Valdez Prospector* of April 17, 1902, reported on a voyage of the *Excelsior* to Iliamna Bay on Cook Inlet to land a party bound for the Mulchatna. Although the party experienced considerable difficulty in crossing from Iliamna Village to the Mulchatna, the men reported "very

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38. U.S. Congress, House, *Railway Routes In Alaska: Message From the President of the United States Transmitting Report of Alaska Railroad Commission*, 62d Cong., 3d Sess., 1913, H. Doc. 1346, pp. 8, 90-93, 105-06, 109. Also see "Alaska Railroad Commission," in Ronald Lautaret, comp., *Alaskan Historical Documents Since 1867* (Jefferson, North Carolina, and London, McFarland & Company, Inc., Publishers, 1989), pp. 67-75.

39. U.S. Department of the Interior, National Park Service, *Golden Places: The History of Alaska-Yukon Mining With Particular References to Alaska's National Parks*, by William Hunt, 1989, p. 326, and "Unknown Portions of the Territory of Alaska," *The Pathfinder*, II (September 1921), pp. 1-3.

40. "A Reconnaissance In Southwestern Alaska In 1898, by Josiah Edward Spurr," in U.S. Geological Survey, *Twentieth Annual Report*, Part VI, p. 96.

good prospects" from Iliamna Lake and tributary rivers. Samples of the gold "running in sizes from a pin head to a pea," were sent to Seattle for assay.[41]

In 1903 Alfred H. Brooks reported in a USGS publication that prospectors had entered the Kuskokwim River Valley. "Now and again," he observed, "come reports of the discovery of rich placers, but up to the present time these have not been verified." He went on to state that gold had "long been known to occur on the upper waters of Mulchatna River, and the easterly fork of Nushagak River, emptying into Bristol Bay, but has not yet been found in workable quantities." These placers were "said to yield $4 to $5 a day to the man, but their inaccessibility makes them of no commercial value."[42]

In 1909 F.J. Katz, geologist with the USGS, published notes on the Mulchatna gold placers that he had gathered from prospectors while reconnoitering the Lake Clark-Iliamna Lake area that summer. Among other things, he observed:

> On the Mulchatna, from the Koktalee up, and on the Koktalee also, fine flour gold is found on all the river bars. Bed rock has not yet been prospected along those larger streams on account of ground water. Only summer work has been attempted so far and as yet no permanent ground frost has been encountered. It is claimed that after May 15 no thawing is required. Above the forks of the Mulchatna, particularly on the middle fork, the gold so far found is coarser and pay is said to be present. Some of the smaller tributaries carry coarse gold. On one of them two men this summer opened a hole and took out about $8 worth of coarse gold.
>
> The prospecting so far has been confined to the present stream beds. The pay is practically all on bed rock, which is reported by the prospectors to be chiefly slate. The gravels prospected are generally from 4 to 12 feet deep; one hole is 16 feet deep.
>
> Water is plentiful and grades are sufficient for sluicing. Timber is abundant on all the streams.[43]

In 1910 it was reported that numerous prospectors had gone to the Mulchatna region and that "all find much encouragement." Fine gold had been discovered on the tributaries of the river, and "a little money has been rocked off the bars." Because there was no base of supplies "within a radius of about 200 miles," the prospectors had been unable to undertake extensive development work.

To open up the area the Mulchatna Development Company, a Seattle-based firm, was formed in 1910. The company intended to operate a stern-wheel steamer on the river and build a trading

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41. *Valdez Prospectors*, April 17, 1902. An account of the journey of the *Excelsior* and the subsequent experiences of the men may be found in letters written by Webster Brown in the Alaskan Journal of 1900-01. Copies of these letters may be found in the Webster Brown Papers, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks.

42. Alfred H. Brooks, "Placer Mining In Alaska In 1903," in U.S. Department of the Interior, Geological Survey, Bulletin 225, *Contributions to Economic Geology, 1903* (Washington, Government Printing Office, 1904), p. 48.

43. F.J. Katz, "Gold Placers of the Mulchatna," in U.S. Department of the Interior, Geological Survey, Bulletin 442, p. 202.

post and sawmill. By the end of the summer the company hoped to establish a base of supplies at the head of the river's navigation at a town site to be known as "Mulchatna."[44]

In June 1910 John Kinney discovered gold on the bench of Bonanza Creek, a tributary of the Mulchatna. The subsequent activities on the Bonanza were described by an anonymous writer who was an obvious booster for the largely unexplored region:

> The first ten pans washed averaged forty cents to the pan, and the coarsest piece weighed 28 cents. The bench is about 85 feet high and steep enough to permit the lowering of the gravel to the creek by a sliding car. Kinney worked about 125 yards of the gravel and cleaned up nearly thirteen ounces of gold. This bench is not large enough to warrant the expense of bringing water up to it. So far as known there is no permanent frost in any of the gravels of the upper courses of this watershed. However, pick and shovel methods have reached their limit, as the flow of water is so heavy through the gravels that it is impossible to sink to a depth of more than ten to fifteen feet even with modern pumps.

The writer also noted that prospecting had been conducted on the Kakhtul River which flowed into the Mulchatna several miles above the confluence of that stream and the Tikchik River:

> Pans running ten cents are not uncommon, but the ordinary pick and shovel and sluice box methods, as generally pursued, will not be successful, as stated above, for the black sand occurs in the gravels to such an extent as to make amalgamation of the gold difficult. Probably more systematic prospecting has been done on this stream than on any of the others of the Mulchatna drainage, and an average estimate of some half dozen prospectors who have spent considerable time on this stream places the value to be recovered from these gravels at about $1.50 per yard. This estimate applies to the surface gravels and the bars.

Other miners were also active in the Mulchatna region during 1910. These included J.W. Walker, Otis M. "Doc" Dutton[45], and Joe Kackley, all of whom were based at Tanalian Point on Lake Clark. They found coarse gold on Bonanza Creek "with pans running as high as ten cents." Chris Hansen took out four ounces of coarse gold "by hand methods" from Tom Creek, a tributary of Bonanza. Dave Johnson located some ground in the area, bonded it to others, and left "for the States." O.B. Millett, then of Iliamna, sunk six holes with a hand drill, running from 6 to 19 feet in depth, and found coarse gold in each, the pay "running as high as twenty cents to the pan."

The writer noted that while the area was remote, it was "far from difficult of access." He stated:

> The Kvichak River affords a means of access by way of Iliamna Lake during the summer season, but the easiest and quickest route is probably via Iliamna Bay on Cook

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44. Bill Styles, "Developing Another Portion of the Mineral Empire of Alaska," *Alaska-Yukon Magazine*, X (July 1910), pp. 132-33.

45. Dutton, a well-known individual who lived in the Lake Clark-Iliamna region for many years, was variously known as Dr., Doc, and Dock. Dutton was a medical doctor as well as a miner; he occasionally did medical work in the area. Sara Hornberger, "Overview of Historic Contact in the Lake Clark Study Area," in Linda J. Elanna, ed., *Lake Clark Sociocultural Study, Phase I* (Anchorage?, NPS, 1986), p. 4-32; Walter Severson, interview by John Branson (LACL), 1992.

> Inlet, thence over a trail for thirteen miles to the lake. For the past four years a pack train of four animals has been available for freighting. From Iliamna Lake the route lies down the lake to the Nondalton river and up this river to Lake Clark, thence up the Chulitna River. After leaving Iliamna Lake there are two short portages of five and one-half and four miles respectively, the rest of the trip being entirely by water. There is a store at Iliamna and one at Nondalton and another at Six-Mile Lake, a tributary of Lake Clark. These stores carry principally native supplies, but will carry supplies for miners whatever the demand warrants, and their prices are very reasonable.[46]

Mining activities continued in the Mulchatna region during the pre-World War I years, although the amount of production appears to have been low. In 1912 it was reported that prospectors "directed their attention to the benches, and encouraging results" were obtained on Bonanza and Ptarmigan creeks.[47] The following year the USGS noted that "a few [miners] are still prospecting in the Mulchatna placer district."[48]

When a USGS expedition reconnoitered the Lake Clark-Central Kuskokwim region in 1914, it did not visit the Mulchatna diggings but gathered information on its mining activities. Philip S. Smith, leader of the expedition, summarized the party's findings:

> In 1914 the only prospecting for gold in the Mulchatna basin is reported to have been on Big Bonanza Creek. This stream apparently heads in an isolated group of hills, and its middle course lies in a steeply incised gorge and its lower part in the rather widely open gravel-floored lowland of the Mulchatna and its tributary, the Chilikandresten. A small camp, consisting of about six persons, has been established. This place was not visited but from what are believed to be reliable reports it was learned that a hole 65 feet deep had been recently sunk to bedrock and gold discovered. Granitic intrusives cutting the shale country rock were found in the hills south of this creek, and probably their contacts were the source of the mineralization. No information as to the value of the placer found has been received, and the lack of actual investigation of the region makes conjectures as to the probable value almost worthless....
>
> On Big Bonanza Creek, a tributary of the Mulchatna, supposed to enter its northern branch about 3 miles above the camp of July 12, some placer mining has been done, and four to six persons are said to be living on the creek. The settlement was not visited but is reported to consist of only a few cabins. Some old caches below it on the Mulchatna indicate that supplies are brought up the river by poling boat.[49]

Although a large number of claims were staked during the "small stampede" to the upper Mulchatna basin during 1912-14, little gold was recovered. No ground was found that "could be worked at a profit under the conditions then prevailing," and in 1929 the USGS reported that

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46. "Unknown Portions of the Territory of Alaska," pp. 1-3.

47. Brooks, "The Mining Industry In 1912," in U.S. Department of the Interior, Geological Survey, Bulletin 542, p. 44. Sporadic prospecting was also carried out on nearby Scynneva and Pass Creeks during this period.

48. Brooks, "The Alaska Mining Industry In 1913," in U.S. Department of the Interior, Geological Survey, Bulletin 592, p. 64.

49. U.S. Department of the Interior, Geological Survey, Bulletin 655, pp. 38, 136-37.



Prospecting for gold in the Bonanza Hills during the winter of 1935-36, using the Airplane Placer Drill to locate bedrock. Charlie Wolff (left) and Charlie Dennison (right) were from Tanalian Point, while Martin "Poykin" Johnson (center) was from Naknek. Several men from Nondalton joined them prospecting in the Mulchatna drainage. The prospectors received logistical support from pilot Roy Dickson and dogsleds from Nondalton.

Courtesy of Martin Johnson, Sr.

"no serious mining has since been done there." If "the region were less remote and the cost of hauling in supplies and equipment not prohibitive," it was thought that some ground on Bonanza Creek "might be profitably worked."[50]

Although mining activity in the Mulchatna region declined after 1914, there were periodic attempts to prospect the area in subsequent years. O.B. Millett, one of the original claim locators, prospected his six claims on Bonanza Creek for several years in the 1910s. During the mid-1920s he brought a 4-inch hand drill and hand pump to test the narrow valley alluvials. With values too low, small scale operation was impractical and Millett only performed assessment work for some years thereafter. During the early 1930s he optioned 30 placer claims on the upper end and 40 on the lower end of the claims he had staked in 1910. In 1934 his efforts to interest a mining company in the placers was unsuccessful. The following year he signed an agreement with William Hill and associates to drill the property, and a 4-inch Hillman Airplane Drill was taken to the site some 70-80 miles from Nondalton. After the drill arrived at Bonanza Creek, however, no holes were drilled because of lack of funds, and the venture was abandoned.

In 1946 four men located 27 claims on Bonanza Creek for an undetermined mining company. No work was done on them, however, and the claims were dropped.

During the late 1950s Terry Gill, who had conducted assessment work on the Portage Creek placers near Lake Clark for Howard Bowman in 1958, began prospecting in the Bonanza Creek drainage using hydraulic and hand methods. He established a camp at the mouth of Little Bonanza Creek, and by 1961 had staked some five miles of ground, including the areas where most of the earlier mining activities had been centered.[51]

Although Gill would continue prospecting through the 1970s, mineral production remained low. In 1973, for instance, Edward H. Cobb wrote that Bonanza Creek and its tributaries, Pass and Scynneva creeks

> have been extensively prospected, but production probably has been less than 150 fine ounces of gold. Quartz veins, some containing a few sulfide minerals and a little free gold, are the probable source of the gold in the creek gravels. The valley of Bonanza Creek, though narrow, might be capable of supporting a small dredge or a dragline operation under favorable economic conditions.[52]

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50. Capps, "The Lake Clark-Mulchatna Region, Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 824-C, pp. 127-154.

51. Martin W. Jasper, "Bonanza Creek Placers, Lake Clark Quadrangle," in State of Alaska, Department of Natural Resources, Division of Mines and Minerals, *Report for the Year 1961* (Juneau, 1961), pp. 59-60, and State of Alaska, Department of Natural Resources, Division of Geological and Geophysical Surveys, Alaska Open File Report 118, *Preliminary Bedrock Geology and Mineral Resource Potential of West-Central Lake Clark Quadrangle, Alaska* by G.R. Eakins, W.G. Gilbert, and T.K. Bundtzen (Juneau, August 1978).

52. U.S. Department of the Interior, Geological Survey, Bulletin 1374, p. 12.

OIL AND GAS PRODUCTION

In July 1957 the Richfield Oil Company struck oil in the Swanson River field on the Kenai Peninsula, thus inaugurating operation of the first commercial petroleum field in Cook Inlet. Exploration and mapping of petroleum reserves were extended throughout the Cook Inlet region and met with similar success. The Kenai oil boom intensified with construction of a pipeline and marine terminal in the late 1950s and a Standard Oil refinery at Nikiski, north of Kenai, in the early 1960s. Nearly 500 men were employed in the Cook Inlet oil fields by 1960, drilling wells, constructing pipelines and refineries, and conducting exploratory surveys. A second phase of the oil boom commenced with discovery of offshore oil discoveries in Cook Inlet during 1963-65. Oil companies began opening offices in Anchorage, giving the city a stable base for its economy and future growth. The boom also contributed to the rapid growth and development of the Kenai Peninsula, its population more than doubling from 6,000 to 14,000 between 1960 and 1970.[53]

The development of the oil and gas industry in the Cook Inlet region, which soon outdistanced other economic activities in the inlet in dollar value, would have a major impact on the coastal areas near and adjacent to present-day Lake Clark National Park and Preserve. By 1972 a number of oil and gas fields were located in the inlet and 281 wells were drilled in productive fields. The following fields were in operation in the form of offshore platforms or onshore sites along the west coast of the inlet in the general area of the current park that year:

FIELD	TYPE	OPERATOR
Trading Bay	Oil	Atlantic Richfield Co.; Union Oil Co. of California; Texaco Inc.
McArthur River	Oil and Gas	Union Oil Co. of California; Marathon Oil Co.; Atlantic Richfield Co.
Granite Point	Oil	Mobil Oil Corp.; Amoco Production Co.
Redoubt Shoal	Oil	Amoco Production Co.
Beluga River	Gas	Standard Oil Co. of California
Nicolai Creek	Oil	Texaco Inc.
Moquawkie	Gas	Mobil Oil Corp.
Kaloa	Gas	Amoco Production Co.
West Foreland	Gas	Amoco Production Co.

In addition, construction of a deep draft marine tanker terminal was begun at the mouth of the Drift River in Redoubt Bay in 1966. By the early 1980s six oil companies shipped crude oil through the Cook Inlet Pipeline Company's line from shore facilities owned by the individual firms on the west side of the inlet to the terminal. From there the oil was loaded on to tankers for delivery to ports in the lower 48 states. Shipments of crude oil from Drift River amounted

53. Further information on the growth and development of the Kenai Peninsula and the impact of the oil boom may be seen in U.S. Department of the Interior, Bureau of Land Management, Alaska OCS Socioeconomic Studies Program, *Lower Cook Inlet Petroleum Development Scenarios Sociocultural Systems Analysis*, by Stephen R. Braund, Stephen R. Behnke, Stephen R. Braund and Associates, January 1980, pp. 43-48, 173-82, and "The Native, Russian and American Experiences of the Kenai Area of Alaska," Prepared for the Conference on Kenai Area History, Sponsored by the National Endowment for the Humanities, Alaska Humanities Forum, Mayor's Advisory Committee on History and Tradition, Kenai, Alaska, November 7-8, 1974 (copy on file at Homer Society of Natural History, Homer, Alaska).

to about 60,000,000 barrels per year in the early 1970s, but this total declined during the following decade. In 1982 some 24,700,000 barrels of oil passed through the facility.[54]

The oil and gas production of the Cook Inlet region, including that of the Homer and Hope districts of the Kenai Peninsula, far outshadowed all other mineral commodities after the late 1950s. Between 1959 and 1972 the value of this hydrocarbon production was more than $1-1/4 billion and constituted almost the entire production of Alaska.[55]

MINING ACTIVITIES WITHIN PRESENT-DAY LAKE CLARK NATIONAL PARK AND PRESERVE

The region between Cook Inlet and Bristol Bay, where Lake Clark National Park and Preserve is located, held few mineral deposits of value to prospectors. In 1902 Wilfred H. Osgood of the U.S. Biological Survey conducted a reconnaissance of the area. Following his survey of the Lake Clark region Osgood observed:

> The stream entering the extreme head of the lake [Lake Clark] is also of good size, about 80 feet wide at the mouth and navigable for small boats some 20 miles. It is called Chokotonka River by the natives, but several prospectors who visited it had designated it as Clark River. Portage or Achteedeedung Creek, which enters the north side of the lake about half way between Keeghik and the mouth of the Tleekakeela is the only stream on which gold has been found. About half a dozen men have worked on this creek and secured a few fair samples of placer gold, but nothing that pays for working.[56]

When Martin and Katz conducted their USGS expedition to the Iliamna Lake-Lake Clark area in 1909 they gathered the first detailed data on mining claims in the region. They noted several lode claims at Iliamna Bay on Cook Inlet and along the shores of Iliamna Lake, particularly at Pile Bay, that showed evidence of copper, silver-bearing lead, and zinc. The only lode claim within the boundaries of present-day Lake Clark National Park and Preserve that Martin and Katz reported was the Hardenburg prospect on Kasna Creek about 1½ miles from the south shore of Kontrashibuna Lake.

The Hardenburg was a copper-iron prospect located some ten miles from Tanalian Point on Lake Clark which was "reached by trail and boat." The mine claims had been located in 1906 by Charles Brooks and Count Charles von Hardenburg. The geologists noted that "one small hole"

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54. Joint Federal-State Land Use Planning Commission, Resource Planning Team, Minerals Section, *Inventory Report, Minerals, Energy, and Geology, Southcentral Region*, Anchorage, Alaska, 1974, pp. 60-75. Alaska Geographic, *Anchorage and the Cook Inlet Basin*, p. 143; and *Cook Inlet Environment*, V, 4-5.

55. U.S. Department of the Interior, Geological Survey, Bulletin 1307, *Synopsis of the Mineral Resources and Geology of Alaska*, by Edward H. Cobb (Washington, Government Printing Office, 1974), p. 13.

56. Osgood, "Lake Clark, A Little Known Alaska Lake," pp. 328-29. Among the early prospectors at Portage Creek were Oliver B. Millett, the miner who along with William Dietering discovered the great "white channel" deposits in the Klondike. State of Alaska, Department of Natural Resources, Division of Geological and Geophysical Surveys, Alaska Open-File Report 120, *Portage Creek Gold Placers, Lake Clark Quadrangle, Iliamna District, Alaska*, by T.K. Bundtzen and J.T. Kline (Juneau, June 1979), p. 2 (Open-File Reports, Alaska Resources Library, Bureau of Land Management, Anchorage).



A prospector on the beach at Tanalian Point with several freight sleds before World War I. Tanalian Point was first identified by geologists George C. Martin and Frank J. Katz in 1909; it served thereafter as a jumping off place for prospects along Mulchatna River, Portage Creek, and Kasna Creek.

Courtesy of Helena Seversen Moses

had been opened on the prospect in what was termed the "Shamrock Ledge," a mineralized deposit at an approximate elevation of 2,300 feet. Martin and Katz continued their report:

> No development work had been done except the building of a house and a cache on the lake and a trail from them to the prospect. The ledge is in a limestone and approximately parallel to its strike – about north (magnetic). The contacts of the mineralized body with the limestone are masked by slide and soil. Within a zone about 75 feet wide are various bands, some of specular hematite with a little quartz chalcopyrite; others of micaceous specular hematite, chalcopyrite, quartz, and calcite composed in part of amphibole; and still other small irregular stringers of chalcopyrite, pyrite, and quartz – all in a much shattered dense limestone. There is very little oxidized material, probably because the region has been thoroughly scoured by glaciation. In the absence of exploratory tunnels, shafts, etc., and because of the masking talus and soil it is difficult to make out the relations of the mineralized bands or to estimate their proportions. There appear to be two hematite bands, 7 to 10 feet thick, and three or four zones of similar width which contain chalcopyrite with other minerals. Perhaps the total chalcopyrite aggregates 8 per cent of the mass and may be locally segregated in bodies large and rich enough to constitute ore.
>
> This prospect is about 40 miles from Iliamna Bay and now is accessible only by a roundabout route through Iliamna and Clark lakes. Its development, therefore, is sure to be retarded. A timber supply more than sufficient for development purposes exists immediately below the prospect. Water rights and a power site have been staked by some of the men interested in the property at the falls of Kontrashibuna River, the outlet of Kontrashibuna Lake, 8 miles from the prospect. There is a fall of 60 feet here and a large flow during the summer months, so that sufficient power might be developed to assist materially in the working of the claims. There is another fall on the river entering the head of Kontrashibuna Lake.

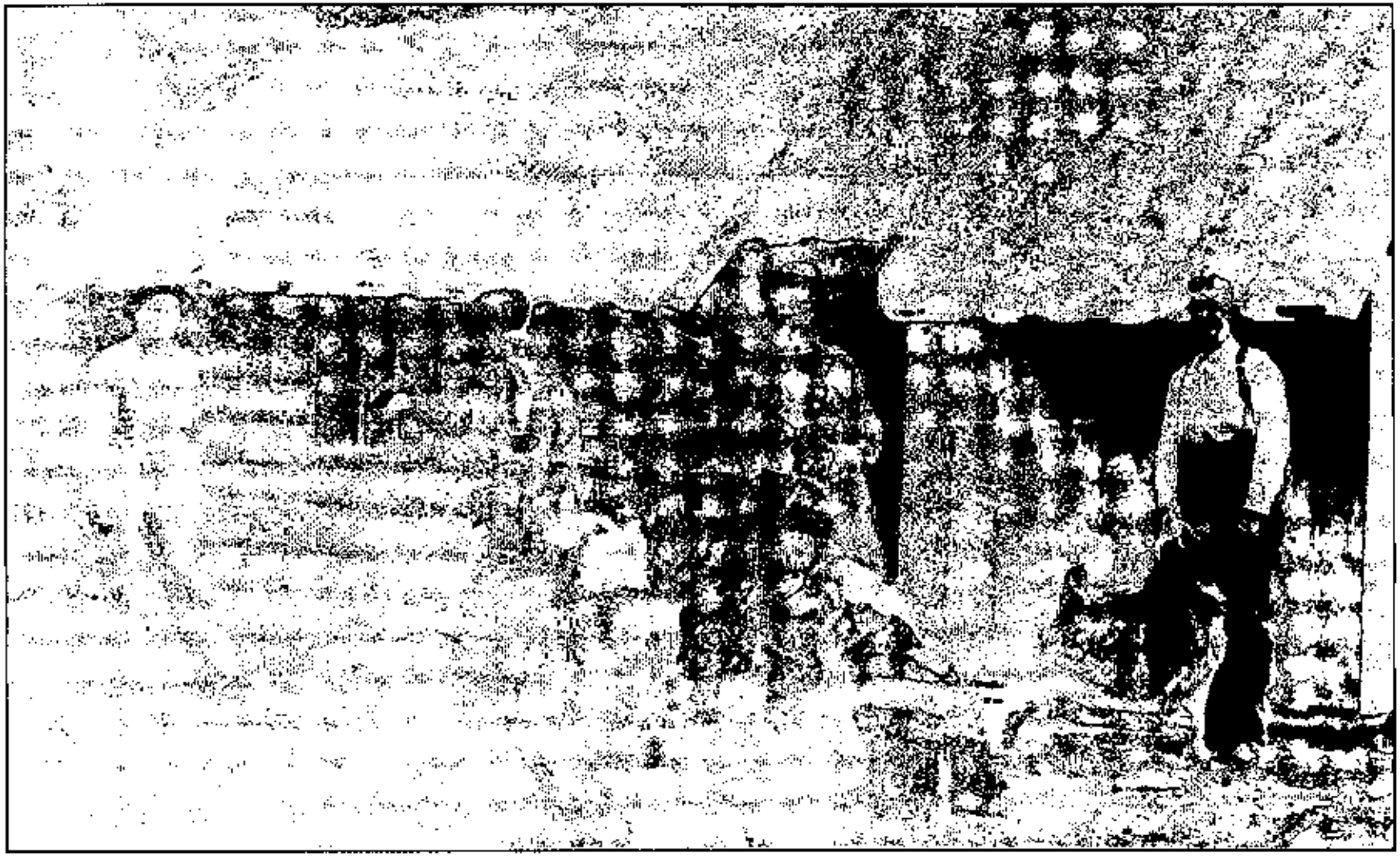
Martin and Katz observed that there had also been "some desultory effort to prospect placers on the streams tributary to Lake Clark from the north." These endeavors included:

> From Caribou Creek, a northeasterly tributary of Chulitna River, fine gold but no pay is reported. On the headwaters of Kijik River the alluvium of Kellet Creek and Ingersol, Lincoln, and Franklin gulches is reported to be auriferous. On Portage Creek, entering Lake Clark about 35 miles above the outlet and heading against the streams just mentioned, one man, now dead, is said to have done considerable work. He took out about $40, all coarse gold. The alluvium was found to be about 12 feet deep and composed chiefly of large glacial boulders.[57]

During 1911 a party of three men, J.W. Walker, Doc Dutton, and Joe Kackley, were encamped at Tanalian Point on Lake Clark, prospecting, trapping, and hunting. Doc Dutton and Joe Kackley are said to have settled at Tanalian Point around the turn of the century, remaining in the area until their deaths at ages 90 and 84 in 1949 and 1944, respectively. Prior to coming to

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57. G.C. Martin and F.J. Katz, "Outline of the Geology and Mineral Resources of the Iliamna and Clark Lakes Region," pp. 193-200, in U.S. Department of the Interior, Geological Survey, Bulletin 442, *Mineral Resources of Alaska: Report on Progress of Investigations in 1909* (Washington, Government Printing Office, 1910). Also see U.S. Department of the Interior, Geological Survey, Bulletin 485, pp. 121-22, 126. The latter source noted that two men had netted several hundred dollars in coarse gold as a result of the prospecting efforts.



Otis M. "Doc" Dutton, Mary Ann Trefon, Arthur Tullock, and Joe Kackley at Tanalian Point around 1916. Two children are standing in front of Ms. Trefon; they are her sons Alex (born in 1912) and Pete (born in 1914). Dutton and Kackley homesteaded at Tanalian Point for more than thirty years and the Trefons lived there for nearly as long.

James Carter Collection, Alaska Historical Library

Lake Clark to engage in gold placer mining on Portage Creek, they had been involved in oil drilling efforts at Oil Bay on the Iniskin Peninsula.[58] In a letter to A.S. Tulloch in Gary, Indiana, on November 25, 1911, Walker described the adventures of the three men at Tanalian Point:

> Your letter and pictures received sometime ago and this mail brought us the papers and flag for "Secar." We took turns and read the papers all through to each other for fear we would miss something. Joe is figuring on splitting out a straight spruce and we are going to take our sick tent and make a flying machine....
>
> Joe and I have our out fit put up and waiting for the wind to stop blowing to cross lake. We are on our way to Tutna Lake to try for a few marten skins for a set of furs. If we can't get marten look out for fox.
>
> There is no news to tell you. Mulchatna is still at a stand still. It seems everybody wants the other fellow to do the digging. We are going to run a drain on Portage Creek next spring. Brown and Gleason took out some good money last year. I had a drill sent from home and we intend to put it on Bonanza Creek next year. A short time will determine how far it is to Bedrock.
>
> The grouse rabbits and ptarmakin are plentiful everywhere now....We had a duck hunt on Chulitna this fall and got all we wanted. While we were camped in the old place (where you and Tom camped) a fat bull moose walked out on the bar on the island in river and I got action. It wasn't far to pack as we dragged the carcass without skinning it in the boat and took it home.[59]

The men had experienced a harrowing escape form death the year before. They had built a cache at Tutna Lake, some 30 miles northwest of present-day Nondalton. On the back of a photograph of the cache Walker described their experiences there:

> Our main cache or storehouse at [Tutna] Lake built of log split in two with whip-saw smooth side on the inside, sets on pests 7 ft. high to prevent bear, wolverine, and field mice from getting in and destroying the provisions, when we leave we remove the ladder, Feb. 2nd 1910 Doc, Judge and I narrowly escaped freezing to death within 75 yds. of this place. Had travelled 18 miles pulling a sleigh weighing 205 lbs. over an open country without a tree to break the wind. It was 70 below zero and considerable wind. We arrived 1 & ½ hours after dark. Judge could not see or hear and could hardly stand up. I was but little better with a great effort kept from dropping into an unconscious condition like going to sleep. Did not feel cold or suffer any. A drink of even water

58. Historic American Buildings Survey, *A Survey of the Historic Architectural Resources In Lake Clark National Park and Preserve*, pp. 7-8.

59. J.W. Walker to A.S. Tulloch, November 25, 1911, James Carter Collection, Photo Collection Album 148, Alaska Historical Library, Juneau. "Secar" referred to Chief Secara, an old Tanaina chief living at Old Nondalton who had requested an American flag. The Carter Collection consists of photographs showing mining-related activity in the Lake Clark-Iliamna Lake region during the early 1900s.

would have been of great value. We had no nourishment or drink all day. Worked extremely hard.[60]

Limited mining endeavors continued in the Lake Clark area during the pre-World War I years. In 1912 a "little coarse gold was taken from the placer of Portage Creek."[61] During 1913 the USGS reported that with "the exception of the recovery of a few hundred dollars' worth of gold from the gravels of Portage Creek," there "was no productive mining in the Iliamna region." Prospecting and development of copper and gold bearing lodes was conducted, however, "on claims near Kontrashibuna Lake" and "on the Gleason claims, near Lake Clark."[62]

When the USGS expedition led by Philip S. Smith visited the Lake Clark region in 1914 the men found that few mines or prospects were being developed. "Practically no natives" were employed in the mining endeavors. The few who were employed in the Iliamna and Lake Clark areas were paid about $2 per day and board. Most of the Natives were "paid in trade," thus reducing the actual cost of labor "to considerably less than if they were paid in cash."

Smith discussed the problems hindering full-scale mineral exploration and development in the region. He summarized the difficulties:

> High prices are inevitable because of the long transportation all supplies must undergo, the danger of loss or damage to which they are subjected in transit, the short time available for bringing them in, the need of an exceptionally large reserve supply, the financial uncertainty as to the stability of the boom towns and the pecuniary resources of the merchants in newly organized camps, the high wages and the consequent high overhead and construction charges, the social and educational disadvantages incident to life in a remote region, which justify a larger income from investments, and the many other real though less tangible hardships to which all frontier life is subjected.

Access to the Lake Clark region also posed problems for mining development. Smith observed that practically "the only ice-free winter route from the States to this part of Alaska terminates at a small bay on the west side of Cook Inlet." From Iliamna Bay the route to the interior crossed "several ranges of mountains" and presented "many difficulties, which add to the cost and time of transportation." In winter transportation was "carried on mainly by dog teams or on well-beaten trails by horse-drawn sleds." Throughout the Lake Clark region "no winter roads and scarcely any trails" were "kept open except for purely local use." Although water power sites were available in the Lake Clark-Iliamna Lake region, no "water powers with volumes larger than a few sluice heads" had been developed.

Smith noted that the mineral resources of the Lake Clark region had been only "slightly explored." Gold placers had been operated on the Koksetna and Kijik rivers, and gold lodes were

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60. Written caption on back of Photograph No. 37, James Carter Collection, Photo Collection Album 148.

61. Alfred H. Brooks, "The Mining Industry In 1912," in U.S. Department of the Interior, Geological Survey, Bulletin 542, *Mineral Resources of Alaska, Report on Progress of Investigations in 1912* (Washington, Government Printing Office, 1913), p. 44.

62. Alfred H. Brooks, "The Alaska Mining Industry In 1913," in U.S. Department of the Interior, Geological Survey, Bulletin 592, *Mineral Resources of Alaska: Report on Progress of Investigations in 1913* (Washington, Government Printing Office, 1913), p. 64.

being prospected at Kontrashibuna Lake. Copper deposits had been prospected in the vicinity of Lake Clark, but most of the copper was combined with sulfur, thus forming the mineral chalcopyrite. Molybdenite, the sulphide of molybdenum, had been found in small quantities west of the north end of Lake Clark. The ore contained some gold, and it was mainly for that reason that the prospects were being worked.

When the USGS party arrived at Lake Clark they found no mining activity other than prospecting on the claims at the head of the lake. Operations "on these consisted of little more than the usual work required by law." A new quartz vein had recently "been discovered on the upper part of Kijik River, about 10 miles northwest of the extreme head of Lake Clark." This lode was reported

> to cut granitic rocks and is probably a pegmatite vein. The gold content is reported to be sufficiently high to make mining profitable, but the great expense necessary for opening a property at this place will probably prevent active development in the near future. Associated with the quartz and gold in this vein are small, irregularly distributed crystals of molybdenite, the sulphide of molybdenum. This mineral is in platy bluish silvery flakes, the largest aggregates of which are about half an inch in diameter. The occurrence of the molybdenite and the presumable pegmatitic character of the vein point to the conclusion that this gold-bearing vein was formed at moderate to high temperatures.[63]

On August 10, 1915, the nine claims of the Kasna Creek copper deposit near Kontrashibuna Lake were patented to Richard M. Edwards of Houghton, Michigan. Edwards had acquired the claims in 1910. Two examinations of the claims were made for him by Alexander Legatt of Butte, Montana, in 1911 and W.R. Crane of Pennsylvania State College in 1913. The claims were surveyed under U.S. Mineral Survey No. 973, and thereafter Patent No. 486281 was granted to Edwards. The claims, known as Cyanide, Gilt Edge, Kindall, Barnes, Peary, Cook, King, Platsburg, and Belle Lode, covered 175.292 acres. To date three tunnels had been dug on the claims, the total estimated value of the improvements being $6,100.[64]

Little mining activity was reported in the Lake Clark region during World War I. Some minor amounts of placer gold were produced at Portage Creek in 1917 and 1918. In the latter year a

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63. U.S. Department of the Interior, Geological Survey, Bulletin 655, pp. 127-32, 137, 150-51, 153. Also see Philip S. Smith, "Mineral Resources of the Lake Clark-Iditarod Region," in U.S. Department of the Interior, Geological Survey, Bulletin 622, *Mineral Resources of Alaska, Report on Progress of Investigations in 1914*, by Alfred H. Brooks and others (Washington, Government Printing Office, 1915), pp. 247-71, and Philip S. Smith, "Occurrences of Molybdenum Minerals In Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 926C, *Mineral Resources of Alaska: Report on Progress of Investigations in 1939* (Washington, Government Printing Office, 1940), pp. 190-91.

64. U.S. Department of the Interior, Bureau of Mines, Report of Investigations 4828, *Investigation of Kasna Creek Copper Prospect, Lake Kontrashibuna, Lake Clark Region, Alaska*, by R.S. Warfield and F.A. Rutledge (Washington, Bureau of Mines, December 1951), p. 3. Also see "Kasna Creek Copper Prospect, Lake Clark National Park," ca. 1989, Logan Hovis Files, National Park Service, Alaska Regional Office, Anchorage.

deposit of iron ore (magnetite) was reported "at Tuxedni Bay, on the west shore of Cook Inlet."[65]

The magnetite deposit was located on Magnetic Island at the edge of the tidal marsh on the north shore of Tuxedni Bay "near its head." The island is within the present-day boundaries of the park and preserve. The claims were worked and assayed during 1920-21 by Roy A. Trachsel of Anchorage. The deposit reportedly cut "the volcanic rocks at a point not far distant from the contact of the granitic intrusive" that was "exposed about the upper end of Tuxedni Bay." A considerable body of the iron oxide was "in view at this place" and was "not far distant from the deep channel extending northwestward from Snug Harbor toward the head of the bay."[66]

Later in September 1951 Arthur Grantz and R. Werner Juhle of the U.S. Geological Survey conducted a field investigation of the magnetite deposits on the island. The only apparent development of the deposit on the west side was exposed in a sea cliff. It included "a prospect hole about 5 feet wide and 3 to 5 feet high, which had been driven about 13 feet horizontally beyond the end of a sea cave." Where the deposit was exposed in a sea cliff, it was 30 to 35 feet thick, and it extended some 110 feet through outcrop and beneath a cover of soil and vegetation. No development was evident at the deposit on the east side of the island.

The investigators took samples from the two deposits for testing and analysis. The samples from the western deposit contained "50 percent or more of iron as metal, with no more than a few percent of the iron occurring in garnet or possibly other silicate minerals." For use as iron ore the samples contained undesirable amounts of sulfur and phosphorus.

The richest sample from the eastern deposit "contained 25.8 percent of iron and 0.01 percent of sulfur." About one-fifth of the iron occurred in silicate minerals. The magnetite content of the deposit as a whole was estimated "to be about 10 to 20 percent." Thus, the investigators concluded that the deposits were not large enough for profitable commercial development.[67] There was no evidence of any ore shipped from the deposits, which in 1967 would be estimated to contain "only a few thousand tons of magnetite-bearing material."[68]

The isolation and relative inaccessibility of the Lake Clark region continued to prevent thorough exploration and assessment of its mineral potential. When a USGS expedition led by Stephen R. Capps visited the area in 1929, for instance, he observed that the area "has been so little visited by white men and is still so incompletely prospected that no fair judgment as to its

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65. G.C. Martin, "The Alaska Mining Industry in 1917," in U.S. Department of the Interior, Geological Survey, Bulletin 692, *Mineral Resources of Alaska: Report on Progress of Investigations in 1917* (Washington, Government Printing Office, 1918) p. 33, and G.C. Martin, "The Alaskan Mining Industry in 1918," in U.S. Department of the Interior, Geological Survey, Bulletin 712, *Mineral Resources of Alaska: Report on Progress of Investigations in 1918* (Washington, Government Printing Office, 1919), p. 35.

66. U.S. Department of the Interior, Geological Survey, Bulletin 789, pp. 55-56.

67. Arthur Grantz, "Magnetite Deposits at Tuxedni Bay, Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 1024D, *Mineral Resources of Alaska, 1954-1955* (Washington, Government Printing Office, 1957), pp. 95-106.

68. U.S. Department of the Interior, Geological Survey, Bulletin 1246, *Metalliferous Lode Deposits of Alaska*, by Henry C. Berg and Edward H. Cobb (Washington, Government Printing Office, 1967), p. 22.

mineral resources can yet be made." Capps went on to elaborate about past mining operations in the area and speculate on its future mineral prospects:

> Mining has been limited to small gold placer-mining operations on some of the tributaries of Lake Clark. The most ambitious attempt to develop the gold placer deposits on any one stream took place in 1910 to 1912 on a creek locally known as Portage Creek, which flows into Lake Clark from the northwest some 10 miles northeast of the mouth of the Kijik River. A number of men worked for three summers on the lower four claims on that stream, and it is reported that the total value of the gold recovered was about $2,000. Desultory mining has been done at a few other localities near Lake Clark, but the results were discouraging, and in 1929 no placer mining was in progress in this region.
>
> In the region between Lake Clark and Iliamna Lake there are reported to be several gold and copper prospects that show considerable mineralization....The outlook for the finding of profitable gold placer deposits in this region is less promising, though possibly small areas of workable ground occur there. The severe glacial erosion within the high mountains is likely to have removed any extensive preglacial accumulations of placer gold that may have existed, and the thick deposits of gravel in the valleys in the foothill belt make it difficult to sink to bedrock and so determine whether or not paying ground is present.
>
> As for nonmetallic mineral deposits of value, little can be said. No coal-bearing beds are known in this region and there is probably no coal here. There is also no likelihood that the rock formations here represented are oil bearing. Certainly the granite and other igneous rocks offer no hope, and the Mesozoic sediments are so highly metamorphosed and so lacking in organic material that the chance that they contain oil pools is remote.[69]

In another publication concerning his USGS expeditions in the southern Alaska Range during 1926-29, Capps observed that "the white men of the region are all fishermen, trappers, or traders, some of whom do some prospecting." As a whole, the region was "as undeveloped as it was 30 years ago," and there was "no immediate likelihood of any improvement in this condition unless mineral deposits of importance" were discovered. The problems of access and virtual lack of knowledge of the area, according to Capps, had resulted in neglect of the southern Alaska Range by prospectors:

> Only in the better-known areas around Lakes Iliamna and Clark has any prospecting of consequence been done, and that by only a few men and at scattered localities. Since preliminary maps of the recently surveyed areas have been issued some interest has been noted in the region, and the quick and easy method of reaching it by airplane has been utilized by a number of trappers and prospectors. It may safely be stated, however, that great areas in this part of Alaska have escaped even a casual examination of their mineral possibilities.[70]

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69. Stephen R. Capps, "The Lake Clark-Mulchatna Region, Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 824C, pp. 153-54.

70. U.S. Department of the Interior, Geological Survey, Bulletin 862, pp. 34-35, 89.



The Fred Bowman family landed at Portage Creek on Lake Clark in April 1936 to begin their placer mining operations at Bowman's Camp. Bob Carlsen of Anchorage flew the Bowmans in a Curtiss Robin and landed amidst a combination of ice and open water. Shown, left to right, are Norma Bowman (1885-1978), Howard Bowman, and Fred Bowman (1890-1959).

Courtesy of Howard Bowman

There are few documentary materials relating to mining activities in the Lake Clark region during the 1930s and 1940s. In 1939 the USGS reported that "the only placer mining in the vicinity" of the lake was conducted by Fred Bowman on Portage Creek. Bowman had commenced mining operations "late in the season," and his operations consisted primarily "in hydraulicking the local stream gravels."[71]

The Bowman mining camp, located approximately one mile north of Lake Clark on the west bank of Portage Creek, is the most significant mining site in the park and preserve because of its long association with mining in the area and its retention of many historic elements reflecting the diverse and evolving activities undertaken at the Portage Creek placers.[72] Bowman acquired nine unpatented placer claims, which have become known as the Bowman Group, along the creek during the mid-1930s and leased their operation to Art Stark and a Stevenson family. Equipment was installed, having been moved in by dogs during the winter, and placer activities initiated, but the Stevensons did not last the first season. Thereafter, Bowman took over the operations and established his main camp on the One Above Discovery claim about 1938. While the Stevensons had employed 10 to 12 people, Bowman never had more than 4 or 5 working for him. Bowman's operation was forced to shut down during World War II since gold mining was considered to be non-essential to the war effort. Thus, Bowman went to Libbyville to work as a blacksmith. In 1945 Bowman resumed working the claims as a bulldozer-hydraulic operation. He continued his operations until his death in 1958. Since then Fred's son Howard has continued to develop and mine the nine claims.[73] In 1960 Terry Gill, a local area placer miner, completed mining and assessment work for Bowman. While an aggregate production figure for Portage Creek is not available, the state of Alaska has estimated that it does not exceed 1,000 troy ounces of gold.[74]

In 1973 the USGS estimated that the total amount of gold taken from the Portage Creek placers to date "was probably worth only a few thousand dollars." Although "desultory mining and prospecting" had been reported "from other streams in the same general area," there had "been no activity on them for many years."[75]

In 1946 the U.S. Bureau of Mines reported that there were a number of copper deposits in the Iliamna Lake district. The district included the nine Kasna Creek claims near Kontrashibuna

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71. Philip S. Smith, "Mineral Industry of Alaska In 1939," in U.S. Department of the Interior, Geological Survey, Bulletin 926A, p. 37.

72. National Park Service, Mining Inventory and Monitoring Program, Cultural Resource Site Inventory Form, Claim: One Above Discovery (AA038769) and Discovery (AA008768), AHRS No.: XLC-089, Field Site No.: LACL-89-001, Prepared by Karen Miller and Logan Hovis August 22, 1989, Files, National Park Service, Alaska Regional Office, Anchorage.

73. Annual Placer Mining Application, Land Use and Water Use Permits and Mining License for Howard N. Bowman, dated January 25, 1985, in File, "Bowman, Howard; Mining Ops," Old Park Ranger Files, Lake Clark National Park and Preserve, Port Alsworth.

74. State of Alaska, Department of Natural Resources, Division of Geological and Geophysical Surveys, Alaska Open-File Report 120, p. 2. Also see "Portage Creek Placer Claims, Lake Clark National Park," ca. 1989, Logan Hovis Files, Alaska Regional Office, Anchorage.

75. U.S. Department of the Interior, Geological Survey, Bulletin 1374, *Placer Deposits of Alaska*, by Edward H. Cobb (Washington, Government Printing Office, 1973), pp. 11-12.

Lake, as well as various claims and prospects in the Iliamna Lake and Kamishak Bay vicinities. "At least two well-financed companies" planned "to start exploration of the various copper deposits "as soon as the reservation which now blankets the region is lifted."[76]

During 1948-49 the U.S. Bureau of Mines investigated the Kasna Creek deposit as part of its Alaska program for the development of critical and strategic materials. The investigation was conducted in cooperation with the St. Eugene Mining Corp., Ltd., of Vancouver, British Columbia, which had acquired an option to the claims from Richard M. Edwards' estate following an examination by Alexander Smith during the summer of 1943. A base camp had been established at the mouth of Kasna Creek, and a trail cleared to the claims. The investigation found that "no production" had been obtained for the prospect, which consisted of two deposits separated by a deep draw – the Gilt Edge and the Barnes. Mineralized ground on the Gilt Edge claim on the north extended about 1,100 feet in length and 250 feet in width, and was some 200-300 feet above the stream bed. Mineralized rock on the Barnes and King claims to the south was about 1,300 feet long and 50 feet wide and formed the east bank of the creek channel. The work involved exposure of the deposits at irregular intervals by approximately 1,225 feet of hand-dug trenches and taking 417 channel samples for analysis.

The investigators found that development at the Gilt Edge consisted of three adits dating from the pre-World War I years. One adit was inaccessible since the tunnel portal had caved in, while another on the Belle claim "did not penetrate the deposit" and was "in the hanging-wall limestone for its entire length." One adit on the King claim was on an old map but could not be located on the ground.

The investigators analyzed samples from the Gilt Edge and Barnes deposits for gold, silver, lead, zinc, and sulfur, but only traces or very small quantities of those elements were found. The average analyses of the samples from the Gilt Edge and Barnes deposits were 0.69 and 1.14 per cent copper, respectively. After eliminating the northern lower-grade part of the Gilt Edge deposit, a composite sample of the two deposits averaged 0.95 percent copper and 27.5 percent iron.[77]

Despite the low commercial value of the Kasna Creek deposits, however, the St. Eugene Mining Corporation continued to conduct periodic exploration work on the claims during the next two decades. During this period various government agencies conducted studies of the deposits. For example, the U.S. Geological Survey carried out stream sediment sampling and bedrock analysis of the Kasna Creek drainage during the 1966 field season. Four years later the Division of Mines and Geology of the State Department of Natural Resources conducted a geological and geochemistry study of the claims for the benefit of "future prospecting and mappers." The latter

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76. U.S. Department of the Interior, Bureau of Mines. Information Circular 7379, *Alaska's Minerals As A Basis for Industry*, by H. Foster Bain (Washington, Bureau of Mines, December 1946), p. 33.

77. U.S. Department of the Interior, Bureau of Mines, Report of Investigations 4828, pp. 1-10.

study noted the existence of scattered flakes of molybdenite in a piece of granite float in the creek.[78]

Between 1965 and 1970 diamond drilling on the Kasna Creek claims renewed interest in the presence of the large contact-metamorphic copper-iron deposit. Mining operations, however, were delayed pending "suitable transportation" and settlement of land status issues under the provisions of the Alaska Native Claims Settlement Act of 1971.[79]

During the postwar years other mining-related investigations were conducted in the Lake Clark region. For instance, during July-August 1949 a four-man USGS team headed by Geologists Robert M. Moxham and Arthur E. Nelson reconnoitered the Iliamna Lake-Lake Clark region, investigating various metalliferous deposits and mining claims for their radioactive content. The examination was conducted on behalf of the Division of Raw Materials of the U.S. Atomic Energy Commission. The geologists noted that in recent years "roads connecting Iliamna Lake with tidewater and with Lake Clark" as well as two new airfields had been constructed in the region, thus improving access and resulting "in renewed interest in mining."

The team visited three sites within the boundaries of present-day Lake Clark National Park and Preserve. At the Kasna Creek copper-iron prospect samples were taken, the radiometric tests giving negative results. Samples of molybdenite-bearing granitic from Joseph Thompson's claim near the top of Kijik Mountain gave no indication of radioactivity.

Radioactivity, however, was detected on six of Thompson's claims at a silver-lead prospect he had staked recently "in the valleys of two parallel western tributaries of the Kijik River, about 7 miles northwest of Kijik." Here silver, galena, sphalerite, chalcopyrite, and pyrite had been found in a shar zone in granitic rock. Radiometric tests were made at several prospect pits on the claims as well as in the surrounding vicinity. The radioactivity in the locality averaged "about double the normal background for the region." The higher readings were thought to be the result of "radioactive minerals sparsely distributed through a large mass of granite country rock rather than from local concentrations of radioactive minerals." None of the three sites was deemed to have commercial potential.[80]

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78. U.S. Department of the Interior, Geological Survey, Open-File Report, *Results of Stream Sediment Sampling and Bedrock Analyses in the Eastern Part of the Iliamna Quadrangle, and at Kasna Creek, Lake Clark Quadrangle, Alaska*, by Bruce L. Reed, 1966, pp. 1-18 (Open File Reports, U.S. Geological Survey, Denver Service Center Library), and State of Alaska, Department of Natural Resources, Division of Mines and Geology, Geochemical Report 20, *Geology and Geochemistry at Kontrashibuna Lake, Lake Clark Region, Southwestern Alaska*, by Gilbert R. Eakins (College, Alaska, August 1970), pp. 2-14, 18.

79. U.S. Department of the Interior, Geological Survey, Bulletin 1368B, *Stratigraphy, Structure and Economic Geology of the Iliamna Quadrangle, Alaska*, by Robert L. Detterman and Bruce L. Reed (Washington, Government Printing Office, 1980), p. B76.

80. U.S. Geological Survey, Geological Survey Circular 207, *Reconnaissance For Radioactive Deposits In the Southern Cook Inlet Region Alaska, 1949*, by Robert M. Moxham and Arthur E. Nelson (Washington, Geological Survey, 1952), pp. 1-4. Also see U.S. Department of the Interior, Geological Survey, Trace Elements Memorandum Report 235, "Interim Report on an Appraisal of the Uranium Possibilities of Alaska," by Helmuth Wedow, Max G. White, and Robert M. Moxham, March 1951, pp. 75-78 (Open File Reports, U.S. Geological Survey, Denver Service Center Library).

During the 1970s and 1980s mineral exploration was conducted along the Johnson River on the hitherto untapped Chinitna Peninsula near the south end of the present-day park and preserve. In 1970 a lode claim was staked on the river. Assessment work on the claim was conducted through 1974 by its owner-operators, Gene Kempf and John Young. Thereafter, work was discontinued and as of February 15, 1977, no commodity had been indicated for the lode claim in the files of the U.S. Bureau of Mines.[81]

During 1982-83 Cook Inlet Region Inc., a Native corporation, contracted with Anaconda Mineral Company to commence exploration work on a 9,200-acre tract along the Johnson River in townships T.1N., R.21W. and T.1S., R.21W. Seward Meridian. In 1982 the company conducted outcrop and stream sediment sampling and mapping. The exploration operations during 1983 consisted of rock and stream sediment sampling with associated geologic mapping, geophysical exploration, trenching, and core drilling. A camp, airstrip, and drill site were built during the latter year. The purpose of the Anaconda project was to determine the mineral potential of the project area and to delineate any mineralized areas for possible further exploration and future development.[82]

During the 1970s several studies were initiated to determine the mineral potential of the lands being considered for a National Park Service unit in the Lake Clark region. The NPS Pacific Northwest Regional Office conducted a survey during 1971-72. On the lands then being considered for possible inclusion in the national park system only the 175-acre Kasna Creek mineral entry had been patented. Lands legally located and maintained under the mining regulations amounted to 28 groups consisting of 568 claims encompassing about 11,360 acres. No production from lode mines was of record, and probably none had been "attained." A small amount of placer gold, however, was known to have been recovered from Portage Creek.[83]

During 1976-1977 the U.S. Bureau of Mines conducted a reconnaissance examination of the lands within and near to the study area then being proposed for a Lake Clark National Park to identify and evaluate mineral deposits and mineralized zones. The bureau found that large portions of the Lake Clark region were "highly mineralized." The conclusions of the investigation read in part:

> The portion of the study region southeast of Lake Clark Pass except for a narrow strip along Cook Inlet is composed of a rock type thought to be unfavorable for mineral deposition. However, this area is rugged, glaciated, and inaccessible. The geology is not well known. A few mineral occurrences are known. The lack of known mineral deposits may reflect lack of prospecting.

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81. File-0020940005, ERK No. 1, Minerals Availability System Deposit Listing, December 31, 1981, Library, U.S. Bureau of Mines, Juneau, Alaska.

82. "Finding of No Significant Impact, Johnson Project Exploration Plan of Operations," April 12, 1983, (and attachments) in File, Johnson River, CIRI Mining Tract Park, Administrative Files, Lake Clark National Park and Preserve, Port Alsworth. Also see "Superintendent's Annual Report, Lake Clark National Park and Preserve 1984," Old Ranger Files, Lake Clark National Park and Preserve, Port Alsworth.

83. National Park Service, Pacific Northwest Region, "Mineralization Within the National Park Service Study Area Considered For the Proposed Lake Clark Pass National Wilderness Park, Alaska," February 1973, pp. 4-6, Record Group 79, Records of the National Park Service, Box Accession No. 079-83E0007, Alaska Task Force Legislative Support Data, File-Legislative Support Data, Proposed Lake Clark National Park, Alaska, National Archives and Records Administration, Federal Records Center, Seattle.

The north half of the study region may be divided into areas favorable for (1) tin-uranium mineralization of unknown type or extent, as well as contact-type copper-lead-zinc; (2) a zone favorable for porphyry copper-molybdenum deposits with associated lead-zinc-silver-gold veins; and (3) an area favorable for molybdenum or molybdenum-tungsten porphyry deposits.

The western portion of the study region is underlain by a marine volcanic-sediment sequence favorable for copper-zinc and zinc-lead stratiform deposits. Copper-gold or copper-molybdenum-gold porphyry deposits occur in this area within small Tertiary intrusives. The placer gold deposits in this area appear to have been derived from these deposits.

The extreme north end of the study region is underlain by sediments which may contain vein deposits of antimony, antimony-mercury, lead-zinc-silver and gold-quartz. Copper-gold bearing porphyry deposits similar to those in the western part of the study region may also occur in this area.

Industrial mineral deposits of possible value include cement-grade limestones, pumice, and zeolites.

The study noted that "four active volcanoes" indicated that geothermal development might be practical, particularly in the Redoubt Volcano area and on the Chinitna Peninsula, and the southeast margins of the Lake Clark region were in the "Cook Inlet petroleum province."[84]

84. U.S. Department of the Interior, Bureau of Mines, Open File Report 114-78, *Mineral Appraisal of Certain Alaska National Interest Lands, Proposed Lake Clark National Park: A Summary Report*, by Robert H. Lambeth, Alaska Field Operations Center, Anchorage, 1978. pp. 1-18. More detailed information on mineral occurrences in the park and preserve may be found in U.S. Department of the Interior, Geological Survey, Open File Report 76-485, *Summary of References to Mineral Occurrences (Other Than Mineral Fuels and Construction Materials) In the Iliamna, Lake Clark, Lime Hills, and McGrath Quadrangles, Alaska*, by Edward H. Cobb, 1976; and U.S. Department of the Interior, Geological Survey, Open File Report 81-1343A and B, *Summaries of Data On and Lists of References to Metallic and Selected Nonmetallic Mineral Occurrences In the Iliamna, Lake Clark, Lime Hills, and McGrath Quadrangles, Alaska, Supplement to Open File Report 76-485, Part A, Summaries to January 1, 1981, and Part B, Lists of References to January 1, 1981*, by Edward H. Cobb and Bruce L. Reed, 1981. These open file reports are available at the Bureau of Land Management's Alaska Resources Library in Anchorage.

CHAPTER EIGHT

BIG GAME HUNTING AND SPORT FISHING IN THE LAKE CLARK REGION

INTRODUCTION

As a result of exploration and activities associated with the fur trade, salmon industry, and mining rushes in the Cook Inlet and Bristol Bay regions in the decades following American acquisition of Alaska growing numbers of white Euroamericans entered the south central part of the territory. The influx of whites resulted in stories and reports of the region's wilderness beauty, big game, and fisheries. Thus, hunters were lured northward to the inlet and bay, as well as the general vicinity of present-day Lake Clark National Park and Preserve during the late nineteenth and early twentieth centuries in search of big game and sporting adventure. During the 1930s, after the advent of the airplane made the area's lakes and streams more accessible, sport fishermen began visiting the region in growing numbers to take advantage of its abundant fishing opportunities.

NATIVE DENA'INA HUNTING AND FISHING ACTIVITIES

At the time of Alaska's transfer to the United States and for several decades thereafter virtually all hunting and fishing in the Cook Inlet and Bristol Bay regions, including the Lake Clark and Iliamna Lake areas, was conducted by Natives to meet their subsistence needs. In 1880, for instance, the Tenth Census report noted that the Dena'ina of Cook Inlet were "ardent hunters, spending most of their time and energy in the chase on land...and often make long journeys into the interior, up and through mountain defiles, and even over summits and glaciers." The "variety of native mammals" was "very great." These animals included:

> Bears both brown and black – the former of great size and ferocity; frequently from 10 to 12 feet in length, strongly suggestive of the grizzly – are killed in large numbers by the hunters every year. The deer found here is apparently a larger cousin of the reindeer, the woodland caribou. Moose, single and in family groups, can be found feeding throughout the low brush-wood and alder swamps, and mountain sheep inhabit the higher mountains feeding upon the nutritious grasses and moss found in the clefts of mountain tops and rocky ledges. The fleece of this sheep (or goat?) is surprisingly long and coarse, their skins making a favorite bedding of the natives. These natives trap the beaver on streams and lakes, the land-otter, not only in the interior, but on the sea-shore, and kill the porcupine, the whistling marmot, wolves, black and gray, the lynx, the wolverine, the marten, mink, musk-rat, and a small white weasel, called here "ermine" by courtesy. Of wild fowl they have the grouse (both the white ptarmigan and the ruffled grouse), wild geese and ducks in millions during the breeding season, and the blue sand-hill crane and white swan in flocks.

Brown bears were especially plentiful on the western side of Cook Inlet in the general area of present-day Lake Clark National Park and Preserve during the early 1880s. The aforementioned census stated:

> On the steep sides of the volcanic range of mountains on the west side of Cook's inlet, brown bears can be seen in herds of twenty or thirty. Their skins are not very valuable, and, owing to this fact and to the fierce disposition of the animals, they are not commonly hunted. All natives of Alaska respect them, and it is the universal custom of hunters to address a few complimentary remarks to the intended victims before attempting to kill them. Perhaps the skins of fully one-half of the brown bears killed throughout Alaska are retained by the natives for bedding and to hang before the entrances of houses in the place of doors. The smaller skins are tanned and cut up into straps and lines, and the natives of the interior utilize them for manufacturing sledge-fastenings and the net-work bottoms of snow-shoes, because this leather does not stretch when exposed to moisture as moose- and deer-skins do.

The Dena'ina, according to the census, were also "expert fishermen" who enjoyed "an abundance of piscatorial food." "Salmon of fine size and quality" ran up their rivers, and trout crowded "the hundreds of lakes in their country, where they are found all through the winter and caught through the ice." The fishermen descended to tidewater "only when king-salmon, or 'chavitcha', come up from the sea in dense masses, or when schools of white whales or grampus follow up the 'eulachan', or candle-fish, until they are left high and dry by the receding tide and fall easy victims to the natives."

Southwest of the present-day park and preserve along the Bristol Bay coast the Natives, according to the census report, engaged in harvesting salmon that "frequent[ed] in astonishing numbers the Nushagak and other streams emptying into Bristol bay."[1]

To hunt big game the Natives primarily used "muzzle-loading guns," according to Lieutenant W.R. Abercrombie who reconnoitered the Cook Inlet region in 1884. In the upper inlet area, however, "double-barreled shotguns of small gauge carrying either ball or shot" were "somewhat in favor." Ammunition was obtained in the trading posts of the Alaska Commercial Company at "Kenai, Knik, Tyoonok, and Iliamna."[2]

EARLY BIG GAME SPORT HUNTING

Among the unofficial visitors who were lured northward to Alaska by gold rush stories and reports of Alaska's wilderness beauty and big game during the late nineteenth and early twentieth centuries were hunters. Some posed as amateur scientists and occasionally contributed to our knowledge of natural history. Others went to Alaska only to obtain animal trophies. The period was a time when Theodore Roosevelt advocated federal policies to conserve America's natural resources, while he himself shot up a volley whenever he was near wild animals of the world. This Rooseveltian ambivalence toward nature was exhibited by many of the whites who visited south central Alaska for sporting adventure.

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1. *Report on the Population, Industries, and Resources of Alaska*, by Petroff, pp. 15-16, 26, 57-58. Also see H.W. Seton Karr, *Shores and Alps of Alaska* (London and Chicago, Sampson Low, Marston, Searle, & Rivington, and A.C. McClurg & Co., 1887), pp. 234-43.

2. "Report of a Supplementary Expedition Into the Copper River Valley, Alaska, 1884, by Lt. W.R. Abercrombie, Second Infantry, U.S.A.," in *Compilation of Narratives of Explorations In Alaska*, p. 402.

By the late 1890s the game resources of the Cook Inlet region were receiving extensive attention in reports published by exploration expeditions. For instance, after reconnoitering south central Alaska between Resurrection Bay and the Tanana River with the Glenn military expedition in 1898, Walter C. Mendenhall, a USGS geologist, reported on the game resources on the east side of Cook Inlet.[3]

One of the earliest documented big game hunters to visit the Cook Inlet region in pursuit of "pure" sporting adventure was an English colonel named Claude Cane during the summer of 1902. Cane was a careful observer and a fine writer who exhibited some of Roosevelt's ambivalence toward nature. Although the colonel returned to Great Britain with eight Dall sheep heads as trophies, he welcomed big game management.[4]

While hunting in the Cook Inlet region during 1902, Cane and his associates hunted bears on the Chinitna Peninsula and in the Tuxedni Bay, Crescent River, and Polly Creek areas within the present-day boundaries of Lake Clark National Park and Preserve and moose and Dall sheep on the Kenai Peninsula. While on their hunting enterprise the men witnessed a spectacular eruption of the Redoubt Volcano which Cane vividly described:

> Iliamna has always been more or less active, or at least smoking, but no signs whatever of activity had been seen in Mount Redoubt for more than fourteen years, until suddenly in the spring of this year it had burst forth, into violent eruption. Ashes and volcanic dust were thrown right across the inlet, and at Kenai and Kussiloff the latter lay on the ground several inches thick in places, though the distance to the summit must be more than a hundred miles....Although the first violence of the eruption was spent before our arrival upon the scene, during the first three months of our stay in the inlet Mount Redoubt kept on showing considerable activity, pouring forth at intervals dense clouds of smoke and vivid sheets of flame, and blackening the usually virgin slopes of snow on his own sides and those of his neighbours with clouds of dark grey volcanic dust....During all the time that his irascible twin brother was manifesting all these signs of wrath and internal commotion, Iliamna, scarcely fifty miles away, went on emitting placidly the same thin blue column of smoke which he had been in the habit of sending up for years past.

During their bear hunt Cane and his companions set up a camp along the mosquito-infested Crescent River about one-third of a mile from its mouth on the west shore of the inlet. Near the beach they spotted a large brown bear retrieving salmon from the river. Cane described the men's activities as they stalked and finally shot the bear:

> However, at last out he came, and stood awhile to listen...looking magnificent. I let him get a bit away from the bush before firing, and just as he broke into a run pulled the trigger. He stopped dead short, turned round; but before he had time to move an inch I fired again, and he fell in his tracks with his forelegs stretched out in front and his

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3. "A Reconnaissance From Resurrection Bay to the Tanana River, Alaska, 1898," in U.S. Geological Survey, *Twentieth Annual Report*, Part VII, pp. 337-39. For more information on the mammals and birds of the Cook Inlet region during the early twentieth century see U.S. Department of Agriculture, Division of Biological Survey, *Natural History of the Queen Charlotte Islands, British Columbia; Natural History of the Cook Inlet Region, Alaska*, pp. 61-81.

4. Sherwood, *Cook Inlet Collection*, pp. 151-52.

hindlegs stretched out behind as dead as a door-nail, another tribute to the power of the .256 Mannlicher.

This was a he-bear, and a very much bigger one than the last, his skin measuring from nose to tail 10 ft. exactly. The fur, however, was in such bad condition that, big as he was, it was not worth taking, so I contented myself with the head, the hair on which was all right, and his claws, which were enormous. He belonged to the same species as the other, *Ursus kidderi,* and, as in her case, the Mannlicher bullet had left very little of his heart.

Despite his successful hunting endeavors, particularly in terms of Dall sheep and bears, Cane urged some limited game management restrictions. His views on this topic were most expressly stated in a "retrospective" of his trip. Regarding moose, for instance, he noted:

At the same time I think the Government were well advised to impose restrictions on their indiscriminate slaughter, as it would be an enormous pity if these magnificent animals were to share the fate of the buffalo and the case of these latter animals has shown how hard it is to get up a decent head of any species of wild animal again once it has been practically exterminated. The two great sources of danger are meat-hunting and killing for the sake of procuring heads for the taxidermists and dealers in the States. The former cannot be controlled, but traffic in heads should be vigorously suppressed. The sportsman shooting for museums or his own private collection will do little or no harm, but all the same he ought not to be allowed to shoot without a license, and the number of licenses should be limited.[5]

Big game hunting in the Cook Inlet region began to receive publicity in Europe during the early 1900s. In 1904, for instance, Captain C.R.E. Radclyffe published a big game hunting guide in London. He noted that five Englishmen had hunted in western Alaska during 1903. His book contained the following data on the Cook Inlet area:

Here one may land at Saldovia, and put in the season in search of brown and black bears, as well as sheep and moose. For bears, the bays and rivers on the west side of the Inlet are best, the most likely spots being Chinitna Bay, Snug Harbour, Krison River, and Polly Creek. The last three places have been well described by Colonel Cane in his book on Alaska; and the first bay had been visited by two or three sportsmen at different seasons, who have generally done well with brown and black bears. This district, indeed, is peculiarly well adapted for bear-hunting, since there is a large tract of mud-flats near the shore intersected by numerous creeks. Bears may be found in April and May eating the grass on the hill-sides, and in June fishing for salmon in the creeks on the flats. In a few weeks' hunting in Chinitna Bay in 1901, Messrs. Kidder and Blake killed nine brown and four black bears. During summer there is little difficulty in crossing Cook's Inlet, and then leisurely making one's way into the sheep and moose country on the Kenai Peninsula. In fact, this is the easiest trip in Alaska, and can be done in comparative comfort. Two American ladies have already accompanied their husbands on shooting trips in Cook's Inlet, and neither experienced any great hardship.

5. Cane, *Summer and Fall in Western Alaska,* pp. 29-30, 68-69, 167.

Radclyffe included a list of known hunting guides in the Cook Inlet region who should be consulted by sportsmen before visiting the area. He listed five men at Seldovia, two at "Kussiloff" [Kasilof], and six at Kenai who would outfit hunters and guide them to the most promising hunting areas. Several of these men were storekeepers, postmasters, and cannery managers who doubled as guides for sportsmen. The cost of hiring a guide ranged between 5 and 10 dollars per day, but when the higher dollar amount was paid the guide generally supplied a boat and Native help. Such a guide was useful because he knew the terrain and could "be trusted to collect a staff of natives who can be relied on, whereas a stranger may be imposed upon by some of the worthless lazy natives so numerous in the neighbourhood of Cook's Inlet." The Natives' pay ranged from $1.25 to $1.50 per day.[6]

During the early 1900s some adventurers visited the inlet to hunt and fish while prospecting. One such person was H.P. Gallagher who made his first trip to Alaska in 1904 prospecting and hunting southward from Tyonek along the beaches of the west coast of Cook Inlet. Passing south of Tyonek in mid-July Gallagher noted in his diary that he and his party shot some ducks in the vicinity of Trading Bay. He observed:

> Ducks were gathered here in great numbers. The little ones litterly [sic] covered the water as they swam ahead of the boat, while in the air were dozens of gulls, preying upon them.

Gallagher and his party passed southward through Redoubt Bay, observing eagles and sea gulls and several large brown bears along the coast. Camping along the beach of Redoubt Bay the men fished for salmon:

> The boys wove a fish net from some old rope and staked it on the beach. The salmon failed to run into it, however. They then started out with clubs stationed themselves in a narrow channel between the bars in the river like a bear would have done. The salmon were swimming upstream. Presently they spied a large salmon trying to shoot the riffles. Water six or eight inches deep – the bottom rocks smooth and shiny. Van made a pass with his clubs, slipped and fell into the water while the salmon started down stream. Palmer (was) trying to jump on the salmon. Finally, salmon stunned and captured.
>
> We have considerable sport in catching salmon, and have devised many ways of catching or landing them. They will not bite a hook and bait, but we manage to keep a supply on hand of the choicest red salmon hanging on the trees for immediate use.

Near the southern edge of Redoubt Bay the men secured "a fine specimen of the Bald Eagle" and killed a brown bear that weighed "in the neighborhood of 8- or 9-hundred pounds." The men wanted to take the hide of the bear, but threw it away as they had no means of "curing" it.

The Gallagher party pressed on to Chisik Island where they camped and shot some magpies. They caught a variety of fish, including "salmon, salmon trout, flounder, or young halibut." Rowing to the mainland in the vicinity of Crescent River and Polly Creek the men spent some time on the "sand or mud banks, which is plentifully stocked with soft shell clams or 'ras[z]or backs', muscles [mussels] and other shell fish." They gathered some clams and mussels and a

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6. Captain C.R.E. Radclyffe, *Big Game Shooting In Alaska* (London, Rowland Ward Limited, 1904), pp. 13-19.

collection of shell fish as well as "a few specimen of fossil shells which are of geological interest." Before leaving the inlet the men crossed to the Kenai Peninsula where they passed up the Anchor River. Here they secured several teal and grouse "of the specie known as the fool hen."[7]

Big game hunters continued to visit the Cook Inlet region during the pre-World War I years, primarily in search of moose, bear, and Dall sheep. In 1912, for instance, an Englishman named J.T. Studley published a book describing his hunting adventures while on the Kenai Peninsula and the so-called Chinitna Peninsula. After hiring William Hunter, an experienced hunting guide at Kenai, Studley crossed the inlet on a tugboat owned by the "Kussiloff cannery" and camped on the shores of Snug Harbor on the Chinitna Peninsula. He observed that the area "was Hunter's favourite place," since he had "shot big grizzlies" there the previous spring. Studley shot a bear on the first day after the men's arrival. They skinned the bear, although its coat "was but an indifferent one, being very patchy." Hunter cut off all four feet and took out the gall bladder of the bear, because "the Chinamen at the factory [at Kenai] gave good money for them." After further unsuccessful hunting in the Snug Harbor vicinity, the men returned to Kenai where they sold to a Chinese cannery worker the gall bladder for one dollar and the four feet for $1.50. The specimens, after being soaked in whisky, were reported "heap good medicine."[8]

The Cook Inlet region, together with the Lake Clark-Iliamna Lake area, thus had become known as a sportsmen's paradise by the early 1910s. After visiting Cook Inlet Ella Higginson wrote in 1912:

> It is comparatively easy for hunters to cross by the chain of lakes and water-ways from Bristol Bay to Cook Inlet – which is known to sportsmen of all countries, both shores offering everything in the way of game. The big brown bear of the inlet is the same as the famous Kadiak; and hunters come from all parts of the world when they can secure permits to kill them. Moose, caribou, mountain sheep, mountain goat, deer, and all kinds of smaller game are also found. There are many trout and salmon streams on the eastern shore of the inlet, and the lagoons and marshes are the haunts of water-fowl.[9]

Despite the growing interest of sportsmen in hunting game in Alaska in the pre-World War I period, however, the nonresident hunter's impact on animal populations was relatively insignificant. There were too few visiting big game hunters. Prior to the war the number hunting in any year in the entire territory probably did not reach 30. Of these only a handful hunted in the Cook Inlet and Lake Clark-Iliamna Lake regions.[10]

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7. Thomas, "Cook Inlet In 1904," pp. 261-72.

8. J.T. Studley, *The Journal of a Sporting Nomad* (London and New York, John Lane, The Bodley Head and John Lane Company, 1912), pp. 223-32. There are more published accounts of big game hunting on the Kenai Peninsula than on the west side of Cook Inlet during the pre-World War I years. See, for instance, William S. Thomas, *Trails and Tramps in Alaska and Newfoundland* (New York and London, G.P. Putnam's Sons and The Knickerbocker Press, 1913), and E. Marshall Scull, *Hunting In the Arctic and Alaska* (London, Duckworth & Co., 1914).

9. Ella Higginson, *Alaska: The Great Country* (New York, The MacMillan Company, 1912), p. 301.

10. Sherwood, *Big Game In Alaska*, p. 119.

EARLY REGULATION OF BIG GAME HUNTING

The wanton destruction of Alaska's big game, along with national sentiment favoring the preservation of wildlife and birds, resulted in the passage of the Alaska Game Law in 1902. Congress responded to the growing pressures to protect Alaska game by passing the first game law for the territory on June 7, 1902. The act prohibited "the wanton destruction of wild game animals or wild birds, the destruction of nests and eggs of such birds, or the killing of any wild birds other than a game bird, or wild game animal, for the purposes of shipment from Alaska." The law permitted Native Indians and Eskimos to kill any game animal or bird for food or clothing, and miners, explorers, or travellers were allowed to kill game animals for food, provided they were not shipped or sold. The law prohibited the shipment from Alaska of any wild game except fur-bearing animals, scientific specimens, zoo animals, animals for propagation, and "specimens and trophies." It also established the first hunting seasons. The Secretary of Agriculture was authorized to place further restrictions on certain areas, a provision that would enable the protection of game in easily accessible areas such as Cook Inlet, the Kenai Peninsula, and Kodiak Island.[11]

The new game law was widely disregarded or circumvented by big game hunters. Some sportsmen complained that the danger facing the depletion of the game animals came primarily from the Natives. For instance, the aforementioned Radclyffe observed in 1904:

> The real danger at present lies in the indiscriminate killing of bears, moose, caribou, and sheep by the natives for the sale of the hides and horns, and also for the sake of the meat of the last three species, which is sold by the natives and others to ships, canneries, and miners throughout the country. For the last-named purpose males, females, and young of all kinds of game have hitherto been killed at all seasons of the year.

Radclyffe was particularly opposed to new regulations put in force in 1903 prohibiting the killing of caribou on the Alaska Peninsula west of Lake Iliamna and preventing the export of more than one moose from the Kenai Peninsula per year.[12]

The Alaska Game Law was amended by Congress on May 11, 1908. The amending act removed protection from the American bald eagle, changed certain bag limits, and allowed regional management of species. The provisions of the new law divided Alaska into two game districts – one north and one south of latitude 62° with special seasons for each. South of that latitude, which included the entire Cook Inlet and Lake Clark-Iliamna Lake regions, moose, caribou and mountain sheep could be hunted from August 20 to December 31, brown bear from October 1 to July 1, deer and mountain goats from August 1 to February 1, and grouse, ptarmigan, shore birds, and water fowl from September 1 to March 1. The law established a non-resident hunting

11. "An Act for the Protection of Game in Alaska, and for other purposes," June 7, 1902, quoted in Cane, *Summer and Fall*, pp. 173-76; Sherwood, *Big Game In Alaska*, pp. 27-28; and *Annual Report of the Governor of Alaska, 1903*, pp. 34-39.

12. Radclyffe, *Big Game Shooting In Alaska*, pp. 27-31.

license, with fees of $50 for U.S. citizens and $100 for aliens, and resident and non-resident shipping licenses, ranging from $5 to $150.[13]

Enforcement of the game laws in Alaska would be difficult because of the vast and remote stretches of land in the territory. To oversee the enforcement of the game laws' provisions the Department of Commerce and Labor dispatched five wardens to Alaska by late 1911. The chief warden and one deputy were stationed at Fairbanks, while three deputies were located at Tanana, Wrangell, and Nushagak. The latter deputy supervised a large area stretching some 300 miles in length, including the region of present-day Lake Clark National Park and Preserve.[14]

Besides the game laws other measures were taken to protect game species in Alaska during the early twentieth century. On February 27, 1909, for instance, President Theodore Roosevelt by Executive Order No. 1039 established the Tuxedni Reservation, later to be redesignated the Tuxedni National Wildlife Refuge in 1940. As provided in the proclamation "Chisick Island and Egg [now known as Duck] Island situated...at the entrance to Tuxedni Harbor" were "reserved and set apart for the use of the Department of Agriculture as a preserve and breeding ground for native birds." It was unlawful "to hunt, trap, capture, wilfully disturb, or kill any bird of any kind whatever, or take the eggs of such birds within the limits" of the reservation. Later in 1970 most of Chisik Island and all of Duck Island would be designated as a wilderness area under the provisions of the Wilderness Act of 1964.[15]

Subsequent to the establishment of the Tuxedni Reservation Congress passed legislation to protect wild animals and birds and their eggs in federal refuges. Legislation was enacted on March 4, 1909, and was later amended on April 15, 1924. Section 84 of the amended legislation (43 Stat. 98) stated:

> Whoever shall hunt, trap, capture, willfully disturb, or kill any bird or wild animal of any kind whatever, or take or destroy the eggs of any such bird on any lands of the United States which have been set apart or reserved for refuges or breeding grounds for such birds or animals by any law, proclamation, or Executive order, except under such rules and regulations as the Secretary of Agriculture may, from time to time, prescribe, or who shall willfully injure, molest, or destroy any property of the United

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13. *Annual Report of the Governor of Alaska, 1908*, pp. 51-55; Major General A.W. Greely, *Handbook of Alaska: Its Resources, Products and Attractions In 1924* [1925] (Reprinted, Port Washington, New York,and London, Kennikat Press, 1970), pp. 185-86; Higginson, *Alaska: The Great Country*, pp. 315-16; and Sherwood, *Big Game In Alaska*, p. 31. More detailed information on this topic may be seen in U.S. Department of the Interior, Office of the Secretary, *General Information Regarding the Territory of Alaska, Edition of December 1922* (Washington, Government Printing Office, 1923), pp. 68-73).

14. Charles Nagel, Secretary of Commerce and Labor to Walter E. Clark,, Governor of Alaska, December 16, 1911, RG 101, Box 100, Folder 6, File 41-2, Fur Bearing Animals, 1911, Alaska State Archives and Records Center, Juneau.

15. Executive Order No. 1039, February 27, 1909, and *Federal Register*, Vol. 5, No. 147, July 30, 1940. Also see U.S. Department of Agriculture, Bureau of Biological Survey, *Service and Regulatory Announcements, Alaska Game Commission* (Washington, Government Printing Office, 1925), p. 20; and William E. Warne, Assistant Under Secretary of the Interior to Archie W. Shiels, (and enclosures), June 7, 1948, Record Group 48, Records of the Office of the Secretary of the Interior, Central Classified Files, 1937-1953, Box 3363, File 3-27, Part 10, September 3, 1947 to December 18, 1950, Fish & Wildlife Service, Wildlife Refuges, General, National Archives and Records Administration, Washington, D.C.

States on any such land shall be fined not more than $500, or imprisoned not more than six months, or both.

Five years later on February 18, 1929, Congress passed another law (45 Stat. 1222-1226) providing further protection of wildlife in federal refuges. Section 10 of this law stated:

> That no person shall knowingly disturb, injure, or destroy any notice, signboard, fence, building, ditch, dam, dike embankment, flume, spillway, or other improvement or property of the United States on any area acquired under this act, or cut, burn, or destroy any timber, grass, or other natural growth on said area or on any area of the United States which heretofore has been or which hereafter may be set apart or reserved for the use of the Department of Agriculture as a game refuge or as a preserve or reservation and breeding ground for native birds, under any law, proclamation, or Executive order, or occupy or use any part thereof, or enter thereon for any purpose, except in accordance with regulations of the Secretary of Agriculture; nor shall any person take any bird or nest or egg thereof on any area acquired under this act, except for scientific or propagating purposes under permit of the Secretary of Agriculture.[16]

GAME ANIMAL POPULATIONS IN THE LAKE CLARK-ILIAMNA LAKE REGION DURING THE 1910s AND 1920s

Participants of the various USGS expeditions that traversed the Lake Clark-Iliamna region during the 1910s and 1920s kept detailed notes on their wildlife observations. The reports provide considerable detail on the availability and distribution of various species. During the expedition through the Lake Clark-Central Kuskokwim region in 1914, for instance, Philip S. Smith kept copious notes on the wildlife encountered. He observed that for "an area so sparsely inhabited and so seldom traversed," the region had "a surprisingly small amount of game." He stated further:

> Caribou and bear were the only large animals seen at close range. The greatest number of caribou were found in the morainic country in the basin of Koksetna River north of the camp of June 29....According to the accounts of natives caribou at one time were much more numerous in the Lake Clark-Central Kuskokwim region. On almost all the more continuous ridges are hard-beaten game trails, some of them worn 2 feet below the general surface. None of these trails shows much recent use, and parts of them are almost entirely obliterated by the growth of bushes.
>
> Bears are reported to be numerous in the Mulchatna Valley, but only one was seen in this basin, and few trails or other signs of these animals were noted except in the vicinity of Halfway Mountain, near the Mulchatna-Hoholitna divide, north of the camp of July 18. Both brown and black bears are found, but none of the very large brown bears similar to those on Kodiak Island are reported....Bear meat was obtained from the natives at Sixmile Lake and is said to form an important part of their food supply, but it is becoming increasingly difficult to obtain.

16. Quoted in U.S. Department of the Interior, *General Information Regarding the Territory of Alaska, Edition of June, 1931* (Washington, Government Printing Office, 1931), pp. 103-04.

Signs of moose were particularly noticeable in the vicinity of the lakes in the valley of the stream tributary to Gnat Creek in which the camp of July 17 was situated, and in the lowland of the Kuskokwim near the camp of August 14. The natives near Sixmile Lake had moose meat which they said was killed in the basin of the Chulitna. No signs of sheep or goats were observed in any of the region visited by the expedition of 1914, but in the high, rugged hills north of the east end of Lake Clark sheep are reported to be fairly numerous.

The smaller animals – foxes, beavers, squirrels, porcupines, and rabbits – were seen at several places. The only foxes seen were the tawny and black cross-fox....Many beaver dams were noticed in the lowlands of the Kuskokwim, especially along Muskeg Creek, the stream that enters Stony River near the camp of August 13. Small, reddish tree squirrels were seen at a few places. The so-called ground squirrels, so common in the unforested parts of northern Alaska, were nowhere numerous, and even their characteristic gopher-like holes were seldom observed, though in some of the coarse talus piles near the tops of the more rocky knobs, such as on Groundhog Mountain, near Lake Clark, their scolding chatter was often heard. Porcupines were found in almost all parts of the area. Apparently they live in the timbered areas, but most of those seen were traveling over the bare, brushless uplands. According to prospectors, rabbits are very numerous in many parts of the area traversed by the expedition of 1914. A large number of bushes had been nibbled by rabbits, but surprisingly few rabbits were seen. They were seen most commonly in the willow thickets along Stony River, especially at the mouth of Stink River, near the camp of August 7.

Several kinds of birds were seen in the region, and those especially sought for their flesh or eggs are gulls, ptarmigan, spruce hens, cranes, ducks, and geese. Gulls are numerous around Iliamna Lake, and their eggs, which are gathered from the rocky islands in that lake, form an important part of the food supply of both the natives and the whites living in that region. On June 12 the Survey party met four or five egg hunters and sampled some of the several hundred eggs they had gathered. A few fish gulls were also seen on the Kuskokwim, but, so far as known, these birds are seldom hunted as meat or for their eggs. Ptarmigan in small flocks, rarely consisting of more than a score of birds, were seen often in the unforested areas, seldom on the gravel bars in the valleys.[17]

During 1920-21 Fred H. Moffit led a USGS expedition through the Chinitna and Iniskin peninsulas along the west coast of Cook Inlet. Concerning game in that area Moffit noted:

The west coast of Cook Inlet in the vicinity of Chinitna and Iniskin Bays furnishes only a small variety of animals and birds to interest the prospector and hunter. Brown and black bears are the principal larger animals. They are numerous and are present in all parts of the district mapped, so that careful precaution must be taken against the loss of food supplies that have to be left unguarded. They are seen more frequently in the spring and early part of the summer than at other times, for they come out to feed when the vegetation first starts and are less protected from view by the grass and the leaves of the underbrush. The marshy flats at the head of Chinitna Bay are favorite feeding grounds for them in spring, so that it is not unusual to see several at one time

17. U.S. Department of the Interior, Geological Survey, Bulletin 442, pp. 38-40.

in the evening. After the salmon begin to ascend the streams in July and early August the bears get much of their food by fishing on the riffles where the fish are running or by collecting the dead or dying fish along the banks. Their trails are found along all the fish streams, and the track of a big bear who crosses a grass patch on the hillside may be seen for weeks.

The wolverine is the only other large animal in this district likely to molest a cache. He is universally despised and dreaded because of his thieving habits, and until recently was counted as of no value as a fur-bearing animal. There are no moose, caribou, or mountain sheep in the district, and fur-bearing animals are not numerous, so that trapping has not been particularly profitable.

Ducks are plentiful in the fall, and a few ptarmigan and grouse were seen by surveying parties in 1921. The number of ptarmigan and grouse varies greatly from year to year, so that no single year gives a correct idea of their abundance or scarcity.[18]

In the 1920s, the first Euroamerican hunters entered the interior drainages of the present-day park and preserve. Colonel Alexander James "Sandy" Macnab and Frederick K. Vreeland, one of the first hunting parties, arrived in Alaska in July 1921, and in early August headed to the Lake Clark country to make "studies of plant and animal life and of the geography of the country in hunting big game." Vreeland traveled as a representative of the Camp Fire Club, and Macnab, also a Club member, was on leave from the U.S. Army.[19]

The pair spent almost two months exploring the south and central portions of the present-day park and preserve. From Anchorage, they headed west to the cannery at Snug Harbor; then, using a cannery boat, continued on to Iliamna Bay. Using Sam Foss and his three horses, the two brought their outfit over the 12-mile Iliamna Portage to Old Iliamna village where they were taken by Hans Seversen in a gas boat to the head of the Newhalen Portage, four miles east of the Newhalen River. They hired Native packers to transport their outfit over the portage and then paddled up the river to Old Nondalton village and on up to Tanalian Point, where they hired local guides for their hunt. Next, Macnab and Vreeland paddled up to the head of Little Lake Clark and then worked their canoe up the Chokotonk River, exploring most of its eastern tributaries. Late in August, they left their canoe near Kijik village on Lake Clark and backpacked up the Telaquana Trail to the headwaters of the Little Mulchatna River and Fishtrap Lake. Macnab and Vreeland hiked the arduous southern 20 miles of the trail before returning to Tanalian Point. Guided by Doc Dutton and Gabriel Trefon, the hunters made a successful sheep hunt in the mountains east of Kontrashibuna Lake in mid-September. They then retraced their route of entry back to Iliamna Bay on Cook Inlet via the Iliamna Portage in late September.[20]

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18. U.S. Department of the Interior, Geological Survey, Bulletin 789, pp. 8-9. In 1936 Olaus J. Murie of the Bureau of Biological Survey visited the Tuxedni Bay-Chisik Island area, describing the wide array of bird life on the island. See "General Notes," May 7, 1936, in Olaus J. Murie Papers, Box 8, Folder 29, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks.

19. Morgan Sherwood, letter to John Branson (LACL), February 13, 1992; "Visit Alaska Interest of Outdoor Life: Col. A.J. Macnab and F.K. Vreeland Study Flora and Fauna of Alaska," *Anchorage Daily Times*, August 1, 1921.

20. A.J. Macnab, *Diary of an Alaskan Sheep Hunt 1921*, unpub. mss., Dr. C.J. Edwards collection, Bonners Ferry, Idaho; John Branson, "Macnab-Vreeland 1921 Trip to Lake Clark," unpub. mss., LACL Archives, Port Alsworth.

Vreeland and Macnab had mixed success on their hunting expedition. At Kontrashibuna Lake the early-September Dall sheep hunt netted two rams, and at Nondalton Village, they obtained a brown bear skull and sent it on to Dr. C. Hart Merriam at the U.S. National Museum. Otherwise, however, Vreeland noted that "the region was notable for the scarcity of big game animals," even though it had "every evidence of having been once a good game country." In addition, the pair made a number of detailed wildlife observations. At Tuxedni Bay, they mentioned "much evidence of bears;" he also noted "very large numbers of ducks along mud flats of upper Cook Inlet." Vreeland also spoke with familiarity of the various kinds of fish in Iliamna Lake and Lake Clark and wrote that "the salmon have been depleted to a very alarming extent by the many canneries on the Bristol Bay and unless prompt action is taken their early extinction is threatened." He decried the wanton waste of fish caused by the trout tail bounty around Iliamna and Lake Clark and was most critical of the mismanagement and red tape associated with the Iliamna reindeer herd.[21]

After leading a USGS expedition through the Lake Clark-Mulchatna region in 1929 Stephen R. Capps described the wildlife encountered. He noted:

> The Lake Clark-Mulchatna region was the natural range of a moderate number of caribou, but the natives keep them reduced in numbers for some distance back from the shores of Iliamna and Clark Lakes. A few dozen caribou were seen during the summer of 1928. There are a few mountain sheep in the high country around the upper end of Lake Clark, and probably also in the rough country at the heads of the tributaries of the Mulchatna River. One band of sheep was seen near the head of Telaquana Lake.
>
> Both black and grizzly bears are present, and some of the grizzlies are large. From the experience of the Geological Survey parties during the years 1926 to 1929 in this general part of Alaska, bears are less common in the upper basins of the Mulchatna and Stony Rivers than farther north in the range. Moose may be found throughout this region, but are more abundant in the valleys of the northern tributaries of the Mulchatna and in the Stony Basin than farther south.
>
> The fur-bearing animals that are most abundant in this area are beaver, fox, otter, lynx, mink, and muskrat. From time to time restrictions are placed upon the trapping of beaver, and in the 1929-1930 season no trapping for them was permitted. As beaver are the most abundant and easily taken fur bearers of the region, restrictions on beaver trapping have an important influence on the value of the annual catch of furs, and as most prospectors depend upon trapping as their main source of income restrictions on trapping are reflected in the decreased number of prospectors in the country.
>
> Small game animals and birds were notably scarce in the Lake Clark-Mulchatna region in 1929. It is a well-recognized fact that in any part of Alaska the abundance of rabbits and of ptarmigan varies greatly from year to year, and the rabbits in particular seem to have a cycle of six to eight years, during which from a small number they increase to astonishing numbers and then decline rapidly. The ptarmigan similarly may be present in tremendous numbers in one year and almost completely absent the next. As

21. Frederick K. Vreeland, "Notes to Edward A. Preble of the U.S. Biological Survey," Smithsonian Institution Archoves, Record Unit 7176, U.S. Fish and Wildlife Service 1860-1961 Field Reports, November 29, 1921, 1.

> many of the carnivorous fur-bearing animals depend largely upon rabbits and ptarmigan for their food supply, the abundance of the fur bearers depends closely upon the presence or absence of these small animals. In 1929 rabbits were almost completely absent in this region, not one being seen by any member of the Geological Survey party. Ptarmigan and spruce grouse also were scarce.[22]

After his expeditions through the southern Alaska Range region during 1926-29 Stephen R. Capps concluded that this "portion of the Alaska Range is fairly well stocked with large game animals, though in fewer numbers and smaller variety than in some other parts." He observed:

> Except in the area tributary to Lake Clark they have been little hunted and are therefore fairly easy to approach. Both black and grizzly bears are common, from 50 to 100 having been seen each summer by the Survey parties. They are especially abundant in the Chakachatna, Stony, and Skwentna Basins. As these bears have had little experience with man, they show little fear, and the black bears especially are bold and likely to raid any provisions left unguarded. Wolverines also are common, and precaution must be observed to keep them out of caches. Moose are present in the timbered areas throughout the region. East of the range they are hunted by the natives and are not abundant, but in the upper Chakachatna, Skwentna, Stony, and Telaquana Basins they are fairly numerous, and the well-marked moose trails along all the larger valleys are of great assistance to the traveler, as they are relatively free from brush and follow favorable gradients. Caribou range in the Ptarmigan Valley and South Fork of the Kuskokwim area in some numbers and into the head of the Skwentna Basin. They are also found sparingly in the Chakachatna and upper Stony Basins along the west face of the mountains as far south as Lake Clark. Mountain sheep are abundant in the basin of the South Fork of the Kuskokwim but were seen only in small bands of few individuals in the upper Skwentna and Chakachatna Basins, at the head of Stony River, and near Telaquana Lake.[23]

ALASKA GAME COMMISSION ACTIVITIES, 1925-1940

A significant watershed in Alaska game protection occurred on January 13, 1925, when Congress passed "An Act to establish an Alaska Game Commission to protect game animals, land fur-bearing animals, and birds" [43 Stat. 739]. To administer the game protection program, the Alaska Game Law, as the legislation came to be called, established a five-person commission, each of whom was required to be a resident of the territory. The law, which would be enforced by game wardens, contained provisions prohibiting the use of poison and granted powers to the commission to regulate the methods of taking possession, sale, and transportation of game animals, land fur-bearing animals, and wild birds. Licenses for fur-dealers were fixed by the act at $10 for residents, $250 for non-resident Americans, and $500 for aliens. Non-resident hunters paid $10 for small game hunting licenses and $50 for big game and trapping. Alien hunting

22. Capps, "The Lake Clark-Mulchatna Region, Alaska," in U.S. Department of the Interior, Geological Survey, Bulletin 824C, pp. 134-35.

23. U.S. Department of the Interior, Geological Survey, Bulletin 862, p. 30.

licenses were set at $100. Additional charges were applied for trophies taken or transported out of the territory.[24]

Because of white complaints that Natives were abusing their hunting privileges, the game law modified the exemptions granted to them by earlier legislation. Under the new law Natives were classed with prospectors and travelers, and were permitted to take game during closed seasons only when "in absolute need of food and other food is not available." Such animals could not be sold (except for the hides, within Alaska), and the Secretary of Agriculture could revoke the exemption if he decided that wildlife in a certain region was in danger of extermination. The law provided that Natives were to abide by the restrictions on migratory bird hunting as provided in the Migratory Bird Treaty of 1916 with Great Britain, thus forbidding them to hunt such game birds during the spring and summer.

The 1925 law did not require the purchase of hunting, trapping, or fur-trading licenses by "native-born Indians, Eskimos, or half-breeds who have not severed their tribal relations by adopting a civilized mode of living or by exercising the right of franchise." Despite the provisions of the law that were applicable to the indigenes, however, it would be enforced unevenly and many of the Natives, most of whom still relied heavily on hunting and gathering, would continue their traditional practices.[25]

One of the new features of the Alaska Game Law was provision for a registered guide service. The legislation stated that "only a resident citizen or a resident Native Indian or Eskimo of the territory may act as guide for a non-resident in any section of the territory where the commission by regulation requires nonresidents to employ guides." The guides were to register with and procure a license from the commission, which was authorized to determine their qualifications.

Under the provisions of the game law and subsequent regulations devised by the game commission, lists of registered guides were published. When a sportsman desired to hunt in a particular area of Alaska, he was required to contact one of the registered guides or guide associations serving that region. The sportsman and the guide would agree upon rates, length of hunt, trophies desired, and other matters. The guides would arrange the hunt, head the party in the field, locate the game, and advise on the selection of suitable trophies. The guides aided in skinning, preparing, and curing the trophies, and they were responsible for proper packing and shipment of the skins, capes, and antlers.[26]

During 1925-26 the Alaska Game Commission issued licenses for hunting guides throughout the territory under the provisions of the game law and subsequent regulations. The men who were licensed to guide hunting parties in the Lake Clark-Cook Inlet regions were:

	Address	**Region for Guiding Hunting Parties**
Samuel B. Foss	Iliamna	Iliamna and Lake Clark region

24. Greely, *Handbook of Alaska*, pp. 189-90, and U.S. Department of the Interior, *General Information Regarding the Territory of Alaska, 1931*, pp. 89-98. In 1936 resident hunting licenses were established.

25. Sherwood, *Big Game In Alaska*, pp. 95, 106-07.

26. Territory of Alaska, *General Information Regarding Alaska* (Juneau, Alaska Planning Council, 1941), pp. 113-15.



Sam Foss (1881-1950) and Sophie Rickteroff Foss (1897-1964) at Pedro Bay during World War II. Sophie was from the Rickteroff family whose forebear Savva Rickteroff was living at Old Iliamna by 1838. Sam was born in Dakota Territory (in what is now North Dakota) and by 1902, his parents had moved to Old Iliamna. He was a licensed big game hunting guide in the Iliamna-Lake Clark area in 1925-26.

Courtesy of Dolly Foss Jacko

Charles L. Cadwallader	Anchorage	Kenai Peninsula and Cook Inlet region
Fred C. Judd	Anchorage	Kenai Peninsula and Cook Inlet region
H.L. Worcester	Anchorage	Kenai Peninsula and Cook Inlet region
Frank E. Tourle	Seward	Kenai Peninsula, Cook Inlet, and Kodiak[27]

Reports of the Alaska Game Commission during the late 1920s indicate that the game wardens under its control faced considerable difficulty in carrying out their duties. Funds were scarce, and the men had great distances to cover, often in inclement weather and over rugged terrain. In the Cook Inlet and Lake Clark regions motor boats and dog team travel were the primary means of transportation as the wardens attempted to traverse the area to enforce the game law's provisions. From the sketchy reports available it appears that the wardens in the Lake Clark-Cook Inlet areas concentrated on collecting license fees, seizing contraband furs, overseeing "beaver sealing," and enforcing the open-closed hunting season periods and bag limits.[28]

The annual report of the executive officer to the Alaska Game Commission for 1928-29 summarized some of the problems confronting the wardens assigned to the area within which present-day Lake Clark National Park and Preserve is located. He observed:

> As stated in previous reports, this summer patrol is not as productive of prosecutions as it should be, for it is many months after violations occur that the warden gains knowledge of them. With the present condition of finances, it is the best that can be done until sufficient funds are made available to purchase and maintain a dog team enabling the warden to make a winter patrol of portions of the Alaska Peninsula and the Iliamna and Nushagak regions. It is estimated that at least $2,000 will be required for this additional and much needed work....
>
> The absence of a boat for transportation on Cook Inlet, since the loss of the "MARTEN" in 1926, continues to seriously handicap the warden's activities in this district. Charter rates for suitable boats on Cook Inlet range from $40.00 to $75.00 a day, thus you can realize from your knowledge of the limited funds available that it is almost impossible for the warden to charter a boat. This forces him to depend entirely upon common carriers for transportation to Cook Inlet points. Common carriers do not regularly visit the west side of the Inlet, and our work in that section has been seriously neglected.[29]

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27. Report of the Executive Officer to the Alaska Game Commission for the Period April 14, 1925 to January 31, 1926, in Alaska Game Commission, Annual Reports of the Executive Officer to the Alaska Game Commission, 1925-1959, Microfilm, Alaska Historical Library, Juneau. During the 1926-27 hunting season the licensed guides for the Lake Clark-Iliamna Lake region were: John Bailey Seward (a.k.a. Jack Seward), Lake Clark district; Ralph C. Vogt, Anchorage, Region adjacent to Snug Harbor and Chinitna Bay; and Samuel B. Foss, Iliamna, Iliamna and Lake Clark districts. *Annual Report of the Governor of Alaska, 1927*, p. 51.

28. Third Annual Report of the Executive Officer to the Alaska Game Commission for the Year 1927, pp. 20-21, and Fourth Annual Report of the Executive Officer to the Alaska Game Commission for the Period of January 1st to October 31, 1928, pp. 9-10, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

29. Fifth Annual Report of the Executive Officer to the Alaska Game Commission for the period November 1, 1928 to October 31, 1929, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

During the late 1920s and early 1930s local white residents in the Lake Clark-Iliamna Lake region were employed by the Alaska Game Commission for such jobs as licensing officers and tagging officers. For instance, Hans Seversen of Iliamna was listed as a licensing officer in both 1928-1929 and 1929-1930. In 1931-32 C.M. Hatton of Iliamna was listed as a special tagging officer.[30]

By the early 1930s the Alaska game wardens were using airplanes to conduct their patrolling activities. During 1931-1932, for instance, the executive officer reported to the game commission concerning patrolling activities between Anchorage and Bristol Bay:

> During February, March and April Warden O'Connor was occupied with checking arrivals and departures of planes and trains and persons likely to be active in transporting illegal furs. This work was varied with short patrols along the Railroad Belt and one plane trip to Iliamna Lake and Dillingham to check up on the report [unsubstantiated, as it turned out] that Warden Healy had been drowned.
>
> On May 7 Wardens Healy and O'Connor joined the "Seal" and conducted patrols in Districts #5, #6 and #9 until July 9 when the "Seal" with Warden Healy left for Bristol Bay. The major purpose of the combined patrol was to endeavor to locate a cache of illegal beaver skins that were reported to be somewhere in the Cook Inlet or Susitna River regions.[31]

By the mid-1930s the annual reports of the executive officer to the Alaska Game Commission included summaries of reports relating to wildlife populations throughout the territory. The summaries provide one of the best overviews of the wildlife population levels for the area within the boundaries of the present-day park and preserve. In 1935, for instance, Hans Seversen of Iliamna reported that the upper Mulchatna River was "overrun by wolves." Warden Sarber of Dillingham observed that grouse were "especially plentiful and noticeably increasing in the Mulchatna River country and Lake Clark country." Sarber also commented that black bear were "quite plentiful" in the "upper Lake Clark country," while brown and grizzly bears where "fairly numerous in the upper Lake Clark and Iliamna Lake region and on down the Alaska Peninsula." Moose had "increased appreciably in the Lake Clark country" and were especially plentiful in the "western section" and "throughout most of the Mulchatna River drainage." Caribou were "quite plentiful in the upper Mulchatna River country and on the tundra country across from the Mulchatna River to the Lake Clark and Iliamna Lake country." Mountain sheep were "fairly numerous in the mountain ranges between Lake Clark and across to the divide of the Stony River" and were "not noticeably decreasing." Wolves were "spreading and increasing in the Lake Clark and Mulchatna River region" and were "becoming numerous in that country." Marten were severely depleted except for a few "in the mountain country of the headwaters of the Mulchatna

30. *Ibid.*, p. 4; Sixth Annual Report of the Executive Officer to the Alaska Game Commission for the period November 1, 1929, to October 31, 1930, p. 3; and The Eighth Report of the Executive Officer to the Alaska Game Commission for the period November 1, 1931 to October 31, 1932, p. 5. in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

31. The Eighth Report of the Executive Office to the Alaska Game Commission for the period, November 1, 1931 to October 31, 1932, p. 18, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.



In the early 1930s, local trappers such as Gillie Jacko (left) came to Seversen's Roadhouse to sell beaver hides. Shown in the photo is a Travel Air 4000, piloted by Frank Dorbrandt. George Seversen is in front of Dorbrandt; Gory Nicolai, holding two beaver hides, is in front of Seversen. Mike Hatton, an Alaska Game Commission agent, is seated in the center; Mary Seversen is second from right; Anne, her sister, is on the right; and their brother Walter stands at front right. This photo was taken circa 1932.

Courtesy of Helena Seversen Moses

River and the country lying between the upper Mulchatna River and Lake Clark." Rabbits were "very plentiful" and "increasing rapidly" in "the upper Iliamna Lake and Lake Clark regions."[32]

A comparison of the aforementioned wildlife reports with those of 1939 provides a picture of the fluctuations and changing locales of various species over a five-year period. In 1939 it was reported that moose were "increasing fast on the west side of Cook Inlet" and "moving in around Iliamna and on the Peninsula." On the upper Nushagak and Mulchatna rivers there were "numerous caribou," while "large bands" were crossing the Holitna to Whitefish Lake. Small numbers of black bear inhabited the upper Mulchatna and Nushagak rivers, the Iliamna Lake-Lake Clark country, and the Naknek Lake country. Beaver were disappearing from the Nushagak and Mulchatna river valleys, the result of overtrapping by aliens and retaliation against those whites by angry Natives who were systematically destroying the beaver houses and white traps along numerous streams. The "upper Iliamna and Lake Clark" region was "about cleaned out" of beaver where they had "been taken too closely for years." It was recommended that the beaver season should be opened and closed earlier "to keep excessive trapping down." During the spring "many people" entered the area "to take their vacation and also to shoot beaver."[33]

Because wolves and coyotes were increasing in many parts of Alaska by the late 1930s the Alaska Game Commission commenced a bounty payment program for their pelts in 1939. By June 1940 some 945 persons had claimed bounties of $20 on an aggregate of 2,716 wolves and coyotes.[34]

BIG GAME HUNTING: 1940s-1970s

During the late 1940s the Lake Clark-Iliamna Lake area was noted for three principal big game species that were treasured by hunters. The most plentiful were moose which were increasing in the Cook Inlet region to the point that they appeared to be damaging their own ranges in some areas. The Mulchatna herd of caribou, which ranged to the north and west of Lake Clark in the Mulchatna River drainage, numbered about 1,000 in 1948-1949. The size of the herd was decreasing, however, primarily because of burning and reindeer grazing in its winter ranges and to a lesser extent because of hunting and natural predators. The area north and east of Iliamna Lake, including Lake Clark, continued to have a high concentration of Dall sheep.[35]

Besides moose, caribou, and Dall sheep, one of the leading attractions for big game hunters in the Lake Clark region during the postwar years was brown bear. This species was especially plentiful on the Chinitna Peninsula, and it brought hunters to the area just as it had since the early twentieth century. In May 1946, for instance, Arthur S. Crites, a resident of California, and

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32. The Tenth Report of the Executive Officer to the Alaska Game Commission for the period of November 1, 1934, to November 30, 1935, pp. 64, 75, 77, 79, 81, 83-84, 93, and 99, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

33. The Executive Officer's Report to the Alaska Game Commission For the Period December 1, 1938 to December 31, 1939, pp. 32, 36, 46, 86-89, in Alaska Game Commission, Annual Reports for the Executive Officer, 1925-1959.

34. "Record of Wolf and Coyote Bounty Payments Over A Period of One Year," January 2, 1940, The Executive Officer's Report to the Alaska Game Commission For the Period January 1, 1940 to December 31, 1940, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

35. A. Starker Leopold and F. Fraser Darling, *Wildlife In Alaska: An Ecological Reconnaissance* (New York, The Ronald Press Company, 1953), pp. 47-67, 83-96, 102-105.

his friend John Utterstrom, a businessman in Anchorage, flew from that town to Chinitna Bay to hunt for "Alaska Brownies." The men employed two guides who transported them around the area in a 20-foot dory with a 10-horsepower outboard motor.

After catching and skinning several hair seals "for the bounty," the men attempted to shoot two American eagles nesting in a tree along one of the bay's inlets. The men then turned to the object of their hunting trip, and during the next few days they saw four black bears and many more brown bears. They shot and killed three "brownies" – one measuring nine feet, two inches "from tip to tip and of excellent fur" weighing an estimated 1,200 pounds and another measuring only "five feet four inches." The latter, a female with "longer and better colored" fur, subsequently made "the most beautiful rug of the three which we got."

While the guides returned to Anchorage the hunters flew to Lake Iliamna with Glendon Collins, a bush pilot who had formerly worked for the Alaska Fish and Game Commission, a seven-member panel established by the territorial legislature in 1957 to assist the U.S. Fish and Wildlife Service in the enforcement of federal fish and game laws, manage territorial fish and game policies, and administer licensing regulations. Since it was too early in the season to fish in the Newhalen River, which Crites described as "the best trout fishing stream in all of the world," they flew out to some smaller streams and tried both flies and spinners but caught nothing. That night the men stayed at Hans Severseп's lodge, "a well-known resort" at Iliamna. Two doctors from Portland were at the lodge while fishing.

The men then flew to Lake Clark to fish. Crites described his experiences there:

> This is known as the most beautiful part of Alaska. I have since hoped it might be my good fortune to go back there some summer and spend a month or more fishing. The climate is most pleasant and the scenery beyond compare. The lake is over one hundred miles long and has many inlets and is full of fish (rainbows, mackinaw trout, and graylings).
>
> Our pilot flew around over the inlets to the lake. Finally we saw some fish scurrying down one of the rivers into the lake; they had been scared by the plane. Collins turned about and lit on the lake. In two hours I had caught on the fly fifty-two graylings (they averaged about 2½ pounds each in weight). The pilot said he could not get off the lake with any more weight, so I reluctantly stopped fishing. We dressed the fish and took them back to Anchorage with us.[36]

The postwar years witnessed the development of improved transportation in the Lake Clark-Iliamna Lake region, thus encouraging the growth of big game hunting and sport fishing. A Congressional report, for instance, noted that "the 1949 tourist has for his use either chartered or scheduled air service for trips to all recreational spots around Cook Inlet, to McKinley Park, to the isolated big game and fishing areas around Dillingham and Iliamna, and to the volcanic craters of Katmai National Monument." In addition to the tourists, the estimated 25,000 residents of the Cook Inlet region, according to the report, were potential patrons of resorts and other recreational facilities.

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36. Arthur S. Crites, *A Hunter's Tale of the Great Outdoors* (Los Angeles, The Ward Ritchie Press, 1952), pp. 118-38.

The Congressional study noted that both resident and nonresident hunting and fishing had developed quite rapidly during the postwar years. As "an estimated average of $2,000" was "expended by each big-game trophy hunter, much of the tourist industry's efforts and investments" had been "aimed at developing this lucrative business."[37]

During the 1960s, improved accessibility increased hunting pressure in the Lake Clark region. The Twin Lakes area to the north of Lake Clark, for instance, became a popular focus for big game guided hunts of Dall sheep. The sheep were vulnerable because they were found around the alpine lakes which allowed ready float plane access. The heavy hunting pressure on the sheep resulted in a severe decline of the ram population in the Lake Clark area by the early 1970s.[38]

To accommodate the increasing popularity of big game hunting in the Lake Clark-Iliamna Lake region during the 1960s lodges were established by registered guides and outfitters. One of the earliest such establishments at Lake Clark was the Chulitna Lodge, located near the mouth of the Kijik River. The lodge was operated by Glenn Andrews, a registered guide and outfitter. Advertisements for the lodge appeared in the *Alaska Sportsman* as early as March 1966. The advertisements stated that Andrews offered trophy and wilderness hunting and fishing opportunities on the "Great Alaska Peninsula" from his "fly in lodge and camps." He specialized in guiding hunts for brown and grizzly bear, moose, caribou, sheep, and wolf as well as trapping endeavors.[39]

Glenn Andrews published an article about an eventful 10-day bear hunt based from his Chulitna Lodge on Lake Clark in the August 1967 issue of *Alaska Sportsman*. Using the lodge and another camp at Kakhonak on the southeast shore of Iliamna Lake as his bases, Andrews guided the bear hunt with his Super Cub airplane. The hunter was David Doutre, a gun shop owner from San Jose, California. After seeing brown bear in various areas, including Lake Clark Pass, Telaquana Lake, and the Bruin Bay vicinity along the west coast of Cook Inlet south of the present-day park/preserve, Doutre finally shot and killed a bear in the Telaquana region.[40]

During the early and mid-1970s the Lake Clark region supported a small but growing sport hunting industry. While the area had no recognized outstanding wildlife resources, and the existing population densities were low, its relative accessibility to Anchorage, the major population center of the state, suggested that sport hunting had potential for growth. While much of the recreational activity in the area focused on sport fishing by that period, hunting continued to be popular.[41]

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37. U.S. Congress, House, Committee on Public Works, *Cook Inlet and Tributaries, Alaska, Letter from the Secretary of the Army*...85th Cong., 1st Sess., 1957, H. Doc. 39, pp. 69-70.

38. *Anchorage Daily News*, May 15, 1983.

39. "The Guide Post," *Alaska Sportsman*, XXXII (March 1966), p. 1.

40. Glenn Andrews, "Chulitna Brownie," *Alaska Sportsman*, XXXIII (August 1967), pp. 6-9, 52-53.

41. U.S. Department of the Interior, Alaska Planning Group, *Final Environmental Statement, Proposed Lake Clark National Park, Alaska*, 1975, pp. 86, 89. Also see Byron Dalrymple, *Complete Guide to Hunting Across North America* (New York and London, Harper & Row, 1970), pp. 731-42, and Alaska Department of Fish and Game, comp., *A Fish and Wildlife Resource Inventory of the Cook Inlet-Kodiak Areas, Volume 1-Wildlife*, pp. 7, 31-33, 213-14.

Sport hunting in the Lake Clark region during the early and mid-1970s included primarily the harvest of brown/grizzly bear, moose, caribou, and Dall sheep. Based on estimates by the Alaska Department of Fish and Game, the reported harvest of brown bear in the area was 179 during the years 1971-1975. These bear roamed predominantly in the Cook Inlet coastal regions and the western drainages of the park proposal area. During the summer, as the salmon began to move upriver to spawn, the bear congregated along the numerous streams draining into Iliamna Lake, up the Newhalen River to Sixmile Lake and Lake Clark, and at the Tlikakila River as it flowed into Lake Clark. The reported harvest of moose, which occurred in moderate to high densities along the major rivers and their tributaries within the proposal area, was 747 during 1971-1975. The majority of moose kills took place in the coastal regions and western drainages of the proposal. The five-year harvest figure for Dall sheep, concentrations of which sometimes ranged up to 600 in the northern part of the proposal area during winter, was 47. Of this total, 90 percent of the kills were made in the mountainous areas on the west side of the proposal region. Dall sheep concentrated around lower Twin Lake in winter, and their spring and lambing ranges included the mountains between Twin Lakes and Turquoise Lake and north of the Tlikakila River.

During 1975-1976 sport hunting of the Mulchatna caribou herd increased markedly. With the demise of the Nelchina herd in 1973 and the drastic fall in surveyed numbers of the Arctic herd, more hunters began pursuing caribou in the Mulchatna herd, one of 13 major barren ground caribou herds in Alaska. Consisting of from 9,000-14,000 animals this herd ranged over a 20,000-square-mile region bounded by Iliamna Lake on the south, the Swift River on the north, the Aniak Lakes area on the west, and the Alaska Range foothills in the Lake Clark region on the east. Because of the increased hunting pressure limits were placed on caribou hunting for the first time during the 1976-1977 season. The season extended from August 1 to March 31. Previously, the bag limit had been five caribou per day and ten per calendar year. During the 1976-1977 season hunters were permitted to take only one to three animals per season, depending on the particular game unit in which they were hunting.

Waterfowl were present in the foothills, lakes region, and tundra plains. Trumpeter and whistling swans were noted along the Chulitna River basin. Game duck species that attracted hunters to the region included mallard, widgeon green-winged teal, pintail, harlequin, scaup, goldeneye, scoter, eider, bufflehead, and old squaw. Seabird colonies nested along the coast around Cook Inlet, with concentrations found at Tuxedni and Chinitna bays.

Guided hunting increased three-fold in the Lake Clark region during the early 1970s. Some summer cabins within the proposal area were maintained by guides and air charter services and these were used regularly in the summer by outdoor recreation visitors engaged in hunting and fishing.[42]

During the early 1970s the state of Alaska established the Guide Licensing and Control Board. Its mission was to regulate the commercial hunting guide industry for the purpose of protecting the state's wildlife resources. To accomplish that purpose the board established exclusive

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42. "Lake Clark National Park/Preserve, Existing Recreation Uses, November 1976," "Lake Clark National Park/Preserve, Existing Economic Uses, April 1975," and "Lake Clark National Park/Preserve, Wildlife, November 1976," RG 79, File-Legislative Support Data, Proposed Lake Clark National Park, Alaska, Box Accession No. 079-83E0007, Alaska Task Force Legislative Support Data, National Archives and Records Administration, Federal Records Center, Seattle. Also see Michael Lynn Sheldon, "The Impact of the D-2 Land Proposals on Sport Hunting for Dall Sheep in Alaska" (unpublished M.P.A. thesis, University of Alaska, Anchorage, August 1977).

commercial guide areas and assigned guides to each area. Through the 1970s the board systematically established exclusive guide areas in each of the state's game management units. The criteria used by the board for assignment of a guide to an exclusive area included such considerations as use, occupancy, and financial investment of the guide in the region.

During the 1970s "Professional and Vocational Regulations" for hunting guides were prepared by the Guide Licensing and Control Board in cooperation with the Alaska Department of Commerce and Economic Development. While some of the regulations became effective in June 1974 a complete set of regulations was not prepared and codified until June 1978.

The 1978 regulations required that a nonresident hunter be accompanied by a guide when hunting brown or grizzly bear and Dall sheep. Other species of big game could be hunted by nonresidents who did not have a guide. Twenty-six guide districts were established and defined as being identical to the 24 areas described as game management units by the Alaska Department of Fish and Game, plus the addition of two subdistricts.

Under the new regulations a guide had to be at least 21 years of age and have a minimum of five years of hunting experience in Alaska. After passing a written and oral examination and meeting other requirements for certification, including 90 days in the field over a three-year period acting as an assistant guide under the supervision of a master guide, he was licensed and entered on a register for one of the guide districts. He was restricted to guiding in the district for which he was certified. The master guide level was attained after ten years of superior performance as a registered guide. The regulations contained a section of "guiding ethics" designed to govern the professional activities and responsibilities of the guides.[43]

Following approval of these regulations the National Park Service, to which a number of areas in Alaska, including Lake Clark National Monument, had been assigned for administration that year, accepted the hunting guide assignments made by the Guide Licensing and Control Board. The NPS issued the guides, who were assigned areas in Park Service units where hunting was permitted, concession permits and commercial use licenses.[44]

By the late 1980s guiding would become Alaska's seventh most important industry. At that time about 47 master guides and 375 registered guides were in business. Of these about 220 registered guides were active as were 35 to 40 master guides. In 1986 clients paid Alaskan guides some $16,700,000 for hunts. The average gross income for an active master guide for that year was $80,000 and that for a registered guide was $62,000. Guides needed a lodge, camp, or boat from which to hunt, as well as equipment, including airplanes, boats, and horses. The average investment for active master guides in such gear in 1986 was $325,571 and that for registered guides was $202,737.[45]

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43. State of Alaska, Department of Commerce and Economic Development, Division of Occupational Licensing, Guide Licensing and Control Board Regulations, 12 AAC 38.010, Printed June, 1978, File, Hunting Guides & Regulations, Old Park Ranger Files, Lake Clark National Park and Preserve, Port Alsworth. Also see Editors of Alaska Magazine, *1978-79 Alaska Hunting Guide* (Anchorage, Alaska Northwest Publishing Company, 1978), pp. 113-15.

44. "Briefing Statement, Hunting Guides, October 1988," File-Hunting Guides, Park Administrative Files, Lake Clark National Park and Preserve, Port Alsworth.

45. Jim Rearden, "So You Want to Be An Alaskan Guide," *Alaska*, LIV (August 1988), pp. 32, 42.

SPORT HUNTING IN LAKE CLARK NATIONAL PRESERVE DURING THE 1980s

When Lake Clark National Park and Preserve was established in 1980 sport hunting was authorized within the preserve, the boundaries of which included an arc along the western and southwestern sides of the "core park." The preserve fell within four hunting districts delineated by the Alaska Department of Fish and Game: 9B, 16B, 17B, and 19B. It was estimated that some 1,600 sport hunting days occurred in the preserve during 1981. The annual hunting season dates and species limits are determined by the state Board of Game under the supervision of the Department of Fish and Game.[46] Enforcement of hunting regulations in the preserve is done primarily by park rangers and state wildlife protection officers through interagency cooperation efforts.

By 1984 some 15 certified big game guides were authorized by the state to operate in the four hunting units in which the preserve was located, and by the following year commercial use licenses had been awarded to Alaska Safari and Rust's Flying Service, both of Anchorage, to guide within the preserve. Commercial licenses were issued when a business had no commercial facilities within an NPS unit, the commercial activity originated and terminated on non-NPS lands, no money changed hands on NPS lands, and no commercial solicitation occurred on park lands.

Most of the hunting activity in the preserve, however, continues to be nonguided. The proximity to Anchorage and the Kenai Peninsula makes the preserve especially popular for resident hunters. In addition to those who use their own aircraft to hunt in the preserve, air taxi operators bring in other residents as well as out-of-state and foreign hunters.

Sport hunting activity in the preserve is most readily apparent during the late summer, early fall hunt when areas such as Stony River, Caribou Lakes, Fishtrap Lake, and Snipe Lake receive heavy hunting pressure.[47]

Among the attractions of the preserve for sport hunters during the 1980s has been the Mulchatna caribou herd which ranges across the Mulchatna River and tributary drainages in hunting units 16, 19B, and 19C. Newspaper accounts during the early 1980s, for instance, noted that hunters who wanted to minimize flying time should focus their efforts on this herd, which consisted of some 25,000 animals by 1983, because it could be reached without arranging charters in outlying communities. Float planes flying from the Anchorage area reportedly could put a hunter near caribou for about $500. The reports noted that the Mulchatna herd had a tendency to scatter more than other herds, but the Anchorage-based air services that flew hunters usually had a fair idea of the location of the animals. Bush pilots could usually put a hunter near a herd or out in front of one that was migrating. Then is was "just a matter of glassing with binoculars

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46. For instance, see State of Alaska, Department of Fish and Game, Alaska Board of Game, *Alaska Game Regulations, Effective Dates, July 1, 1989-June 30, 1990, No. 30, Governing Recreational, Subsistence and Commercial Uses of Alaska's Wildlife*, pp. 1-49.

47. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve, Alaska*, August 1984, p. 19; "Information Sheet," n.d., File-Commercial Licenses, Old Park Ranger Files, Lake Clark National Park and Preserve, Port Alsworth; and U.S. Department of the Interior, National Park Service, Alaska Region, *Commercial Visitor Service Directory*, May 1985, n.p.

from the highest ground until some animals are located." Hunting unit 19B was particularly used by hunters wishing to combine moose hunting and caribou hunting.[48]

By 1987 it was estimated that the population of the Mulchatna caribou herd was 42,900 and still increasing. That year Christopher Batin described the opportunities for hunting in the area of the herd's migration in his *Hunting In Alaska: A Comprehensive Guide:*

> The current population figures for the Mulchatna herd are the highest ever recorded. But harvest data is of questionable value since the reported harvest is a minor fraction of the actual harvest, which includes subsistence use by local villagers. Hunters can find caribou in the Lime Hills along the Stony River to the Bonanza Hills at the head of the Mulchatna River. Caribou also winter along the South and Windy forks of the Kuskokwim River, the lowlands near the mouth of the Swift River, at Nushagak Bay near Clark's Point, and along the Kvichak River. Big bulls frequent the Big Mountain area in mid-winter. In recent years, a substantial increase in caribou has occurred near New Stuyahok and Ekwok on the west side of the Nushagak River. These units are popular hunting areas for hunters chartering flights from Anchorage. Expect to pay around $800 per person, minimum, for a charter flight to this area. August and September are the best months to go on floats; one caribou may be taken until October 31. Starting November 1, three caribou can be taken in some areas. Then, access is chiefly by ski plane.[49]

Batin also made some observations on other sport hunting attractions in Lake Clark National Preserve. Good moose hunting was conducted in the upper Hoholitna drainage near Whitefish Lake and the upper Stony River drainage near Telaquana and Two Lakes with the greatest hunter success on the Stony River below the Telaquana River. Although outside the preserve boundaries Trading Bay and Redoubt Bay on Cook Inlet were two of the most significant areas for hunting waterfowl in Alaska. Trading Bay was rated among the top 15 goose and waterfowl hunting areas in the state.[50]

During the 1980s several publicized incidents relating to enforcement of hunting regulations occurred in the preserve. On September 5, 1982, Carl F. Brady, Jr., an Anchorage insurance man and former finance manager for the Terry Miller for Governor campaign, was cited by a park ranger for shooting a moose near a small unnamed lake in the preserve four miles northwest of Lake Telaquana on the same day he was airborne. To protect moose, which are easily spotted from the air, state law requires moose hunters to spend a day on the ground before hunting. The law is designed to prevent hunters from flying out to spot a moose, landing on a nearby lake,

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48. *Anchorage Daily News,* September 25, 1983.

49. Christopher Batin, *Hunting In Alaska: A Comprehensive Guide* (Fairbanks, Alaska Hunter, 1987), p. 74.

50. *Ibid.*, pp. 51, 332-33. Batin offered observations on other hunting opportunities in the game units in which Lake Clark National Preserve is located. However, he did not pinpoint the geographical areas within the units, thus making it difficult to determine whether his statistics applied to areas within or outside the preserve. The wildlife harvest statistics for the game units in which Lake Clark National Preserve is located may be found in the annual *Summary of Wildlife Harvest* prepared by the Alaska Department of Fish and Game, Division of Wildlife Harvest. The summaries, however, do not indicate geographical areas within the units, thus making it impossible to determine the actual harvest within the preserve. See, for instance, State of Alaska, Department of Fish and Game, Division of Wildlife Conservation, *Summary of Wildlife Harvest, 1988-1989,* Prepared by Information Management Section, Wildlife Information Data Base, March 1, 1990, pp. 30-32, 49-53, 56-58.

getting out of the plane, and shooting the animal. The Brady case was the first time federal officials had tried to prosecute a hunter under the state law.

After issuing a citation to Brady the ranger left to get a National Park Service pilot and aircraft to retrieve the carcass of the moose. Returning the following morning NPS rangers found that only the head, lower legs, and intestines remained. Armed with a search warrant the rangers went to Brady's Anchorage home and seized a .243-caliber rifle with scope and approximately 400 pounds of moose meet.

Brady pleaded no contest to the charges in the U.S. District Court in Anchorage. He was ordered to pay a $500 fine, contribute $1,000 to the Anchorage Zoo, donate ten hours of volunteer work at the zoo, and forfeit his moose meat. He was placed on probation for six months and ordered not to hunt until March 1983.[51]

Charges of wanton waste were filed against three moose hunters in the preserve in September 1983. The three men, two from Barrow, Alaska, and one from Los Angeles, California, encountered three large moose in a "remote corner" of the preserve ten miles from where their floatplane dropped them. The men packed out the antlers of the moose, the largest of which was trophy size measuring 54 inches across. Although the men packed out some meat, they realized that it would take a week to pack all the meat to their camp. The men decided to leave most of the meat at the kill site because of the difficulties in packing it "through muskeg and tiaga, bog and willow thicket, ridge and valley to camp." Accordingly, Park Service rangers charged the men with wanton waste, and they received a fine.[52]

The state's commercial hunting guide area assignment program was invalidated by the Supreme Court of the State of Alaska on October 21, 1988. The court declared the exclusive guide areas assigned by the Guide Licensing and Control Board "to be without legal force." The court's opinion stated that the non-competitive method of selection was unenforceable. As a result of the decision all registered hunting guides had state authorization to commercially hunt in any and all areas of Alaska.[53]

To mitigate potential hunting pressure in the national preserves throughout Alaska in the aftermath of the supreme court's decision the Park Service operated an interim program for guided hunting during 1989-1990. The program limited the number of guides and the number of clients hunting in the preserves. The hunting guides who had NPS authorization to guide hunts in national preserves in 1988 were, if qualified, given concession permits for the 1989 and 1990 seasons. No new guides were authorized or transfers of permits allowed during the two-year interim period.[54]

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51. *Anchorage Daily News*, September 23, 1982.

52. *Anchorage Daily News*, September 25, 1983.

53. "Briefing Statement, Hunting Guides, October 1988," File-Hunting Guides, Park Administrative Files, Lake Clark National Park and Preserve, Port Alsworth.

54. News Release, U.S. Department of the Interior, National Park Service, "Hunting Guides Require National Park Service Permit," August 23, 1989, File-Hunting Guide Operation, Park Administrative Files, Lake Clark National Park and Preserve, Port Alsworth.

SPORT FISHING: 1930s-1970s

Although the potential for lucrative recreational fishing opportunities in the Lake Clark-Iliamna Lake region had been known since the earliest years of the twentieth century, sport fishing would not become a major tourist attraction in the area until the late 1930s. Some of the earliest reports of the fishing opportunities afforded anglers in the region were those published by USGS expeditions. In 1914, for instance, a USGS party exploring the Lake Clark-Central Kuskokwim region observed in its report:

> Fish are probably abundant in most of the streams of the region....The most common food fishes are salmon, grayling, whitefish, and trout. Salmon were beginning to run in Newhalen River before June 13, and were still running in good numbers on the Kuskokwim as late as August 29. The salmon taken at both places were in good condition, and had none of the spots that are usually seen on fish that have traveled far from salt water. Along all the larger streams that were crossed by the expedition of 1914 surprisingly few dead salmon and almost no fishing trails made by bears were seen. The absence of these two features, so common on good salmon streams, suggests that possibly salmon are not numerous. Whitefish are said to be especially abundant in the large streams after the salmon have left. They are caught throughout the winter in the Kuskokwim below the Holitna and probably elsewhere throughout the region. Whitefish Lake, at the head of the Hoholitna, is said to owe its name to the abundance of whitefish in it. Grayling were caught in several of the larger clear-water streams, and were seen even in the smaller brooks. Many of the grayling caught were 18 inches or more long.[55]

Later in 1929 a USGS expedition to the Lake Clark-Mulchatna River region reported favorably on the fishing prospects of the area's lakes and streams. Stephen R. Capps, the geologist in charge of the exploring party, observed:

> This region as a whole is exceptionally well supplied with fish. Lakes Iliamna and Clark and their larger tributaries being notable spawning grounds for red salmon, which come up in the early summer in large numbers. This fish furnishes the main item of food for the natives. These two lakes, as well as the many other lakes of the region, contain lake, rainbow, and dolly varden trout, whitefish, and pickerel, all in sufficient abundance to form a reliable food supply and to make a paradise for the angler. The smaller streams of the region are also stocked with trout and grayling, except in those upper reaches of the creeks that are obstructed by beaver dams.[56]

As the airplane came into more widespread use in south central Alaska during the 1930s travel to the Lake Clark-Iliamna Lake area became faster and easier. Better transportation, coupled with reports of the fishing opportunities in the region, led to some of the first sport fishing endeavors on the lakes in the late 1930s. In June 1937, for instance, two men, one of whom was a big game hunter from New York, flew to Lake Iliamna from Anchorage via Star Air Lines to fish for rainbow trout on the Newhalen River. The men flew to Iliamna where Hans Severson had a store and lodge. His place, according to the men, had "become the crossroads-of-the-air

55. U.S. Department of the Interior, Geological Survey, Bulletin 442, pp. 40-41.

56. U.S. Department of the Interior, Geological Survey, Bulletin 824C, p. 135.

for planes between the Cook Inlet and Bristol Bay regions." It was "a short ride and thrilling trip by air" from Anchorage to Iliamna via the "back door" of "Clark Pass" through the "precipitous Aleutian Range." When the men arrived at Iliamna they were welcomed and outfitted by Severson who told them that they were the first two sportsmen "ever to come here solely for the purpose of catching" the huge rainbow trout on the Newhalen. With the guidance of Jack Hobson, a 72-year-old resident who had lived in the area for years, the men fished for two weeks near the mouth of the river as well as at its rapids several miles away. After flying back to Anchorage, the men had their "giant trout" mounted and published an account of their fishing adventures in the *Alaska Sportsman*, thus providing further publicity for the area's fishing attractions.[57]

The influx of military personnel into Alaska during World War II placed heavy demands on the game fish resources of the entire territory. As a consequence sport fishing licenses for residents, nonresidents, and aliens were established in 1942.[58] To protect the game fish populations, game fish species and methods and seasons for taking game fish were established in 1943. In the Lake Clark-Iliamna Lake region catch limits were inaugurated under new regulations for "all waters draining into Bristol Bay" and the "lakes and streams west of Cook Inlet." The limits, which applied to rainbow, steelhead, cutthroat, eastern brook, Dolly Varden trout, and grayling, were "10 fishes singly or in the aggregate, but not to exceed 10 pounds and 1 fish daily." No one could possess more than two daily bag limits.[59]

Sport fishing became a significant recreational activity in the Lake Clark-Iliamna Lake region after World War II. The continuing influx of military personnel into many areas of Alaska, including Cook Inlet, during the postwar period, increased the pressure on the game fish resources of the region. At the same time the fishing opportunities in the region received ever-increasing publicity, thus attracting anglers both from Alaska and other parts of the United States and Canada.

In 1946, for instance, the Lake Clark-Iliamna Lake region received considerable publicity in a popular book entitled, *Alaska's Animals & Fishes*, written by Frank Dufresne, an expert on Alaskan wildlife and fisheries who had served as chief executive of the Alaska Game Commission for many years. Dufresne drew attention to the "fishing paradise" in the Iliamna Lake-Lake Clark region:

> Westward a few miles from the principal city of Anchorage at the head of Cook Inlet is Lake Iliamna, the largest body of fresh water in Alaska. It is a hundred miles long, nearly fifty miles wide. In the same general slope of Bristol Bay is beautiful Lake Clark, the Wood River chain of lakes, and Kukaklek, Naknek, Becharof, Ugashik – immense stretches of water rarely disturbed by fishermen.

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57. Ray E. McDonald and Lucille Kempley, "Giants of the Newhalen," *Alaska Sportsman*, IV (September 1938), pp. 10-11, 24-29.

58. U.S. Department of the Interior, Fish and Wildlife Service, Circular 17, *Alaska's Fish and Wildlife*, by Clarence J. Rhode and Will Barker (Washington, Government Printing Office, 1953), p. 45.

59. U.S. Department of the Interior, Fish and Wildlife Service, Alaska Game Commission, *Regulations Relating to Game and Fur Animals, Birds, and Game Fishes In Alaska, July 1945* (Washington, Government Printing Office, 1945), p. 16.

> There are several gamy varieties here to tempt the man with rod and reel, but the star of the show is a very special type of rainbow trout. In the white-capped rapids of Newhalen River draining Lake Clark into Iliamna many of the rainbows you catch will be two feet in length with fair numbers of them exceeding thirty inches. They are unbelievably abundant, and because of the roaring, cold water in which they live, they fight long and furiously when hooked. The rapids in Naknek, Wood, and in dozens of lesser known rivers in this vicinity are fully as good rainbow trout fishing as the Newhalen. Collectively, they exceed any other known waters for quantity and quality of these colorful giants. To reach these "Great Lakes" of Alaska and their connecting rivers requires an hour or two by airplane from the city of Anchorage.

At the village of Igiugig where Lake Iliamna drained into the Kvichak River, "an incredible sight" awaited "the angler fortunate enough to visit this lonely outpost":

> Rainbow trout from 16 to 32 inches in length fairly swarm in the clear fast waters. As many as two or three hundred of the brilliantly colored fish are in sight at one time as the angler makes his cast from the high bank. Most any type of spinner, spoon or plug brings instant response. Gaudy colored wet flies in the larger sizes are equally acceptable. Anglers who visit this place feel that they have at last found the mythical "Fisherman's Paradise." They are positive that nowhere else on Earth is there anything to compare with it.
>
> But had the fisherman chosen the foam-flecked waters of the Naknek River, the beautiful falls below Brooks Lake, or the savage torrents of Newhalen River their pleasure would have been equally great. Surely, in all the land there are no waters providing such quantities of rainbow trout as the large streams in this area. Fish exceeding three feet in length have been taken.
>
> Each stream produces its own type of rainbow. In the Newhalen River the trout are trim in form, lightly speckled, pale in color, extremely active when hooked.

The Lake Clark region, according to Dufresne, also provided abundant fishing opportunities for species other than rainbows. Near Tanalian Point at Lake Clark "practically every grayling taken will fall within the 16 to 18 inch class." In addition, Lake Clark, Iliamna Lake, and other lakes in the area had "enormous and practically untouched stocks of lake trout." Favored habitat for the northern pike included the backwaters of Iliamna Lake and Lake Clark, and those two bodies of water marked the extreme limit of range of the "shee-fish." Sportfishing for salmon in Alaska had only been going on for a few years, according to Dufresne, but in recent times two of the five species had begun to be recognized as having "gamy qualities." These two, the king salmon and silver salmon, were also available in quantity in portions of the Lake Clark region.[60]

During the postwar years fly-in fishing ventures to the Lake Clark-Iliamna Lake region became more frequent. Some of these excursions were described in published works, thus popularizing the area's game fishery. A fairly typical account of such a trip was published in Russell Annabel's *Hunting and Fishing In Alaska* in 1948. After flying from Anchorage to Lake Iliamna on a private float-equipped airplane, Annabel observed:

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60. Frank Dufresne, *Alaska's Animals & Fishes* (New York, A.S. Barnes and Company, 1946), pp. 206, 212, 215-18, 224, 240-42, 244, 251, 260, 265, 291.

> We were on the bank of Tularik Creek, a tributary to Lake Iliamna, two hundred and fifty miles southwest of Anchorage. Iliamna...lies in the heart of what certainly is one of the finest of all rainbow-fishing regions. Nobody knows how large the rainbows grow there. Anglers discovered the race of giants only about ten years ago and were just beginning to explore the many creeks, rivers, and lakes on the watershed when the late war interrupted them. It is an established fact, however, that thirty-inchers are common, and that a number of thirty-six-inchers have been taken. The Indians and white trappers state, moreover, that rainbows measuring forty inches have been taken here in salmon nets.

From Lake Iliamna Annabel and his companions flew to Lake Clark. Here the men fished for "gem-bright shallow-water lake trout" near the southern outlet of the lake. They then flew to Tanalian Point and fished for grayling. According to Annabel, these

> handsome fish, all purplish and green, with lavender spots, average about fourteen inches here, and hit so eagerly that if you dangle your fly a few inches above the water they will leap out for it. They wanted brown, black, or gray flies, fished dry, and when they took one and the hook was set, they fought on the surface, cutting big circles and figure eights, but not jumping so often as the rainbows and lake trout.

After flying to Naknek to fish for steelheads the men returned home. As they flew back to Anchorage, Annabel commented:

> Everywhere we looked under the plane's wings there were lakes and streams, and as you watched them slide past, you wanted to land and try them out. This is some of the greatest fish country we have left. It is vacation country. It is country every fresh-water angler should visit.[61]

The widespread publicity given to Alaska's sport fishing resources led to increasing numbers of anglers who sought to exploit those opportunities during the postwar years. In 1947, for instance, the Alaska Game Commission reported on the rise in sport fishing and its impact on commission activities:

> More Alaskans are now taking up sport fishing than formerly. Many non-residents are fishing our streams and advertising the advantages here, and it is receiving more attention from Alaskans who never thought about angling for sport. Many Alaskans had previously taken sport-fishing as a matter of course but now that their attention has been attracted by non-residents fishing our streams, they are enjoying the sport in full measure.
>
> Requests are coming in for stocking grayling in the coastal streams, and people of the Interior are asking that trout be planted in their better streams. Lake trout are in

61. Russell Annabel, *Hunting and Fishing In Alaska* (New York, Alfred A. Knopf, 1948), pp. 326-41. Also see Federal Writers' Project, *A Guide to Alaska: Last American Frontier*, by Merle Colby (New York, The Macmillan Company, 1950), pp. 353-54.

demand for planting in the Interior, as such fish are scarce in many large lakes where there should be plenty of fish for sport as well as food.[62]

The following year the commission elaborated on its plans to meet the demands of sports fishing enthusiasts in the territory:

> We are receiving many requests to stock lakes and streams that have never contained game fish and it is believed that this phase of the work will have to be exploited in the immediate future if we are to continue enjoying some of the best fishing on the North American continent. It is planned to begin this work upon the availability of funds, and to begin a program of transplanting trout next year by use of [Fish and Wildlife] Service aircraft.
>
> Game fish provide a big portion of food for residents, particularly natives in the remote interior areas. The total economic value of game fish taken annually is estimated at a minimum of $500,000.00.[63]

The reputation of the Lake Clark region as a popular sport fishing mecca continued during the 1950s. In 1959 the U.S. Fish and Wildlife Service reported that the "Katmai Monument, Lake Clark, and Wood-Tikchik waters" offered "some of the finest fishing in Alaska." "Grayling, large lake trout, northern pike, quantities of Dolly Varden, steelhead and rainbow trout in addition to good runs of king and silver salmon and red salmon that take lures" made "the Bristol Bay fishery an anglers paradise." Two U.S. Air Force recreation camps on the Naknek River, the military base at King Salmon, the fishermen's camps maintained by Northern Consolidated Airlines, and the growing tourist-angler trade out of King Salmon were placing significant angler concentrations on the key lakes and streams of the region. During the summer of 1958, for instance, it was estimated that over 10,000 fishermen-days of use were placed on the major Bristol Bay drainages.[64]

By the mid-1960s sport fishing had become increasingly important to the economy of the Lake Clark-Iliamna Lake area. In 1964, for instance, the Alaska Department of Fish and Game reported that large 20-30 inch rainbow trout were attracting large numbers of sport fishermen into the region each year. The incidental take of large lake trout, Dolly Varden, and arctic char consisted of "added incentives" to the sport fishermen. Existing sport fishing areas of importance in the region centered primarily in the Iliamna Lake drainage system, including the Newhalen, Copper, and Kvichak rivers, Lower Talarik Creek, and Gibraltar Lake.[65]

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62. Eighth Annual Report of the Alaska Game Commission to the Secretary of the Interior For the Period July 1, 1946 to June 30, 1947, p. 7, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

63. Ninth Annual Report of the Alaska Game Commission to the Secretary of the Interior For the Period July 1, 1947 to June 30, 1948, p. 14, in Alaska Game Commission, Annual Reports of the Executive Officer, 1925-1959.

64. U.S. Fish and Wildlife Service, "The Sport Fisheries of Alaska," by Roger W. Allin, August 1959, pp. 12-14, Alaska Collection, RG 36, Archive Box 84-23, Folder-"Sport Fisheries of Alaska," National Park Service History Collection, Office of Library, Archives, and Graphics Research, Harpers Ferry Center, National Park Service, Harpers Ferry, West Virginia.

65. State of Alaska, Department of Fish and Game, Informational Leaflet 95, *Iliamna Lake Watershed Freshwater Commercial Fisheries Investigation of 1964*, by Howard Metsher, February 28, 1967, p. 3. Also see Joe Brooks, *Complete Guide to Fishing Across North America* (New York, Harper & Row, 1966), pp. 486, 488.

NAME OF LAKE	LOCATION BY U.S.G.S. TOPO. Scale 1:250,000	AVERAGE LENGTH	MAX. KNOWN LT. OR PROBABLE MAX. LENG	ABUNDANCE				AVAILABILITY TO ANGLERS					BEST SEASON FOR FISHING				ACCESS		
				VERY ABUNDANT	MODERATELY	LOW	OCCURRENCE	EASY TO TAKE	EFFORT REQUIR. TO TAKE LG. NOS.	CAN BE VERY GOOD OR VERY BAD	LOW	VERY LOW	SPRING & FALL ONLY	SPRING, FALL & SUMMER	WINTER ONLY	ALL YEAR	AIR CHARTER	DRIVE IN	HIKE TO
Iliamna Lake	Iliamna	20	36+	x					x					x			x		
Kakhonak Lake	Iliamna	17	25+	x				x	x					x			x		
Gibraltar Lake	Iliamna	19	25+		x			x						x			x		
Kukaklek Lake	Iliamna									PRESENT									
Battle Lake	Iliamna									PRESENT									
Tazimina Lakes	Lake Clark									PRESENT									
Kontrashibuna	Lake Clark	17	24+	x				x						x			x		
Kijik Lake	Lake Clark	19	24+	x				x								x	x		
Lake Clark	Lake Clark									PRESENT									
Twin Lakes	Lake Clark	17	24+	x				x								x	x		
Turquoise Lake	Lake Clark									PRESENT									
Telaquana Lake	Lake Clark									PRESENT									

66

Trout fishing opportunities in the Lake Clark Region, 1966.
Source: Alaska Department of Fish and Game, Sport Fish Division.

The annual editions of the *Alaska Sport Fishing Guide* that were prepared by the Alaska Department of Fish and Game during the mid-1960s provided further data on the attractions of the sport fishery in the Lake Clark-Iliamna Lake area. According to the guides the village of Iliamna on Iliamna Lake could be reached by scheduled flights. The entire area was served by charter service from Anchorage, Kenai, Homer, King Salmon, and Iliamna. Prior arrangements for accommodations were usually necessary except at Iliamna. Boats were generally available at the Newhalen River and Igiugig on Iliamna Lake.[67]

A report by the Sport Fish Division of the Alaska Department of Fish and Game in 1966 (above) illustrated the allure of the lake trout fishing opportunities in the Lake Clark-Iliamna Lake region. The report included data on the size, abundance, availability, best seasons, and access to the various lakes in the region.

As the sport fishery in the Lake Clark region expanded the Alaska Department of Fish and Game took steps to regulate its exploitation. Although various regulations had been in force for

66. Memorandum, George L. Van Wyhe, Fishery Biologist IV, ADF&G, Fairbanks, Alaska to Alex McRae, Director, Sport Fish Division, ADF&G, Juneau, July 29, 1963, Record Group 11, Department of Fish and Game, Office of the Commissioner, Subject Files, 1961-1973, File-"Sport Fish," Alaska State Archives and Records Center, Juneau.

67. State of Alaska, Department of Fish and Game, *Alaska Sport Fishing Guide*, ca. mid-1960s, p. 62.

several decades, they were refined in a more comprehensive manner during the mid-1960s. By 1965, for instance, all of Cook Inlet was closed to king salmon fishing. The year-round daily catch and possession limits for areas of the inlet extending one-half-mile radius from the terminus of all salmon streams was three salmon (other than king) over 16 inches in length, except three additional silver salmon over 16 inches in length could be taken. In the waters and drainages of the Bristol Bay region, which included the Lake Clark-Iliamna Lake region, the year-round bag limit was:

> Ten (10) in total of trout, lake trout and grayling daily or in possession of which not more than 2 may be over 20 inches in length. Twenty (20) fish daily when excess over area limit is composed of Dolly Varden or Arctic char.

The regulations for sport fishing described the methods and means under which such recreational pursuits could be undertaken. Among the regulations were the following provisions:

> Sport fishing may be done only with a single line held in the hand or attached to a rod so held or closely attended, having attached to it not more than one plug, spoon, spinner or series of spinners or two flies or two hooks or as hereinafter provided, EXCEPT that two rods, each with a single hook, may be used while fishing through ice.

Fresh water sport fishing for trout char, grayling, and salmon were not to be taken with fixed or weighted hooks and lures, multiple hooks and lures, spears, or arrows. Sport fishing practices that were not allowed included fishing in fresh water with live fish for bait, fishing within 300 feet of an artificial barrier, weir, dam, fish ladder, or other obstruction, and fishing in restocked or planted waters when so designated.[68]

When the Alaska District, Corps of Engineers, Anchorage conducted a study of the Cook Inlet environment in the early 1970s it was noted that Cook Inlet salmon were an important recreational resource. Most sport fishing for salmon was conducted in fresh water streams. Two streams supporting a significant sport fishery that were within the present-day boundaries of Lake Clark National Park and Preserve were Silver Salmon Creek and Polly Creek. Coho salmon was the principal species caught in those streams.

The study noted that use of razor clams for sport in Cook Inlet had been increasing steadily during recent years. In 1972 more than 400,000 clams were harvested by sport diggers in the inlet. While the majority of this harvest was made on the easily accessible beaches on the eastern coast of the inlet between the Kasilof River and Homer Spit, diggers were making increasing use of the beaches on the western side. On one weekend day in 1972, for instance, 62 airplanes were counted at Polly Creek during a routine check.[69]

The growing significance of the sport fishery at Iliamna Lake and the Kvichak River drainage system was recognized in 1973 by the Alaska Department of Fish and Game. The area was

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68. Alaska Department of Fish and Game, *Alaska: Sport Fishing Seasons and Bag Limits, Summary, 1965, Effective February 2, 1965*, RG 11, File-"Sport Fish Seasons and Bag Limits, 503.2, Summary, 1965." Alaska State Archives and Records Center, Juneau. Also see Alaska Legislative Council, Legislative Affairs Agency, *Report On the Cook Inlet King Salmon Fishery*, December 1972, pp. 1-16.

69. Alaska District, Corps of Engineers, *The Cook Inlet Environment: A Background Study of Available Knowledge* (Anchorage, Alaska, August 1972), pp. III-22-23, 35-37.

designated a "trophy fish watershed," and special regulations reflecting "a fishing-for-pleasure, rather than meat, philosophy" were inaugurated.[70]

The expanding sport fishing industry led to the establishment of lodges and resorts in the Iliamna Lake-Lake Clark region. By the mid-1970s nearly a dozen resorts were operating on the shores of Iliamna Lake and several at Lake Clark, Sixmile Lake, and other points scattered throughout the region. The resorts provided accommodations and various services to the growing number of anglers and recreationists traveling to the region to take advantage of its fishing opportunities. Some resorts provided boats and guides for fishing opportunities on the accessible lakes and waters in the region, while others flew fishermen in float planes to isolated lakes. Some resorts provided guiding services and equipment for hikers, rafters, canoers, backpackers, and campers.[71] A fisheries resource inventory of the waters within the recently established Lake Clark National Monument was conducted by the Sport Fish Division of the Alaska Department of Fish and Game and the National Park Service during 1978-79. Among other objectives the inventory evaluated the sport fishing utilization of portions of 27 lakes and 13 rivers within and adjacent to the national monument.

Recreational angling was observed (or known to occur) on most of the waters surveyed. During 1978 and 1979, a voluntary angler use survey was also conducted by contacting angling guides and air charter services thought to utilize the region in their sport fishing oriented activities. Twenty-three operators responded to the survey with 20 indicating use of some of the waters within the study area. The angler use survey reports indicated substantial sport fishing use occurred on the following lakes and rivers within the national monument: Chilikadrotna River, Chulitna River, Kijik Lake, Kontrashibuna Lake, Lake Clark, Kijik River, Mulchatna River, Tazimina River, Tazimina Lakes, and Telaquana Lake, all of which received 100 or more man days of commercially transported angler use. The figures were thought to underestimate total angler use as private plane operators and local nonguided anglers were not included in the survey and several commercial operators known to use the area did not respond. Twin Lakes, Portage Lake, and Fishtrap Lake were thought also to exceed 100 man-days of angling use annually.

The study compiled a partial list of the principal commercial operators known to transport anglers to waters within the region. This list included:

Alaska Air Guides
Alaska North Flying Service
Alaska Safari, Inc.
Alaska Travel Air
Alaska Trophy Safaris
Chulitna Lodge
Fishing Unlimited
Hayes River Lodge
Hedlund Guide Service
Homer Air Service
Iliamna Air Taxi, Inc.
Iliamna River Outfitters
Iliamna Safaris
Iliaska Lodge
Kachemak Air Service
Kenai Air Alaska, Inc.
Kenai Guide Service
Ketchum Air Service

70. Jim Rearden, "The Alaska Sportsman," *Alaska*, XXXIX (September 1973), pp. 20-21.

71. State of Alaska, Department of Fish and Game, Sport Fishing Division, *Alaska Sport Fishing Resorts and Charter Services*, [ca. 1975], pp. 19-24. For the experiences of the operators of one of the lodges established at Iliamna during the mid-1970s see Ted Gerken, ed. by Anne Silleck, *Gamble at Iliamna: The Story of What Happened When Two Alaskans Put Their Entire Life Savings Into a Frontier Fly-Fishing Lodge* (Homer, Anchor Publishing, 1988).

Kokhanok Lodge
Koksetna Camp
Little Mulchatna Lodge
Newhalen Lodge
Rainbow King Lodge
Rust's Flying Service
Samsal's Guide and Flying Service
Talarik Creek Lodge
Van Valin's Island Lodge

The fisheries inventory study found that fish species sought primarily by anglers within the Lake Clark region included Arctic grayling, Arctic char, Dolly Varden, lake trout, northern pike, rainbow trout, sockeye salmon, coho salmon, and chinook salmon. Burbot and whitefish species were also sought by local anglers during winter by through-the-ice fishing endeavors. Razor clams were sought during low spring tides along the western Cook Inlet shoreline, particularly in the vicinity of Polly Creek.

The study found that the principal sport fishing attributes of the Lake Clark region were the variety of fish species available to the angler, relatively high catch rates, and the scenic wilderness settings in which fishing occurred. However, the stocks of recreationally utilized species, with the exception of northern pike, did not produce the uniquely large individual specimens that attracted "trophy" fishermen to adjacent areas in the Iliamna and Naknek watersheds. Thus, the sport fishing effort in the study area was fairly widely dispersed. The dispersed angling effort was "probably a beneficial situation," and there did not appear to be any current obvious biological problems in the region.

Dispersed recreational fishing use of the waters in the study area was the result in part of relative inaccessibility. Float planes were the method of transport used most commonly to travel to waters in the Lake Clark region. To a lesser extent wheel planes were used for landings primarily on river bars. Motor boats were employed for travel on the larger lakes and rivers. Inflatable rafts were an increasingly popular mode of travel for river trips on the Mulchatna, Chilikadrotna, Tlikakila, Tazimina, and Chulitna rivers and were also used on some of the smaller lakes.[72]

SPORT FISHING IN LAKE CLARK NATIONAL PARK AND PRESERVE DURING THE 1980s

Sport fishing continued to be one of the principal visitor activities in Lake Clark National Park and Preserve after its establishment in 1980. In 1981, for instance, it was estimated that 3,500 sport fishing days occurred in the park and preserve. To accommodate the ever-increasing number of sport fishermen ten lodges/resorts were operating within the boundaries of the park and preserve by 1984. Seven of the lodges were on the shores of Lake Clark, two were on Cook Inlet, and one was on Crescent Lake. The lodges on Lake Clark included The Farm, Koksetna Camp, Lakeside Lodge, Osprey Lodge, Alaska's Wilderness Lodge, Fishing Unlimited, and Van Valins Island Lodge. The two lodges on the coast were Haeg's Wilderness Home and Silver Salmon Lodge, and the one on Crescent Lake was the Little Mulchatna Lodge. Two other lodges were operated on the shores of Sixmile Lake outside the boundaries of the park and preserve,

72. State of Alaska, Department of Fish and Game, Division of Sport Fish, and U.S. Department of the Interior, National Park Service, *A Fisheries Inventory of Waters in the Lake Clark National Monument Area*, by Richard Russell, Project Leader, 1980, pp. 111-15.

and a number of resorts were located in the Iliamna-Newhalen area on the shores of Iliamna Lake. The average lodge in the park and preserve could house about ten people at one time, and most persons or groups were booked for one week. Collectively, at an average five days occupancy per week for the 17-week season, the lodging capacity in the park and preserve in 1984 was 9,350 overnight stays.[73]

Visitor access to the park and preserve continued to be by air. South central Alaska population centers, including Anchorage, the Kenai Peninsula communities of Kenai and Homer, and the Bristol Bay region towns of Dillingham and King Salmon, were the principal departure points for most travel to the park and preserve. North Pacific/Raven Air, Sea Air, and Ryan Air provided daily commercial services from Anchorage to the airport at Iliamna. Charter services were available from Iliamna to the various lodges/resorts. In addition to scheduled airlines there were approximately 120 air taxi operators that provided direct service to destination points in the park and preserve. Individual private plane owners also had access to traditional landing sites in the park and preserve, including lakes, gravel bars, beaches, private airstrips, and snowfields. Two 5,000-foot private airstrips at Port Alsworth served lodges near that location on the shores of Lake Clark. A state-maintained airfield was located at Nondalton on Sixmile Lake just southwest of the park and preserve.[74]

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73. By 1985 some 25 commercial operators were licensed to provide sport fishing guide service in Lake Clark National Park and Preserve. These operators included: Alaska Fishing and Wilderness Adventures, Alaska Mountain Treks, Alaska Outdoor Services, Alaska Safari, Alaska Travel Air, Alaska's Wilderness Lodge, Big Red's Flying Service, Bran Air/Adventures Unlimited, Branch River Air Service, Eclipse Expeditions, Far Flung Adventures, Fishing Unlimited, Haeg's Wilderness Home, Lake Clark Air Service, Lake Clark River and Mountain Adventures, Little Mulchatna Lodge, Mike Cusack's King Salmon Lodge, Osprey Lodge, Ouzel Expeditions, Pass Creek Guide Service, Rainbow River Lodge, Rust's Flying Service, Silver Salmon Lodge, Todd's Iguigig Lodge, and Trail Ridge Air. U.S. Department of the Interior, National Park Service, Alaska Region, *Commercial Visitor Service Directory*, May 1985, n.p.

74. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve, Alaska*, pp. 31-32; *Los Angeles Times*, April 20, 1980; "Lodges-Brochures," Old Park Ranger Files, Lake Clark National Park and Preserve, Port Alsworth; State of Alaska, Department of Fish and Game, *Alaska Sport Fishing Guide* (Juneau, 1981), p. 64; and State of Alaska, *Resource Management Recommendations For Lake Clark National Park and Preserve and Surrounding Area*, February 24, 1984, pp. 1-19 (copy on file in Alaska Historical Library, Juneau).

CHAPTER NINE

IMPACT OF SOCIOECONOMIC DEVELOPMENT AND WHITE SETTLEMENT OF THE COOK INLET AND BRISTOL BAY REGIONS ON THE LAKE CLARK AREA

INTRODUCTION

The purpose of this chapter is to provide an overview of the socioeconomic development of the Cook Inlet and Bristol Bay regions. Within the context of the development of those regions the chapter will review the history of white settlement and activities in the Lake Clark region and the impact of that settlement and American institutions on the area's Native population.

SOCIOECONOMIC DEVELOPMENT OF THE COOK INLET AND BRISTOL BAY REGIONS

Urban and Agricultural Growth in Cook Inlet

As a result of the commencement of the salmon fishing industry during the 1880s and the mining rushes of the 1890s the Cook Inlet region had begun to emerge from its isolation by the turn of the twentieth century. Although the region was still remote from the principal centers of commerce and trade in Alaska and continued to be sparsely populated primarily by Dena'ina Indians, it had been explored by government, military, scientific, and privately-financed expeditions and it was becoming the focus for an influx of white Euroamericans. When Walter C. Mendenhall reconnoitered the region with a military expedition in 1898 he noted:

> Cook Inlet and Prince William Sound have a semipermanent white population, consisting of traders, claim owners, prospectors, fishermen, and Russians, some of whom stay in the country from year to year, others going to some point in the States occasionally to spend a winter. A much larger percentage of the whites found there in the summer, however, are transients, who never winter in the country.
>
> The principal trading and mining centers are Sunrise, Hope, Tyonek, and Knik, and in these camps or the mining regions adjacent to them most of the whites may be found. A few each year penetrate some distance beyond the borders of the well-known districts and reach the interior of Kenai Peninsula or prospect within the Matanuska Valley. Two small parties this year (1898) succeeded in getting nearly across the Copper River Plateau, and a few hardy traders or prospectors in previous years have reached the interior.[1]

The growing population of the Cook Inlet region was revealed in the population statistics compiled by the census in 1900. The figures for the region's five principal towns that year compared with 1890 were:

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1. "A Reconnaissance From Resurrection Bay to the Tanana River, Alaska, In 1898," by Mendenhall, in U.S. Geological Survey, *Twentieth Annual Report*, Part VII, p. 340.

	1890	1900
Kasilof	117	159
Kenai	264	290
Seldovia	99	149
Sunrise		130
Tyonek	115	107[2]

An overview of the developing Cook Inlet region was included in a report to Governor John G. Brady by H.H. Hildreth, the editor of Sitka's weekly newspaper *The Alaskan* who was hired as a special census agent for the Cook Inlet district. In his report, Hildreth noted that onthe inlet's eastern edge lay the towns and villages of Sunrise, Kenai, Saldovia [sic], Homer, Munina [Ninilchik], Hope, Port Graham (or English Bay), and Kussilof [Kasilof]. Knik was located at the north end of the inlet. Hildreth described each community, then noted that

> The northwest coast of Cook Inlet from the West Foreland to the Sushitna River is known as the Tyoonok country. There are three settlements in this district — Tyoonok, Old Tyoonok, and Ladds Station. The population consists of some 300 natives and a few white men. At Tyoonok and Ladds Station are stores, and a very good business is transacted with the natives in furs.
>
> The chief occupation of these people is fishing and trapping. They make a few curios, but are generally trifling and simple in their habits, as are their neighbors on the other side of the inlet....[3]

The potential of the Cook Inlet region for agricultural development had long been recognized. In 1899, for instance, Captain Edwin F. Glenn reported:

> From an agricultural standpoint, Cook Inlet and the country tributary thereto may be safely regarded as the garden spot of Alaska. I saw at that place the gardens of the Russian priests, which furnish the employees of the canneries and some others with all the vegetables they consume. Without going into details it is sufficient to state that here practically everything one procures in the markets of Oregon and Washington is obtainable from these gardens. At Tyoonek, Knik station, Hope City, Sunrise City, and Sushitna station a large variety of vegetables was raised during the past summer. At Tyoonok a large amount of potatoes, turnips, and other vegetables was raised. The potatoes were planted on the side of the very steep hill that lies just back of that place, principally because it is exposed to the southern sun through the summer months. On the top of this hill is a stretch of level ground, of which several acres have been cleared and put under cultivation. Here the majority of the vegetables was raised, and here experiments were made with cereals....
>
> I consider that gardening in this section of Alaska has passed beyond the experimental stage. It was frequently stated that potatoes, turnips, cabbage, beets, etc., grown in

2. U.S. Department of the Interior, Census Office, *Census Reports, Volume II, Twelfth Census of the United States, Taken In the Year 1900, Population, Part II* (Washington, U.S. Census Office, 1902), p. 426.

3. *Annual Report of the Governor of Alaska, 1900,* pp. 58-60.

> Alaska, would not keep during the winter, but thorough investigation showed that this was not true. In properly prepared root cellars all such vegetables will keep as perfectly as in any other section of the United States.
>
> As to cereals, there is no doubt that rye, oats, barley, and buckwheat can be profitably raised. Wheat will grow and head out well, but it is not at all certain that it will mature; the chances are that it will not do so, as a rule. Indian corn can not be raised with profit, although it is believed that for table use some varieties of "six-weeks corn" can be grown to advantage.
>
> The only drawback to successful gardening or farming in this section of Alaska is the first expense of preparing the soil for planting. The entire country is covered with a dense growth of trees, underbrush, grass, and moss, which it is difficult to remove. One can scarcely expect to obtain much of a crop for the first season, as the ground can not he gotten into condition. After that, not only can good crops he raised quickly, but a ready market can be obtained for them. In addition to the valley of the Matanuska River, I can include those of the Sushitna and Yentno rivers, the dimensions of which are much greater and in which the soil is quite as fertile.

The agricultural potential of the Cook Inlet region, particularly the Matanuska Valley and secondarily the Susitna Valley, continued to receive attention during the 1910s and 1920s.[4] J.L. Wallen, for instance, observed in 1923 that from "an agricultural standpoint Cook Inlet basin, and especially that part known as the Matanuska Valley, will compare not unfavorably with the Dakotas" of the early 1890s. The author, who was a member of the Anchorage bar and operated a fox farm at Seldovia, noted:

> There is in Cook Inlet basin over a million acres of land that can be subdued and made productive as easily as land in most of the states of the Union. Up to this time there have been over 450 homestead entries filed, and about 102,000 acres appropriated.[5]

By the end of the 1920s nearly 400 families were deriving a livelihood, wholly or in part, from agricultural pursuits in Alaska. The majority were in the Matanuska and Susitna valleys in the upper inlet and the Tanana Valley near Fairbanks. Alaska's farmers, however, continued to face difficulties besides those attendant upon venturing into a virgin environment.[6]

Then, in 1935, the Federal Emergency Relief Administration, using Depression-era funding, initiated the Matanuska colony experiment. Despite a series of reverses the new 200-family colony persevered. The Matanuska Valley colonists did exceptionally well during the World War

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4. U.S. Department of Agriculture, Office of Experiment Stations. Alaska Agricultural Experiment Stations. Circular No. 1, *Information For Prospective Settlers In Alaska*, by C.C. Georgeson (Washington, Government Printing Office, 1916). pp. 26-30.

5. J.L. Waller, "Cook Inlet vs. The Dakotas," *Pathfinder of Alaska*, IV (February 1923). pp. 3-4, 19.

6. Ernest Greuning, *The State of Alaska* (New York, Random House, 1968). pp. 212-13.

II period as construction of military installations in the Cook Inlet region resulted in a large influx of population and fueled demand for agricultural products.[7]

The Tyonek and most other Cook Inlet areas never developed agriculture toany significant extent, and the farm sector in the Matanuska Valley remained small. Even so, people continued to hope that Alaska would one day support a large, prosperous agricultural industry.

Urban Growth in the Bristol Bay Region

Despite its location in the heartland of the world's richest sockeye salmon spawning area, the Bristol Bay region languished for nearly two decades after Alaska's transfer to the United States. The first saltery in Bristol Bay began in 1883 and a cannery was opened at Nushagak the following year. Ever since that time, as described in Chapter 6, Bristol Bay has been dominated by commercial fishing and by the facilities which have supported this industry. Town development, however, has been relatively sparse.

That is not to say that urban influences have been absent in the region. The Moravian church, for example, established a mission at Nushagak in 1886 and called its settlement Carmel. Apart from missionary activities the group organized an industrial school, and in 1901 was loaned a herd of 88 reindeer. Nushagak later gained a small hospital and a U.S. Commissioner's office. The community remains today.

One reason for Bristol Bay's lack of development was that the salmon industry fell on hard times following World War I, largely due to overfishing, poor market conditions, and inattention to calls for conservation measures. Communities remained small, the largest being Dillingham, Naknek, and Nushagak. The canning companies, owned by outside interests with most of the money generated going out of Alaska in payment to nonresidents, became a law unto themselves. The packers generally escaped heavy taxes and when, in 1912, they demurred in helping fund local road construction because the "fisheries have no interest," Alaska Congressional delegate James Wickersham reacted angrily:

> It exhibits as plainly as the English language can be made to exhibit it their desire to get everything they can out of Alaska and give absolutely nothing in return. They resent the suggestion that Alaska or the people of Alaska have any right or interest in the salmon or the fisheries of that country. They are non-residents themselves; and they resent it when it is suggested that they pay some little portion of the tax for the building of roads or the development of the country.

Development in the Bristol Bay region has also been thwarted by a series of devastating epidemics, wiping out Native population centers. During 1899-1900 the lake village of Tikchik

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7. Clarence C. Hulley, "Historical Survey of the Matanuska Valley Settlement in Alaska," *Pacific Northwest Quarterly*, XL (October 1949), pp. 327-40. Also see University of Alaska, Alaska Agricultural Experiment Station, Bulletin 15, *Present and Potential Agricultural Areas In Alaska* (Palmer, February 1953), pp. 9-12; Orlando W. Miller, *The Frontier In Alaska and the Matanuska Colony* (New Haven and London, Yale University Press, 1975); Evangeline Atwood, *We Shall Be Remembered* (Anchorage, The Alaska Methodist University Press, 1966), pp. 13-25; and Brigitte Lively, *The Matanuska Colony: Fifty Years, 1935-1985* (Palmer, Matanuska Impressions Printing, 1986), pp. 16-17.

was decimated by a smallpox epidemic. The population center of Kijik on Lake Clark was reduced by measles in 1902, and an areawide epidemic in 1918-19 was so severe that the population center of Nushagak never recovered, and nearly a dozen other villages virtually disappeared from the map. So many children were left without parents that an orphanage was established for them at Kanakanak in 1920.

To prevent such outbreaks in the future federal and territorial health agencies became extremely active in the Bristol Bay region during the late 1930s and 1940s. The agencies emphasized tuberculosis control, and the death rate from that disease was reduced dramatically by 1950. The health services also resulted in reduced child and infant mortality rates, although they remained far above the national average.

In the aftermath of the 1918-19 epidemic the Bureau of Education building at Kanakanak was enlarged and remodeled as a hospital to meet the chronic need for medical services in the area. The hospital was the first permanent health facility in Bristol Bay and remained the area's major medical service center. In later years the Kanakanak hospital became an Alaska Native Health Service Hospital administered by the Department of Indian Health of the U.S. Public Health Service. By the early 1970s the hospital had a 29-bed capacity and an average patient load of 12. It offered most general medical services, including surgery, obstetrics, and treatment of communicable diseases.

In addition health centers were constructed during the mid-1950s at Naknek and Dillingham, each staffed by a public health nurse in the employ of the Alaska Department of Health. Itinerant public health nurses visited Native villages in outlying districts. Other government institutions and social services had become prominent features of the region's socioeconomic development by the late 1950s. The territorial Department of Education, for instance, operated fourteen schools in the entire region (one of which was a high school at Dillingham), with a total enrollment of 564 and a staff of 35 teachers in 1957-58. The Alaska Native Service operated four small schools with a total enrollment of 114 that were staffed by instructional aides rather than regular teachers.

A substantial source of new money in the Bristol Bay region was the result of various territorial and federal assistance programs, some of which dated back to the 1930s. By the 1950s the Bureau of Indian Affairs, Territorial Department of Welfare, Employment Security Commission, and Social Security Administration were making aggregate payments of more than $100,000 to residents in the region. These payments included old age assistance, aid to dependent children, aid to the blind, unemployment compensation, and general relief.

In 1880 Bristol Bay's total population was about 2,700 – an increase of only some 12 percent over the total at white contact. The population peaked in 1890 at some 3,400 but had declined 25 percent by 1939. Waves of Chinese, Mexicans, Japanese, and Filipinos were imported to work the canneries, but few decided to settle. Because of the depletion of fur-bearing animals, white trappers left the area and the periodic mining rushes produced little of value. During World War II a U.S. Army air base was established 15 miles east of Naknek (now King Salmon Air Force Station) and other military facilities, such as U.S. Coast Guard navigational aids and Bristol Bay and Alaska National Guard scout platoons stationed at Dillingham and Togiak resulted in a 40 percent increase in population to 2,756 in 1950.

The site of what is now King Salmon Air Force Base was first surveyed by the Civil Aeronautics Administration (CAA, now the Federal Aviation Administration) in 1941. The CAA acquired 3,845 acres of land and began construction of the airfield and support facilities. When the United States entered World War II, the Army assumed control of the airfield. During the war, the airfield, named Naknek Army Air Base, was a fuel and rest stop, weather information point, and site of navigational and communications facilities.

After the war the government placed the base on inactive status and the CAA took over administration of the facility. In 1947 the government renamed the facility King Salmon Air Force Base and put it into operation as a satellite of Elmendorf Air Force Base. The new station was part of a network of mainland bases to be used in the air defense of Alaska and to serve as an advanced staging field on the Alaska Peninsula from the mainland to Aleutian Island stations.

With the coming of statehood in 1959 significant changes occurred in the Bristol Bay region. To provide for a modern school system and effective political control of the region by locals, residents of Naknek, King Salmon, and south Naknek founded the first borough (county-styled regional government) in Alaska in 1962. The Bristol Bay Borough, covering a 1,200-square mile area in the Kvichak Bay region, was established as a second-class borough under the new state constitution. Of the powers allowed such a political entity by Alaska statutes the borough assumed responsibility for police and fire protection, health services, road building and maintenance, schools, and sewer service. Regional school boards soon came to the rest of the bay region, and local autonomy quickly became a popular cause in the area.

The census of 1970 reported 4,632 people living in the Bristol Bay region in 24 villages, the city of Dillingham, with a population of more than 900, and the military installation at King Salmon. About one-third of the population was white, while the remainder were of Eskimo, Aleut, or Athabaskan extraction. Although the population count showed a 16.7 percent increase since 1960, there was an outmigration of just under 20 percent for nonwhites. The outmigration undoubtedly resulted from economic issues since the median family income for Bristol Bay during the mid-1970s was $7,800, compared with $12,400 for the entire state. The median income for Native families was under $6,000.

The major source of income for locals in the region continued to be the fishing industry. In 1970, for instance, 450 jobs in fishing and 700 in fish processing were reported. The seasonal fishing work, however, forced many area residents to be "jacks-of-all-trades," acting as hunting and fishing guides, pilots, government fish and game agents, and operators of fishing lodges, and some still managed to live primarily off the land by engaging in traditional fishing and hunting activities. The growing regional service centers of Dillingham and Naknek were also providing increasing wage employment opportunities.

Historically, Dillingham's growth had been linked closely to the development of the salmon canning industry. During the 1920s and 1930s it began to emerge as a commercial center for the Bristol Bay region. This occurrence became particularly pronounced during the postwar years as the town came to serve as a regional center for trade and services. By 1970 Kodiak Western Alaska Airlines, a local carrier which served most of the villages of the region, operated out of Dillingham, thus making the city a transfer point for passenger and freight traffic. Wien Air Alaska also provided service connecting Dillingham to Anchorage as well as to other communities in the Bristol Bay region. In addition, several charter flying services operated out of the city.

As a regional commercial center and the principal supply hub for the region's other communities, Dillingham had a variety of businesses, recreational facilities, and tourist-related services by the mid-1960s. It had more extensive community facilities and services than any other population center in the area. Its facilities and services included: (1) a water and sewer system completed in 1964; (2) a high school completed in 1961; (3) a small boat harbor completed in 1962; (4) long-distance telephone service; (5) an electric generating plant; and (6) a public health service hospital at nearby Kanakanak and a public health nurse and private practitioner in residence at Dillingham.

The economy of Dillingham was significantly strengthened by a substantial amount of employment in various government agencies. These agencies included the Federal Aviation Administration, the U.S. Fish and Wildlife Service, the Alaska Department of Fish and Game, the Alaska Department of Highways, the city school district, and the U.S. Public Health Service Hospital at Kanakanak. The employment and income generated by these agencies was particularly important. In contrast to employment in the fishing industry, it was stable with little seasonal variation. In addition, unlike many areas in Alaska, government employment in Dillingham was entirely civilian.

Despite the emerging development of Dillingham, however, the economy of Bristol Bay continued to be based on the sea – primarily the salmon industry and the boom/bust cycles that go with it. During the period from 1961 to 1972 the average wholesale value of the catch was $30,000,000, but in 1974 the bay was declared a disaster after experiencing two years of the worst catches in its history, the annual totals averaging only about $6,000,000. Following that debacle the Bristol Bay Regional Development Council was established to broaden economic options for the region.

By the mid-1970s the majority of Bristol Bay's 22 salmon canneries and several floating operations were still held by outside interests, some of which were Japanese firms. Efforts were undertaken, however, to diversify and revitalize the regional economy under local control. In 1973, for instance, a local fisherman's co-op was formed to develop cold-storage operations, but it failed the same year. Thereafter, the Tonuak Indian Credit Association helped a number of local men to finance their own boats and break away from the cannery-owned fleets. In 1973 the city of Dillingham built a $1,240,000 cold storage plant with dock facilities, and the facility began to compete with the cannery that formerly monopolized business there, thus helping to increase prices paid to local fishermen. Several years later in 1976 the Bristol Bay Native Corporation bought out Peter Pan Seafoods, one of the area's largest processors, reorganized the troubled company, and reportedly earned back much of the $9,000,000 purchase price in the first few years of operation.

During the late 1970s exploration for oil resources in the Bristol Bay region was undertaken by Phillips Petroleum. Despite concern for the environmental impact of offshore drilling on the salmon stocks, the Bristol Bay Native Corporation signed a contract with Phillips that would give them 50 percent of any oil discovered.

Other efforts to broaden and stabilize the economic base of the regional economy included mineral exploration and development, harvesting the limited timber resources, scientific management of the salmon fishery, exploitation of farming potential in permafrost-free areas, and development of the tourism industry. These endeavors, however, continued to be hindered

by the remoteness of the area, the problems of transportation, labor, and lack of materials, and the sparse and scattered population of the region.

The Bristol Bay region had a population of 7,815 in 1980, slightly less than 2 percent of Alaska's total population. Dillingham (1,563), the Bristol Bay Borough (1,094), Togiak (470), and New Stuyahok (331) accounted for more than a third of the region's population. During recent years there has been a regional population shift from smaller, outlying villages to larger communities, especially Dillingham, to take advantage of employment opportunities, social services and amenities. The dominant ethnic background of the villages has continued to be Native (Aleut, Eskimo, and Indian), while the Caucasian population has concentrated in Dillingham, Iliamna, Naknek, and King Salmon.

The region's economic structure consisted primarily of small village economies with seasonal cash flows and significant reliance on subsistence use of fish and wildlife. Larger cities and towns had more diversified economies with concentrated populations and steady, year-round employment.

The infrastructure of the 38 communities in the region varied from practically nothing to a full complement of facilities and services in the Bristol Bay Borough and first-class cities of Sand Point, King Cove, and Dillingham. Most of the smaller second-class cities or villages had a very limited infrastructure. No road access existed from outside the region, airplanes and boats being the only means of access. Only three intercommunity roads existed, but during the winter travel could be conducted between communities by snowmachines or all-terrain vehicles. Most communities had at least a small gravel runway for planes, but the only major air and water transportation centers were at Dillingham and King Salmon.[8]

Transportation Development

The stage was set for the establishment and modern development of Cook Inlet, with Anchorage as its centerpiece, when on April 10, 1915, President Woodrow Wilson selected the route for a proposed railroad connecting an ice-free port with the coal fields of interior Alaska. The route Wilson chose ran north from Seward, using 71 miles of track laid by the Alaska Central and

8. Unless otherwise noted material for this section was summarized from: James W. VanStone, *Eskimos of the Nushagak River: An Ethnographic History* (Seattle and London, University of Washington Press, 1967); Alaska Geographic, *Bristol Bay Basin*, pp. 13-91; Hawkins and Daugherty, comps., *The Silver Fleece*, pp. 1-53; Territory of Alaska, Office of the Governor, Alaska Rural Development Board, "Preliminary Economic Survey of Dillingham, Alaska and the Bristol Bay Region," by George W. Rogers, August 1, 1955, pp. 1-16; Arctic Environmental Information and Data Center, University of Alaska, Anchorage, and Institute of Social, Economic, and Government Research, University of Alaska, Fairbanks, *The Bristol Bay Environment: A Background Study of Available Knowledge*, pp. 557-743; David T. Kresge, Susan R. Fison, and Anthony F. Gasbarro, *Bristol Bay: A Socioeconomic Study* (Fairbanks, University of Alaska, Institute of Social, Economic and Government Research, 1974), pp. 1-1 to 7-23; Bristol Bay Borough, *Bristol Bay Borough Community Profiles, 1982*, Sheet 1; U.S. Department of the Interior, *The Bristol Bay Regional Management Plan and Final Environmental Impact Statement*, [1984], Vol. I, pp. 2-15 to 2-24; James W. VanStone, "Nushagak," *Alaska Journal*, II (Summer 1972), pp. 49-53; Lael Morgan, "Bristol Bay and That Beautiful Disaster," *Alaska*, XLI (February 1975), pp. 33-38, 77-79; "Dillingham: Marketplace of Southwestern Alaska," *Alaska*, LIV (February 1988), pp. 38-39; and Carmen Jefford Fisher and Mark Fisher with Clifford Cernick, *Winging It!* (Chicago, New York, and San Francisco, Rand McNally & Company, 1981), pp. 252-58; John M. Wright, Judith N. Morris, and Robert Schroeder, *Bristol Bay Regional Subsistence Profile: Technical Paper No. 114* (Dillingham, Alaska Department of Fish and Game, Division of Subsistence, July 1985).

Alaska Northern railroad companies between Seward and Kern Creek prior to 1910, west along Turnagain Arm to the mouth of Ship Creek where the government intended to dredge a harbor and construct a wharf, then north through the Susitna Valley and the Matanuska and Nenana coal fields to Fairbanks.[9] A post office was opened at Ship Creek in April 1915, with the government adopting the name Anchorage.[10]

During 1916 and 1917 the population of Anchorage skyrocketed, reaching nearly 7,000 at one point, nearly 3,000 of whom worked on the railroad. Despite shortages of labor and scarcities of building materials occasioned by United States involvement in World War I construction on the south central portion of the railroad was completed by 1920.

Throughout the 1920s the population of Anchorage remained somewhat under 3,000, the city's economy, being fueled primarily by the railroad. In 1923 the railroad was completed to Fairbanks. The building of the railroad did not directly affect the west side of Cook Inlet. The increased population brought on by the railroad, however, made the area more accessible than it had been previously.

While the railroad was under construction three established steamship lines began sending vessels to Anchorage. The three were the Alaska-Pacific Navigation Company, known as The Admiral Line; the Pacific Coast Steamship Company, oldest and largest shipping firm on the coast; and the Alaska Steamship Company. In addition, at least one new line was formed and operated in Cook Inlet – the Independent Steamship Company. In 1916 the Alaska-Pacific Navigation Company and the Pacific Coast Steamship Company merged to form the Pacific Steamship Company.

As a result of the expansion of trade and commerce in the inlet during the 1920s, steps were taken to improve shipping services. In 1927, for instance, the Alaska Territorial Legislature appropriated funds to subsidize a cargo-passenger route on Cook Inlet. The act provided for up to $5,000 a year for the operation of a vessel "in the coastwise trade, as a common carrier of freight and passengers, from Anchorage to Illiamna Bay, along the coast of Cook's Inlet, touching at Kenai, Kasiloff, Ninilchik, Snug Harbor, Homer, Seldovia, Halibut Cove, Illiamna

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9. For further historical information on the Alaska Railroad see Edwin N. Fitch, *The Alaska Railroad* (New York, Washington and London, Frederick A. Praeger, Publishers, 1967); William H. Wilson, "The Alaskan Engineering Commission and a New Agricultural Frontier," *Agricultural History*, XLII (October 1968), pp. 339-50; and Theodore Pilger, "The Government Railroad of Alaska," *Mining and Scientific Press*, CXV (December 29, 1917), pp. 925-32.

10. Jonathan N. Nielson, *Armed Forces On A Northern Frontier: The Military In Alaska's History, 1867-1987* (New York, Westport, Connecticut, and London, Greenwood Press, 1988), pp. 90-92, and U.S. Department of the Interior, Office of the Secretary, *General Information Regarding the Territory of Alaska, Edition of September, 1918*, p. 59. Efforts to build the school at Anchorage coincided with endeavors to lay the foundation for a comprehensive public school system throughout Alaska. In 1917 the territorial legislature revised all previous school legislation by passing three acts. One act authorized the creation of school districts outside of incorporated towns where there was a population of 100 or more, upon the petition to the district judge of 50 or more citizens outlining the boundaries of the proposed district. The authorities of the district, elected by popular vote, were empowered to levy real and personal property taxes, not to exceed one percent of assessed valuation, for school purposes. Another act provided that the territory would refund to each incorporated town 75 percent of the cost of construction, operation, and maintenance of schools, and a third act established a territorial Board of Education, composed of the governor as chairman and the four senior senators – one from each division – which selected a commissioner of education.

and Tyonek." The vessel was to make "regular stated trips not less than once in each 15 days during the season when navigation is open in the aforementioned waters."[11]

The 1920s also witnessed the development of aviation in the Cook Inlet region as well as throughout Alaska. With the most rudimentary aids, Alaska's bush pilots carried men and materials throughout the territory. Where roads were lacking, air transport opened a new era in communications, eliminating the isolation of remote communities and reducing dependence on the mail carrier and his boat or dogsled. Early-day bush pilots in Anchorage used a one-block-wide firebreak along the south side of Ninth Avenue as a landing strip until Merrill Field was built in 1930.[12]

In December 1926 Anchorage Air Transport, the town's first commercial airline, was established. Russell H. Merrill, a well-known bush pilot for whom Merrill Field would be named, was the firm's first pilot, basing his operations at Lake Spenard.

Merrill also discovered from the air a pass across the north end of the Aleutian Range that would be named for him. Located in the northern part of present-day Lake Clark National Park and Preserve this pass and Lake Clark Pass (also in the park/preserve) to the southeast would be used by bush pilots for years as the best ways to get through the Aleutian Range.[13]

By the late 1930s Anchorage had become the hub of a large volume of air traffic for the Cook Inlet, Bristol Bay, and Kuskokwim regions. Much of this traffic was due to the position of Anchorage in relation to Seward and the Alaska Railroad. Anchorage, although located at the head of Cook Inlet, was not accessible to the larger steamboats operating between Alaska and the 48 contiguous states because of navigation conditions in the inlet. Such steamboat traffic terminated at Seward. Adverse flying conditions usually prevailed at Seward, and no air carriers were based at that point. The traffic moved largely by rail to Anchorage and Fairbanks, although some moved by air to Anchorage, chiefly passenger traffic.

During a 20-month period in 1938-39, for instance, the inter-area air traffic for which Anchorage served as the hub amounted to more than 60 percent of the total inter-region passenger traffic in interior Alaska and more than 80 percent of such freight traffic. Between Anchorage and Bristol Bay a total of 3,351 passengers and 292,572 pounds of freight were carried, and between the Anchorage and Kuskokwim areas the air traffic consisted of 918 passengers and 125,396 pounds of freight.

Several airlines were organized in Anchorage during the late 1930s to accommodate the burgeoning inter-area air traffic. Bristol Bay Air Service was incorporated on May 3, 1938, under

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11. DeArmond, "Cook Inlet Shipping," pp. 28, 32, and *Session Laws of Alaska, 1927*, Ch. 36, Sec. 1.

12. For further data on the historical development of aviation in the Anchorage and Cook Inlet areas see Stephen Haycox, "Early Aviation in Anchorage: Ambivalent Fascination With the Air Age," *Alaska History, III* (Fall 1988), pp. 1-20, and State of Alaska, Department of Natural Resources, *An Overview of Aviation History in Alaska With an Emphasis on Float and Ski Plane Use*, by Dale A. Stirling, May 1982, pp. 1-24.

13. "Lake Clark Pass National Monument, Alaska," September 30, 1968, Alaska Collection, RG 36, Alaska Material, DSC 84-39; Folder-Alaska Sites, Brief Descriptions, 1968, 1972, National Park Service History Collection, Harpers Ferry Center; and Capps, "Chakachamna-Stony Region," in U.S. Department of the Interior, Geological Survey, Bulletin 813, p. 100.

the leadership of Bert Ruoff, an Anchorage-based pilot who had been engaged in flying in Alaska since February 1936 principally between Anchorage and the Bristol Bay region. The business of the carrier was primarily the transport of passengers in connection with the fishing and canning industries in Bristol Bay. Most of the business was conducted to and from Anchorage, Naknek, and Dillingham. In 1939 the corporation's flying equipment consisted of three airplanes (one seven-passenger travelair, one six-passenger travelair, and one five-passenger Waco) with interchangeable wheel, ski, and pontoon landing gear for each.

Star Air Lines, Inc., was established at Anchorage in November 1937 and quickly became the largest carrier in the territory. During 1938-39 the company operated 14 aircraft, with interchangeable wheel and ski landing gear for each and water landing equipment for six. All but two of the planes were equipped with two-way radio, voice and code, and the company maintained ground radio stations at three points. The company employed ten pilots, four full-time radio operators, and an average of 17 mechanics and helpers. Anchorage was the principal base of the company, but secondary stations were maintained at McGrath and Fairbanks. The traffic handled between Anchorage and the Bristol Bay and Kuskokwim areas was the principal source of revenue for the company. During 1938-39 the airline provided service from Anchorage to McGrath via Rainy and Merrill passes and via Merrill and Lake Clark passes to Bristol Bay, where it made landings at individual canneries. Some 92 trips were flown over the latter route, carrying a total of 710 passengers and 28,766 pounds of freight.

In October 1938 Arthur G. Woodley, a native of New York who had been engaged in commercial flying operations in Alaska since 1932, established Woodley Airways. That year the airline obtained several mail contract routes between Anchorage and various Cook Inlet villages and Bristol Bay, including a stop at the new village of Iliamna. One of the contracts was modified in 1940 to provide regular mail service to Tyonek during December, January, and February. The airline's equipment consisted of five 6-7 passenger travelair and one 4-5 passenger Waco plane. A hangar and shop were maintained at Anchorage and a seaplane ramp at Lake Spenard. The company had arrangements for use of ground stations at four other points in its area of operations. The company employed three pilots on a commission basis, a bookkeeper, radio operator, mechanic, and three helpers. Agents were employed at principal points in the Bristol Bay area to receive freight and sell passenger transportation for which services they were paid five percent of the cost of transportation. During 1938-39 the airline made 59 trips between Anchorage and Bristol Bay points, carrying a total of 481 passengers and 24,910 pounds of freight.[14]

Dillingham Air Service, a company established by Matt Flensburg in November 1939, was perhaps the earliest of the fledgling airline companies to be based in the Bristol Bay region. Flensburg had begun flying activities at Dillingham in May 1936 after purchasing a two-passenger Rearwin Sportster to carry single passengers and small amounts of freight in the vicinity of Dillingham. In February 1938 he began using a three-passenger Fairchild. Flensburg maintained a small hangar on a creek near Dillingham which he used for storage and for changing from skis to floats and beaching gear for seaplanes.

The early operations of Dillingham Air Service consisted almost entirely of rendering local service within a radius of 20 miles of Dillingham, flights to the Nushagak River and Wood River

14. Civil Aeronautics Board, "Alaska Air Transportation Investigation, Report of Raymond W. Stough, Examiner, to Civil Aeronautics Board, December 17, 1940," pp. 1-6, 158-72, 214-27, 232-38.

lakes region, and occasional trips to Anchorage and Bethel. From March 1938 to April 1939 Flensburg made 108 trips within the Dillingham region, carrying a total of 888 passengers. Approximately 30 percent of the passengers carried on these flights were patients going to or coming from the Bureau of Indians Affairs Hospital at Kanakanak.[15]

To accommodate the increasing air traffic throughout Alaska an Alaska Aeronautics and Communications Commission was established to administer and promote aeronautics and communications within the territory. Appropriations for the establishment of air navigation aids were forthcoming at the prodding of the commission during the years prior to American involvement in World War II. As a result improvements were made to aid air traffic in the Lake Clark-Iliamna Lake region. In his annual report for 1940 the governor of Alaska stated that survey and construction work was in progress for a communication station at West Foreland and an intermediate airfield at the new village of Iliamna. During the war years, the U.S. Army constructed Iliamna Air Field.[16]

Although regular air mail service would not be initiated in Alaska until the late 1930s, mail routes were contracted by postmasters as early as the mid-1920s. One of the first pilots to fly mail from Anchorage to the canneries in the Bristol Bay region was Robert E. Ellis. Reminiscing some years later, Ellis noted:

> I like to startle people with the geographical names of the mail route I flew in 1931. I used to fly out of Anchorage headed for Bristol Bay. I would fly down Cook Inlet and straight for Lake Clark Pass. If I got through Lake Clark Pass, which wasn't easy, I would then fly up the Chulitna River and down the Mulchatna River until I came to the Nushagak River. Then I would spend the night at Kanakanak and the next day fly to Nushagak, Koggiung, Naknek, Egegik and Ugashik.[17]

During the late 1930s preparations for regular air mail service in Alaska were initiated under legislation passed by Congress in 1935 and 1937. Using the authority granted by Congress in these acts the U.S. Post Office Department awarded four-year contracts in 1938 for a variety of regular air mail routes throughout the territory. Among the routes that were contracted for the July 1938-June 1942 period was one that served Bristol Bay. The twice-per-month, wintertime route connected Anchorage to Pedro Bay, Iliamna, Igiugig, Naknek, Koggiung, Egegik, Pilot Point, and Ugashik. It returned to Anchorage by way of Clarks Point, Kanakanak, Dillingham, Ekwok, and Iliamna.[18]

In 1940 and 1941 two military bases were built on the outskirts of Anchorage: Fort Richardson and Elmendorf Air Force Base. Fort Richardson was the main base and principal headquarters of the U.S. Army in Alaska. Construction of ground and air facilities began in June 1940, and the first increment of combat troops, consisting of 21 officers and 732 troops, arrived the same

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15. Civil Aeronautics Board, "Alaska Air Transportation Investigation, Report of Raymon W. Stough, Examiner to Civil Aeronautics Board, December 17, 1940," pp. 189-94.

16. *Annual Report of the Governor of Alaska, 1940*, p. 41.

17. R.E. (Bob) Ellis, *What...No Landing Field?* (Haines, Alaska, Chilkoot Press, 1969), p. 13.

18. U.S. Congress, House, Committee on Territories, *Alaska – Its Resources and Development, Message from the President of the United States*...75th Cong., 3d Sess., 1938, H. Doc. 485, pp. 173-75.

month. Construction of Elmendorf Field, a U.S. Army airfield, was begun during the winter of 1940-41.[19]

The large influx of military personnel into Alaska during World War II had a significant impact on the development of Anchorage as well as the entire Cook Inlet region, placing demands on the largely untapped recreational opportunities and the underdeveloped resources of the area. It also resulted in increased travel over the Iliamna Lake-Lake Clark area, situated as it was between Anchorage and King Salmon.

During the post World War II period civilian air travel was advanced to a condition of dependable, safe, and regular transportation in the largely roadless Bristol Bay region. The air base at King Salmon was opened to civilian traffic, and it became the crossroads for air travel in southwestern Alaska. Petersen Flying Service, Alaska Airlines, and Pacific Northern Airlines provided service from Anchorage to Dillingham and Naknek using DC-3s. In the bay area Dillingham Air Service, Ken Armstrong, Walatka Air Service, Western Alaska Airlines, Nicholson Air Service, and Wood Flying Service, among others, used smaller planes to provide transportation to cabins, villages, and fishing spots throughout the region.

In 1950 Northern Consolidated Airlines, a combination of six pioneer aviation firms, established sport fishing camps in the Katmai area, attempting to develop passenger travel on its Anchorage-King Salmon route. The major traffic on this route, however, continued to be commercial salmon fishermen, supplemented by tourists. DC-3s, or chartered DC-6s, were used by the airline for those purposes. Along with the passengers, supplies and freight were carried to outlying villages and cabins. In August 1949 Babe Alsworth completed construction of a 4,000-foot air strip at Tanalian Point in Lake Clark, thus permitting DC-3s to land at that isolated spot for the first time.

Conditions for air travel continued to improve in the Bristol Bay region. By the late 1950s the principal landing fields operated by the CAA that could accommodate DC-3 equipment were at Iliamna, King Salmon, and Dillingham. DC-3 service from Anchorage was operated by Northern Consolidated and Pacific Northern airlines. The flights operated into King Salmon and Dillingham, and Northern Consolidated continued some flights to Bethel on the Kuskokwim.

With the advent of the jet age in 1958 air service was upgraded with F-27 Turboprops. A new runway was built at Dillingham, and daily service was instituted. Still, the single-engine Cessnas, Pipers, and Beechcraft served the area, mostly on floats in the summer and on skis in the winter.

By the early 1970s three certificated route carriers – Kodiak Western Alaska Airlines, Wien Air Alaska, Inc., and Reeve Aleutian Airways – served the Bristol Bay region along with nine principal air-taxi operators. Nearly 80 percent of the villages listed in the U.S. Census received

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19. U.S. Army, Office of the Chief of Military History, *United States Army In World War II: The Western Hemisphere, Guarding the United States and Its Outposts*, by Stetson Conn, Rose C. Engelman, and Byron Fairchild (Washington, Government Printing Office, 1964), pp. 223-52. For background information on the strategic planning and design of defense of the Western Hemisphere, see U.S. Army, Office of the Chief of Military History, *United States Army In World War II: The Western Hemisphere, The Framework of Hemisphere Defense*, by Stetson Conn and Byron Fairchild (Washington, Government Printing Office, 1960). For more data on the military significance and buildup at Elmendorf Air Force Base during the war, see Alaskan Air Command, Office of History, Elmendorf AFB, Alaska, *The Air Force In Alaska, Part II: Buildup to Dutch Harbor, June 1940-June 1942*, by John Haile Cloe (ed. by Sherry Faller), April 1986, pp. 18-22.

scheduled commercial air service at least once a week and most of these received scheduled service three or more times a week. King Salmon had daily flight connections with Anchorage and there were flights between Dillingham and Anchorage every day except Sundays.

West Coast of Cook Inlet

As Anchorage and the upper Cook Inlet region underwent development during the post-1915 era the west side of the inlet remained largely a wilderness area with "towering mountains, active volcanoes, pristine glacial valleys, [and] untrampled beaches." With "the exception of those seeking to develop the region's energy [mineral] potential, the relatively few human intruders" who "broach[ed] the wall of the Aleutian Range" went "to fish or hunt." The only substantial community along the narrow coastal strip from the Susitna flats to Cape Douglas by the early 1980s was Tyonek, a Dena'ina community of 239 about 45 air miles southwest of Anchorage. When miners had moved into upper Cook Inlet during the 1890s, Tyonek became a supply and staging area. After the turn of the century, however, Tyonek's fortunes declined as those of Anchorage prospered. Natural resources, especially fish, game, and furs, sustained most of the town's residents, but by mid-century declining stocks of wildlife brought hard times.

In February 27, 1915, the federal government established the Moquawkie Indian Reservation, consisting of 26,918 acres for the Dena'ina in the Tyonek area. Later, under the Indian Reorganization Act of 1934, the Native village of Tyonek became a federally-chartered corporation on November 27, 1939.

When oil was discovered on reservation land several decades later, Tyonek residents won the right to prohibit oil development on their land without their permission. The Tyonek Natives sold oil development rights on the reservation in 1964 for $12,900,000. The village council, in cooperation with the Bureau of Indian Affairs, formed the Tyonek Management Corporation to undertake profit-oriented ventures and build 60 new homes and a new school, install and maintain a water and sewage system, and provide electricity to residents.

Although little marketable gas was discovered on reserve lands, other development has been initiated in the Tyonek area in recent decades. By the early 1980s Tyonek Timber, Inc., a subsidiary of a Japanese company, was leasing state land for timber harvest. The company logged about 25,000,000 board feet annually, all of which was processed into wood chips and sent to Japan to be converted into pulp and paper. Land for a camp, chip mill, and dock was leased from Tyonek residents, and some of the Natives were employed by the firm.

The Chugach Electric Association, Inc., which supplies power to much of Anchorage and indirectly to other portions of the Cook Inlet lowlands, began operating a power station at Beluga, north of Tyonek, in the 1970s. Among the largest gas-fired power plants in the United States, the Beluga station could produce 326 megawatts of power by the early 1980s and was the largest electricity-generating plant in Alaska. Sitting atop the Beluga River natural gas field, the plant had eight generating units, seven of which relied on natural gas for power, while the eighth unit operated on waste heat recovery by capturing hot exhaust from two other units.[20]

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20. For more information on the Tyonek community see James A. Fall, "Tyonek: Resource Uses In a Small, Non-Road Connected Community of the Kenai Peninsula Borough," in Robert J. Wolfe and Linda J. Ellanna, comps., (continued...)



U.S. Army "J Boat" being hauled across the Iliamna Portage to Pile Bay on Iliamna Lake in 1943 by Carl Williams (1912-1987). The J Boat was used by the Army during the mid-1940s when they built the airfield at New Iliamna.

Courtesy of Wilma Williams

While the rugged and isolated terrain of the west coast of Cook Inlet south of Tyonek largely prevented any development until recent years, one early endeavor was undertaken to improve connections between the inlet and the interior lakes region. This development, which took twenty years to complete, was the construction of the Iliamna Portage Road between Iliamna Bay (on Cook Inlet) and Lake Iliamna. The first activity took place in 1916; John Zug of the Board of Road Commissioners reconnoitered the trail that year and recommended that a 12-mile road be built. The following year, the first work was done, a crew of eight men improving 9½ miles of trail northwest from Iliamna Bay. In 1921 more improvements were conducted; then, in 1927, the Alaska Road Commission continued improvements allowed the first horse-drawn wagons to use the route.[21] During 1934-35 the commission widened the former Native pack trail that crossed the portage from Iliamna Bay on the inlet to the village of Old Iliamna on the Iliamna River east of Iliamna Lake. The road was blasted out of rock in places, and it became a narrow, winding, and steep traverse that often became a muddy mess requiring chains. The road often took 12 hours to travel, but it became the principal route for overland freight to the Iliamna Lake region. In 1937 the road was extended to Pile Bay on Iliamna Lake, giving road users direct lake access rather than the necessity of using the Iliamna River. The extension work required the construction of a 180-foot steel span bridge across the Iliamna River. Since its completion in 1937, freight hauling and road maintenance have been entrusted to the late Carl Williams of Pile Bay and his son Ray. In 1955, the road was graded and widened to 10 feet. Even so, the road continued to be difficult and was only open during the summer months. Nevertheless, 450 tons of supplies and from 10 to 40 boats were hauled over the primitive road annually by the early 1970s.[22]

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20. (...continued)
Resource Use and Socioeconomic Systems: Case Studies of Fishing and Hunting In Alaskan Communities, Technical Paper Number 61 (Juneau, Alaska Department of Fish and Game, Division of Subsistence, March 1983), pp. 202-18; Ron Stanek, "Tyonek Yesterday and Today," *Alaska Fish Tales & Game Trails*, XIII (September 1981), pp. 38-39, 45; U.S. Congress, House, Committee on Interior and Insular Affairs, *Report With Respect to the House Resolution Authorizing the Committee on Interior and Insular Affairs to Conduct An Investigation of the Bureau of Indian Affairs Pursuant to H. Res. 698*, 82d Cong., 1st Sess., 1953, H. Rept. 2503, pp. 1094, 1400, 1522, 1545; and James A. Fall, Dan J. Foster and Ronald T. Stanek, *The Use of Fish and Wildlife Resources in Tyonek, Alaska: Technical Paper No. 105* (Anchorage, Alaska Department of Fish and Game, Division of Subsistence, 1983), pp. 23-32.

21. Claus-M. Naske, *Paving Alaska's Trails: The Work of the Alaska Road Commission* (New York, University Press of America, 1986), 41, 73; Fred Roehl, Jr., interview by John Branson, September 1, 1993.

22. Ray and Linda Williams, interview by John Branson, August 1993. For further information on the road see *Anchorage Daily News Magazine*, July 1, 1984, in Vertical Files, File- "Carl Williams, We Alaskans," Homer Society of Natural History, Homer, Alaska; U.S. Department of the Army, Chief of Engineers, Engineer Intelligence/Study, *Reconnaissance of the Iliamna Tote Road from Cook Inlet to Iliamna Lake, Alaska*, September 1953, pp. 4-8; and George Eicher, Jr., "Shortcut North," *Alaska Life*, VI (January 1943), pp. 7-10. Unless otherwise noted material for this section was summarized from Alaska Geographic, *Anchorage and the Cook Inlet Basin*, pp. 22-159; Alaska Geographic, *Cook Inlet Country*, Vol. 5, No. 1, 1977, pp. 112-25; Evangeline Atwood, *Anchorage: All-American City* (Portland, Binfords & Mort, 1957), pp. 1-46; William H. Wilson, "The Founding of Anchorage: Federal Townbuilding on the Last Frontier," *Pacific Northwest Quarterly*, LVIII (July 1967), pp. 130-41; H. Doc. 34, pp. 49-77; and B.W. Denison, *Alaska Today* (Caldwell, Idaho, The Caxton Printers, 1950), pp. 124-27.

NATIVE AND NON-NATIVE EUROAMERICAN SETTLEMENT PATTERNS IN THE LAKE CLARK REGION FROM THE 1890s TO THE 1920s

Within the context of the early socioeconomic development of the Cook Inlet and Bristol Bay regions non-Native Euroamericans began to enter the Lake Clark region for the purpose of living for extended periods of time. The first white men to stay in the region for any length of time were prospectors who arrived in the late 1890s and early 1900s. The prospectors began entering the Lake Clark region as an outgrowth of the Turnagain mining rushes and concentrated their gold prospecting on Portage Creek near Lake Clark and in the Mulchatna River and Bonanza Creek areas to the northwest of the lake. In 1902 when Wilfred H. Osgood led a U.S. Biological Survey team through the Lake Clark region he noted:

> The stream entering the extreme head of the lake is also of good size, about 80 feet wide at the mouth and navigable for small boats some 20 miles. It is called Chokotonkna River by the natives, but several prospectors who visited it had designated it as Clark River. Portage or Achteedeedung Creek, which enters the north side of the lake about half way between Keeghik and the mouth of the Tleekakeela, is the only stream on which gold has been found. About half a dozen men have worked on this creek and secured a few fair samples of placer gold, but nothing that pays for working.

Osgood also devoted attention to the Native village of Kijik on the shores of Lake Clark. He described the village and the characteristics and lifeways of the Natives he found, noting that they had been little affected by previous contacts with whites:

> The natives of Lake Clark are collected in one village situated on the north side at the mouth of Keeghik Creek. They universally call this settlement Keeghik, although the name Niknak, which has been used, is known to most of them. Keeghik is also the original native name for Lake Clark. The village consists of about a dozen houses and caches of hewn logs, very substantially and well made. About half a mile back from the present village are very ancient traces of a large village of former times. In 1891 Schanz enumerated 42 inhabitants of Keeghik, which is perhaps twice the number now there. Some were away at the time of our visit, so we saw only about a dozen. Nearly all are of mixed blood, usually with considerable trace of Russian, but their main derivation has been from pure Indian tribes on the upper Kuskokwim drainage and the Kenai tribes from the head of Cook Inlet. Doubtless they may safely be considered the westernmost representatives of the pure Athabascan stock. Their language is now as much or more mixed than their blood, although the speech they profess as their own is a dialect similar to that of the Kenai tribes. Very few of them speak much English, but nearly all are proficient in Russian and in modified Aleut, as well as in several Indian lingoes. They go to the coast frequently, but have suffered less from the deteriorating influences of the whites than most of their neighbors. They hunt and fish much as their forefathers did, though, of course, many of them have modern arms, and they do not confine their field to allotted or hereditary districts so much as formerly. Their main food supply is the salmon, which run up the Nogheling River in large numbers and enter most of the streams at the lower end of Lake Clark. Large game is not abundant on the immediate shores of the lake, and apparently never has been, but there are fairly good hunting districts within a few days' journey. An occasional moose or caribou is found about the lake, but neither is common, and the natives do no systematic hunting for them there. White sheep are found on the mountains

between the lake and Cook Inlet, but they remain far back from the lake throughout the summer. Small game is much more plentiful. The Alaska spruce grouse is excessively abundant, and the Dall varying hare is also found in large numbers. Fur-bearing animals are not particularly abundant.[23]

Seven years later, in 1909, G.C. Martin and F.J. Katz explored the Lake Clark-Iliamna Lake region for the U.S. Geological Survey. In the report of their expedition they described the settlements and prospectors' camps in the area, as well as the transportation routes that had been developed in the isolated country. Regarding the settlements in the region the geologists noted:

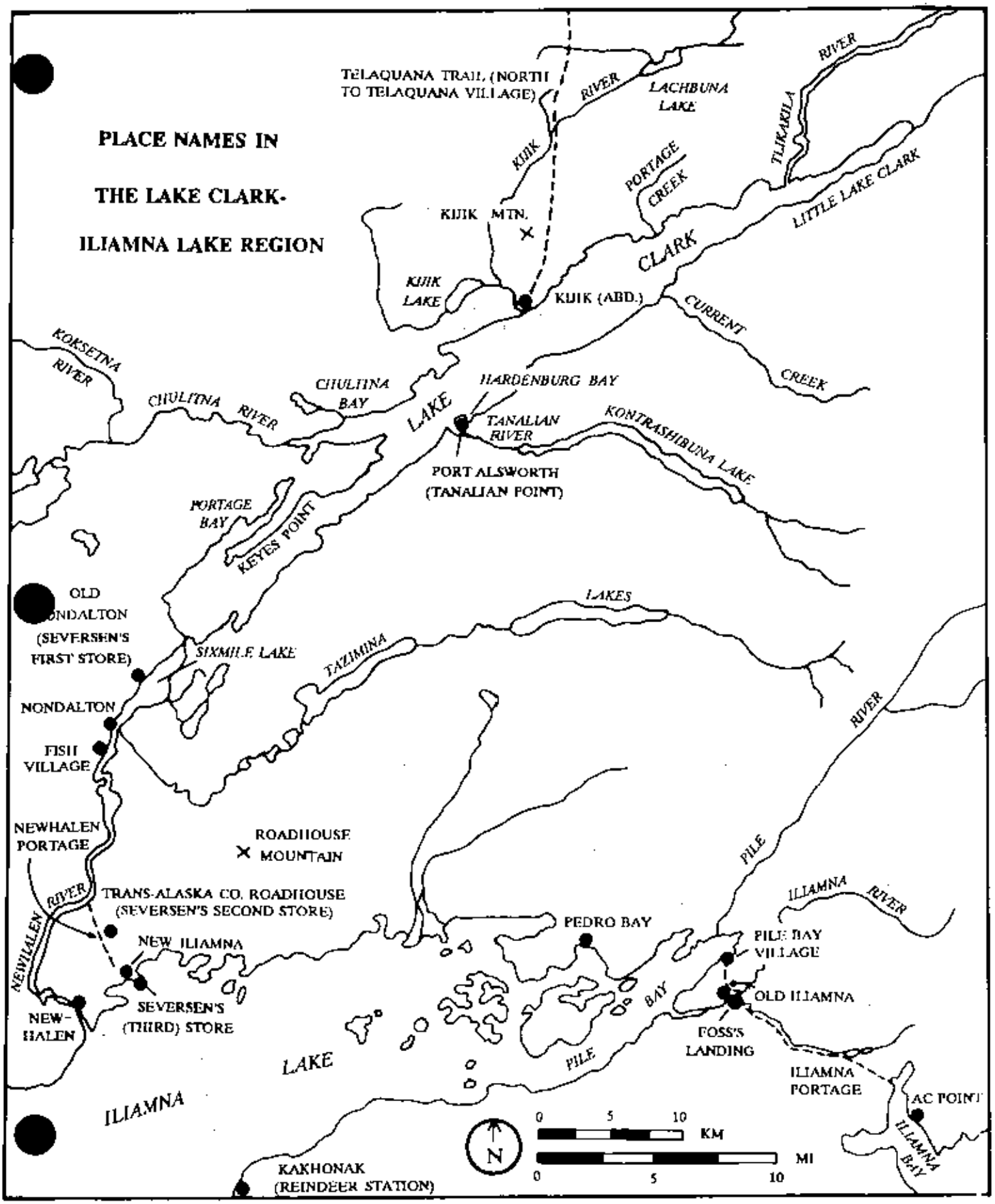
> The largest settlement and the chief trading point for this entire region is Iliamna village...situated on Iliamna River, 4 miles above its mouth and 12 miles from Iliamna Bay. This village has a population of about 15 whites and 40 natives. It has a United States commissioner and a Government school. Three stores are located here. A Government reindeer station has been located at the head of Kakhonak Bay since the spring of 1905. The other villages, which are inhabited permanently only by natives, include Kakhonak, on the south shore of Iliamna Lake 12 miles west of the head of Kakhonak Bay; Newhalen, near the mouth of Newhalen River; Nondalton, on the west shore of Sixmile Lake; and Kaskanak, on Kvichak River, about 10 miles below Iliamna Lake. Iliamna and Nondalton are Kenai villages, the others being Eskimo. The former villages of Chekok and Nikhkak [Kijik village] are now abandoned. There are several cabins belonging to prospectors and traders at Iliamna and Cottonwood bays, but these are occupied only when a steamer is expected or when freight is being moved from the coast. Numerous isolated camps and cabins are scattered throughout the district. Most of these were built by prospectors, who have been at work in a small way since 1898 over the greater part of this region and in the adjacent Mulchatna country....
>
> Dutton post office, which was formerly situated at the head of Cottonwood Bay (the southern arm of Iliamna Bay), is now (1910) abandoned. The entire region is dependent for its summer mail on the accommodation of the postmasters east of Cook Inlet and of the mail clerks and other officers of the steamers calling at Iliamna Bay. Winter mail is received by private delivery from points on the Cold Bay and Nushagak mail route.

Martin and Katz also described at length the transportation routes that had been developed in the remote Lake Clark-Iliamna Lake region. They observed:

> This region is accessible only by water, there being two well-traveled routes leading to it – one from the east by way of Iliamna Bay and the other from the west by way of Koggiung.

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23. Osgood, "Lake Clark, A Little Known Alaskan Lake," pp. 328-31. Some 88 photographs relating to native populations and non-native settlers in the Lake Clark region may be found in Andrew Balluta, Albert Wassillie, Sr., Pamela Twitchell, Linda J. Ellanna, Alex Trefan, Sara Hornberger, and Priscilla Russell Kari, Chapter 8, "Historic Photographs From the Lake Clark Study Area," [1985], Phase I, Socio-Cultural Study for Lake Clark National Park and Preserve, Directed by Linda J. Ellana, Files, National Park Service, Alaska Regional Office, Anchorage, Cultural Resources Division. In addition the park has collected other historic photographs of the region, copies of which may be found in the Port Alsworth office of the park and preserve.


PLACE NAMES IN
THE LAKE CLARK-
ILIAMNA LAKE REGION
TELAQUANA TRAIL (NORTH TO TELAQUANA VILLAGE)
KIJIK RIVER
LACHBUNA LAKE
TLIKAKILA RIVER
KIJIK MTN.
PORTAGE CREEK
LITTLE LAKE CLARK
CLARK
KIJIK LAKE
KIJIK (ABD.)
CURRENT CREEK
KOKSETNA RIVER
CHULITNA RIVER
CHULITNA BAY
HARDENBURG BAY
LAKE
TANALIAN RIVER
KONTRASHIBUNA LAKE
PORT ALSWORTH (TANALIAN POINT)
PORTAGE BAY
KEYES POINT
OLD NONDALTON (SEVERSEN'S FIRST STORE)
LAKES
SIXMILE LAKE
TAZIMINA
NONDALTON
FISH VILLAGE
RIVER
NEWHALEN PORTAGE
ROADHOUSE
MOUNTAIN
PILE
ILIAMNA RIVER
NEWHALEN RIVER
TRANS-ALASKA CO. ROADHOUSE (SEVERSEN'S SECOND STORE)
PEDRO BAY
NEW ILIAMNA
PILE BAY VILLAGE
SEVERSEN'S (THIRD) STORE
NEW-HALEN
BAY
OLD ILIAMNA
FOSS'S LANDING
LAKE
PILE
ILIAMNA PORTAGE
AC POINT
ILIAMNA
ILIAMNA BAY
N
0 5 10 KM
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KAKHONAK (REINDEER STATION)



Agafia Trefon (1908-1928) holding a parasitic jaeger (Stercorarius parasiticus) at Tanalian Point; photographed by sport hunter Frederick K. Vreeland of New York City in the summer of 1921.

Courtesy Robert W. Vreeland

The steamers from Seattle to Prince William Sound and Cook Inlet and also the local steamers from Valdez westward and from Seldovia and Port Graham to the upper Cook Inlet ports will land at Iliamna Bay whenever weather permits and sufficient business warrants it. Iliamna Bay is about a day's sail from Seward or 6 to 12 days from Seattle. There is usually about a boat a month from May to October, inclusive, and occasional boats during the winter.

A good horse trail leads from the head of Iliamna Bay to Iliamna village, a distance of about 12 miles. This trail crosses a 900-foot summit 3 miles west of Iliamna Bay. Another trail leads from the head of Cottonwood Bay to Iliamna village, about 20 miles, crossing three summits at elevations of 1,700, 1,500, and 1,975 feet, at 4, 5½, and 15 miles from Cottonwood Bay, descending to 1,400 and 600 feet between the summits. A good wagon road has been built for the first 2 miles and from the fifth to the fourteenth mile, or as far as the Dutton copper prospects. These trails can usually be used by horses from June 1 to November 1. Dogs are used during the rest of the year.

From Iliamna village all parts of Iliamna Lake and Kvichak River can be reached in boats, there being several large sailboats and a gasoline launch at the village. Horses can also be taken from Iliamna village throughout the greater part of the region, except in the high mountains. The shores of Lake Clark are impassable for horses east of longitude 154 degrees W.

Bristol Bay is visited by cannery vessels about May 1, and by a passenger steamer from Valdez once a month in June, July, August, and September. Part of the supplies for the stores at Iliamna village are brought in by this route, which has the advantage of being all water and avoiding the portage from Iliamna Bay to the village.

Iliamna Lake can also be reached by a portage from the head of Kamishak Bay to the head of Kakhonak Bay. This route is said to be easy, the pass being low. It is, however, not much used except by natives, because of the difficulty of having supplies landed on this uncharted part of the coast.

Many of the supplies for Lake Clark and the Mulchatna country west of it are taken in from Iliamna village by dogs in the winter. Summer transportation to Lake Clark may be accomplished either with horses or by boats to a point on the shore of Iliamna Lake 4 miles east of Newhalen River, by a 5-mile portage from that point to Newhalen River above the lower rapids, and thence by boat up the Newhalen. Native packers are usually available at this portage.

The Mulchatna region can be reached from Lake Clark by boats up Chulitna River to a short portage at the head of Swan River, or up Chulitna and Koksetna rivers to points near the headwaters of other of the eastern tributaries of the Mulchatna....It can also be reached by taking horses over this same general route.[24]

The map that Martin and Katz included with their report is probably the first map to indicate structures on Lake Clark. Six buildings are shown. Two at Tanalian Point, one on the Tanalian

24. U.S. Department of the Interior, Geological Survey, Bulletin 485, pp. 20-23.

River, two at Kijik, and one on Miller Creek. Unfortunately, the map does not include the Portage Creek area where most of the mining activity was concentrated.[25]

The two cabins which the geologists recorded at Tanalian Point were manifestations of a settlement that was more than a decade old. By 1900, 17 white prospectors were living in and around Kijik and some undoubtedly were living at Tanalian Point where they found ready access to the Kasna Creek copper prospects on Kontrashibuna Lake. The outline of an old cabin in the woods at Tanalian Point and other (now obliterated) near Hardenburg Bay (Port Alsworth) suggest the presence of prospectors about one hundred years ago. Bureau of Fisheries data suggest that Euroamericans have been living at Tanalian Point since 1895. The Dena'ina also lived at the point, but they did not move there until after white had established a settlement.[26]

A USGS expedition led by geologist Philip S. Smith reconnoitered the Lake Clark-Central Kuskokwin region some five years later in 1914. Smith observed that the region between Lake Clark and the Stony River was "so sparsely settled" that they saw no one during the trek between those two bodies of water. Along the Kuskokwim were

> cabins, many of which are occupied by prospectors and trappers, and several native families have permanent homes along the river. The natives are employed mainly in hunting and fishing, but all of them do more or less work for the white people and so earn money to buy tea, flour, and sugar, which they crave. Many of the natives have a considerable admixture of Russian blood, and the leaders are usually half-breeds.

Four to six persons were living in a small mining settlement on Big Bonanza Creek. Supplies were transported to the prospectors by poling boats traversing up the Mulchatna River.

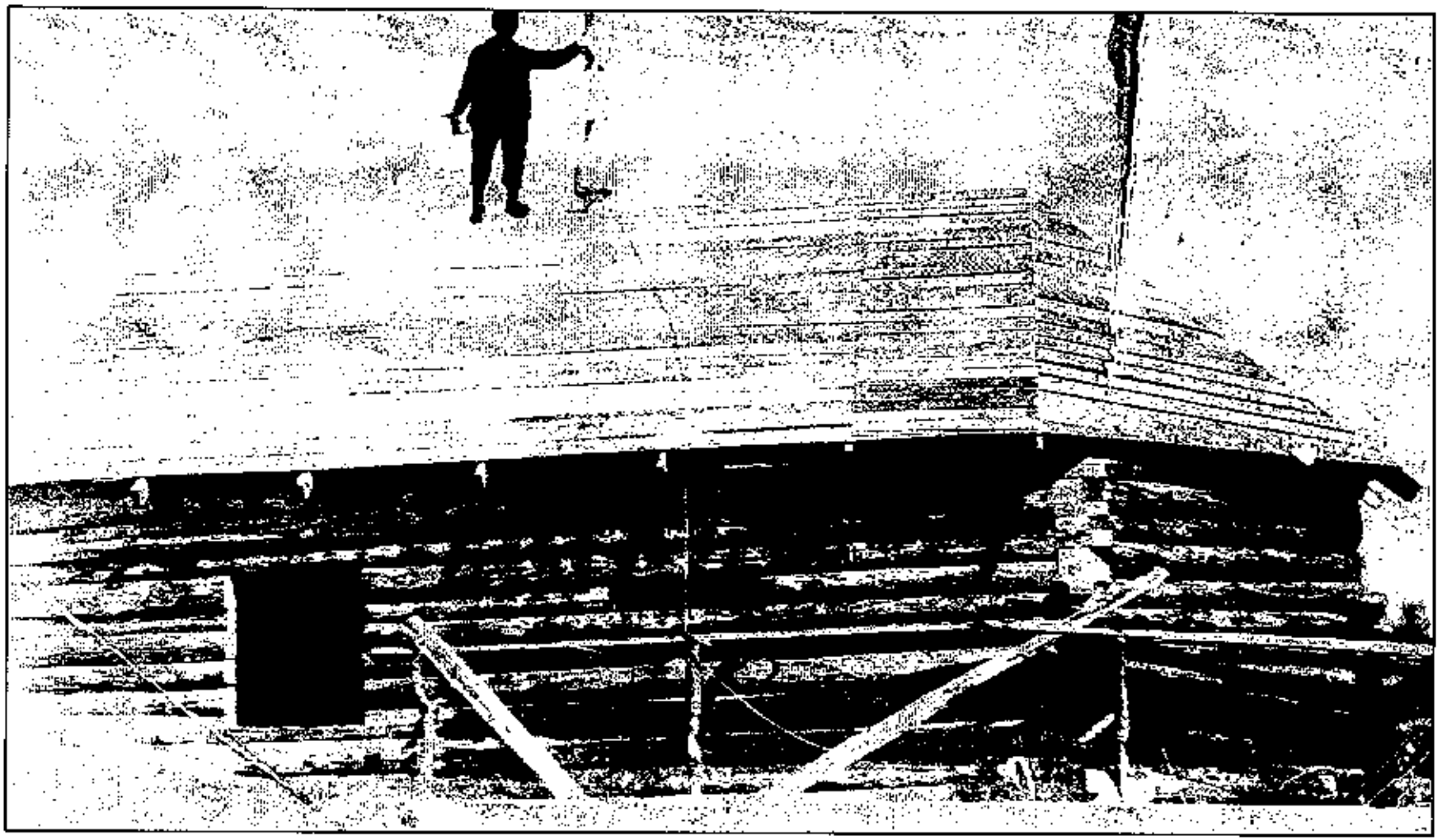
Nondalton was the principal settlement in the vicinity of Lake Clark. According to Smith, the village was

> on the northwest shore of Sixmile Lake. A store, in charge of a white trader, and a score of cabins of natives are the only buildings. The population consists almost entirely of natives. At the time Nondalton was visited in 1914 the town was deserted and all the people were living in tents and in rough shelters at a fishing village at the outlet of Sixmile Lake. Most of the supplies for Nondalton are brought in boats up Kvichak River and along Iliamna Lake and are back-packed across the Newhalen Portage and thence taken up Newhalen River and Sixmile Lake in boats.

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25. Historic American Buildings Survey, *Historic Architectural Resources in Lake Clark National Park and Preserve*, p. 7. Only one of the buildings on Tanalian Point is known to survive. One building on Portage Creek is known to survive from this period. Constructed of large round logs, the building was moved by Fred Bowman in 1938 to be incorporated into his house nearby. While dismantling and reassembling the structure, he probably changed the notching, because the logs are now nailed into corner posts.

26. Babe Alsworth, interview by John Branson, 1975; Alex Trefon, interview by John Branson, February 26, 1993; U.S. Department of Commerce, *1900 Census of Population*; "Iliamna Kijik" data located in Drawer 7, Roll 1750 at NARA Anchorage; Ward T. Bower, "Alaska Fishery and Fur Seal Industries in 1925," in U.S. Department of Commerce, Bureau of Fisheries, *Report of U.S. Commissioner of Fisheries for the Fiscal Year 1926* (Washington, GPO, 1927), 92-98.



Anton Balluta (1905-1938) atop the roof of St. Nicholas Church at Old Nondalton in 1930, immediately after he had affixed the cross. The church, which still stands, is on the National Register of Historic Places.

Courtesy of Sophie Austin



In 1920, this was the home of the Trefon Balluta (1858-1923) family at Tanalian Point. Originally from Telaquana village, they lived at Kijik in 1900 and at Old Iliamna in 1910 before settling at Tanalian Point.

Courtesy of John Lee

Some 40 miles "in an air line southeast of Sixmile Lake" was Old Iliamna, the principal trading point for the southern part of the Lake Clark-Iliamna Lake region. The village, according to Smith was on the

> Iliamna River, about 12 miles from Iliamna Bay, the port on Cook Inlet. Steamers from Seattle call at Iliamna Bay about once a month during the summer and leave mail and supplies at a deserted cabin at a place locally known as AC Point. North of AC Point the head of Iliamna Bay is very shallow and at low tide is a mud flat impossible to traverse in a skiff. Another group of cabins has been built at the head of the bay, but none of them is permanently occupied. A well-beaten trail leads from these upper cabins through a pass about 900 feet high, 3 miles distant from salt water, and thence follows Chinkelyes Creek down to Iliamna, at the junction of that creek with Iliamna River.[27]

Few white persons followed the early prospectors and trappers to the Lake Clark region for several decades. In 1929, when Stephen R. Capps led a USGS expedition through the Lake Clark-Mulchatna region, he stored provisions at Brown Carlson's cabin on Lake Clark and made observations on the settlers and villages in the area. Among other things, he observed:

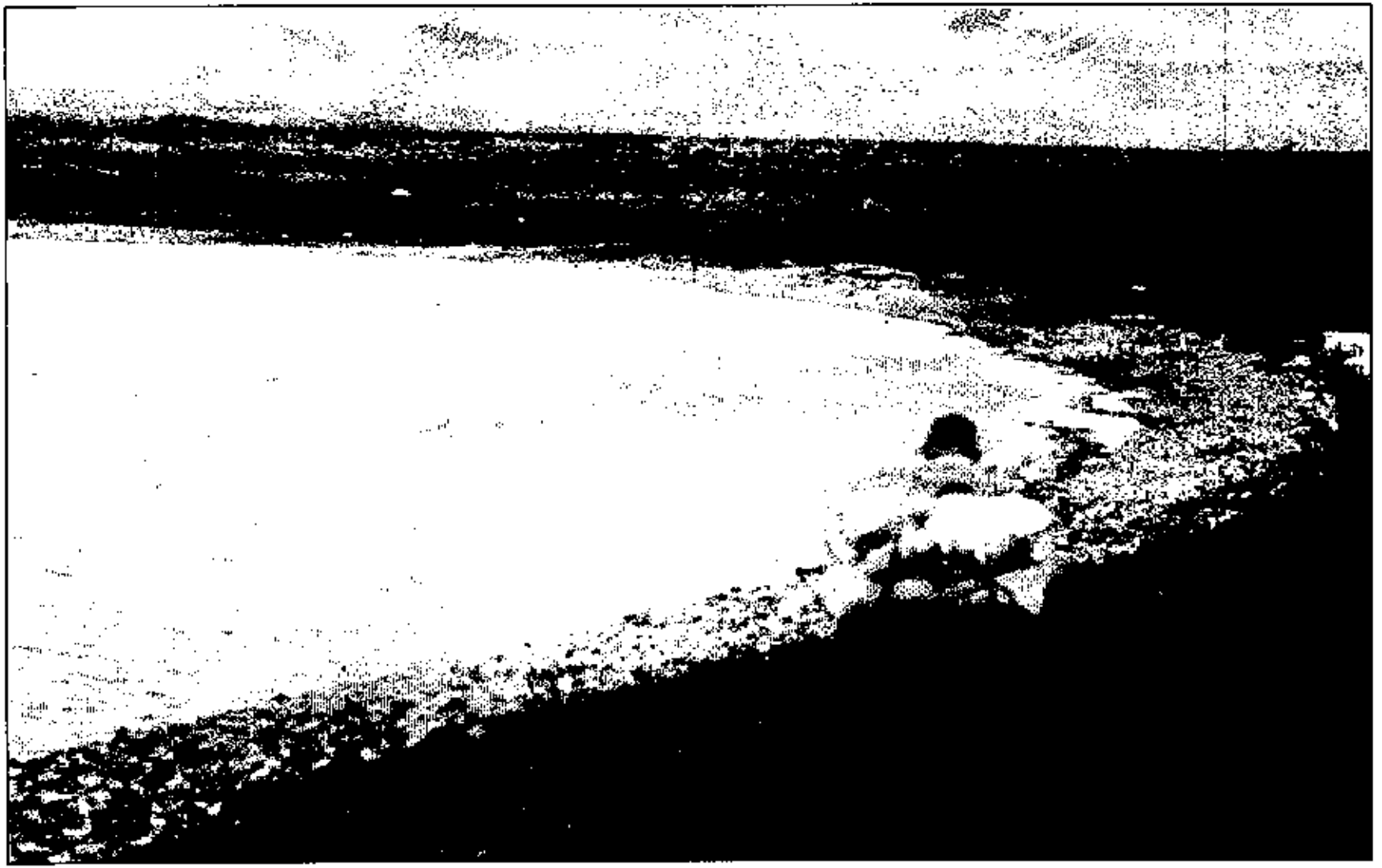
> Except for one white man on the north shore of Lake Clark, about 5 miles above the mouth of the Kijik River, there are no permanent inhabitants in the region....There were formerly native villages at the foot of Telaquana Lake and at the mouth of the Kijik River, and a few native houses along the north shore of Lake Clark, but all of these are now abandoned. The nearest settlement of any size is Nondalton, on the west shore of Sixmile Lake, where some 60 or 80 natives and one white man live. There are perhaps half a dozen white men prospecting or trapping on Lake Clark. Although most of the natives of this region have their homes at Nondalton, many of them visit different parts of this region to trap during the midwinter months and move to temporary fishing camps in the summer, so that the inhabitants of the village are rarely all present there at the same time.
>
> On Iliamna Lake and on the lower Iliamna River there are about a dozen white men and two native villages. Iliamna Village, on Iliamna River, 4 miles above its mouth, is inhabited by 60 or 70 natives of the Kenai tribe....
>
> It will thus be seen that although the Iliamna-Clark region has been known to white men for many years and is fairly easy of access both from Cook Inlet and from Bristol Bay, its development has been very slow, and the few white men in it live by trading, trapping, and prospecting.[28]

Capps elaborated on the settlement of whites and their activities in the sparsely-populated Lake Clark-Iliamna Lake region in another report on his expeditions through the area during 1926-1929. His observations, which contained comments on the impact of white settlement on Native lifeways, included:

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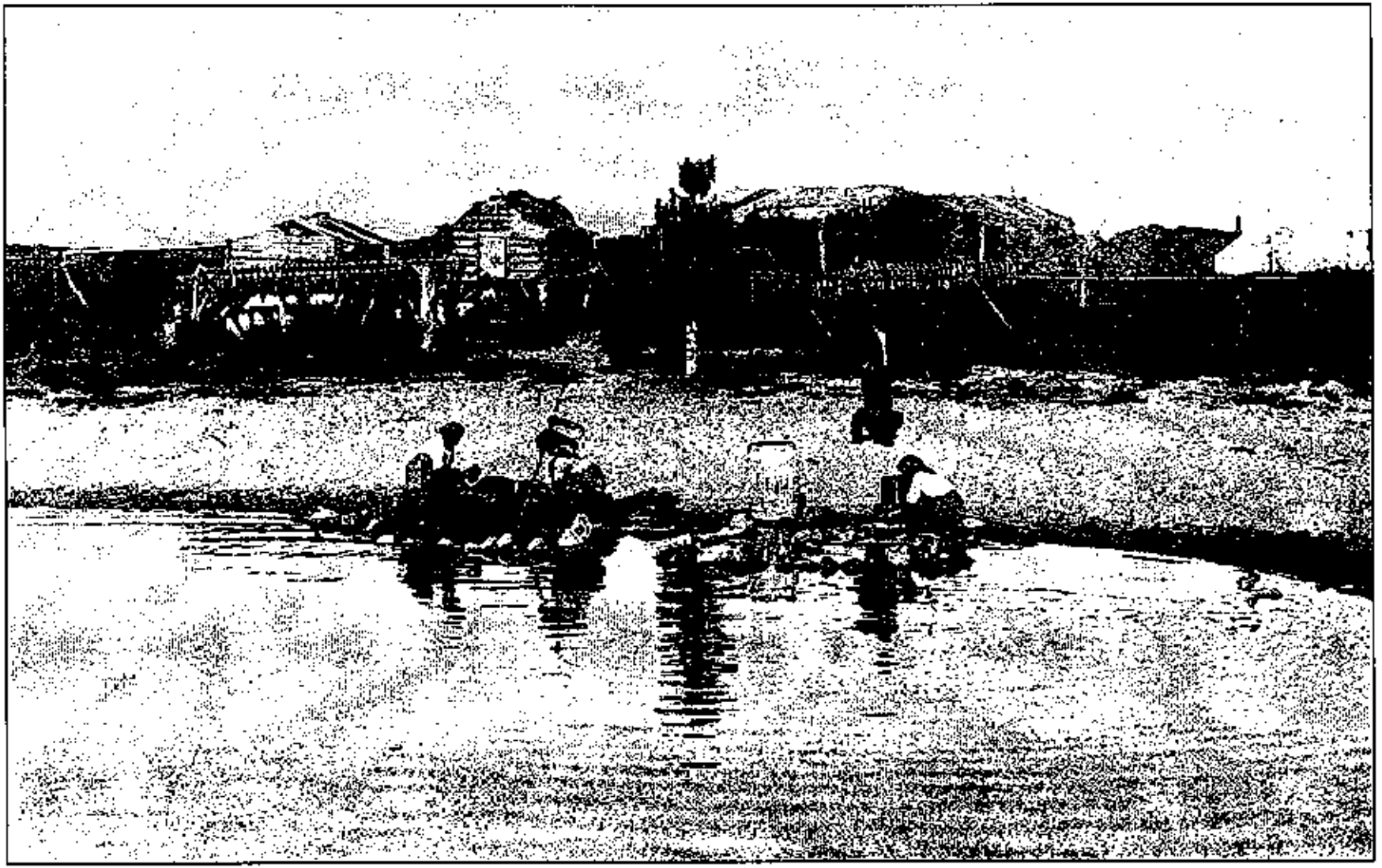
27. U.S. Department of the Interior, Geological Survey, Bulletin 655, pp. 35-38.

28. Capps, "Lake Clark-Mulchatna Region," in U.S. Department of the Interior, Geological Survey, Bulletin 824-C, pp. 137-38.



Indian packers, in 1914, are seen leaving Brown's Roadhouse; Roadhouse Mountain is in the background. Brown's Roadhouse was probably built by Frank Brown in 1914 and was reported to be the first frame house on Iliamna Lake. Brown was a prospector who had a cabin on the Kijik River along the Telaquana Trail.

P. S. Smith #912, USGS Photo Library, Denver



Simeon Wassillie's fish camp on the east side of the Newhalen River near Iliamna Lake in the summer of 1921. New York sportsman Frederick K. Vreeland took this photograph of women processing red salmon. In the background are wall tents where people stayed while putting up fish, drying racks, a smokehouse, and log caches.

Courtesy of Robert W. Vreeland

Except for a few small settlements around its margins, this region is entirely uninhabited by either whites or natives. On its eastern edge, according to the census of 1930, there were 78 persons residing at Tyonek, on Cook Inlet, all but a few of whom were natives; 56 persons at Susitna station, on the Susitna River, of whom perhaps a dozen were white; and a few white trappers and fishermen scattered along the shores of Cook Inlet and the Susitna, Yentna, and Skwentna Rivers. At Iliamna village, on the Iliamna River, the records show 100 inhabitants, of whom perhaps a dozen were whites, and many of those actually reside at various places along the shores of Iliamna Lake. The village of Nondalton, on Sixmile Lake, below the mouth of Lake Clark, was credited with 24 inhabitants, all but one or two of whom are natives. A few white trappers and prospectors and a few families of natives live along the shores of Lake Clark. From all these points of settlement trappers maintain trap lines during the winter, and many families have summer fishing camps at some distance from their winter houses, but except for the shores of Cook Inlet and of the larger rivers and lakes there are no permanent habitations in this great region.

There was formerly a considerable native village at the foot of Telaquana Lake, but it is now abandoned. Before the advent of the white man the natives of Tyonek were accustomed to make summer hunting trips into the headwaters of the Chakachatna Basin, and similarly the Susitna natives formerly hunted in the upper Skwentna Basin, but for the last 30 years these expeditions have been given up, for the natives find it easier to gain a living by various employment with white men than to make the difficult journeys of former years.

Although a few prospectors occasionally visit the more accessible parts of the region, and a few mining claims are held near Iliamna Lake and Lake Clark and on Iliamna Bay, there is now no mining in progress, and in the past mining has been confined to the production of small amounts of placer gold from the north shore of Lake Clark. The natives subsist largely upon fish and rely upon their catch of fur and the sale of fish to supply them with money for such purchases as they need to make. The white men of the region are all fishermen, trappers, or traders, some of whom do some prospecting also. As a whole, this region is as undeveloped as it was 30 years ago, and there appears to be no immediate likelihood of any improvement in this condition unless mineral deposits of importance are discovered.[29]

NON-NATIVE EUROAMERICAN SETTLERS AND ACTIVITIES IN THE AREA OF LAKE CLARK NATIONAL PARK AND PRESERVE FROM THE 1890s TO THE 1980s

The aforementioned accounts indicate that the late 1890s and early 1900s witnessed the first influx of white prospectors and settlers into the Lake Clark-Iliamna Lake region.[30] Initially, the

29. U.S. Department of the Interior, Geological Survey, Bulletin 862, pp. 34-35.

30. Unless otherwise noted material for this section was extracted from three principal sources: Historic American Buildings Survey, *Historic Architectural Resources In Lake Clark National Park and Preserve*, pp. 1-4ff; Sara Hornberger, Chapter 4, "Overview of Historic Contact In the Lake Clark Study Area," [1985], pp. 29-55, Phase I, Socio-Cultural Study for Lake Clark National Park and Preserve; and Alaska Geographic, *Lake Clark - Lake Iliamna Country*, pp. 133-45. The material presented in Hornberger's overview is based substantially on a series of personal interviews (continued...)

whites settled in the more accessible Iliamna area. Non-Native settlers were drawn to Dena'ina villages which were already in existence. The identity of the first non-Native settler on Iliamna Lake is not absolutely certain, but it is likely that he was Alex Flynn, who may have been in Old Iliamna village (located on the Iliamna River east of the lake) as early as 1892.[31] During the pre-World War I years the village had three stores and three streets. B.J Foss, and his sons Sam and Harold, opened a store at Foss's Landing (across the river from Old Iliamna) in 1903. A year later, Peter Anderson established a store in the village itself, and Fred J. Roehl, Sr. had a store by 1913. The village's three streets were divided along racial lines: one for Dena'ina, one for Eskimos, and one for whites. Formal mail service to the Iliamna region was initiated in 1912 when the aforementioned Roehl took the oath of office as postmaster for Old Iliamna village. The settlers received their goods from horses and dog teams that freighted across the Iliamna portage. Freighters included Anderson, the Foss family, and Evon Rickteroff.[32]

John Martin Hobson and Charles Carlson were probably the first white prospectors to winter on Lake Clark. At age 21 Hobson, a native of Idaho, went to Alaska on a sealing ship. In 1900 or 1901, after working on a beach crew of the Alaska Packers Association cannery at Kogguing, he traveled to Lake Clark. Hobson married Tatiana Constantine, a Native, and the couple lived at a village on the Stony River until 1915, when they moved to Old Nondalton. Hobson continued to fish at Bristol Bay each summer. The personal history of Charles Carlson remains obscure.

The first long-term permanent white resident of Lake Clark was a rather legendary and colorful character who called himself Brown Carlson. Born in Norway in 1878, Carlson went to sea in sailing ships as a boy of 16 and traveled the world before settling in Bristol Bay as a commercial fisherman around 1900. After working as a commercial fisherman for several years he struck out alone for the Lake Clark region, settling west of Portage Creek where he may have done some prospecting. He is recorded as marrying Christina Balluta, a Native, at Kijik in 1906. He built a cabin and large wooden workboat and then opened a 100-mile trapline which reportedly never earned him less than $1,500 per year. The trapline extended from his house up to the head of Lake Clark, through a pass to Otter Lake, over to Ingersol Lake (Lachbuna Lake), and down the Kijik River Valley to Miller Lake and back to Lake Clark. Always traveling on foot, he used pack dogs but not a team, and the trapline took five days to run. His original cabin burned about 1939, but he rebuilt on the site. Carlson continued trapping the Tlikakila and Chokotonk rivers through the late 1950s. Failing eyesight forced him to enter a nursing home in Anchorage in the

30. (...continued)
that she conducted for the National Park Service during the mid-1980s. Transcripts of the interviews may be found in two notebooks entitled "Historical Interviews" at Lake Clark National Park and Preserve, Port Alsworth. The most important interviews for this study are listed in Appendix G.

31. Townsend, "Ethnohistory and Culture Change of the Iliamna Tanaina," p. 102.

32. Fred Roehl, Jr., interview by John Branson, September 1, 1993. For more data on postal service in the Iliamna region see Virginia Doyle Heiner, *Alaska Mining History: A Source Document* (Anchorage, Office of History and Archaeology, Alaska Division of Parks, July 1977), pp. 268-69.

1960s. He died in 1974, at the age of 97, leaving a rich legacy of rugged individuality and physical strength and courage in the Lake Clark area.[33]

As aforementioned in chapter 7 of this study, J.W. Walker and several friends were living at Tanalian Point on Lake Clark by 1911. Walker filed a homestead claim for 160 acres on Lake Clark at the mouth of the Tanalian River on February 6, 1912, but the land was never patented. The men were engaged in prospecting, hunting, fishing, and trapping. Two years later, Walker was joined at the point by the eight-member Trefon Balluta family from Old Iliamna. Other people who lived there before World War I were Pete Anderson and his Dena'ina wife, Agafia, who had a cabin on the site of the Floyd Dennison cabin and prospected at Portage Creek in 1913. Tanalian Point began to grow in importance because of the abandonment of Kijik village and because the new site became a staging area for travels to the Telaquana Trail and to mining activities on Kontrashibuna Lake and Portage Creek. In addition, the floodplain of the nearby Tanalian River offered the best timber resources for cabins and fuel in the immediate area.[34]

Two of Walker's associates were Otis M. "Doc" Dutton and Joe E. Kackley, both of whom had come to the Lake Clark region around the turn of the century to prospect and trap. They stayed in the area until they died at ages 90 and 84 in 1949 and 1944, respectively. By 1920 the two men had taken up residence there.[35] Although Doc and Joe had the reputation as being primarily trappers, they were attracted to the area by its mining possibilities. Because trapping was done in the winter and mining in the summer, these activities were compatible. Thus, many prospectors in the region were also trappers. A letter the men wrote in 1927 indicates that by that time they had turned their attention from mining to trapping. The letter was dated "Tanalian Point, Alaska, Aug. 29th, 1927" and was addressed to A.S. Tulloch in Grand Marais, Michigan:

> We have a Good House and are taking life Easy. We have a fine Garden, all kinds of Vegetables, wish you were here to Put in the Winter with us. We are put on a limit of 20 Beaver to the man but that is Good Enough. Ours Averaged $32.50 but we got all Large Ones. Joe would set away from their House and we wouldent get Eny small ones. We had a good patch last winter and Prices are good. Hanse Seversen is running a Trading Post at the Beach where the Trail starts over to Nondalton. His Sales will run over $37,000 this spring. He is on Easy Street. Joe and I & Brown Carlsen are all ready

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33. *Anchorage Daily Times*, February 21, 1962; Historic American Buildings Survey, *Historic Architectural Resources In Lake Clark National Park and Preserve*, p. 9; and Ales Hrdlicka, *Alaska Diary: 1926-31* (Lancaster, Pennsylvania, Jacques Cattell Press, 1943), p. 398. Outbuildings which were part of Brown's original complex remain near the lake. Two photographs of Brown's complex taken by the Capps Expedition during the late 1920s may be seen on the following page. The photographs may be found in the Stephen R. Capps Collection, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks.

34. James Carter Photograph Collection, Alaska Historical Library, photo number 1; Alex Trefon, interview by John Branson, February 26, 1993.

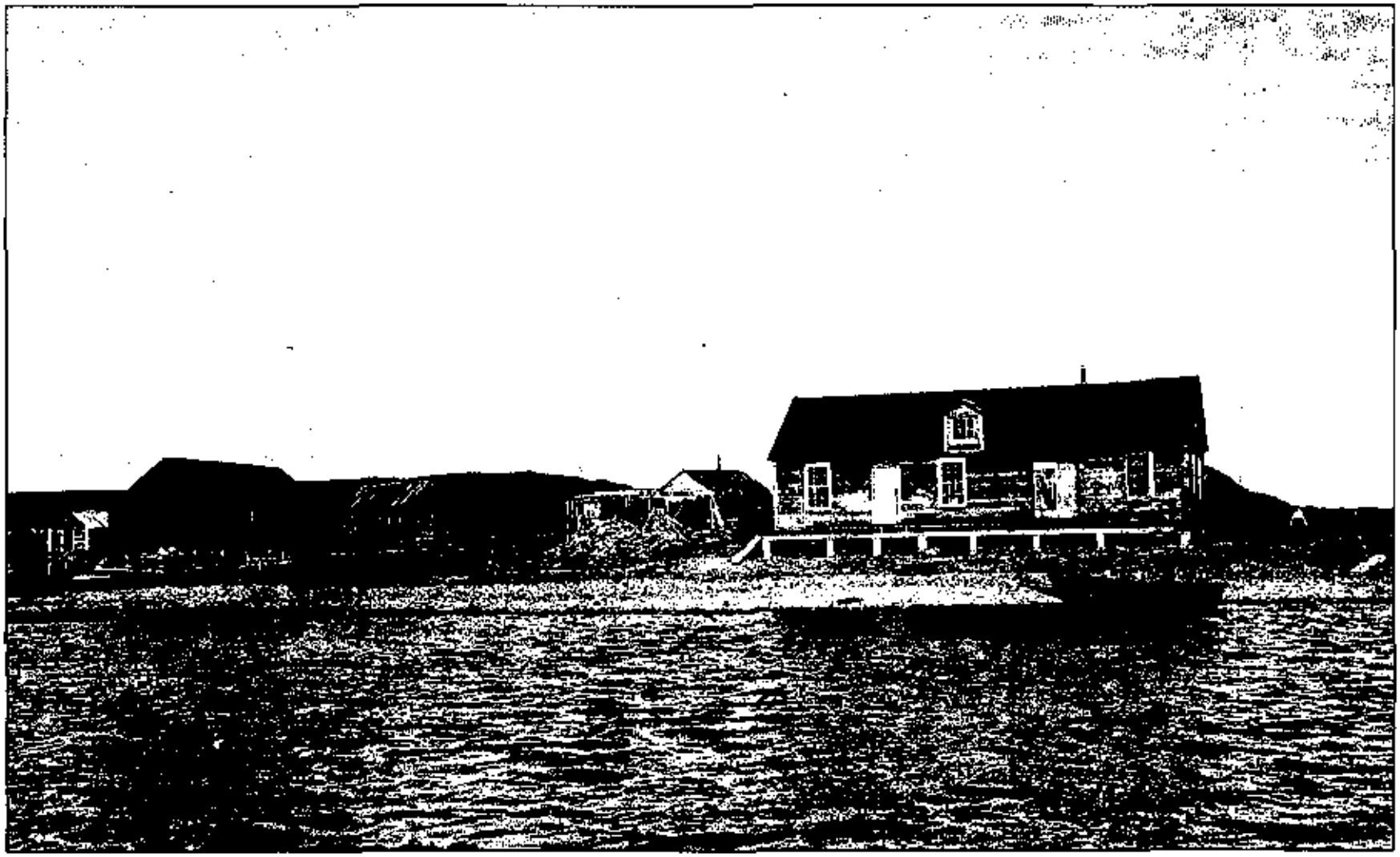
35. U.S. Department of Commerce, *1920 Census of Population*, in Cabinet 19, Drawer 7, Roll 1750, NARA Anchorage; Historic American Buildings Survey, *History Architectural Resources in Lake Clark National Park and Preserve*, p. 8. The original cabin that they built is still standing, set back from the shore behind a later house. It has a 14 x 13-foot portion built of round logs, dovetailed at the corners, and a 10 x 13-foot wood frame portion made of whipsawn lumber. Although the wood frame portion was later enclosed by horizontal siding, this small building survives remarkably intact.





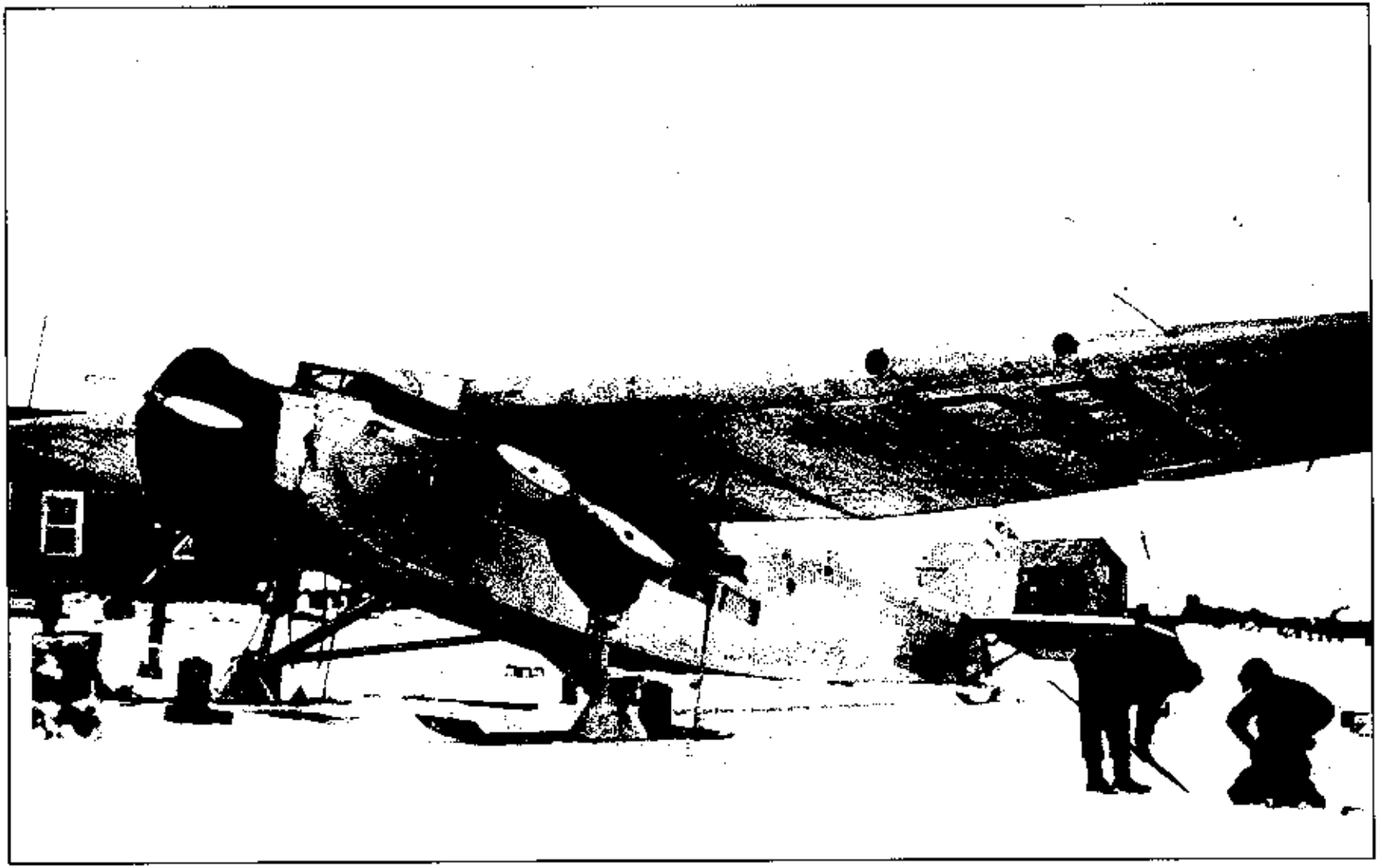
Brown's Complex. Photos taken by the Capps Expedition during the late 1920s.

S. R. Capps Collection, Univ. of Alaska Fairbanks



What became known as Seversen's Roadhouse by 1923 was first built by Koggiung merchant Herman Gartelmann (1871-1923) on a sheltered point four miles east of the mouth of the Newhalen River around 1914-15. At the time this photograph was taken in 1916-17, it was owned by Old Iliamna merchant Frederick J. Roehl Sr. (1859-1924) whose estate later sold the roadhouse to Hans Seversen (1869-1939).

Courtesy of Marie Roehl Millett



Star Airways Ford Tri-motor parked on the ice in front of Severseп's Roadhouse, Lake Iliamna, in the late 1930s. The roadhouse (left) provided lodging, a wide variety of merchandise, and an outlet for raw furs. The gas house is on the right. Star Airways merged with other lines in the early 1940s and became Alaska Airlines.

Courtesy of Helena Severseп Moses

to go down to Hanses for our winter supplyes. We get all the Heavey stuff up by Dog Team. We get up Flour, Sugar and all of the Heavey Stuff a year ahead. We Can now get all most Everything we want. Lots of Sheep up Brooks Lake, no Trouble to get our Winters meat. Course Carabo & Moose are all most everywhere, same as Black & Brown Bare. When we come back from the Beach we are going over to Chulitna. Ducks & Geese fine Shooting but we can Kill Enough in a few hours to Do us and our Friends. I have wished for your old Browning Automatic many times when they came to fast for my 16 Remington but its Dandy. Joe uses the old 12 Gague Winchester pump but he getts them. We have a fine Old Town Main Canoe 19 ft. overall. It's a Beauty. It was a Present from "Col" A.J. Menab U.S.A. & Fred K. Vreeland of New York. They were in for a Hunt, had a fine time, Got some fine Specimens. I went along an Cooked for them. Secar is still on Deck. Will tell him Hellow for you when I see him. He has the Flag you sent him, but like the Rest of us is getting old....

I wish you were here for Supper. We are going to have Mt. Sheep Stake and Cranberry Sauce. I believe you could do justice to it. Walker has been in the Salmon & Clam Canning Bus for years, got married and I guess is getting along Some way. We havent seen him for years. We here from him once in a while.[36]

An early settlement in the area grew along the north shore of Iliamna Lake, just east of the mouth of the Newhalen River. The site of the present-day community of New Iliamna grew out of a number of roadhouses and stores that were established in the vicinity of Roadhouse Mountain and Newhalen Portage; for that reason, the site was first known as Portage. The first roadhouse was built by Trans-Alaska Company workers in 1902 as part of a proposed railway that was to connect Iliamna Bay and St. Michael (see chapter 7). This roadhouse was located at about the midpoint of the six mile long Newhalen Portage; Martin Gorman, a member of the 1902 Osgood biological survey, noted the structure as Roadhouse No. 2.[37]

The roadhouse was abandoned soon afterwards because of the collapse of the Trans-Alaska Company. For the next decade it remained common property. Then, during the teens, Hans Seversen began using it as a store. Seversen, a one-time ministry student in Minnesota, had established a store and warehouse at Old Nondalton in 1914; he found the new location more favorable and stayed there for several years.[38]

By 1914, Euroamerican settlement had also begun along the northern shore of Iliamna Lake. Geologist Philip S. Smith reported the existence of a Brown's Roadhouse, reportedly the first frame building on Iliamna Lake. It was located near the present-day Federal Aviation Agency compound, approximately one mile from Iliaska Lodge. At about this time Herman Gartelmann, a merchant from Koggiung, hauled lumber and tin siding up the river to the site of Iliaska Lodge. Once he arrived there, he built a large tin sided warehouse and an adjacent frame

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36. O.M. Dutton and J.E. Kackley to A.S. Tulloch, August 29, 1927. Carter Collection, Photo Collection Album 148, Alaska Historical Library, Juneau.

37. LACL Photo H-286; M.W. Gorman, *Report on a Botanical Survey of the Lake Iliamna Region, 1902*, unpub. mss., University of Oregon Library, p. 157.

38. Mike Delkittie, interview by John Branson, August 3, 1993; Anne Seversen Monsen and Walter Seversen, interview by John Branson, June 27, 1994.

building with two dormer windows which he used as a roadhouse. In 1915 or 1916 Old Iliamna merchant Frederick J. Roehl Sr. purchased the buildings from Gartelmann and ran a roadhouse until his death in the early 1920s.[39]

By 1923, the building had been taken over by Hans Seversen, who abandoned his former roadhouse site and moved his provisions to the site. According to Stephen Capps, who passed through the area in 1929, Seversen's Trading Post (his third site) was a "typical frontier post." It was on a bleak, barren point of land sticking out into the lake, and consists of an unpainted 1 story store building; a couple of galvanized iron ware houses, and his house, which is half frame and half sod....There are a half dozen families near by."[40] Seversen continued to operate the roadhouse until his death in 1939. In the wake of his death, local fisherman Art Lee and his wife Helen ran the roadhouse until Art started a store of his own in the early 1940s.[41]

As noted by Capps, a new village, known as New Iliamna, had begun to grow around the post by 1929. Old Iliamna during this period had begun to lose its population, in part because the newly-extended road to Pile Bay made the community more isolated. By the late 1930s, Old Iliamna was abandoned. Families from Old Iliamna moved to Pedro Bay, Pile Bay, and New Iliamna. By the late 1930s, New Iliamna included accommodations for sport fishermen, and during the mid-1940s an airfield was constructed nearby.[42]

Aided by the airplane increasing numbers of whites began to settle in the Lake Clark region during the 1930s. Aviation service had come to the area during the late 1920s, thus making the remote region more accessible; float and ski planes, for instance, first landed at Seversen's Roadhouse in the late 1920s. In a USGS report of an expedition to the Chakachamna – Stony River region in 1928, geologist Stephen Capps observed:

> With the establishment of a commercial aviation service at Anchorage the problem of transporting passengers and freight to points in this region has been wonderfully simplified, and a number of trappers have used this service in taking outfits into the Chakachatna and Stony Basins. In 1928 the charge for this service was about $1 per plane-mile, the capacity of the plane was a pay load of about 700 pounds, and landings were made with pontoons on some of the numerous lakes.[43]

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39. Philip S. Smith, Photographic Album Nos. 910, 912, and 913, USGS Photo Library, Denver; Fred Roehl, Jr. and Victor Monsen, interview by John Branson, June 27, 1994.

40. [Capps] to Dearest, June 20, 1929, Capps Papers, Series 2: Personal Correspondence, 1908-1941, Box 4, Folder 8, May-July, 1929, Archives and Manuscripts, Alaska and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks; Alaska Road Commission, "Alaska" (map), 1923.

41. Donald J. Orth, *Dictionary of Alaska Place Names*, p. 856; *Anchorage Daily Times*, January 9, 1939, 1; January 10, 1939, 1; John Lee, interview by John Branson, September 2, 1993.

42. Joan B. Townsend, *Ethnohistory and Culture Change of the Iliamna Tanaina*, 68-69; John Lee, interview by John Branson, September 2, 1993; Chuck Hornberger, interview by John Branson, June 24, 1994.

43. Capps, "The Chakachamna-Stony Region," in U.S. Department of the Interior, Geological Survey, Bulletin 813, p. 107.

Among the settlers to arrive in the Lake Clark region during the 1930s were bush pilots who were attracted to the area after flying over it. Jim Kennedy, for example, was a commercial fisherman in Bristol Bay and an early flyer who settled on the lake, constructing a complex on the north shore about 1935. Kennedy had an air taxi operation, and after finding it difficult to keep a plane on the north shore of the lake because of the wind and waves he sold his place to Babe Alsworth and moved to Tanalian Point, where he used Dry Creek for an airstrip and the sheltered Hardenburg Bay for summer float plane operations.[44]

Perhaps the best known pilot to settle on Lake Clark was Leon "Babe" Alsworth, a former resident of the Bristol Bay area. As a pilot for Northern Consolidated Airlines between Bristol Bay and Anchorage, Alsworth flew over the lake via Merrill and Lake Clark passes and thought that the scenic area would make a good intermediate stop. Babe and his wife Mary settled on the northwest shore of Lake Clark in May 1942. The Alsworths experienced the same difficulties with using airplanes on the north side of Lake Clark that the Kennedys had found. Thus, in August 1944 they moved across the lake to the sheltered location of Hardenburg Bay on the southeast shore at the foot of Tanalian Mountain. (The site had previosly been used as Mary Ann Trefon's spring fishing camp, and as the site of a prospector's line cabin associated with the Kasna Creek copper claims.) After building a small house that year, they constructed a larger home nearby during 1947-52. By the summer of 1945 a 1,500-foot airstrip was cleared, and by November 1950 it had been expanded to 4,000 feet and was being used by DC-3s.[45]

The largely Caucasian settlement of Port Alsworth grew up around the Alsworth homestead and airstrip. The Alsworths began an air taxi operation, gave leases on pieces of land to friends and acquaintances, and provided land for the establishment of Tanalian Bible Camp, an organization associated with the interdenominational Arctic Mission. After the Alsworths moved to Hawaii in 1977 their son Glen continued the family tradition by managing Lake Clark Air Service and operating a fishing lodge which had come to be known as "The Farm".

One of the more newsworthy exploits engaged in by the Alsworths during the 1940s was the killing of wolves from airplanes to take advantage of bounties offered by the Alaska Territorial Legislature. In February 1942, for instance, the *Alaska Sportsman* reported that "Pilot Babe Ellsworth [Alsworth] with his wife as gunner, killed sixteen wolves on early morning flights by airplane near Naknek." Reportedly, they "were able to pick up and pelt all of the wolves." The "pelts, used for parka ruffs, found ready sale."

Several years later in January 1945 the periodical reported that the Alsworths had killed 29 wolves the previous year. The article noted:

> Hunting wolves by airplane usually is inordinately costly, and not particularly successful. "Babe" Ellsworth and his wife...however, have done well at it. "Babe" is a good pilot, and his wife is a crack shot. Together they shot twenty-nine wolves from their plane last year.[46]

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44. Walter Seversen, interview by John Branson, June 27, 1994.

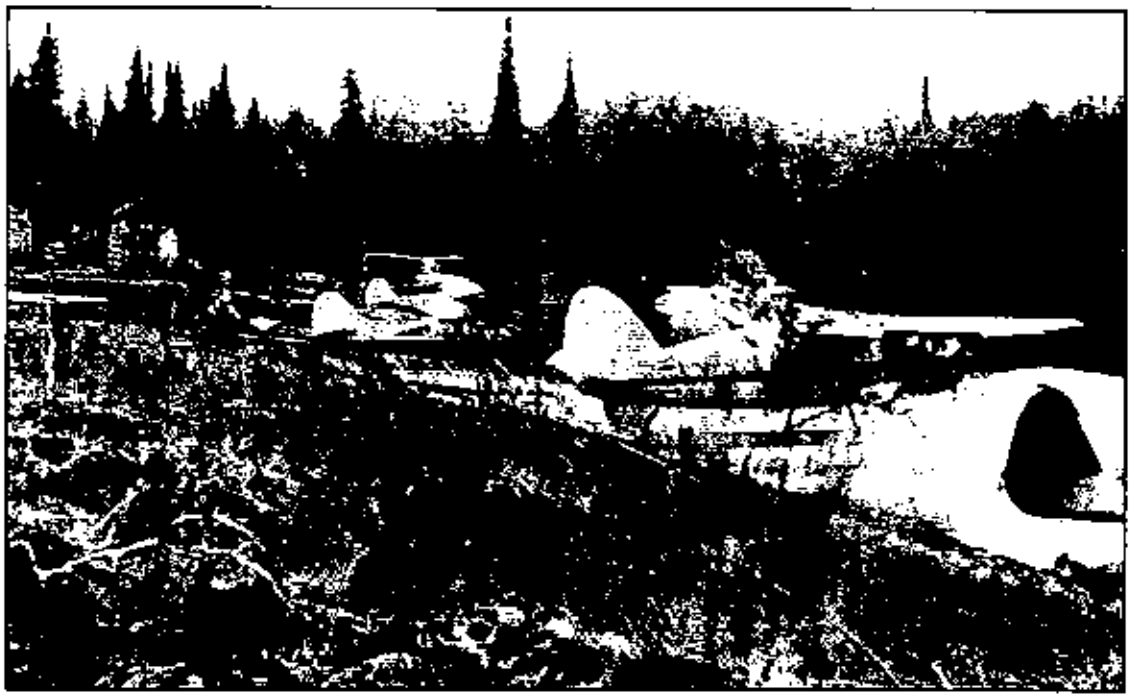
45. Alex Trefon, interview by John Branson, February 26, 1993; Katie Wilson, interview by John Branson, October 21, 1993.

46. Alaska Magazine, *Bits and Pieces of Alaskan History, Volume One, 1935-1959* (Anchorage, 1981), pp. 27, 46, 87.



Jim Kennedy, standing in front of his Aeronca Chief, was the first bush pilot to live on Lake Clark, arriving in the late 1930s. This photograph was taken in front of Old Nondalton on Six Mile Lake in 1943. In the rear (left to right) are Bill Wilson, Pete Koktelash, and Jimmy Balluta.

Courtesy of Sophie Austin





Top: The Alsworth homestead (left) under construction on Hardenburg Bay during the late 1940s. Their first house and shop are left of center and seven planes (including a Stinson JRSR and a Norseman) can be seen. In 1950, the Port Alsworth post office was established here. *Bottom:* Leon (Babe) and Mary Alsworth's first home on Hardenburg Bay (right) was made of cottonwood lumber sawed on Charlie Dennison's sawmill. The shop building is on the left. Hardenburg Bay was named for Count Charles von Hardenburg, who posted the Kasna Creek copper claims on Kontrashibuna Lake in 1906. Port Alsworth was established in 1950 with the opening of a post office in the Alsworth's home. This photo was taken is the late 1940s.

Courtesy of Mr. and Mrs. Babe Alsworth (both photos)

Mining possibilities continued to attract settlers to the Lake Clark region during the 1930s. Charlie Dennison, for example, settled at Tanalian Point in 1932 and prospected at Kontrashibuna Lake and Bonanza Creek through the 1930s. During 1937-38 Dennison, who would build a house about 1940, brought a steam-operated sawmill to the site by dogteam in a double-ended sleigh, and it provided lumber to many residents, both Native and non-Native, in the area.

Charlie's son Floyd entered the Lake Clark region with his father. Floyd built a complex on the south shore of the lake east of the Tanalian River in 1935. He owned a ham radio and operated a 50-watt transmitter on the site for McGee Airlines, the predecessor of Star Airlines. He also operated a U.S. Weather Station installation.[47]

Fred Bowman, perhaps the miner with the longest association with Lake Clark, moved to the lake when his airline went bankrupt in 1936. Bowman's mining operations on Portage Creek were fairly profitable during the late 1930s, and he employed some of his friends and former business associates. Bowman was forced to close the mine when the government curtailed nonessential gold mining operations during World War II. After serving as a blacksmith at the Libbyville cannery on Bristol Bay during the war, he returned to the mine, and his son Howard continued periodic operations at the site into the 1980s. The Bowman mining camp, located approximately one mile north of the lake on the west bank of Portage Creek, is the most significant mining site in the park and preserve because of its long association with mining in the area and its retention of many historic elements reflecting the diverse and evolving activities undertaken at the Portage Creek placers.

Some prospectors who settled at Lake Clark during the 1930s are primarily remembered as trappers. Among this group were Charlie Wolfe, Joe Thompson, and Chester Whitehead. Some, like Whitehead, who was of Pennsylvania Dutch extraction, continued to fish in Bristol Bay during the summers, and he is said to have had eight different cabins around the lake over the years. During the late 1930s he and Thompson built a log cabin on the north shore of the lake that still stands. Wolfe had several trapping cabins along the Chilikadrotna River, one up the Chulitna near Caribou Creek, and one at Tanalian Point on Lake Clark which he built about 1932.

During the 1930s a few whites began to settle along the isolated west coast of Cook Inlet across the Aleutian Range from the interior Lake Clark region. Those who did settle in this rugged region generally trapped in winter and fished in the summer. George Brown, for instance, was part German, part Indian, and part Aleut, came to the area in the 1930s. With a legendary reputation for toughness, he built a cabin on the north shore of Chinitna Bay and trapped and fished the area for some 30 years before being killed by a bear after his plane crashed. Joe Munger, who arrived from Michigan just after World War II, built a cabin on Silver Salmon Creek and trapped from Tuxedni Bay down to the Iniskin Peninsula and conducted set-net fishing operations near the Johnson River and on the northwest edge of Chisik Island until the late 1970s.

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47. Federal Communications Commission, "Radio Stations In Alaska As Of January 9, 1939, Aircraft Radio Station In Alaska," February 20, 1939, RG 101, File - 62.6 Federal Communications Commission, 1939-50, Alaska State Archives and Records Center, Juneau.

At least one commercial lumbering operation was known to have been established in the coastal area during the 1930s. Taking advantage of the abundant spruce in the area Wilbur Morris built a cabin and installed a sawmill near Red Glacier in the late 1930s. In one year, 1942, he received a permit to cut 1,000,000 board feet of spruce, 10,000 linear feet of trap piling, and 500 linear feet of wharf piling. Most of the buildings he built to house the sawmill operation have disappeared as the result of a changing shoreline, but those that remain are interesting gable-roofed buildings with board-and-batten siding or horizontal planks. The lumbering operation was never big enough to leave much of a mark on the landscape, but Morris remained at the site until about 1960.

Other sawmills were present on the coast, but apparently not for commercial purposes. Henry Swiss, a fisherman who built a log cabin on Polly Creek in the 1930s, constructed a cannery nearby with the aid of a sawmill, probably during the 1950s. Henry Kroll also had a sawmill which he used to construct a collection of horizontal-planked buildings at his complex on Tuxedni Bay during the 1940s.

White settlers continued to move to the Lake Clark region during the post-World War II decades, attracted by the scenery and resources of the still relatively remote wilderness area. Some came to fish, hunt, trap, and prospect, while others established commercial lodges to accommodate growing numbers of tourists interested in fishing and hunting. Others wished to take advantage of the isolated region's remoteness and live an idyllic existence in the bush unencumbered by the complexities of modern civilization.[48]

Among the most famous settlers to homestead in the area were Jay and Bella Hammond. Jay, who would be a popular governor of Alaska during 1974-1982, became acquainted with Lake Clark while flying for Bud Branham, a long-time trapper, hunting guide, and bush pilot in 1946-1947. After joining the U.S. Fish and Wildlife Service in 1949, Jay was stationed at Dillingham. His work included monitoring wildlife populations and wolf predator control in the Lake Clark area, and he established a working camp at the head of the lake. Attracted by the scenery and wilderness setting of the region the Hammonds, after first thinking of building a residence at Telaquana Lake, homesteaded at the mouth of Miller Creek on the northwest shore of Lake Clark in the early 1950s. Although they began construction of a cabin home in 1952, their building complex was not completed until the mid-1960s because of the future governor's activities as a state legislator and a commercial fisherman in Bristol Bay and as a professional hunting guide.[49]

Another of the best-known postwar residents in the Lake Clark region is Richard Proenneke, who at the age of 51 decided to retire from his job as a diesel mechanic on Kodiak Island. Proenneke first visited Twin Lakes in 1962 and built a cabin on Upper Twin Lake in 1968 in which he has since lived. His book *One Man's Wilderness* (1973), as well as his journals and photography, have contributed to environmental awareness for thousands of Americans and

48. Information on recent settlers and settlement patterns in the Lake Clark region may be found in the aforementioned "Overview of Historic Contact In the Lake Clark Study Area" by Sara Hornberger. Further data on the coming of the Hornberger family to Lake Clark during the late 1960s may be seen in Michael Frome, *Promised Land: Adventures and Encounters in Wild America* (New York, William Morrow and Company, Inc., 1985), pp. 62-75.

49. Alaska Magazine, *Bits and Pieces of Alaskan History*, p. 121, and Tricia Brown, "Freedom of Speech," *Alaska*, LIV (June 1988), pp. 19-23, 51, 53.

allowed many thousands of people to gain appreciation and understanding of what it is like to go into the Alaskan bush, build a log cabin, and live with gray jays, caribou, moose, Dall sheep, grizzly bears, and other wildlife as neighbors.[50]

In 1975 the non-Native population in the Lake Clark region was studied by Bea Van Horne, a planner with the Environmental Studies Program at the University of California, Santa Cruz. Van Horne described the settlement and use patterns for non-Native residents:

> Most of the fifteen or so non-Native families on Lake Clark live near Port Alsworth, where mail and radio communications are received. Most stay only during the summer, but there are about half a dozen families that spend the entire year. Several families work elsewhere during the winter but plan to return to their houses on the lake permanently at some future date. There are also about fifteen homeowners that come to the lake seasonally. All of these people are to some degree interdependent – sharing their work and goods in a mixed cash-trade economy. Three families have sizeable vegetable gardens and greenhouses. All families do at least some hunting, fishing, and gathering for subsistence purposes. Sufficient timber large enough to use for cabin building for these families is found at the upper end of the lake.
>
> There are two hunting lodges near Lake Clark, and one at Fishtrap Lake, which cater mostly to wealthy out-of-state trophy hunters. They provide meals, air transport, and guiding services. Two families have cabins which they use as lodges for people interested in non-consumptive recreational use of the area such as hiking, birdwatching, and boating.
>
> Outside of Lake Clark, there is one seasonal residence on Lachbuna Lake, about half a dozen cabins at Twin Lakes (including one permanent), and about a dozen at Telaquana Lake. Most of these are used for hunting. In addition to cabins, there are quite a few hunting camps – areas used regularly by local guest-lodges for large tents or lean-to shelters for fly-in hunters. During hunting season the northwestern lakes sport a continual buzz of small planes shuttling hunters and tending hunting camps.[51]

Considerable data on recent non-Native settlement in the Lake Clark region has been collected by the National Park Service during the 1980s. After Lake Clark National Park and Preserve was established in 1980 the National Park Service undertook a cabin study on the lands within the boundaries of the newly-designated area. The purpose of the study, which continues to be updated, was to determine the ownership status of each cabin site in the park and preserve and collect data on its location, description, occupancy, and use. By the late 1980s more than 170 cabin sites had been identified. The number of structures per site varies from 1 to 20, including cabins, sheds, tent frames, outhouses, and caches. The cabin sites, most of which have been built by non-Natives from Anchorage or Kenai Peninsula communities since the 1950s, are used for commercial fishing and clamming, recreation, hunting, trapping, air taxi bases, and full-time or seasonal residences.

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50. Sam Keith, ed., *One Man's Wilderness: An Alaskan Odyssey...from the Journals and Photograph Collection of Richard Proenneke* (Anchorage, Alaska Northwest Publishing Company, 1973), pp. 1-75.

51. Bea Van Horne, *The Lake Clark Area: Volume I: Planning For People, Wildlife, and the Land* (Santa Cruz, California, Environmental Studies Program, University of California, Santa Cruz, June 1975), pp. 42-44.

While the cabin data inventory continues to be updated, the number of cabin sites in various areas of the park and preserve is illustrative of the influx of non-Native settlement and/or use of the Lake Clark region during the last several decades. According to preliminary figures derived from the cabin study, there are 87 documented cabin sites in Lake Clark National Park and Preserve. They are located in the following areas:

Twin Lakes – 13
Snipe Lake – 5
Telequana Lake – 10
Two Lakes – 4
Stony River – 6
Misc. Interior Lakes – 9
Polly Creek-Crescent River – 7
Tuxedni Bay – 9
Silver Salmon – 10
Chinitna Bay – 14

Nearly 90 cabin sites were located along the shores of Lake Clark. Twenty-nine cabin sites were on the north shore of the lake, and 27 along the south shore, including the Tanalian River and Chulitna Bay areas. Port Alsworth, the only community within the boundaries of the park and preserve, consisted of some 31 cabin sites on the south shoreline of the lake, most of which were constructed by non-Natives between the late 1960s and the early 1980s. By the late 1980s the community consisted primarily of eight private lodges serving fishermen, hunters, and outdoor enthusiasts, numerous private dwellings, some of which were used as periodic and seasonal residences, a public school constructed in 1982-83, the Tanalian Bible Camp that had been developed in cooperation with the Alsworth family, and National Park Service field management facilities which were first established in 1982.[52]

The Port Alsworth community continues to be accessible only by air or by boat. In addition to the use of Hardenburg Bay by float planes in summer months, there are two privately owned runways that accommodate single- and multi-engine aircraft that transport passengers, food, fuel, and other necessities to Port Alsworth. Many residents own aircraft and frequently travel to Anchorage for groceries, medical care, and general shopping. Iliamna Air Taxi provides scheduled mail service three times a week, and a number of regional air taxi and air charter businesses operate flights to and from Port Alsworth. A commercial aviation fuel service is available to aviators from a private facility adjacent to one of the runways. The runways are also used for emergency landings by small aircraft unable to fly through Lake Clark Pass during inclement weather.[53]

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52. U.S. Department of the Interior, National Park Service, "Lake Clark National Park and Preserve, Cabin Data, Part I," November 16, 1981. Subsequent additions to the cabin data study include: "Lake Clark National Park and Preserve, Cabin Data for Lake Clark Area, North Shore," n.d.; "Lake Clark National Park and Preserve, Cabin Data for Lake Clark Area, Tanalian River & South Shore & Chulitna Bay," n.d.; and "Lake Clark National Park and Preserve, Cabin Data for Lake Clark Area, Port Alsworth," n.d.

53. U.S. Department of the Interior, National Park Service, *Site Plan Environmental Assessment, Port Alsworth Field Management Site, Lake Clark National Park and Preserve, Alaska* (Draft), June 1990, p. 10. For further data on flying conditions and flight patterns in the Lake Clark region see Don and Julia Downie, *Your Alaskan Flight Plan* (Blue Ridge Summit, Pennsylvania, Tab Books Inc., 1980), pp. 207-11.

IMPACT OF NON-NATIVE SETTLEMENT, INSTITUTIONS, AND SOCIOECONOMIC SYSTEMS ON NATIVE DENA'INA CULTURE IN THE LAKE CLARK-ILIAMNA LAKE REGION

The influx of non-Native white settlers in the Lake Clark-Iliamna Lake region that began with the prospectors of the late 1890s and early 1900s would have significant impacts on the Native population in the area. The traditional lifeways and cultural practices of the Dena'ina would be altered radically by the acculturation processes resulting from the spreading influence of Euroamerican institutions and socioeconomic systems in the region. Two of the white institutions introduced into the area that would impact Native culture were reindeer herding stations and schools. As white settlement in the region expanded the elements of a wage economy and American governmental infrastructure were introduced, thus reshaping traditional Native subsistence-oriented societies and changing their cultural patterns.

Impact of Reindeer Herding Stations

In 1905 domesticated reindeer were brought to the Lake Clark-Iliamna Lake region by the U.S. Government. As a result of the efforts of Sheldon Jackson, Presbyterian missionary and General Agent for Education in Alaska from 1892-1906, domesticated reindeer had been imported from Siberia and introduced among the Bering Strait Eskimo in 1892 by the federal government in an effort to provide a resource base for the social and economic development of the Natives of that remote region. The reindeer industry was originally conceived as a subsistence resource to improve the health and welfare of the nearly destitute Natives. By providing practical vocational training and education in animal husbandry that was adapted to community needs it was felt that primitive Natives could be prepared for economic self sufficiency and responsible citizenship. With the discovery of gold on the Seward Peninsula around the turn of the century Native reindeer ownership soon became an important government-sponsored commercial enterprise in support of local mining operations. By 1905 the number of reindeer in Alaska had grown to more than 10,000, and the U.S. Bureau of Education had established 15 reindeer stations in the territory.[54]

The first reindeer herd to arrive in the Lake Clark-Iliamna Lake region did so by accident. In December 1904 Hedley E. Redmyer, a Norwegian Lapp who had emigrated to Illinois in 1883 and later became an associate of Jackson in the Alaska Reindeer Service, took charge of 300 deer and four herders at Bethel. They intended to travel overland from Bethel on the Kuskokwim River to Copper Center, north of Valdez. The 600-mile trek was longer and more difficult than anyone expected, and Redmyer failed to find the mountain passes which led to his

54. Two of the best sources for an overview of the historical development of the reindeer industry in Alaska are Dean Francis Olson, *Alaska Reindeer Herdsmen: A Study of Native Management in Transition* (College, University of Alaska, Institute of Social, Economic and Government Research, December 1969) and Richard O. Stern, Edward L. Arobio, Larry L. Naylor, and Wayne C. Thomas, *Eskimos, Reindeer, and Land* (College, University of Alaska, Agricultural Experiment Station, School of Agriculture and Land Resources Management, December 1980). For further information on this topic, see J. Arthur Lazell, *Alaska Apostle: The Life Story of Sheldon Jackson* (New York, Harper & Brothers, Publishers, 1960); James and Catherine Brickey, "Reindeer, Cattle of the Arctic," *Alaska Journal*, V (Winter 1975), pp. 16-24; Leopold and Darling, *Wildlife In Alaska*, pp. 68-82; Bruce, *Alaska: Its History and Resources*, pp. 84-92; John D. Abrahamson, *Westward Alaska: The Native Economy and Its Resource Base*. Prepared for the Federal Field Committee For Development Planning in Alaska (Anchorage, 1968), pp 69-91; and Greely, *Handbook of Alaska*, pp. 161-69.

destination. In his report of the harrowing mid-winter journey, Redmyer described the incidents that led to his arrival in the Lake Clark-Iliamna Lake region in mid-March 1905:

> As a rule, people who have had no experience with reindeer only by reading are always led to believe the reindeer capable of more than they really are. They are in fact far ahead of any animal to go through a wilderness, but there is a limit to all. I knew if I could get on Clark Lake I could make better time and save a good many more miles traveling and perhaps make Shushitna River or Knik River before April 1, or at least get over the Alaska range before that time and not run any risk of being stationed at a place where I could not get provisions readily.
>
> The 19th of February we struck a big lake which I thought to be the Clark. We made good time on the lake, as I had calculated. The 22d of February we came to an entrance to a big river and found a native who could tell us that we were on the Iliamna Lake, but that we were at the entrance of Naschling River, which runs from Clark Lake, and that we only had a short distance to Clark, and that there was a good portage from Clark Lake to Tyonik, and that white people had traveled over the same portage in the winter. I felt much encouraged in my disappointment. He also informed me about some white people living not very far. I hunted up these people, who were prospectors. They said the portage was all right, but there might be lots of snow and they had no knowledge whether there was moss or not.
>
> In order to lighten up our loads I sold some of our provisions as we could perhaps travel much easier with a lighter sled, and the provisions I could replace at Tyonik. We had some difficulty in traveling, but came to Clark Lake March 1 and found the lake surrounded by high mountains, sharp as needle points, and at the foot these mountains were covered with spruce wood and a very limited space to drive the herd into, and the worst of it was there was not much moss for the deer.
>
> The 5th of March we went as far as we could go with the herd, and we were about 8 miles from the Portage River. There happened to be a pretty good moss place right in the timber, but surrounded by high mountains. A river, which the natives call the Kontraskewna, flows through this valley or kind of cut in the mountains; but I found that we were in a wolf country and that there was no moss at entrance of the Portage Creek. I told Pete Hatta and Mr. Lampela to go as far as they could in two days on the Portage Creek and make an investigation and return. In the meantime two natives from Iliamna Bay just happened to come across the portage from Seward, and they told me there was no moss on the whole portage, and on the other side was very deep snow, and when the boys came back and they had found no moss I knew then that our traveling was at an end.
>
> As the ice was getting very soft I made a retreat as fast as we possibly could, as I did not want to be entrapped in the mountain with the herd. So I made up my mind to return to Iliamna Lake, which is one of the finest reindeer countries I have seen in Alaska.[55]

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55. "Account of Trip From the Kuskokwim Valley to Lake Iliamna. Hedley E. Redmyer," March 19, 1905, in *Fifteenth Annual Report on Introduction of Domestic Reindeer Into Alaska, 1905* (Washington, Government Printing Office, 1906), pp. 160-63.

Finally, surrounded by wolf country, rugged terrain, and mossless territory, Redmyer received permission from Jackson to establish a reindeer station at Kakhonak on the southeast shore of Iliamna Lake. Redmyer would serve as the superintendent of the government reindeer station at Kakhonak for four years. These deer would be the progenitors of all the deer herds that would range in the Iliamna and Bristol Bay regions until the 1930s. Despite their economic benefits for some of the region's Natives the grazing reindeer would deplete significant portions of lichens and moss, thus discouraging the traditional caribou migration routes through the region.[56]

By 1906 the Iliamna reindeer station at Kakhonak had 535 deer, all owned by the U.S. Government. Two Lapp and Finn herders were employed to oversee the deer, and two Native Eskimo boys were enrolled as government apprentice herders. Forty-nine of the deer were trained as sled deer for use in hiring out freighting services. The deer ranged in the southern Iliamna Lake area around Big Mountain and Kukaklek Lake.[57]

In 1907 the Iliamna station had 561 deer, 50 of which had been trained as sled deer and 12 partially trained. Four Native Eskimos were enrolled as apprentices and receiving government support during their apprenticeship. Under rules and regulations approved by the Secretary of the Interior on July 1, 1907, each station superintendent selected "promising and ambitious Eskimo young men" as apprentices for four-year terms.

The new regulations as well as the objectives of the apprenticeship and herding programs were summarized by Harlan Updegraff, Chief of the Alaska Division, in his annual report for 1907. He noted:

> At the end of the first year of his apprenticeship each apprentice whose work is approved by the local superintendent receives 6 reindeer (4 females and 2 males); at the end of the second year of his apprenticeship, 8 reindeer (5 females and 3 males); at the end of the third year of his apprenticeship, 10 reindeer (6 females and 4 males), and at the end of the fourth year of his apprenticeship, 10 reindeer (6 females and 4 males). With the approval of the local superintendent of his station an apprentice may kill his surplus male deer and sell the meat for food and the skin for clothing. He is encouraged to use his sled deer in carrying mails, passengers, and freight.
>
> Upon the satisfactory termination of his contract of apprenticeship an apprentice becomes a herder and assumes entire charge of his herd, subject to the rules and

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56. "The Alaskan Reindeer Service," in Helen M. White, comp., *The Tale of a Comet and Other Stories* (St. Paul, Minnesota Historical Society Press, 1984), p. 210. also see Keith A Murray, Reindeer and Gold: Occasional Paper No. 24 (Bellingham, Western Washington University, Center for Pacific Northwest Studies, August 1988), p. 73; A.C. Kinsley, "General Report, Reindeer Investigations, Kuskoquim Area," 1931, File 9-1-33, Reindeer Investigations, Kingsley Report, pp. 143-44, 151, Alaska History Documents Collection, Volume 15, Archives and Manuscripts, Arctic and Polar Regions Department, Rasmuson Library, University of Alaska, Fairbanks; Jim Rearden, "Alaska's Boom-To-Bust Reindeer Saga," *Alaska*, XL (September 1974), pp. 8-11, 72-73, 76-78; and U.S. Congress, Senate, *Report on the Condition of Educational and School Service and the Management of Reindeer Service in the District of Alaska*, by Frank C. Churchill, Special Agent, 59th Cong., 1st Sess., 1906, S.Doc. 483, p. 176.

57. *Statement of the Commissioner of Education to the Secretary of the Interior, 1907*, pp. 12-14, and U.S. Bureau of Education, *Chapter From the Report of the Commissioner of Education For 1906, Chapter X, Report on Education in Alaska and the Introduction of Reindeer* (Washington, Government Printing Office, 1907), pp. 250-54.

> regulations for the reindeer service. The herder must then in turn train and reward apprentices in accordance with the provisions of the rules and regulations, and thus become an additional factor in the extension of the enterprise....
>
> The rules and regulations provide that the general supervision of the reindeer herds shall be included in the duties of the district superintendent of schools in northern Alaska, each herd being under the immediate supervision of the teacher of the local United States public school, except as otherwise provided by special appointment or contract.[58]

In 1908 the Iliamna reindeer station had a herd of 720 deer. Of this total 649 were owned by the government and 71 by five Eskimo apprentices. It was reported that the government had been forced to take married apprentices at Iliamna "with one exception," and "to support their entire families in order to get them to remain." Each of the married Natives had children and providing the families with rations made operation of the station expensive. During July 1908 Peter J. Hatta, a Native Eskimo, was employed as chief herder to aid Redmyer in his supervisory duties.[59]

During 1909 some 500 deer were driven from the Iliamna reindeer station at Kakhonak to Kogguing at the mouth of the Kvichak River in the Bristol Bay region. A new station was established at that spot which was reported to be "an ideal reindeer country" having "small patches of timber and abundance of moss." Following the loss of more than half its deer the Iliamna station reported having 336 deer in its herd, 208 of which were owned by the government. Chief Herder Hatta owned 55 deer, and five government apprentices owned 73. The Natives obtained $74.00 in income from the sale of meat and contracting freighting services.[60]

Some insight into the operation of the reindeer station during 1909 can be seen in a letter from H.O. Schaleben, the station's new superintendent as Redmyer had left the post under a cloud of charges of financial irregularities involving supplies. On January 15 the superintendent wrote:

> I have taken two new apprentices at the Reindeer Station, Aleutus from Koghonok village, one is the chiefs son, and the other is a brother of Ivan and Peter who are now

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58. "The Alaska Reindeer Service," in U.S. Congress, House, Reports of the Department of the Interior for the Fiscal Year Ended June 30, 1907, *Report of the Commissioner of Education in 2 Volumes, Volume 1*, 60th Cong., 1st Sess., 1907, H. Doc. 5, pp. 399-401, 404. Also see U.S. Department of the Interior, Bureau of Education, Alaska Reindeer Service, *Rules and Regulations Regarding the United States Reindeer Service In Alaska, Approved June 10, 1907, and December 7, 1908* (Washington, Government Printing Office, 1911), pp. 3-12.

59. U.S. Bureau of Education, *Reprint of Chapter from the Report of the Commissioner of Education for 1908, Chapter XXVI, Report on the Alaska School Service and on the Alaska Reindeer Service* (Washington, Government Printing Office, 1909), pp. 1047, 1052. Also see Updegraff to Lopp, August 3, 1908, Albert W. Young to Elmer E. Brown, Commissioner of Education, January 2, 1908 (and enclosures), and Acting Chief of the Division to H.O. Schaleben, July 10, 1908, Record Group 75, Records of the Bureau of Indian Affairs, Alaska Division, General Correspondence, 1908-1935, Iliamna, 1908-20, National Archives and Records Administration, Microfilm Roll 10, Archives and Manuscripts, Consortium Library, University of Alaska, Anchorage.

60. U.S. Bureau of Education, *Reprint of Chapter XXX From Report of the Commissioner of Education for 1909, With an Appendix, Report on Education in Alaska* (Washington, Government Printing Office, 1910), pp. 1323-24, and Appendix, Section VI, LVI, and Section VII, LXIV. Portions of the Koggiung herd were divided further between two new stations at Choguing and Ugashik in 1910.



Eskimo reindeer herder, from Kakhonak Station, with deer trained to pull sleds in front of newly constructed Old Iliamna school (upper right) and teachers' quarters (center) in 1909. The cabin at left belonged to John Cook, a Danish immigrant who cooked at canneries on the lower Kvichak River. Photograph taken by Dr. H. O. Schaleben (1881-1949), the first medical doctor in the area. His wife, Gertrude, was the first teacher at Old Iliamna.

Courtesy of Mrs. Ray F. Schaleben

at the station. They are both good boys, and young and not married. Pete Hatta is getting along well. Everything is in good condition at the station.[61]

In 1910 the Iliamna reindeer station at Kakhonak had a herd of 376 deer, 158 of which were owned by the government. The station continued to employ one herder who owned 73 deer and train five apprentices who owned 145. Twenty sled deer were trained and five were being trained. The Natives earned an income of $200 from the sale of meat and freighting.[62]

Records for the reindeer station at Iliamna indicate that the herd declined to 365 in 1911. Of this total, 131 were owned by the government, 125 by two Native herders, 8 by one Native owner, and 101 by four apprentices. The Natives earned $400 from the sale of meat and freighting. The two herders were Ivan Olympe, who was appointed chief herder on January 1, 1911, and Pete Siwa. The one Native owner was a man named Zimion, and the four apprentices were Kavelilla Olympe, Matfe Bavel, Wassilie Dehkittie, and Ivan Kaloviaslak.[63]

The reindeer station at Kakhonak began to face difficulties in 1912. Although the estimated number of deer in its herd increased to 467, the number of apprentices declined to two. It was reported that the herd "seems to have run down and is scattered considerably." The management of the station was less than satisfactory to J.L. Brown, the new teacher of the Iliamna public school and supervisor of the station.[64]

In 1913 the Iliamna reindeer herd was divided into two, perhaps in the hope of improving its management. A new station was established at Iliamna Village for the "Kenai Indians." Willie Kasayuli of Bethel was appointed chief herder at the new station. This station, known as Iliamna No. 1, had 240 deer, 2 Native herders, 2 Native owners, and 2 Native apprentices. The station at Kakhonak, known as Iliamna No. 2, had 99 deer under the control of 3 Native herders and 1 Native apprentice.[65]

There are few documentary records concerning the reindeer herd operations in the Iliamna Lake region during the 1920s. In 1920 there were some 6,000 deer in the Bristol Bay reindeer district which encompassed the Iliamna region. By 1923 the total number of deer in the Bristol Bay

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61. Schaleban to Updygraff, January 15, 1901, RG 75, Microfilm Roll 10, Archives and Manuscripts, Consortium Library, University of Alaska, Anchorage.

62. U.S. Bureau of Education, *Reprint of Chapter XXXIII from Report of the Commissioner of Education for 1910, With an Appendix, Report on Education of the Natives of Alaska and the Reindeer Service* (Washington, Government Printing Office, 1911), pp. 1366-67.

63. U.S. Bureau of Education, Alaska School Service, *Report on Education of the Natives of Alaska and the Reindeer Service, 1910-11* (Washington, Government Printing Office, 1912), pp. 26, 85.

64. Brown to Lopp, October 22, 1912, RG 75, Microfilm Roll 10, and U.S. Bureau of Education, Bulletin, 1913, No. 36, *Report on the Work of the Bureau of Education for the Natives of Alaska, 1911-12* (Washington, Government Printing Office, 1913), p. 14.

65. U.S. Bureau of Education, Bulletin, 1914, No. 31, *Report on the Work of the Bureau of Education for the Natives of Alaska, 1912-13* (Washington, Government Printing Office, 1914), p. 21, and H.O. Schaleben to Mr. Willy, July 1, 1912, and H.O. Schaleben to Willie Kasayuli, July 1, 1913, Reindeer Files, Roll 49, Reindeer, 1908-17, in United States, Department of the Interior, Bureau of Indian Affairs, Alaska Division, Correspondence, 1908-1935, Archives and Manuscripts, Consortium Library, University of Alaska, Anchorage.

district had increased to 14,000. Records indicate that there were four herds at the Iliamna reindeer station during 1924 and 1925. In 1924 the herds comprised 1,635 deer, and in 1925 there were 2,094. Reindeer meat was an important part of the local diet as evidenced by the fact that 37 deer were butchered for food in 1924 and 38 in 1925.[66] The following year there were six Native-owned reindeer herds in the Bristol Bay area, including those listed at Kulukak Bay, Wood River, Kvichak River, Egegik River, Ugashik River, and Iliamna Lake.[67] Three years later the six herds were located at stations in Egegik, Iliamna, Kanakanak, Kulukak, Togiak, and Ugashik.[68]

In 1929 the Iliamna reindeer station was reorganized, its herds being divided into several components in the region. According to available records the total number of deer in the Iliamna herds on June 30, 1929, was 2,118, but the number declined during the summer to 1,787 by August 1. On the latter date the Iliamna herds, all Native-owned, were located at Eagle Bay and Newhalen on the north shore of Iliamna Lake, Big Mountain on the southwest shore of the lake, and Kulukak Lake, 12 miles from the outlet of Iliamna Lake. During the winter of 1929-30 seven men from Big Mountain removed 493 deer to Kaskanak on the Kvichak River.[69]

As of June 30, 1930, the Newhalen station had 422 deer. During the year 53 were butchered for food and 26 trained as sled deer. There were 10 herders, 2 apprentices, and 2 Native owners, all of whom were classified as Aleut. Seven of the Natives listed their place of birth as Newhalen.

The new station at Eagle Bay was almost exclusively operated by "Kenai" or Dena'ina Natives. The station had five herders and ten owners, all of whom were classified as "Kenai" except for one who was listed as "breed." Six of the herders and owners had been born in Iliamna and nine in Nondalton. During the year 64 deer in the station herd were butchered for food. By June 30, 1930, the new station at Big Mountain had 282 deer. There were five herders and one apprentice, four of the Natives being classified as Aleut and two as "Kenai." During the year 26 deer were butchered for food and 22 of the skins were used for clothing.[70]

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66. U.S. Department of the Interior, Bureau of Education, Alaska Division, Iliamna, "Historical Record," ca. 1924-25, RG 75, Microfilm Roll 10, Archives and Manuscripts, Consortium Library, University of Alaska, Anchorage.

67. "Alaska Reindeer Herds & Units, Bristol Bay Section," October 30, 1926, Reindeer Files, Roll 53, Reindeer, 1930-1935, in United States, Department of the Interior, Bureau of Indian Affairs, Alaska Division, Correspondence, 1908-1935.

68. "Diagram of Reindeer Administration," November 8, 1929, RG 101, Box 297, Folder 8, File 9-8, Reindeer Service Organization and Administration, 1930, Alaska State Archives and Records Center, Juneau.

69. U.S. Department of the Interior, Bureau of Education, Dist. Supt.'s Balances, Reindeer Sub Authorization, 1929-1930, RG 101, Box 298, Folder 4, File 9-15, Reindeer Service, Herds, Drives, and Transfers, 1930, Alaska State Archives and Records Center, Juneau.

70. Alaska Reindeer Service, Record of Herders, Apprentices and Owners and Annual Statistical Reports of the Herds at Newhalen, Eagle Bay, and Big Mountain Station, June 30, 1930, Record Group 75, Records of the Bureau of Indian Affairs, Alaska Reindeer Service, Annual Reports of Reindeer Herds, ca. 1908-1932, Box 1 of 2, Folder Igiavick, National Archives and Records Administration, Seattle Branch.

While the herding stations were reorganized in the Iliamna region in 1930, five other stations continued to be operated in the Bristol Bay region. More than 9,000 deer were kept at Ugashik, Togiak, Kulukak, Koggiung, and Kanakanak.[71]

Further reorganizations of the reindeer herds and stations continued in the Iliamna Lake area during the 1930s. For instance, part of the Newhalen herd was moved to the lower end of the lake at Kaskanak during the winter of 1931-1932. The following year some deer from the Newhalen herd were moved to the Egegik area near Bristol Bay. Despite these divisions, however, the Newhalen herd continued to grow, reaching 1,008 deer by June 1936.[72]

Beginning in late 1936 the reindeer herds in the Iliamna Lake area declined rapidly. Simon John, the chief herder at Newhalen for some years, died in December 1936, and his assistant Nick Olympie assumed oversight of the station. However, a variety of issues complicated by little compensation for the herders and the attraction of high wages in the Bristol Bay fishery led to the demise of the herds during 1936-38. Problems contributing to the demise of the reindeer herding program in the region included overgrazing of the range lands, diseases prevalent among the deer, and poor marketing conditions brought about by the Great Depression.

During 1937-1938 John G. Gordon, a teacher at the Native school in Newhalen, reported on his investigations of the deteriorating reindeer situation. In August 1937 he observed:

> According to these reports there was a total of 93 reindeer killed 33 of which were sold to the whites in this vicinity. The usual price paid was ten cents ($.10) per pound.
>
> All through the winter the herd was constantly attacked by wolves. Many were killed by them. A large number strayed away. The herders say that they went with the caribou.
>
> Since Simeon John died last December the herd has not been taken care of properly. I tried my best to interest the men and urged them to care for their herds but to no avail. The real problem is this: how are we going to make it worthwhile for the herder to stay with the herds? The herders are able to make eight to fourteen hundred dollars during the fishing season in Bristol Bay and that is more than enough for buying all their needs from the local trader. If they want fresh meat they go on a short hunt and get moose. In the fall and spring geese and ducks are plentiful in these parts and the natives manage to get all they need.
>
> Last year Simeon John reported over a thousand deer in the Newhalen herd and 158 in the Quergaluak herd today hardly a tenth of this number can be accounted for. The result is inevitable. As things are at present there is nothing to interest the herders and

71. "Telegram," 1930, RG 75, Alaska Reindeer Service, General Case Files, Box No. 42, Folder Iliamna, National Archives and Records Administration, Seattle Branch.

72. Alaska Reindeer Service, Annual Statistical Reports of the Herds at Newhalen and Igiavick, June 30, 1933, RG 75, Alaska Reindeer Service, Annual Reports of Reindeer Herds, ca. 1908-1932, Box 1 of 2, Folder Igiavick, and General Case Files, Box No. 46, Folder Newhalen (Igiavick), National Archives and Records Administration, Seattle Branch.

induce them to continue. Herding is hard work and the compensation is negligible when compared with the wages or possible earnings at the canneries in Bristol Bay.

Continuing with his investigations, Gordon reported in January 1938:

> I wish to advise you that our reindeer in the Newhalen herd have mysteriously disappeared. Since last August I had no requests for deer meat either from natives or whites. I saw the chief herder during the Christmas holidays and after a long evasive discussion he reluctantly admitted that there were no more deer left in the Newhalen herd.
>
> He then related that several of the owners who still had deer demanded that they be transferred to the Kukaklak Lake herd where they would be better cared for. This they did early last fall leaving a small herd of less than 150.
>
> I then made a personal trip to the reindeer grounds to check his story and found that not even that many were left, in fact few tracks were seen and the two native boys who were with me saw only one deer which they trailed and shot.
>
> I feel very put out about the whole matter because I had planned to ask your office to secure several hundred reindeer for us to re-stock and strengthen the herd. Large earnings in Bristol Bay and drinking has caused this disastrous depletion and disappearance of our herd. The herders received no compensation for their services hence cared less. "Gone with the caribou", is their easy answer.

After talking with Natives in the area Gordon noted in April 1938 that "a few of the Newhalen reindeer have been seen on the Nushagak and Mulchatna Rivers and some as far west as the Tikchik River." The local Natives were not interested in "a roundup that took in such a large territory," however, as they were busily engaged in beaver trapping. Thus, during the late 1930s reindeer herding in the Iliamna region was abandoned and the animals either assimilated with the wild caribou herds or transferred to other stations.[73]

Impact of Schools

On March 2, 1903, Congress passed an act authorizing that payment of 50 percent of the license fees collected from unincorporated towns in Alaska be paid into the U.S. Treasury for the use of the Secretary of the Interior in operating on schools in the unincorporated sections of the territory. The income from this source enabled the secretary to authorize in 1905 the erection of 26 school buildings throughout rural Alaska. One of the 26 buildings was to be built at Old

73. John G. Gordon, Teacher & Community Worker to J. Sidney Rood, Reindeer Service, Nome, Alaska, January 7, 1937; Gordon to Reindeer Service, Nome, March 6, 1937; Gordon to General Reindeer Superintendent, August 24, 1937; Gordon to Rood, Act. Gen. Reindeer Supt., Nome, January 27, 1938; and Gordon to Rood, April 11, 1938; RG 75, Alaska Reindeer Service, General Case Files, Box No. 46, Folder-Newhalen 1568, National Archives and Records Administration, Seattle Branch.

Iliamna. With funds drawn from a Congressional appropriation of $100,000 to support Native Alaskan schools the school at Iliamna was authorized to be opened during fiscal year 1907.[74]

Despite the initial authorization for a school at Old Iliamna plans did not proceed as quickly as anticipated. In 1907 the U.S. Commissioner of Education reported that Dr. Francis H. Gambell, formerly superintendent of the Eaton Reindeer Station, "had been sent as a special agent of the Bureau to make investigation of a reported need of schools in the vicinity of Lake Iliamna, on the Susitna River, and on the shores of Cook Inlet, in western Alaska – a region difficult of access." On the basis of information "secured in these ways, a number of additional school buildings" were to be erected later in the year.[75]

During the summer of 1908 the Alaska School Service, a recently-established division of the U.S. Bureau of Education, assigned H.O. Schaleben and his wife of Sacred Heart, Minnesota, as teachers of the new school at Old Iliamna. Schaleben, a medical doctor, was also appointed to supervise construction of the school and conduct medical services in the village and surrounding Native settlements in the Iliamna area.[76]

With the exception of finishing the interior, construction of the school building at Old Iliamna was completed during the summer of 1908 at a cost of $2,746.33. The school building was a 1½-story frame structure having dimensions of 56 x 22 feet. Alex Flynn, perhaps the first white Euroamerican in Iliamna, and five Natives were hired to do the work. Peter Anderson, the only white merchant at Iliamna, was employed to haul logs to the construction site and provide supplies to the work crew.[77]

During the first year of the Iliamna school's operation in 1908-09 its average daily attendance was 12 and its total enrollment 27. Total cost of operating the school was $2,212.61, or $184.39 per pupil based on average attendance. When W.T. Lopp, Superintendent of the Northern District, visited the school in February 1909 he reported:

> The natives are Indians. They have shown great interest in the school, the first they have ever attended. They have made wonderful progress.

In addition to teaching formal academic subjects at the school, H.O. Schaleben furnished "medical relief" to the Natives at Iliamna and was "required to make tours throughout his district in order to render medical aid to the natives." He was also instructed to teach sanitation and

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74. *Statement of the Commissioner of Education to the Secretary of the Interior, 1906*, p. 29. In 1902-03 and 1904-05 a government school had been operated at Kenai, and in 1905-06 one had been opened at Nushagak. *Ibid.*, p. 27.

75. *Statement of the Commissioner of Education to the Secretary of the Interior, 1907*, p. 8.

76. *Statement of the Commissioner of Education to the Secretary of the Interior, 1908*, pp. 9-10.

77. Comptroller to the Secretary of the Interior, August 25, 1908, and Acting Commissioner to the Auditor for the Interior Department, Treasury Department, Washington, D.C., October 15, 1908, RG 75, Microfilm Roll 10, Archives and Manuscripts, Consortium Library, University of Alaska, Anchorage, and U.S. Bureau of Education, *Reprint of Chapter from the Report of the Commissioner of Education for 1908*, pp. 1024, 1027.

hygiene in the school, introduce sanitary methods of living in the Native villages, and collect vital statistics on the Natives.[78]

During the 1908-09 school year H.O. Schaleben reported on the progress of the school at Iliamna on several occasions. On January 15, 1909, he observed:

> In regard to the school I can report that we are having good results. The attendance is not large but regular. They hardly ever miss a day, and some of them are bright. Mrs. Schaleben and I are both pleased with the children. It requires a lot of patience to teach them but as a whole they are good and like to learn. All the natives take interest in the school and are proud of it before the natives of the other villages. If any of the children are absent their parents as a rule make excuses for them when I am there. I hope this condition will last. Next fall I hope to have some people from the other villages.
>
> I have made one trip doing medical work...to Newrailing [sic] and Nondalting [sic] villages. It is very difficult to travel here in the fall and early winter. The weather is too severe and cold for boating, making it dangerous, and it is very difficult to get around the lake sledding. There is practically no sledding done before the lake freezes.
>
> I found two cases of active tuberculosis in Noondalting [sic] village and two cases in Newrailing village. The population of Noondalting is 44. It is a new village built about 5 years ago, the natives having moved there from Kijik village on upper end of Lake Clark. It is situated on the lower end of Lake Clark in a side hill, or rather on the bank of the lake. It has good drainage, and is a clean village compared to the others. This village has a good shrewd chief. He has good control of all his natives. There is very little biwok made in this village, and the natives have better habits than in the other villages.[79]

In June 1909 Schaleben reported on the number of types of diseases that he had treated in the region since arriving at Iliamna. Among the principal cases he had treated were:

Bronchitis and colds	48	Pneumonia	4
Wounds	16	Gastritis	4
Conjunctivitis	14	Boils and infections	4
Chicken pox	12	Pharyngitis	3
Ulcers	7	Scurvy	3
Pulmonary tuberculosis	5	Syphilis	3

Schaleben went on to note:

> There have been two deaths from pneumonia, two from pulmonary tuberculosis, one from puerperal fever, and one from cirrhosis of the liver. Three infants have died, one

78. U.S. Bureau of Education, *Reprint of Chapter XXX From Report of the Commissioner of Education for 1909, With An Appendix*, pp. 1298-99, 1305, and LVI.

79. H.O. Schaleben to Harlan Updygraff, January 15, 1909, RG 75, Microfilm Roll 10, Archives and Manuscripts Consortium Library, University of Alaska.

from improper feeding, its mother having died of puerperal fever, one from exposure to cold, and one from improper feeding and neglect, its mother developed delirium tremors two days after its birth.[80]

A new teacher, Miss Hannah E. Breece of Alaska, was assigned to the Iliamna school for the 1909-10 school term. Total enrollment was 46 and average daily attendance was 28. Total cost of operating the school amounted to $1,809.81, or $64.64 per pupil based on average attendance.[81]

Breece reported on her first year of teaching on June 1, 1910, reflecting many of the racial stereotypes held by whites at the time. One of her first efforts was to convince the Natives through an interpreter that the children should attend school. According to Breece, her most effective argument was

> that their former means of livelihood were practically cut off. The white man has come. The fur-bearing animals are scarce. The most of the now small amount of "furs" are secured by the white man.
>
> He has the best guns, the most ammunition, can afford the best traps. He can buy the food to sustain him while on the long trips. When he has the furs he understands how to sell them to advantage, because he went to school, his parents went to school, he knows how to cope with circumstances.
>
> They must send their children to school if they were to get even share of these things.
>
> Besides the salmon were getting scarce.
>
> If they were going to live and get any comfort in life they must bend to the inevitable. They must teach the young, new ways of earning a living.

Her arguments "took" and eventually "a goodly number were rustled" into the school in September.

Beside teaching school Breece gathered as many of the village women as were available and "set them to sewing." For Christmas she taught them to make a large "rag doll" for each of the little children in the village. She taught sanitation in the school by teaching the use of "brush, soap and water freely" and applying "ointment for vermin." She visited homes in the village, administering medicine and supervising cleaning because of the "squalor" she found. To improve the quality of life at Iliamna she urged the U.S. Bureau of Education to introduce a saw mill and

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80. *Ibid.*, June 1, 1909.

81. U.S. Bureau of Education, *Reprint of Chapter XXXIII from Report of the Commissioner of Education for 1910*, pp. 1348-49.

bakery in the village, take steps to reduce the making of "brew," and initiate industrial education classes.[82]

In early June 1910 Breece traveled to Nondalton on Sixmile Lake for a month to teach the Dena'ina who were gathered in three small summer fish villages. She described her experiences in a letter on August 13, 1910:

> The chief furnished two tents.
>
> If ever children were eager to learn, those were. There they sat on the floor (ground) (their faces and hands fairly covered with mosquitos) and were just as patient and industrious as though we had all the comforts of civilization.
>
> Some days we had school down on the edge of the Lake, where the wind blew the mosquitoes away....
>
> Sometime there were thirty present. Always as many as twenty.
>
> I took a small organ and how they did love it!
>
> I found the people very responsive and apt to learn.
>
> There is much more evidence of thrift and cleanliness than there is in Iliamna, even after our two years work there....The mainspring of the whole matter is there is very little "beewak" in Noondalting. Of course the Iliamna children are far in advance of the Noondalting children in a "school-room" sense – also in every other way. But speaking of the general welfare of a community Noondalting excels....
>
> I took a good reading chart and books & c from Iliamna. One young man had been taught by prospectors, also had attended school in Iliamna 20 days. He could read easy lessons in the Second Reader. Two others knew the alphabet. Aside from these there was perfect blank....
>
> They loved to sing. I did not teach many songs or hymns but the few I did they know pretty well, especially the first verse. The older people were very proud when they came to hear them.
>
> I did much visiting among the homes.
>
> As to the sewing, I taught the women how to cut and fit the garments and had them make the things in their own homes....
>
> I left a dozen First Books in English with Zackarr. He will take good care of them and loan them to the larger children.

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82. Breece to Commissioner of Education, Washington, D.C., June 1, 1910; Breece to Mr. Lopp, Chief of Education in Alaska, July 14, 1910; and Breece to Elmer E. Brown, Commissioner of Education, Department of the Interior, Washington, D.C., August 13, 1910, RG 75, Microfilm Roll 10, Archives and Manuscripts, Consortium Library, University of Alaska, Anchorage.





Hannah Breece (1859-1940), the second schoolteacher at Old Iliamna (1909-1912), held summer school at Nondalton Fish Village in 1910 and 1911. The photograph, taken July 4, 1911, shows Miss Breece (top left) with most of the village. Copies of this photograph have been located at Iliamna, Alaska; Toronto, Ontario; and Edinburg, Texas. The photographer is unknown but could have been either Dr. H. O. Schaleben or Pete Anderson. Identified individuals include: 1) Hannah Breece, 5) Mary Nudlash Balluta, 8) Alexie Balluta, 9) Olga Nudlash Delkittie, 13) Pete "Fediga" Delkittie, 17) Andrew Balluta, 20) Pete Anderson, Jr., 23) Chief Zackar Evanoff, 24) Marka Karshckoff, 25) Gabriel Trefon, 26) Mary Evanoff, 30) Maxim Cusma, 32) Agafia Sava Anderson, 33) Mike Anderson, 37) Mary Jacko Evan, 38) Gillie Evanoff, 39) Jacko Evan, 43) Mary Ann Kitulkilgih Trefon, 44) Trefon Balluta, 47) Katherine Brooks, 49) Matrona/Yenlu Brooks Seversen, 50) Stephen Brooks, 51) Andrew Nudlash, and 53) Simeon Kankanton.

Courtesy of Mrs. Myrtle Anelon, Mrs. Jane Jacobs, and Mrs. Ray F. Schaleben

Breece also taught the children to plant a garden.[83]

During the 1910-11 school year Hannah Breece continued to teach at Iliamna, the school having a total enrollment of 46 and an average attendance of 24. Subject matter for the year included arithmetic, reading, spelling, writing, physiology and hygiene, geography, letter writing, and drawing.[84] In his report on conditions in the Bristol Bay district, Dr. Schaleben, who had become the district's superintendent, included excerpts from Breece's annual report on several highlights of the school year. These were:

> During part of January and all of February, March, April, and May dinner has been cooked and served in the schoolroom. It has been a great comfort that the children have not been hungry. One good meal a day satisfied them, with the little they got at home. We have had alternate dinners of pork and beans and pork and peas. Once a week graham or whole-wheat mush was provided. Dried apples were used in different ways. Something made with sugar or something sour was frequently furnished. The older boys and girls took an interest in cooking and serving the food. When Dr. Schlaben was here he authorized the killing of a reindeer. Most of this meat I used in school; the rest was given to the aged and sick. The children learned to make potpie, meat pie, light dumplings, etc. How they did enjoy those dinners!...
>
> There is a marked improvement in the appearance of the pupils. The children come with clean hands and faces and with their hair neatly combed or braided. In the fall we had much trouble exterminating vermin – or trying to exterminate them. The effort was in a measure successful, but this spring for a while they got ahead again. The hopeful part of it is that the children and parents are getting woefully ashamed of this state of affairs. Their personal habits are better and their clothing is generally clean. The things provided by the Government and made up by the industrial class are largely responsible for this. Many times the school would compare favorably with a white school in appearance, so far as tidiness goes. The faces are growing different as intelligence increases.

At the same time, Breece commented on the problems associated with alcohol consumption in the village:

> There has not been much liquor made by the natives this winter, because they had no flour and sugar. There would have been just as much liquor making as there was last year if there had been the means. While I was in Fish village I ordered the Indian chief and another young man to carry a barrel of bewak, bubbling and slopping, out of the cabin. Then I upset it. Of course it was not a popular movement, and I did feel some qualms, as I was the only white person for miles around, but it did good. Until that time I could get no sewing or any kind of work from the women. They were all

83. Breece to W.T. Lopp, Chief of Education in Alaska, August 13, 1910. *Ibid.*

84. Breece to W.T. Lopp, Chief of Education In Alaska, June 1911, *Ibid.*

drinking. Afterwards it was much better, though I feel sure they had some hid from me. As to morals, I often wonder if there are any to talk about.[85]

During the summer of 1911 Breece again went to Nondalton to hold classes. In a lengthy report on her travels, experiences, and accomplishments she noted:

> The journey was not as easy as that of last year on account of storms, high water and a far reaching forest fire. Hundreds of acres of good timber were destroyed during June and July. As the proper authorities have no doubt reported on the carelessness of one prospector who was the cause of all this destruction of forests, thus ruining of hunting grounds of natives living in those regions. I will give no particulars as to the origin of this fire. Fortunately it was confined to the opposite side of the river from where the Indian villages were situated, were located or all would have been destroyed.
>
> However I reached the Noondalton Fish Village safely, and was cordially welcomed by the people. Especially the women who all came to the river bank to meet and escort me to the tent which had been put up before my arrival.
>
> The ground floor was damp; all the women "put to" and carried from the beach apronful after apronful of pebbles until they had soon made a clean dry floor for my house.
>
> They then brought sweet spruce boughs, put up the Youkon stone, made kindling, then departed, leaving me to rest. As I had been on the journey three or four days, having been delayed on the lake by a storm or two, this was appreciated.
>
> The people were anxious to have their Sunday school the next day and the work of the previous year was taken up. It might have been only from the previous Sabbath so well did they remember the verses and hymns which we had had the summer before. They had repeated every thing and tried to teach the younger ones so that really, they were much more sure of themselves than they had been when I left.
>
> The school started up the next week. It was encouraging to find that so much was remembered, and not only that but the older ones had done their best to teach the younger ones (This year as last I left with them suitable books.) I give these details because it would be impossible for any teacher to make the advance with a crude people that was made with these people in two summer sessions of school without something else back of it. They have gained about the equivalent of one years schooling but it was largely due to their own interest and self-helpfulness. The mornings were spent in school. The afternoons were spent in the tents and huts teaching cutting and fitting. Also basket making. In former years basketry was an industry among the Kenai but it is a lost art.
>
> The women were delighted and took to it like ducks to water. Each one made a very good raphia basket. Also we revived the old spruce-root and birch baskets.

85. U.S. Bureau of Education, *Alaska School Service, Report on Education of the Natives of Alaska and the Reindeer Service, 1910-11*, pp. 19, 22, 49, 63, 65.





Old Iliamna school children posed in front of the school in 1912 or 1913. The teacher (not shown) was J. L. Brown. Identified children include: 2) Efrim Eminoff, 7) Mike Jensen, 8) Steve Sava, 9) Dolly Flyum, 10) Michael A. Rickteroff, 11) Zenia Marie Delkittie, 12) Louise Goodrow, 14) Vera Rickteroff, 15) Perascovia Rickteroff (not shown), 17) Sophie Foss, and 19) Yavdehiah Cusma.

Courtesy of Marie Roehl Millett

This may prove to be quite a source of income to these women if sales can be made.

Every man in Noondalting can now write his name. They all express regret that they never have had a chance to learn to read.[86]

The Iliamna school continued to function during 1911-12 with Hannah Breece as teacher, although an epidemic of Spanish influenza and lack of an adequate food supply in the area curtailed attendance. Among the emphases of Breeces teaching that year were sewing, citizenship, health, sanitation, carpentry training, involving repair of the school building, and gardening, including use of fertilizers.

While several Natives worked in the Bristol Bay canneries the rest of the Natives trapped. Breece organized the collection of the furs which were sent to the Alaska School Service for disposition. Among the furs sent were 34 mink, 15 red fox, 16 muskrat, 5 land otter, 9 weasel, 4 wolverine, 3 cross fox, and 7 bear skulls.

Breece observed that her educational efforts were undermined by white fishermen in the village. Their influence was "always bad for the natives, as they are very immoral and indulge in liquor freely." The merchants encouraged the whites to live at Iliamna "to increase trade."[87]

During the 1912-1913 school year the teachers at the Iliamna school were Mr. and Mrs. J.L. Brown. In their annual report for the year the Browns described the principal activities and problems facing the school program:

The attendance has been nearly perfect. The children all like school and are only absent in cases of sickness. The language work of the school has been carried on all most entirely as oral work. The speaking of English is one greatest needs of the place. Language work, numbers, reading, spelling, phisiology, geography, and ect. have all been taught by oral reading. We have tried in every way possible to encourage the oral use of English. The aim of all our teaching has been to deal with the practical and to apply every principal taught to the use of every day life. We have visited the houses of the Natives quite frequently and in this way have become acquainted with their needs. The houses are old log cabins and although the floors are scrubbed, the windows washed and kept clean and the general appearance good, they are still foul smelling places, for lack of ventilation and cooking of vile smelling food. The garbage is properly disposed of and the outer premises are in fair condition. In school we insist on personal cleanliness. The children if not washed and combed at home are required to wash and comb at school before commencing any work. The proper instruction in the washing of clothes is very much needed here. Mrs. Brown gave what instruction she could, with our poor facilities. We have no industrial room. We have a work bench, a sewing corner, a cook stove all in the school room. A few of the poorer children for which under clothing were made, was bathed in a wash tub by the school stove after school hours and their old rags containing vermin burned before the new garments were put on them. The arrival of the new sewing machine about the first of December was gladly

86. Breece to U.S. Commissioner of Education, Department of the Interior, June 15, 1912, RG 75, Microfilm Roll 10, and Manuscripts Archives, Consortium Library, University of Alaska, Anchorage.

87. Breece to W.T. Lopp, Chief of Alaska Division, Bureau of Education, June 30, 1912, *Ibid.*

welcomed and much appreciated. Every afternoon when not engaged in teaching cooking, washing, or cleaning, Mrs. Brown spent with the girls in sewing.[88]

There are few available documentary records for the Iliamna school after 1913. Some records for 1924-25, however, indicate that a new school and teacher's residence were built in 1924-25. In 1924 the school had a 154-day term, a total enrollment of 25, and an average daily attendance of 17.5. The following year the school term was shortened to 140 days, and its total enrollment and average daily attendance declined to 16 and 12.7, respectively.

The school building, as described in the Bureau of Education records for that period, was a log structure with 3-inch flooring. The school room, which had a cook stove, was 30 feet wide, 20 feet long, and 8 feet high. It had a 20-person capacity and was furnished with one bookcase, one teacher's desk, eighteen pupils' desks, and one clock. Near the school was a 2-story, 4-room log residence for the teacher. The building, 14 feet x 24 feet, was heated by a wood stove and lighted by kerosene lamps and had one cook stove.

The two government buildings were "about a quarter of a mile from the Native village, situated on a small knoll rising from the banks of the Iliamna river." The village population consisted of 60 Natives and 9 whites in 1924 and 59 Natives and 8 whites the following year. According to school records the village consisted "of about sixteen two room log cabins and a village store, arranged in rather an irregular fashion with small regard to spacing or a pleasant effect." The "principal resources of the natives" were hunting, fishing, and trapping." The country "abounded in small wild game and fur bearing animals and the rivers teem with fish." "Enough work" was "furnished" the Natives "in the canneries for provisions for the winter."[89]

The government school at Iliamna continued to operate until 1932, when it operated for only three months. In 1930 it had a total enrollment of 15 and a daily average attendance of 12 during its 164-day school term. There were 6 students in first grade, 2 in second grade, 3 in third grade, and 4 in fourth grade. The teacher was Walter H. Johnston.

While the Iliamna school was facing closure two new government schools were opened at Old Nondalton Village and Newhalen. The Nondalton school opened in 1930 in a 26 x 36-foot log structure that Hans Seversen may have sold to the Bureau of Indian Affairs. The Newhalen school opened in 1931. By the 1931-1932 school year the Nondalton school had a daily average attendance of 23.8 and a 140-day school term and the Newhalen school 25 and 111 days. Salaries and total operational costs for the Nondalton and Newhalen schools were $2,615/$3,595.59 and $1,493.75/$1,753.75, respectively.[90]

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88. "Annual Report of the United States Public School at Iliamna," June 30, 1913, *Ibid.*

89. U.S. Department of the Interior, Bureau of Education, Alaska Division, Iliamna, "Historical Record," ca. 1924-25, *Ibid.*

90. "Statistical Report Schools and Alaska Native School Service for year ending June 30, 1930," "Cost Per Pupil Based on Daily Average Attendance, Education of Natives of Alaska, 1931-1932," and "United States Department of the Interior, Bureau of Education - Alaska Division, Field Organization - 1929-1930," Record Group 10, Records of Natural Resources, Commissioner's Office, Alaska State Archives and Records Center, Juneau, and *Annual Report of the Governor of Alaska, 1932*, pp. 96-98.

The village of Nondalton was moved to its present site on Sixmile Lake about 1940. Since the new village, which included some families that moved from Stony River, did not have a school, the Office of Indian Affairs conducted a survey during 1940-1942 to determine the possibility of opening a school there. According to the results of the survey, it was found that 84 residents could speak English and 26 could not. Fifty-nine residents could read English. The grades completed in school by the residents to date were: 1st – 9; 2nd – 10; 3d – 9; 4th – 8; 5th – 6; 6th – 3; and 10th – 1. The 10th grade graduate was Jack Hobson, the only non-Dena'ina person recorded in the survey.[91]

A new log school building was built at Nondalton in 1944. The men of the village were hired to cut logs on Lake Clark and float them to the school site which the Native boys prepared. This building was used until 1962.[92]

The new school at Nondalton continued to provide social services to the Native villagers. As part of their work the school teachers surveyed the residents' food supply, garden activity, and individual income to determine if there were physical needs that required attention. During October 1945, for instance, Percy D. Pringle, the teacher at Nondalton, engaged in extensive surveys of the village which then had a population of 104. The quantities of food found in the village were:

Kind	Pounds	How Preserved	Consumption
Salmon	8,500	Smoked	Human
Salmon	15,000	Smoked	Dog feed
Salmon	950	Salted	Human
Moose	400	Dried	Human
Cranberries	500	Raw	Human
Potatoes	2,600	In Cellar	Human
Rutabagas	300	In Cellar	Human
Turnips	150	In Cellar	Human

Pringle observed that the food supply was "adequate with the meat that can be obtained during the winter." The sources of winter food were caribou, moose, rabbits, and fresh fish. The teacher also noted that the village had 190 dogs to feed.

In terms of the garden activity of the villagers Pringle stated that they raised "larger gardens" each year. Vegetables grown included cabbage (100 pounds), carrots (50 pounds), lettuce, peas (20 pounds), potatoes (2,600 pounds), radishes, rutabagas (300 pounds), and turnips (150 pounds). Ten families raised gardens, the approximate total area of the garden being four acres. Pringle noted that Nondalton was "a good place for gardening." The tundra had to be removed

91. Clarence E. Rusch, Enumerator to Claude M. Hirst, General Supt., Alaska Indian Service, Juneau, April 30, 1941, in RG 75, Bureau of Indian Affairs, Juneau Area Office, Tribal Census Rolls, 1935-1966, Box 203, Folder-Nondalton 1938-1940 Census, National Archives and Records Administration, Seattle Branch.

92. Hornberger, "Overview of Historic Contact in the Lake Clark Study Area," pp. 4-57. Because of lack of appropriations the school was closed for at least one year in 1949. *Annual Report of the Governor of Alaska, 1949*, p. 54.

Annual Statistical Report Reported U.S. Government Teacher Alaska Indian Service
Calendar Year 1943 by Percy D. Pringle Station ES 77

Total Village Population 105

TOTAL INDIVIDUAL INCOME (RESIDENT POPULATION ONLY)

Source	Unit	Quantities Sold (A)	Home Use (B)	Total (C)	Total Income or Value $ (D)
1. Game animals, deer, caribou, water fowl, etc.	Lbs.	0	5000	5000	1000.00
2. Reindeer meat	Lbs.	0	0	0	0
3. Seal, walrus whale, oogruk meat	Lbs.	0	0	0	0
4. Eggs-native wild birds	Doz.	0	0	0	0
5. Berries, greens (native)	Lbs.	0	500	500	50.00
6. Seal, walrus, whale, oogruk oil	Gal.	0	0	0	0
7. Fish	Lbs.	0	67500	67500	22500.00
8. Fish oil (native)	Gal.	0	0	0	0
9. Other native food products		0	500	500	50.00
10. Gross Income, native products 1/2/3/4/5/6/7/8/9	xxx	xxx	xxx	xxx	23600.00
11. Estimated expenses	xxx	xxx	xxx	xxx	1425.00
12. Net Income, native food products (10-11)	xxx	xxx	xxx	xxx	22175.00
13. Baskets	No.	0	0	0	0
14. Raw furs and hides	No.	70	40	110	1700.00
15. Skin sewing products (moccasins, parkas, etc.)	No.	0	150	150	1500.00
16. Boats, sleds, skiis, snowshoes, etc.	No.	0	24	24	480.00
17. Ivory carvings	No.	0	0	0	0
18. Wood carvings, totems, masks, etc.	No.	0	0	0	0
Other Arts & Crafts products	No.	0	0	0	0
Gross Income, arts & crafts 13/14/15/16/17/18/19					3680.00
21. Estimated expenses					100.00
22. Net Income, native products (20-21)					3580.00
23. Net Income, agriculture					0
24. Private business, net					0
25. Indian Service, regular employees, salaries					0
26. Indian Service, irregular employees, wages					3000.00
27. Wages from employers other than the Indian Service					25000.00
28. Other wages					0
29. Total wages (25/26/27/28)					28000.00
30. Other earned income					0
31. Total earned income (12/22/23/24/29/30)					53755.00
32. Leases, permits, royalties					0
33. Annuities, interest, dividends, etc.					0
34. Service men's dependents allotments					0
35. Social Security Assistance (OAA)					0
36. Relief issued by Indian Service or other welfare agencies					1080.00
37. Other unearned income					0
38. Total unearned income (32/33/34/35/36/37)					1080.00
39. TOTAL INDIVIDUAL INCOME (31/38)					54835.00

Bureau of Indian Affairs, Annual Statistical Report for Nondalton, 1943. Source: see footnote 93 (page 332).

and burned on the ground, thereby "sweetening the soil." After that humus from brook beds was applied. Children at the school received training in planting gardens as part of their classes.[93]

Several years later in November 1950 a new teacher, Cledia F. Jones, surveyed the Native food supply and gardening activity at Nondalton. Her findings included:

Kind	Quantity	How Preserved
Salmon	64,000 pounds	Smoking, salting
Rainbow trout	500 pounds	Eaten as caught
Moose	16,000 pounds	Smoking, canning, salting
Caribou	5,000 pounds	Smoking, canning, salting
Ducks and Geese	1,000 pounds	
Blueberries	1,000 pounds	Canning, sugaring down in barrels
Low bush cranberries	2,000 pounds	Canning, sugaring down in barrels
Currants	300 pounds	Using juices for syrup
Black bear	3,000 pounds	Smoking
Brown bear	8,000 pounds	Freezing, smoking salting
Beaver	1,200 pounds	Salting

Some 96 people and 80 work dogs were dependent on this food supply. Jones believed the supply to be adequate, "especially the fishing." Moose and caribou were becoming scarce, but berries and wild vegetables were plentiful.

By 1950 gardening had been deemphasized at Nondalton. Ten families continued to plant gardens, but they only covered one acre in aggregate, and the school children no longer planted a garden. The gardens produced 500 pounds of cabbage, 1,000 pounds of potatoes, and 100 pounds of turnips. Jones observed that the entire population of Nondalton "moves to the fish camps during the summer making gardening in the village difficult." However, some of the families had started "cultivating small plots near their camps." A white settler on Lake Clark was engaged in raising potatoes, and the Nondalton Natives found "it much easier to purchase than to grow."[94]

By October 1952 the Nondalton school had an enrollment of 30 in eight grades. Cledia Jones and her husband were the teachers for the school term which covered a length of 180 days. When Paul L. Winsor, Administrative Assistant for the Alaska Native Service at Bethel, visited the school on October 8 and 9, he reported:

> Mrs. Jones seems to have created much interest among her children. Her classroom reflected this; the room was attractive and pleasing. Apparently, the

93. "Annual Survey of Native Food," October 27, 1945, and "Annual Survey of Garden Activity," October 27, 1945, in RG 75, Bureau of Indian Affairs, Alaska Reindeer Service, Agriculture, Hunting, and Fishing Statistics, Box 62, Folder-Nondalton 917, National Archives and Records Administration, Seattle Branch. Included with these documents was a total individual income assessment of the village by Pringle for calendar year 1943, a copy of which may be seen on the previous page.

94. "Annual Survey of Native Food," November 27, 1950, and "Annual Survey of Garden Activity," November 27, 1950, RG 75, Bureau of Indian Affairs, Alaska Reindeer Service, Agriculture, Hunting and Fishing Statistics, Box 62, Folder-Nondalton 917, National Archives and Records Administration, Seattle Branch.

motivating force can be found in teacher techniques in presenting materials to the children. The classroom work in general gave evidence of good teacher planning.

Major skills interest seemed to be in the fields of communication and understanding plus the skills involved in health practices.

Both Mr. and Mrs. Jones give evidence of extreme interest in community affairs. Mr Jones has been quite active in improving the homes from the construction standpoint. The homes are generally much larger than those in the Bethel area. The people grow enough potatoes and vegetables to supplement their diet to the extent that their general health seems to be good.

Mr. Jones also recommended that their fish camps be built of more permanent materials thus eliminating some of the health hazards usually encountered in fish camps. This has been done with the cooperation of both teacher and villagers.

Mrs. Jones is active in helping the women of the village improve their homes, methods of cooking, and general welfare.

The people furnish all the fish, meats, berries, potatoes, and cabbage for the nutrition program; only basic foods are ordered by the teachers.[95]

Meanwhile, the school at Newhalen was facing problems arising from low attendance, deteriorating facilities, and teacher apathy. After visiting the school and talking to Rhoda Thomas, the teacher, in March 1947, Minna Lee Coughlin, Supervisor of Education for the Alaska Native Service, reported:

Attendance, which began with a fall enrollment of 35, has been very erratic with an average of from 6-8 present daily, according to Mrs. Thomas. Eight were present on Friday, March 21, three of these being from Iliamna and five from the village of Newhalen. Classes proceeded in an orderly, competent manner, with excellent experience reading techniques being used in supplementing regular textbook material and as introductory reading for the beginning class....With respect to teaching methods, the only criticisms are minor, being the teaching of word rather than phrase reading, insufficient repetitic in the teaching of spelling words, no apparent recourse to even the limited library facilities available.

The children were served hot cocoa at the 9 o'clock opening of school; the Iliamna children were given hot vermicilli soup as lunch, the village children being sent home....Because of the falling off of attendance, the natives' feeling of strong superstition regarding the building, and the fact that the present school is so very poorly placed to serve either Iliamna or Newhalen village, it would be feasible to either move the present school to a more favorable site, or erect a new school....

95. Paul L. Winsor, Administrative Assistant, Bethel, Alaska to Max W. Penrod, Area Director of Schools, November 18, 1952, RG 75, Bureau of Indian Affairs, Juneau Area Office, Education Program Decimal Files, 1938-1968, Box 295, Folder-Nondalton 864, National Archives and Records Administration, Seattle Branch.

> Doubtless the distances that separate the school from the villagers intensifies the feeling of being alien to their needs and perhaps there is justification for concluding that the natives are unappreciative and hostile. Certainly they are superstitious and feel the school is haunted – and no wonder after two murders and a freezing there....There seems to be no traffic at all between the teacher and the villagers except for the children who come to school, nor is there any effort made to check up on absences, reason given being that they did not want the natives to feel they were being run after....However, the fact that 35 did enroll in the fall seems to indicate that superstition alone is not the cause of poor attendance, and perhaps not distance during the bad weather (less than a quarter of a mile for the villagers, about 2 miles for the people in Iliamna); Just now there appears to be good reason for absences, with most of the men out beaver trapping and many of the older children accompanying them.[96]

The Newhalen school continued to struggle with low attendance, its enrollment declining to 8 in 1952. Nevertheless, the Alaska Native Service hesitated to close a school "which is fully equipped and in fairly good condition in view of the fact that in the neighboring communities we have hundreds of youngsters totally without the services of schools."[97]

While the Newhalen school struggled the Nondalton school prospered. A new frame building, 62 x 68 feet on pilings, was constructed in 1962 at a cost of some $200,000. It contained two classrooms and teachers' quarters. In 1968 a three-classroom addition was constructed as well as a duplex for teacher housing. During 1972-73 the school had two whites and 63 Natives in its elementary program and two whites and seven Natives in its high school program, while the Newhalen school had five whites and 34 Natives in its elementary school.[98]

In 1974 the Nondalton school burned, and the state-operated school system transported portable units to the site for use as classrooms. The following year the Lake and Peninsula School District was one of the 21 Rural Education Attendance Areas formed after the dissolution of the state-operated school system. The district included Nondalton, Newhalen, Pedro Bay, and Port Alsworth. In 1978 a new school and gym were completed in Nondalton, the complex including a public library.

The schools were a major source of cultural change for the Dena'ina. They not only provided an institutional setting in which white Euroamerican language, values, and cultural practices were promoted, but attendance required that women and children remain in the village and not

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96. Minna Lee, Supervisor of Education to Don C. Foster, Alaska Native Service Supt., March 24, 1947, pp. 1-5, RG 75, Bureau of Indian Affairs, Juneau Area Office – Education Program Decimal Files, 1938-1968, Box 295, Folder – Newhalen 864, National Archives and Records Administration, Seattle Branch.

97. Max W. Penrod, Area Director of Schools to Paul L.Winsor, Administrative Assistant, Alaska Native Service, November 28, 1952, in *ibid.* In 1952 a school for natives was built at Pile Bay on the northeast shore of Iliamna Lake and operated for several years. A small territorial school was opened at Pedro Bay on the north shore of Iliamna Lake in 1954 and continued to operate despite small enrollment. Townsend, "Ethnohistory and Culture Change of the Iliamna Tanaina," pp. 326-27.

98. Kresge, Fison, and Gasbarro, *Bristol Bay: A Socioeconomic Study*, pp. 2-18. During 1972-73 the Pedro Bay school had seven natives in the elementary grades.

accompany men on the traditional seasonal round of subsistence activities. Thus, the schools provided the impetus for centralization of Native cultural patterns.[99]

Impact of Wage Economy, Modern Technology, and Government Infrastructure

This section will present an overview of the impact of white settlers and non-Native socioeconomic structures and institutions on traditional Dena'ina settlement and subsistence cultural patterns in the Lake Clark area. Particular attention will be focused on Nondalton on the northwest shore of Sixmile Lake – the nearest Native Dena'ina community to present-day Lake Clark National Park and Preserve. As whites continued to enter the region, they introduced elements of their socioeconomic system, characterized by a cash-based and wage-oriented economy, employment of modern technology, and development of governmental infrastructure. The traditional Dena'ina settlement and subsistence cultural patterns were impacted significantly by the intrusion of white socioeconomic practices as well as diseases to which they were not immune, and the Native society was forced to accommodate itself to the reality of the changing circumstances. Gradually, the traditional Native subsistence cultural patterns would develop into a subsistence-based "mixed" economy having a market sector utilizing currency and modern technology and a non-market subsistence sector dependent on subsistence hunting and fishing.[100]

Dena'ina Settlement Changes in the Lake Clark Region

The late 19th and early 20th century brought major changes in Native Dena'ina settlement and subsistence patterns in the Lake Clark region, resulting in part from the impact of the growing numbers of white settlers who were entering the area to prospect, hunt, and trap. In 1880 the "Mulchatna villages were reported to have a population of 180, but famine, resulting from declining caribou herds, and an epidemic which decimated the population during 1887, led the Dena'ina to take the Russian priest Fluishishkin's advice to abandon the interior and resettle at Kijik on the north shore of Lake Clark, which was then being used as a summer fishing camp site. A Dena'ina village near Telaquana Lake was also abandoned about that time, and some of the people who lived there joined the remnants of the Mulchatna people and moved to Kijik. While the majority of the Mulchatna and Telaquana Natives moved to Kijik and scattered locations along the shores of Lake Clark a few moved to Lime Village on the Stony River some 85 miles northwest of the lake. After the Natives settled at Kijik the priest persuaded them to build a Russian Orthodox "prayer house" where services could be conducted. Thus, a major population shift from the interior to the shores of Lake Clark occurred during the late 1880s as a result of disease, starvation, and the counsel of an itinerant Russian Orthodox priest.[101]

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99. Hornberger, "Overview of Historic Contact In the Lake Clark Study Area," pp. 57-59.

100. Robert J. Wolfe and Linda J. Ellana, "Chapter 1, Introduction to the Case Studies," in Wolfe and Ellanna, comps., *Resource Use and Socioeconomic Systems*, pp. 1-8.

101. Anne C. Sudcamp, trans., "Final Report: Translations of Nineteenth Century Russian Orthodox Priest Records," Submitted to the National Park Service, April 1, 1987, Files, National Park Service, Alaska Regional Office, Anchorage, and Lynch, *Qizhjeh*, pp. 6-10. For further information on Lime Village see Priscilla Russell Kari, *Land Use and Economy of Lime Village: Technical Paper Number 80* (Dillingham, Alaska Department of Fish and Game, Division of Subsistence, June 1983), pp. 1-130.

As aforementioned the prospectors and settlers entering the Mulchatna-Stony and Lake Clark regions during the late 19th century introduced diseases to which the Native Dena'ina had not acquired immunity. Devastating epidemics of smallpox, tuberculosis, measles, and influenza swept through the settlements and killed many people. The village of Kijik was particularly hard hit by an "influenza" epidemic in 1888-1889 and a measles epidemic during the winter of 1901-02. The Dena'ina began to move away from Kijik to escape the dreaded disease. Memories of the epidemic, combined with a desire to be closer to the trading posts on Iliamna Lake, contributed to the end of the Kijik settlement during the early 20th century.

In 1902 a number of Dena'ina moved from Kijik and scattered locations along the shores of Lake Clark to a site near traditional fishing camps on the northwest shore of Sixmile Lake. This settlement came to be known as Nondalton, and later, when the people moved further down the lake, as Old Village or Old Nondalton.

Many of the houses and elevated caches at Kijik, built of split and hewn logs with dovetailed corners, were dismantled between 1902 and 1909 and hauled down Lake Clark to Old Nondalton. Only a few structures and the Russian Orthodox Church were left standing. An extensive network of Native trails connecting the older villages fell into disuse as the Natives adjusted to their new surroundings and way of life resulting from increasing social interaction with whites.

During the early 1900s increasing numbers of prospectors began working in the Lake Clark area, particularly at Portage Creek near the lake and along the Mulchatna River in the Bonanza Hills area. A few prospectors poled boats up the Nushagak and the Mulchatna to haul supplies into the Bonanza Hills area, but most of them entered the region from Cook Inlet over the portage to Iliamna Lake, then across to Sixmile Lake and northwestward toward the upper Mulchatna. Some Nondalton people were hired as packers across the Iliamna Portage and as guides and packers into the Mulchatna placers, thus providing employment at a time when salmon runs into Lake Clark were declining as a result of commercial overfishing in Bristol Bay and fur prices were dropping.

Some Dena'ina families continued to live in Lime Village on the Stony River, although over the years more and more of them moved to Old Nondalton to take advantage of the stores and economic advantages of the area. This migration continued, a few individuals or families at a time, into the 1950s, leaving only a handful of people in Lime Village. During these years some Dena'ina also moved to other Iliamna area villages such as Pedro Bay.

Some Nondalton people began to travel to the Bristol Bay region to participate in salmon cannery work during the early 1900s. The Dena'ina, however, were not involved in fishing operations in Bristol Bay until the 1920s and 1930s.

During 1918-19 the Dena'ina in the Lake Clark-Iliamna Lake region were struck by an influenza epidemic which took many lives. Salmon runs in Lake Clark had been affected by over-fishing in Bristol Bay for several years by that time, and the summer of 1919 was the worst of several bad years. During this period some of the Lake Clark-Sixmile Lake Dena'ina returned to the Telaquana and Stony River areas to put up salmon.

The year 1925 witnessed another disastrous fish harvest in the Lake Clark region. Reportedly, the Natives killed half of their sled dogs to forestall starvation. As a result of declining fish



Big Evan Nudlash, his wife Mary Kankanton, sister and child with dogs. Big Evan worked as a blaster for miners on Kontrashibuna Lake and was the brother-in-law to Hans Seversen. The Nudlashes were the last Dena'ina family to live at Kijik. Big Evan died at Kijik in 1934.

James Carter Collection, Alaska Historical Library

harvests in the following years many of the Nondalton people stopped going to fish camps at Kijik and the Newhalen River. Some of them may have temporarily migrated out of the area or remained dispersed for a period of time in an effort to eke out a living, while others went in increasing numbers to Bristol Bay to participate in the salmon fishery. During the late 1920s, however, the salmon runs in the Newhalen River and Lake Clark improved, and fish camps were reestablished along the river and at Kijik.

The Dena'ina exhibited considerable mobility during the 1920s and 1930s, undoubtedly the result of desperate efforts to survive. Families would stay in one location for a season or several years, then move elsewhere. During the winters families would spread out around the shores of Lake Clark, in the Telequana Lake and Stony-Mulchatna areas, and at Old Nondalton.

At least one Native family continued to live near the Kijik site until the 1930s, while others used the area seasonally for putting up "fall-fish" or for trapping in the winter. Houses at Tanalian Point on the south shore of Lake Clark were regularly occupied by Dena'ina until the late 1930s, and the area continued to be periodically inhabited after that time. Other locations around Lake Clark, such as Chulitna Bay, Dice Bay, Miller Creek, and Tommy Creek, continued to be occupied seasonally. These sites were utilized mainly during fall and winter as trapping headquarters. During the summers families would often go to fish camps at the head of the Newhalen River to put up early salmon. Later in the summer people would return to these sites to put up later salmon and "fall-fish."

Sometime about 1938 several Dena'ina families began to build houses at a location (present site of village) on the shore of Sixmile Lake several miles southwest of Nondalton. The bay in front of the old village had silted in creating mud flats. Since the villagers were using increasingly heavier wooden skiffs and boat engines as a result of their interaction with whites, their fishing equipment required deeper water than that afforded by the old basin. Other reasons for the move included the fact that the old site was on a steep hill which was said to stay frozen until late in the spring and to have too much water running through it when it did begin to thaw. The firewood supply in the vicinity of the village had also become depleted.

During 1938-40 Dena'ina families continued to move to the site of New Nondalton, a number of houses and caches being moved to the emerging village. Some Natives continued to utilize the old village site for gardens until the 1960s.[102]

The population of Nondalton has fluctuated since 1940 when the census noted that it had 82 residents. The population of the village increased to 205 in 1960 but declined to 184 in 1970 and 173 in 1980. Of the latter total 93.1 percent were Natives, mostly Dena'ina. By 1984 the population had increased to 231.[103]

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102. Steven R. Behnke, *Resource Use and Subsistence In the Vicinity of the Proposed Lake Clark National Park, Alaska*, pp. 26-31, and Lynch, *Qizhjeh*, pp. 6-11.

103. U.S. Department of Commerce, Bureau of the Census, *United States Census of Population: 1950, Number of Inhabitants, Alaska* (Washington, Government Printing Office, 1952), Vol. I, pp. 51-5; U.S. Department of Commerce, Bureau of the Census, *The Eighteenth Decennial Census of the United States, Census of Population: 1960, Volume 1, Characteristics of the Population, Part A, Number of Inhabitants*, p. 3-10; U.S. Department of Commerce, Bureau of the Census, *1970 Census of Population, Volume I, Characteristics of the Population, Part A, Number of Inhabitants, Section I, United States, Alabama-Mississippi* (Washington, Government Printing Office, 1972), p. 3-14; Federal Field

(continued...)

Socioeconomic Development of Nondalton

The harvests of fish and wildlife for household use and the monetary sector of the economy have both been important to the people of the Lake Clark region since the Russian fur trade era. Opportunities to earn money have historically been highly seasonal and variable from year to year. Trapping, handcraft production, and freighting for prospectors and traders were the principal sources of currency or credit for Dena'ina people in the Lake Clark region in the late 19th and early 20th centuries. Cannery work and commercial fishing began to provide significant cash income opportunities during the 1920s and 1930s. Some trapping continued into the 1980s but the significance of that activity declined greatly during the 1950s as fur prices dropped in relation to both the cost of living and expense of production. By the 1970s and early 1980s the economy of Nondalton was based on a close integration of production for household use and monetary income.[104]

During the 1970s and 1980s there were a limited number of wage employment opportunities available in Nondalton and the surrounding Lake Clark-Iliamna Lake region. The opportunities, such as commercial fishing, firefighting, and construction, were concentrated during the short summer season. A few jobs were available year-round in the village, but these were often part-time or low-paying. Many of the employment options available to area residents involved leaving the region for varying periods of time.

Only four jobs in Nondalton were relatively long-term during the 1970s and early 1980s. These included the postmaster, school janitor, water system maintenance, and health aide positions, each of which was a government or public sector job. The jobs were essentially year-round, but, with the exception of the janitor position, part-time and low paying. Since the construction of a high school in 1978, the school has been the principal employer in Nondalton, providing three full-time nine-month jobs and about five part-time jobs.

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103. (...continued)
Committee for Development Planning in Alaska, comp., *Estimates of Native Population In Villages, Towns, and Boroughs of Alaska, January 1969* (Juneau, Office of the Governor, Division of Planning and Research, 1969), p. 8; and State of Alaska, Department of Labor, *Alaska Population Overview 1982* (Juneau, 1983), p. 8; State of Alaska, Department of Labor, *Alaska Population Overview* (Juneau, September 1985), p. 54. For more information on population statistics see Allen M. Rollins, comp., *Census Alaska: Numbers of Inhabitants, 1792-1970* (Anchorage, University of Alaska, Anchorage, Library, 1978).

104. Unless otherwise noted material for this section is based on information in the following sources: Judith Marek Morris, *Subsistence Production and Exchange in the Iliamna Lake Region, Southwest Alaska, 1982-1983: Technical Paper Number 136* (Juneau, Alaska Department of Fish and Game, Division of Subsistence, November 1986), pp. 1-148; Steven R. Behnke, *Wildlife Utilization and the Economy of Nondalton: Technical Paper Number 47* (Dillingham, Alaska Department of Fish and Game, Division of Subsistence, March 1982), pp. 1-72; Steven Behnke, "Nondalton: Resource Uses in a Small Community of Southwestern Alaska," in Wolfe and Ellanna, comps., *Resource Use and Socioeconomic Systems*, pp. 48-64; *Alaska Community Survey*, Prepared for State of Alaska, Department of Community and Regional Affairs, by Alaska Planning and Management, Anchorage, September 1972, pp. 592-94; Federal Field Committee for Development, *Planning in Alaska, Alaska Community Inventory, 1971*, p. 146; "Nondalton," in *Alaska Peninsula-Iliamna Lake Community Profiles, 1982*, Prepared by Environmental Services Limited Under Contract with the Alaska Department of Community and Regional Affairs, Division of Community Planning, December 1982; and U.S. Department of the Interior, Alaska Planning Group, *Final Environmental Statement: Proposed Iliamna National Resource Range, Alaska*, October 1974, pp. 78-81.

Since the 1960s construction work has been available occasionally in public works projects for small numbers of people over short periods, one of the best examples being construction of Nondalton's water and sewer system during the 1970s.[105] Few Nondalton men, however, were employed for the construction of the high school in 1978. State and federal funds occasionally have provided a few jobs such as village administrator and short-term projects, i.e., community hall renovation, but these jobs were often vulnerable to funding cuts.

During the 1970s three or four Nondalton men worked on construction jobs outside the village as laborers or equipment operators, and two men worked on the Alaska Pipeline during its construction. The men continued to hold seasonal construction jobs outside the village for four to six months in most years, leaving their families in the village.

Some Nondalton people worked seasonally as firefighters, particularly during summers when fishing was poor in Bristol Bay. The Bureau of Land Management relied heavily on villages, such as Nondalton, to provide emergency firefighters. Crews of about 15 people were organized by a village "crew boss" who was responsible for assembling the crew on a few hours notice to be flown to a fire. Individual incomes from firefighting ranged from about $200 to $2,000 per season. In some years the village fielded one to three crews, including young men and women. Firefighting employment, however, was highly unpredictable and variable depending on the severity and locations of fires across the state.

Historically, most Nondalton people have had a marginal association with the Bristol Bay fishery, primarily as a result of its distance from Bristol Bay. The wage earners who have participated in cannery work generally have gone to Naknek to work for the Alaska Packers Association. Residents have not invested heavily in gear or boats and generally only fish the peak of the sockeye run. They have tended to remain in the village and seek other work when poor fishing was expected, and increased their participation when salmon runs improved. Only three residents of Nondalton owned fishing boats in 1981, and these were older boats in poor condition. Lack of competitive equipment and the time and cash required to maintain old equipment has limited the productivity of the several Nondalton boat owners. Nondalton settlers have often encountered trouble obtaining the gear necessary to compete effectively.

As in the case of trapping, the credit relationship has been an important aspect of commercial fishing for the Nondalton people. They purchased boats on credit from the cannery and often relied on credit to purchase a winter's supply of groceries after the fishing season.

When salmon runs experienced a resurgence between 1979 and 1981 Nondalton residents increased their participation in the fishery. However, entry to the fishery had been limited by legislation during the mid-1970s, with considerable impact on Nondalton's residents' fishing opportunities. The Limited Entry Commission weighted 1971 and 1972 particularly heavily in awarding points for previous fishing participation to qualify for limited entry permits. Many Nondalton residents did not qualify for permits because they had not fished in those years.

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105. Data relating to such public works projects as bridges, roads, drainage structures, and the water-sewer system may be found in Record Group 21, Records of the Department of Community and Regional Affairs, Commissioner's Office, Series 172, Subject Files, 1972-1980, File-Nondalton and File-Rural Development Projects, Nondalton, Alaska State Archives and Records Center, Juneau.

By the late 1970s and early 1980s the capital costs of fishing had increased dramatically, as most fishermen invested in larger, more efficient boats. Canneries no longer provided credit to fishermen, eliminating the major source of investment capital to Nondalton residents. Nondalton people had little access to other sources of credit to finance boats and equipment. Many Nondalton people also had difficulty finding markets for their fish.

Nondalton men with drift permits who did not own boats in the late 1970s began to fish as partners on boats owned by others, generally non-local white fishermen who did not have permits. In such cases the share for the Nondalton permit-holder averaged about 30 to 40 percent. This system enabled people to take advantage of newer, more efficient equipment, producing larger catches and incomes. Often, however, Nondalton fishermen found themselves the victims of poor partnerships, misunderstanding, and bad faith, and frequently made little money.

In addition to the aforementioned cash-generating employment some income has been generated in Nondalton by trapping and serving as fishing and hunting guides. In recent years species trapped include mink, wolf, beaver, land otter, marten, and muskrat.

Most Nondalton individuals tended to work at a range of jobs, despite the small number of options, rather than specializing in one skill. They tended to avoid being too dependent on any one activity in an economy characterized by seasonal and annual fluctuations. Most households attempted to reduce economic risk by employing several members of their household if possible. Another major way of diversifying opportunities and reducing costs was to produce their own food, heating fuel, goods, and equipment.

Information on incomes in Nondalton was collected in household surveys by the University of Alaska (1973) and the Alaska Department of Fish and Game (1980). In 1973 the mean income of 25 households was $5,600. Seven years later the mean income for 14 surveyed households was $12,350, ranging from less than $5,000 to about $35,000.

In addition to limited unemployment compensation payments and social security benefits, Nondalton residents received three principal types of public income assistance. These were Bureau of Indian Affairs welfare payments, food stamps, and state welfare payments including Old Age Assistance, Aid to the Blind, Aid to the Disabled, and Aid to Dependent Children. The number of recipients of public assistance and the average dollars received per household have increased in recent years.

Social, economic, and technological change in Nondalton and the surrounding region has increased the necessity for a household to maintain relatively consistent sources of cash income. The cost of imported products is high in Nondalton because of the community's inaccessibility by surface transportation and its distance from transportation and service centers. Shelter, food, and fuel for heating, transportation, and electrical generation, and the equipment necessary for domestic production are all far more expensive in Nondalton than in Anchorage. In the early 1980s the village had one store, which carried a limited selection of groceries, hardware, and clothing. Most goods arrive by mail, which comes to Iliamna by commercial air service and is then transshipped to Nondalton by small plane. Prices are at least one-third higher than in Anchorage. Stocks of food and supplies fluctuate considerably, and basic food items are often not available in the village. Only households with very low incomes who do not have the cash

to order in a grubstake buy exclusively at the local store. Households with greater incomes tend to purchase staples in bulk by mail from Anchorage.

In part because of the high costs of imported foods, supplies, and energy, the people of Nondalton have continued to rely heavily on a wide range of local resources, including fish, game, plants, and wood. The limited and highly variable monetary incomes of the area are not sufficient to enable most Nondalton families to rely solely on store purchases. The monetary incomes are not reliable enough to allow people to be completely dependent on imported goods even when they do have enough money to purchase food. Non-monetary reasons, such as traditional and customary lifeways, also perpetuate reliance on local fish, wildlife, and other resources.

Residents of Nondalton have found that the best and most efficient use of their limited monetary income has been to invest a substantial portion of it in hunting and fishing equipment and operating costs. This investment, combined with labor for which there are often few other demands, produces a higher return in food than would have been possible if equivalent amounts were spent on imported foods.

Thus, a major portion of the local food supply was derived from fishing, hunting, and trapping. Local food resources play a particularly important role in buffering households against fluctuations in wage earning opportunities and variations in cash income.

During three years (1973, 1980, 1981) for which harvest data was collected, it was estimated that a Nondalton household produced an annual average of 4,432 pounds dressed weight of local fish and game resources for domestic use (see chart on following page). This was an annual average of 846 pounds per household member. Salmon was the largest harvested resource by weight, followed by moose, caribou, freshwater fish species, and beaver. Other significant resources of the subsistence harvest included Dall sheep, bear, and waterfowl. Berries, including salmonberries, blueberries, blackberries, low and highbush cranberries, and currants, were harvested by virtually all households.

Nondalton was incorporated as a second-class city under state law in 1971 and is governed by a mayor and six member council. A Traditional Council, established in 1963 under the provisions of the federal Indian Reorganization Act, is also active, operating through the office of a chief and six member board.

As a second-class city Nondalton was enabled to assume various powers under Title 29 of the Alaska State Statutes. By the early 1980s the city had assumed powers over its (1) streets and sidewalks, (2) sewers and sewage treatment facilities, (3) health services, (4) jail facilities, (5) water supply, (6) community center and library, (7) recreational facilities, (8) garbage and solid waste collection and disposal, and (9) police and fire protection services. The city participated in the state revenue sharing program in which funds were allocated on a per capita basis for community services. In 1982, for instance, Nondalton received $31,717 in state revenue monies. The city also received a grant of $76,000 for installation of a bulk fuel storage facility.

Nondalton has minimal public services. The Lake and Peninsula School District, based in Naknek, operates a combined elementary/high school that was built in 1978. The U.S. Public Health Service renovated the Nondalton water supply system in 1976, and installed a gravity-feed community sewer system in 1968. During the early 1980s an electrical power line was built to the

MEAN HOUSEHOLD HARVESTS OF SELECTED FISH AND GAME RESOURCES, 1973, 1980, 1981, FROM A SAMPLE OF NONDALTON HOUSEHOLDS IN POUNDS DRESSED WEIGHT

	1973 (n=25)	1980 (n=14)	1981 (n=19)
Fish			
Sockeye	2,614	3,985	2,883
White Fish	57	18	36
Grayling	44	23	65
Pike	28	5	14
Burbot		1	1
Char/Dolly Varden	2	10	29
Rainbow Trout	9	9	21
Lake Trout	68	64	39
TOTAL FISH	**1,811**	**4,115**	**3,088**
Land Mammals			
Moose	518	366	483
Caribou	576	332	347
Black Bear	32		47
Brown Bear	4		26
Porcupine	34	14	27
Snowshoe Hare	11	4	8
Tundra Hare		6	3
Beaver	114	114	143
Lynx	2		
TOTAL LAND MAMMALS	**1,291**	**836**	**1,084**
Birds			
Duck	4		7
Goose	9		4
Ptarmigan	13	5	5
Spruce Grouse	3	3	7
TOTAL BIRDS	**29**	**8**	**23**
TOTAL SUBSISTENCE FOOD HARVEST	**4,142**	**4,959**	**1,195**

Sources: see footnote 104, page 339.

village from a central generating facility in Newhalen by the Iliamna-Newhalen Electrical Co-op established in 1977.

By the early 1980s health care in Nondalton was provided at a city-owned clinic built during the 1970s with funding by the Alaska Area Native Health Service through the Bristol Bay Area Health Corporation. In 1973 the health corporation began a cooperative effort with Alaska Federation of Natives, Inc., to coordinate a program for improving medical services throughout the region.

There were 42 single family houses in Nondalton by the early 1980s, most of which were of wood frame construction. Some of the newer housing units were built by the Bureau of Indian Affairs during the 1970s. Fourteen additional houses were constructed by the U.S. Department of Housing and Urban Development beginning in 1982.

Supplies, such as fuel, must be flown into Nondalton, which by the early 1980s had a 2,300-foot gravel airstrip and a cross wind runway, or barged to Iliamna, transported by road to the upper Newhalen River, then hauled by boat to the village. Only one year-round resident of Nondalton owned an airplane in the early 1980s, and aircraft were seldom used by most residents of the village for hunting or fishing activities. Almost half the households in the community were limited in their hunting and fishing efforts by lack of boats, outboard engines, or snowmachines.

Based on the data presented in this chapter the impacts of non-Native settlement and institutions on traditional Dena'ina culture in the Lake Clark region have been numerous and varied. The most significant of these impacts may be summarized as follows:

1. centralization in permanent communities located with access to church, school, and trading establishments, with a concurrent decline in seasonal mobility and access to locally available subsistence resources;

2. an increased interest in and reliance on commercially produced goods which require some access to cash;

3. participation of Dena'ina men, and more recently women, in the Bristol Bay commercial fishery (both processing and fishing roles) as a source of cash necessary for purchasing goods;

4. until the decline of the world fur market, there was more of a concentrated emphasis on trapping furbearers (as opposed to hunting and fishing) because of the availability of fur buyers and the potential sale of furs for cash necessary for purchasing commercial goods;

5. intermarriage between non-Native settlers and Dena'ina (primarily non-Native men and Native women) and attendant cultural changes;

6. settlement of land previously used by the Dena'ina by non-Natives, both for purposes of providing a base of operation for resource extraction such as mining, hunting, and trapping, and more recently for recreational activities and permanent or seasonal residences;

7. organization and operation of western educational institutions which, while ostensibly preparing the Dena'ina for participation in the white socioeconomic society, promoted non-traditional values and world views and played a key role in restricting seasonal family movements related to subsistence;

8. introduction of intoxicating beverages to the Dena'ina, which has resulted in behavioral patterns contributing to social disruption in community settings;

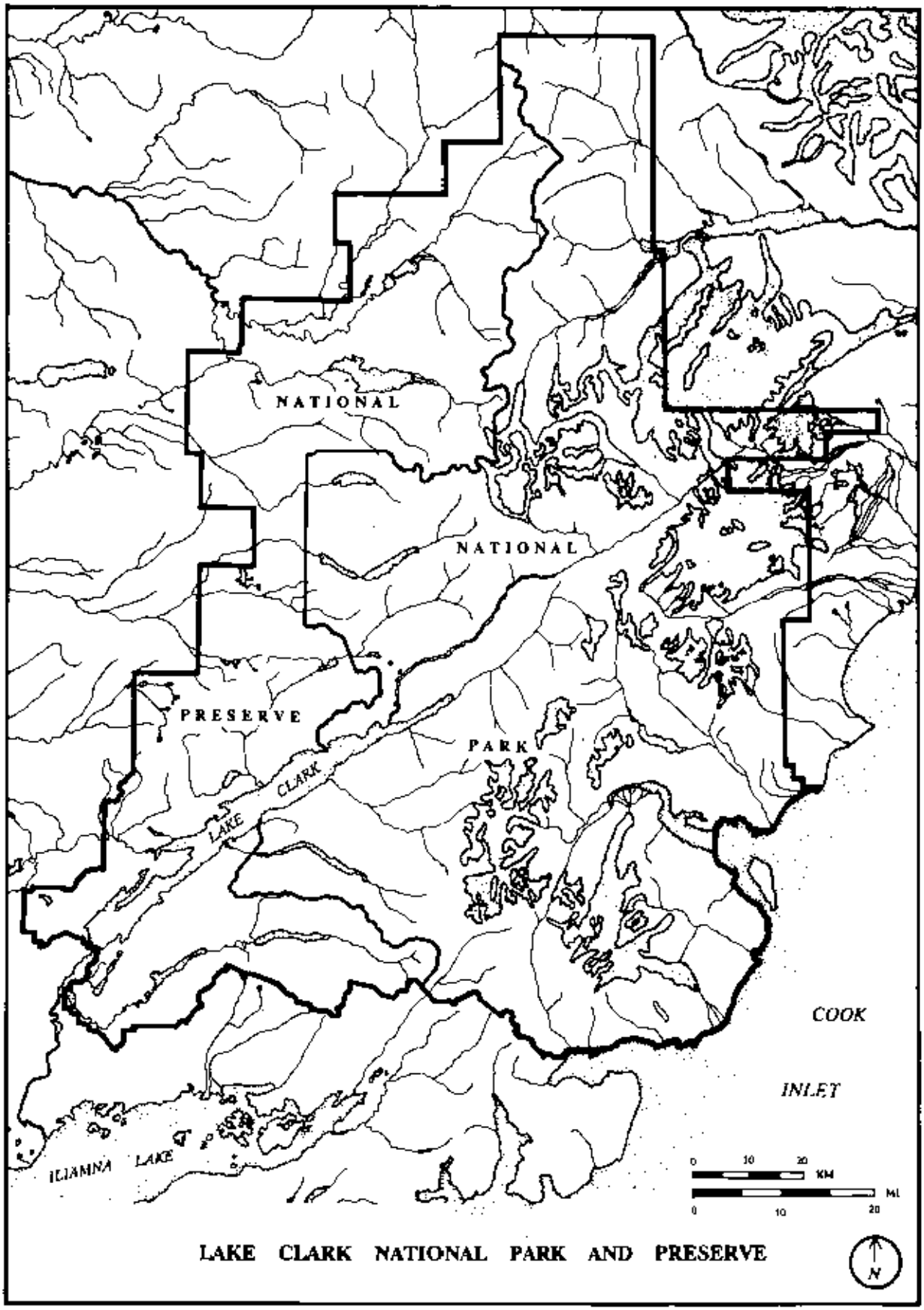
9. technological change associated with access to non-locally produced tools and economic practices, such as gardening, commercial fishing with power boats and nets, and professional hunt and fish guiding;

10. competition for access to land which has resulted in declining access to subsistence resources and traditional harvesting and processing sites;

11. an increase in cross-cultural contact at the interpersonal, community, and institutional levels; and

12. western governmental models and infrastructure have come to be used in the functioning of the local Native villages as communities.[106]

106. The material in these conclusions is adapted primarily from data in Homberger, "Overview of Historic Contact in the Lake Clark Study Area," pp. 63-65.



LAKE CLARK NATIONAL PARK AND PRESERVE

CHAPTER TEN

FEDERAL LEGISLATION AND LAND POLICIES AND THEIR IMPACT ON THE LAKE CLARK REGION DURING THE 1970s AND 1980s

INTRODUCTION

The purpose of this chapter is to provide an overview of the federal legislation and land policies for Alaska during the 1970s and 1980s and examine their impact on the Lake Clark region. The two principal pieces of federal legislation were Public Law 92-203, the Alaska Native Claims Settlement Act (ANCSA) of December 18, 1971 (85 Stat. 688) and Public Law 96-487, the Alaska National Interest Lands Conservation Act (ANILCA) of December 2, 1980 (94 Stat. 2371). In 1971 Congress passed ANCSA, thus setting in motion the process that would allot Alaska's land amongst its many claimants and changing Alaska from an almost wholly federal domain to a mix of federal, state, and private ownerships. As part of this process, the National Park Service and other federal conservation agencies were to recommend national interest lands, which Congress would consider for preservation as parks, forests, wildlife refuges, and wild rivers. This mandate triggered a massive response by the agencies, by conservationists and their opponents, and by Congress itself. It would take nine years before Congress passed ANILCA, thus resolving by legislation the issues raised by the national interest lands mandate and marking a major milestone in this nation's conservation and national parks movement. Both ANCSA and ANILCA would have far-reaching ramifications for landownership, utilization, and management in the Lake Clark region.[1]

ALASKA NATIVE CLAIMS SETTLEMENT ACT OF 1971

One of the questions that emerged in the debate over Alaska statehood was one that Congress had avoided for almost a century – what to do about the land claims of the Native peoples of Alaska. Because Natives were unorganized and most lived in small, isolated villages spread across Alaska the question of their rights in the land was not one that Congress dwelled on during the statehood debate. The statehood act gave the state authority to select some 103,000,000 acres of land to provide itself with a viable economic base, but the law included a provision merely reaffirming the right of Congress to settle the Alaska Natives' claims in the land:

> As a compact with the United States, said State and its people do agree and declare that they forever disclaim all right and title to any lands or other property not granted or confirmed to the state or the political subdivisions by or under the authority of this Act, the right or title to which is held by the United States or is subject to disposition by the United States, and to any lands or other property (including fishing rights), the right or title to which may be held by Indians, Eskimos, or Aleuts...or is held by the United States in trust for said Natives, shall be and remain under the absolute

1. The most comprehensive historical studies of ANCSA and ANILCA are: Robert D. Arnold, *et al. Alaska's Native Land Claims* (Anchorage, Alaska Native Foundation, 1976) and U.S. Department of the Interior, National Park Service, *Administrative History: The National Park Service and the Alaska National Interest Lands Conservation Act of 1980*, by G. Frank Williss, September 1985. A 22-volume legislative history of the Alaska National Interest Lands Conservation Act may be found in the Law Library at the U.S. Department of the Interior, Washington, D.C.

jurisdiction and control of the United States until disposed of under its authority, except to such extent as the Congress had prescribed or may hereafter prescribe, and except when held by individual Natives in fee without restrictions or alienation.[2]

This reservation of federal authority over settlement of Native claims to Alaska's lands and waters had little practical significance until after the discovery of oil at Prudhoe Bay in 1968. Before then, the state had begun to implement the statehood act's sweeping land grants by selecting some areas around existing settlements and other areas which seemed promising for agriculture, transportation, and minerals. But the prospect of further great oil and mineral developments, combined with a resurgence of Native self-assertion, brought significant developments. Pressed by suits filed by Native groups, Secretary of the Interior Stewart Udall in 1966 suspended all further public land transactions in Alaska pending resolution of the Natives' claims.[3]

Out of the resulting legislative process came the Alaska Native Claims Settlement Act, which was signed into law by President Richard M. Nixon on December 18, 1971. This landmark legislation was widely heralded as "the beginning of a great era for the Native people of Alaska."[4]

Congress held a similar view of the law as evidenced by a statement of policy which was made a part of the act. The settlement, according to Congress, should be accomplished:

- in conformity with the real economic and social needs of Natives...;
- with maximum participation by Natives in decisions affecting their rights and property;
- without establishing any permanent racially defined institutions, rights, privileges, or obligations; and
- without creating a reservation system or lengthy wardship or trusteeship.

Under the terms of the act Alaska Natives would receive fee simple title to 40,000,000 acres of land. Of this total, 22,000,000 acres were earmarked for selection by villages, and 16,000,000 acres would be selected by regional corporations on the basis of land area within their regions, rather than population. Native claims based on "aboriginal title" (including claims of hunting and fishing rights) to any additional lands in Alaska were extinguished, and existing reserves except for Annette Island, were revoked. The Native Allotment Act of 1906, under which a Native could secure title to 160 acres (in up to four separate tracts) of land which had been used and occupied, was revoked, but applications for allotments made before passage of the bill would be

2. Public Law 85-508, July 7, 1958.

3. U.S. Congress, House, Committee on Interior and Insular Affairs, *Alaska National Interest Lands Conservation Act of 1978: Report...to Accompany H.R. 39*, 95th Cong., 2d Sess., 1978, H. Rept. 95-1045, Part I, pp. 188-89. For more historical background on the natives' struggle to obtain rights in the land see Arnold, *et al., Alaska Native Land Claims*, pp. 93-144; Ernest Greuning, *The State of Alaska* (New York, Random House, 1968), pp. 355-81, 540-46; and William R. Hunt, *Alaska: A Bicentennial History* (New York and Nashville, W.W. Norton & Company, Inc., and American Association for State and Local History, 1976), pp. 153-66.

4. Quoted in Arnold, *et al., Alaska Native Land Claims*, pp. 146-47.

honored.[5] Compensation for claims extinguished was set at $962,500,000, a sum which would be paid into the Alaska Native Fund over a period of years.

All United States citizens with one-fourth or more Alaska Indian, Eskimo, or Aleut blood who were living when the settlement bill was enacted were qualified to participate, unless they were members of the Annette Island Reserve community of Metlakatla. Tsimshian Indians of that community had been granted a reserve by Congress in 1891, following their emigration from Canada.

Benefits under ANCSA would accrue to Natives through the modern form of business organization – a corporation. All eligible Natives were to become stockholders – part owners – of such corporations.

The first step for a Native to take to become a stockholder would be to enroll – to register his name, his community and region of permanent residence, and to prove that he was an Eskimo, Indian or Aleut as defined in the act. Based upon the region which he considered his permanent home, he would be enrolled and become a holder of 100 shares of stock in one of the 12 (ultimately 13) regional corporations to be established under the act.

Some eligible Natives would become stockholders only in regional corporations, because their permanent homes were away from villages certified to benefit from the act. They would be "at-large" stockholders. Other eligible Natives would be members of both regional and village corporations.

All eligible Native villages would be required to form corporations. Eligible villages were defined as communities half or more of whose population were Natives, having at least 25 Natives who were residents, and not being modern or urban in character. While more than 200 villages were listed in the act, some of them would not be eligible and others not in the list could be found eligible. Native land selections could be made in large areas around eligible villages, where public land was withdrawn for that purpose. These withdrawals generally covered a "core township" – an area six miles square within which the village was located.

The act provided that no rights or obligations of Natives as citizens, nor rights or obligations of the government towards Natives as citizens, would be replaced or diminished. The law, however, called for a study of federal programs affecting Natives to see whether changes of any kind should be considered. Within three years the Secretary of the Interior was to deliver recommendations to Congress regarding future operation and management of these programs.

A key part of ANCSA, Section 17(d)(2), authorized the Secretary of the Interior to withdraw up to 80,000,000 acres of land in Alaska for study to determine if these lands should be added to existing national parks or forests, wildlife refuges, or wild and scenic river systems. Following the study, the secretary would make recommendations regarding the lands to Congress.

A ten-member Joint Federal-State Land Use Planning Commission would be established to make recommendations concerning use or disposition of lands in Alaska. The commission's role would

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5. By April 1990 the status of native allotments in Lake Clark National Park and Preserve would include 29 certified parcels, 36 approved parcels, and 47 pending parcels. Further information relating to the native allotments may be found in the Native Allotment Case Files at the Bureau of Land Management in Anchorage.

be one of developing recommendations that would take into account the interests of various groups of people, such as Natives and other residents of Alaska, and the people of the nation as a whole.[6]

ANCSA was thus a "monumental and historic Act of Congress," because of its contributions to the settlement of Alaska Native land claims. Furthermore, its provision for "consideration of the national interest" in protecting the unmatched wildlife, natural, cultural, scenic, geologic, archaeologic, paleontologic, wilderness, and other values of the public lands" represented "one of the greatest legislative steps taken toward a comprehensive and coherent national land policy since the Northwest Ordinance."[7]

NATIVE CORPORATIONS OF THE LAKE CLARK REGION

Two of the regional Native corporations established under ANCSA's provisions that would file claims to lands within the present boundaries of Lake Clark National Park and Preserve were Cook Inlet Region, Inc., and the Bristol Bay Native Corporation. Cook Inlet Region, Inc., was the only regional corporation whose stockholders were, for the most part, residents of a large urban area. By the mid-1970s it had nearly 6,500 stockholders, most of whom lived within the 38,000-square-mile region. The largest number of the stockholders lived in the Anchorage area. The village of Tyonek, the only community on the west side of the inlet, had the largest number of stockholders (303) of any of the region's six village corporations.

The Bristol Bay Native Corporation had some 5,500 stockholders by the mid-1970s. Of this total about 3,300 lived in one of the 29 villages in the region. Total population in the 40,000-square-mile region was about 5,000. Dillingham, with 925 stockholders, was the largest of the village corporations and was the location of the regional corporation's office.[8]

By the late 1970s the two Native corporations had built up a considerable portfolio of assets. Cook Inlet Region, Inc., was one of six stockholders of Unicorp, Inc., an Alaskan bank holding company which owned United Bank Alaska that opened for business in Anchorage in 1976. Cook Inlet Region, along with five other Native regional corporations, established Alaska Consolidated Shipping, Inc., in 1976 to provide marine transportation for petroleum products to the "lower 48." The six Native corporations owned 51 percent of the company, while Seatrain Lines owned 49 percent and managed the concern. During 1978 Alaska Consolidated joined a consortium of Alaska Interstate and Barbour Oil to form the Alaska Petrochemical Company which obtained a contract for constructing a multi-million dollar petrochemical complex on the Kenai Peninsula. The regional corporation also owned Cook Inlet Properties, Inc., a subsidiary

6. *Ibid.*, pp. 146-65.

7. H. Rept. 95-1045, p. 189.

8. Arnold, *et al.*, *Alaska Native Land Claims*, pp. 178-80, 185-86. Further data on the operation and management of the Bristol Bay Native Corporation may be found in Bristol Bay Native Association, comp., *Bristol Bay: An Overall Economic Development Plan*, 1976, pp. 50-51; Rosita Worl, "BBNC's Approach to 1991: The People's Choice," *Alaska Native News Magazine*, III (March 1985), pp. 12-17; "The Shareholder Choice: BBNC's Approach to 1991," *Alaska Native News Magazine*, III (April 1985), pp. 20-23; "BBNC's Approach to 1991: The Shareholder Choice," *Alaska Native News Magazine*, III (May 1985), pp. 30-34; and "BBNC's Approach to 1991: The Shareholder Choice," *Alaska Native News Magazine*, III (June 1985), pp. 14-18.

that managed commercial real estate and hotel properties acquired by Cook Inlet Region, Inc., including motels, an office building, and a warehouse.

The nonprofit Cook Inlet Native Association provided Natives in the Cook Inlet region with necessary social and economic services totaling $6,500,000 in 1978. These programs included: (1) finance, (2) health services, (3) employment, training, and personnel services, and (4) youth opportunities and day care centers.

The Bristol Bay Native Corporation purchased Peter Pan Seafoods in 1975 and built a new plant at King Cove to process salmon, crab, bottomfish and salmon roe for marketing throughout the United States, Europe, and Asia. By 1978 the Native corporation owned the Anchorage Westward Hilton Hotel, approximately 24 percent of United Bank Alaska, and 8.5 percent of Alaska Consolidated Shipping, Inc.

The nonprofit Bristol Bay Native Association provided Natives in the region with a variety of employment, development, and social programs totaling more than $1,000,000 in 1978. These programs included government-sponsored CETA employment, fisheries enhancement, senior services, and development guidance.[9]

Within three years of passage of the settlement act, 216 local corporations had been organized in villages and cities and at other locations which Natives had identified as their permanent villages. Three of these local corporations were villages which would file land claims within the present park/preserve. The three villages were within the boundaries of the Bristol Bay Native Corporation. They included:

Village	Name of Corporation	1974 Enrollment
Iliamna	Iliamna Natives, Ltd.	75
Nondalton	Nondalton Native Corporation	253
Pedro Bay	Pedro Bay Corporation	105[10]

Under the terms of ANCSA the Native corporations would commence land selections in the Lake Clark region during the 1970s. For instance, the Nondalton Native Corporation, which was entitled to about 130,000 acres by ANCSA, began its land selections in 1971 and by October 1986 some 85 percent of those lands had been conveyed. At first the corporation selected lands for subsistence values, but during the next 15 years it began looking at lands for economic values. In 1984, the village corporation changed its name to Kijik Corporation. Charged with development of resources to return a profit for shareholders, Kijik planned development of the area's assets as a source of revenue. Although it owned the subsidiaries Nondalton Native Fuel Service and Northern Employee Leasing Corp., and once owned North Pacific Airlines, the renamed corporation considered land holdings its strongest potential source of revenue. By the

9. U.S. Department of the Interior, Bureau of Indian Affairs, *Alaska Natives Regional Profiles*, Report No. 209, Prepared for Alaska Federation of Natives Inc., ca. 1978, pp. 5-1 to 5-11 and 7-1 to 7-8.

10. Arnold, *et al.*, *Alaska Native Land Claims*, pp. 196-201,331-33.

mid-1980s it had developed plans for a recreational and residential development on Keyes Point, a peninsula extending into Lake Clark. The proposed development promised to have significant impacts on the resource values of the lake and surrounding region.[11]

LAND WITHDRAWALS UNDER ANCSA IN THE LAKE CLARK REGION: 1973

Although the title of the settlement act made plain that its subject was land for Natives, it also provided for land or rights to land to a much larger group of people – the American public. The act provided for selection of "national interest lands" and classification of others on behalf of the public. It provided a means – easements – for assuring rights of limited access for the public across Native lands. The act also required village corporations to convey some of their land to municipalities for growth and expansion.

The act directed the Secretary of the Interior to withdraw from all forms of appropriation up to 80,000,000 acres of public lands in Alaska for possible additions to the national park, national forest, national wildlife refuge, and national wild and scenic rivers systems. The secretary made his recommendations on potential additions to the systems on December 18, 1973, and Congress gave itself until December 18, 1978, to consider and act on the proposals. In addition to Alaskan lands withdrawn for possible inclusion in the four conservation area systems, the secretary also withdrew lands for possible selection by Native groups, the state of Alaska, and for additional federal study.[12]

Of the land withdrawals made by the Secretary of the Interior in December 1973 some 83,000,000 acres were for possible designation as national parks, forests, wildlife refuges, and wild and scenic rivers. Because the withdrawals for "national native lands" were made under Section 17(d)(2) of the settlement act, they were referred to as "(d)(2) lands." The recommendations consisted of 28 separate proposals, including three new national parks, four national monuments, one national river, one national reserve, nine national wildlife refuges, and additions to existing systems.[13]

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11. Judith Fuerst, "Kijik's Keyes to Profit," *Alaska Business Monthly*, October 1986 (Reprint, 1986). Copy on file in Cultural Resources Division, Alaska Regional Office, National Park Service.

12. U.S. Department of the Interior, Alaska Planning Group, *Final Environmental Statement, Proposed Lake Clark National Park, Alaska*, 1975, p. 14. See Appendix H for brief descriptions of the various land classifications related to the secretary's land withdrawals.

13. U.S. Department of the Interior, National Park Service, *Administrative History: National Park Service and Alaska National Interest Lands Conservation Act*, pp. 142-43.

PROPOSAL FOR A LAKE CLARK NATIONAL PARK: 1973

One of the proposals of the Secretary of the Interior in December 1973 was for establishment of a Lake Clark National Park of approximately 2,610,000 acres. In the Lake Clark proposal submitted to Congress the secretary stated:

> In the areas proposed for a national park, numerous valleys weave through a jumble of mountains. There is a maze of natural hiking routes, which permit surprisingly easy entrance to a spectacular mountain environment. The park encompasses still-smoking volcanoes, spectacular spires, and glaciers.
>
> The park includes a portion of the Cook Inlet coastline, which ranges from gentle alluvial shapes in the north to deeply incised, spruce-covered coastal hills in the south.
>
> Waterfowl, seabirds, trout, bear, moose, sheep and marine animals can be found in the park. Plant communities range from coastal spruce and marsh to alpine meadows and lichen growth at high elevations....
>
> Developments in the park will be located to maintain the ecological and scenic integrity of the area. The area will be managed as a natural area with the objective of preserving its scenic beauty, wilderness attributes, areas of scientific interest and plant and animal life.[14]

The Park Service, in a draft master plan prepared at the time of the proposal, justified its recommendation for park establishment by asserting that the Lake Clark region possessed "wildly diverse resources containing splendid examples of Alaska's finest natural values."[15]

Although various legislative proposals and administrative recommendations for a National Park Service unit in the Lake Clark region would be offered in succeeding years, the December 1973 proposal was the culmination of more than a decade of endeavor to place a portion of the area in the National Park System. While the various park proposals for Lake Clark would recommend a wide array of acreages and land management classifications and policies, the December 1973 proposal set the framework for future debates concerning its inclusion in the National Park System.[16]

The National Park Service had been studying the Lake Clark region for possible addition to the National Park System since the late 1950s. In 1964 the *Parks For America* report recommended that further study be given to a proposal to establish a 330,000-acre Lake Clark Pass National

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14. *Congressional Record*, Senate, January 30, 1974, pp. 1316-17.

15. U.S. Department of the Interior, National Park Service, Alaska Planning Group, *Lake Clark National Park, Alaska, Master Plan*, December 1973, p. 1.

16. See, for instance, Federal-State Land Use Planning Commission for Alaska, *'The D-2 Book,' Lands of National Interest In Alaska*, May 1977, p. 184.

Park.[17] Later, in January 1965, the Park Service's *Alaskan Task Force Report: Operation Great Land,* assessed the significance and values of the Merrill Pass and Lake Clark Pass "zone"which covered an area approximately 175 miles long and 75 miles wide. The study recommended the region for inclusion in the National Park System by noting:

> Merrill Pass and Lake Clark Pass are two popular and highly important passes used by small aircraft in crossing the north end of the Aleutian Range. Precipitous mountains, spectacular glaciers, snowfields, waterfalls and land forms viewed from aircraft flying through either pass are probably unmatched in beauty elsewhere in Alaska. Twenty four glaciers supposedly occur in a distance of 24 miles in Lake Clark Pass.[18]

After further study of the secretary's December 1973 Lake Clark proposal the Park Service developed an initial three-fold purpose statement for the park. The purposes were:

1. To preserve a highly scenic area at the head of the Alaska Peninsula containing glaciers, lakes, passes, waterfalls, high mountain peaks, and associated biological, geological, and cultural resource values, and to provide for public use and benefit of those resources in ways that will protect the watershed required for perpetuation to the internationally important sockeye (red) salmon fishery resource.

2. To provide avenues for involvement of Natives of the region in the management and operation of the national park, with special emphasis on Native involvement in visitor services.

3. To enter into cooperative agreements which will be mutually beneficial to park and outside interests.

In addition to the lands and waters recommended for inclusion within the national park six areas of ecological concern relating to park resources were identified. These areas were adjacent to the park and contained resources, which, if compromised, would endanger resources within the proposal area. The six areas were:

1. Approximately 40,000 acres of Cook Inlet region Native village deficiency land and the Tuxedni Bay National Wildlife Refuge along the eastern side of the proposal in Cook Inlet. These lands are important sea bird nesting areas and valuable for marine mammal habitat.

2. Approximately 345,000 acres of Cook Inlet region Native village deficiency and regional deficiency lands in the vicinity of the Iniskin Peninsula and the upper Pile River watershed, which are key areas for recreation, access, and development.

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17. U.S. Department of the Interior, National Park Service, *Parks For America: A Survey of Park and Related Resources in the Fifty States, and a Preliminary Plan,* 1964, pp. 347, 350.

18. U.S. Department of the Interior, National Park Service, *Alaska Task Force Report: Operation Great Land,* January 1965, p. 36.

3. Approximately 1,450,000 acres of Bristol Bay and Cook Inlet Native regional and village deficiency land, d-1, and State selection pending lands. This contains the lower end of Lake Clark and its many resources, Kijik Lake salmon spawning waters, Port Alsworth, development potential, archeological sites, caribou range, and scenic foregrounds.

4. Approximately 391,000 acres of State selected (pending) lands adjacent to the northwest corner of the proposal relating to watershed protection in the Stony River watershed.

5. Approximately 1,357,000 acres of regional deficiency, d-1, and State patent lands surrounding Chakachamna Lake. This lake is a key access point to the area. Scenic attractions include the volcano Mt. Spurr and Blockade Lake, plus numerous mountains and glaciers.

6. Approximately 100,000 acres of State lands on Redoubt Bay that are scenic forelands to the park proposal.[19]

The proposal for Lake Clark National Park promised to have a significant impact on the resources of the lake region as well as on the socioeconomic and cultural environment of the local area. Ecosystems, landscapes, and water quality would be protected, and the preservation aspects of the proposal would have ramifications for subsistence use, sport hunting, mining, and other extractive uses, as well as transportation and utility corridors as proposed by the state. Socioeconomic impacts and change would also be felt by the communities in the Lake Clark area villages which already reflected "a blending of traditional and Western values and patterns." The principal social impacts, according to the *Final Environmental Statement* on the proposal, would

> flow from increased travel to the area by tourists, outdoor recreation users, and sportsmen. The villages serving as park headquarters and access points would experience increasing contacts with "outsiders." Some people at the local level might resent such intrusions, especially if they interfered with existing social and economic pursuits. The manner in which the park proposal is implemented would have an important bearing on whether the social impacts would be positive or negative. Local people, including regional Native groups, would be involved in cooperative agreements with the National Park Service and would have the option to provide services and facilities to park visitors which bring added employment and cash income to local people. This added income would minimize disparities between local people and entrepreneurs from outside the area. Adverse social impacts for local residents could develop if the new economic opportunities attendant on park establishment and operation attract a significant number of entrepreneurs from outside the area, to the

19. U.S. Department of the Interior, National Park Service, Alaska Planning Group, *Proposed Lake Clark National Park, Alaska, Draft Environmental Impact Statement, DES 73-89*, December 1973, pp. 2-5, 13-15. See the following pages for boundary and land status maps of the proposed park, and see Appendix 1 for brief descriptions of the various land withdrawal classifications related to the secretary's 1973 proposals.

exclusion of local residents, or if sport hunters are not restrained from unfair hunting practices.[20]

Another proposal submitted by the Secretary of the Interior in December 1973 was establishment of a 2,850,000-acre Iliamna National Resource Range. The area would be added to the National Wildlife Refuge System and managed jointly by the Bureau of Sport Fisheries and Wildlife and Bureau of Land Management. The area would be established to protect "the nationally and internationally significant fish and wildlife resources of the range." The proposal included the southern portion of present-day Lake Clark National Park and Preserve and extended south all the way to Kukaklek Lake.[21]

SUBSISTENCE CONCERNS IN THE LAKE CLARK REGION DURING THE 1970s

Although management policies for different parts of the national interest lands systems varied, Alaska Natives were aware that restrictions were often placed on activities within those land management units. In part because of such restrictions, the State of Alaska and private development interests complained that too much land would be removed from possible development by the national interest withdrawals. Of greater concern to Native village Alaskans, however, was the possible impact of the establishment of the national public land systems upon subsistence use.

Concern over subsistence was greatest with regard to the nearly 63,000,000 acres proposed as additions to the national park and national wildlife refuge systems. These proposals provided for continuation of subsistence activities, but also for their possible curtailment. The proposals for these areas stated in part:

> Except as otherwise prohibited by state or federal law, subsistence uses of fish, wildlife and plant resources will continue within the areas added to existing park system units or established as new units, to the extent that such uses were in effect on the date of enactment of ANCSA, unless the Secretary finds that such uses would materially and negatively affect the fish, wildlife or plant resources of such areas. The Secretary may prescribe conditions under which subsistence uses shall be conducted, and may prohibit takings altogether. Regulations on subsistence uses are to be promulgated after consultation with the appropriate fish and game agency of the state.[22]

Further, the proposals permitted the restriction of subsistence uses if they threatened "a progressive reduction of animal or plant resources which could lead to long-range alterations of

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20. U.S. Department of the Interior, National Park Service, *Final Environmental Statement, Proposed Lake Clark National Park*, 1975, p. 125.

21. *Congressional Record*, Senate, January 30, 1974, p. 1318.

22. *Congressional Record*, Senate, January 30, 1974, p. 1315.

ecosystems." These provisions proved worrisome to Natives who continued to rely upon the land for subsistence.[23]

Natives in the Lake Clark region voiced their concerns about subsistence on "d-2 lands" during the 1970s as Congress considered its response to the secretary's December 1973 withdrawals. On December 2, 1975, for instance, Andrew Golia, an economic planner representing Bristol Bay Natives, appeared before a congressional committee at Dillingham:

> There are twenty-nine villages in Bristol Bay. The majority of them live within a subsistent economy. There are a few jobs available within these villages. If their subsistence activities are terminated, they will have no resource but to seek the world of food stamps and welfare lines. We people of Bristol Bay are proud people. We do not want the world of food stamps and welfare lines to face us.
>
> Please remember that our forefathers have fished and hunted upon the designated D-2 lands for generations and generations. Their subsistence activities have laid a foundation to our heritage and culture. Their subsistent activities have given us methods of survival on this land. It has taught us a community feeling that is increasingly needed today. Thus, if we are denied the right to subsist on D-2 lands, we will be losing an integral part of ourselves. Give us the right to keep it vital among us.[24]

Later in April 27, 1977, the members of the Nondalton Village Council addressed an appeal to Representative John F. Seiberling, Chairman of the House Subcommittee on General Oversight and Alaska Lands. Voicing sentiments similar to those of Golia the council stated:

> The people of Nondalton are greatly concerned about D-2 lands in the Lake Clark area. Our main concern is that the land should not be disturbed, and also that our use of the land and the game should not be restricted in the future.
>
> Our people are not used to dealing with government agencies and we are not used to having restrictions placed upon the activities we have always done. We hope that laws are not passed which we will have to break, or that will destroy us the way the Indians in the lower 48 were destroyed. The land and the game are important to us in many ways and we should not be cut off from them.

The Nondalton Village Council drew up a petition and submitted it to Seiberling. It noted that (1) the people of the village utilized moose, caribou, sheep, bear, fish, berries, timber and other resources on the "d-2 lands" in the Lake Clark region; (2) those lands were part of the traditional hunting grounds of the Nondalton Dena'ina; and (3) subsistence activities were economically important to them and were an important part of their way of life and cultural heritage. Thus, they petitioned Congress to establish a management system for the "d-2 lands" in their region which would (1) guarantee their continued right to make use of the land and resources; (2) give

23. Arnold, *et al., Alaska Native Land Claims,* pp. 268-69.

24. Bristol Bay Native Association, *Bristol Bay: An Overall Economic Development Plan,* p. 67.

local residents priority in the use of the resources; (3) provide protection to the fish and game they utilized; and (4) involve them directly in planning and decisions affecting the lands and resources.[25]

Because of the Natives' concerns relating to subsistence issues, the Department of the Interior collected considerable data on traditional uses and the impact of the withdrawals on those activities. At Lake Clark it was found that residents of the nearby largely Native communities of Nondalton, Newhalen, Iliamna, and Pedro Bay engaged in such harvest activities for personal use in areas to the south and southwest, beyond the proposal boundaries. In addition, a number of whites residing at Port Alsworth and along Lake Clark followed subsistence lifestyles and relied on harvest of local resources for food and fuel. Changes in availability of food resources over the years, however, could shift the focus of subsistence activities into the proposal area.

The types of subsistence uses indicated that during the early 1970s residents of the aforementioned communities hunted for caribou, moose, small game, and waterfowl and land birds, and fished for salmon as well as other species. Trapping of furbearers, including fox, beaver, land otter, mink, wolverine, lynx, and bear, occurred. A portion of the furs taken was traded or sold for cash. Gathering of wild plants and berries added an important dietary supplement.

Based on surveys of the four Native villages in the vicinity of the Lake Clark proposal in 1974, it was found that 45 percent of the households relied on locally harvested game animals for 50 percent or more of their meat requirements. Ninety-three percent of the households surveyed relied on locally harvested fish resources for 75 percent or more of their fish requirements.

While complete information on where subsistence harvests occurred was not available, it was found that Nondalton people hunted in the Chulitna River Valley, southwest of the proposal, and around Lake Clark. Together with people from the upper Nushagak River villages, the Nondalton Natives hunted and trapped in the Mulchatna River basin farther west. Subsistence fishing for salmon, Dolly Varden, and brook trout was carried on at Lake Clark, Sixmile Lake, the upper Newhalen River, and other streams in the vicinity of Nondalton. Pike were taken in the Chulitna River. In some years it was necessary for people to travel north into the proposal area to find needed wildlife resources.

The surveys of the four villages provided data on the numbers of animals of each species that were harvested in 1973. These included:

25. Members of Nondalton Village Council to John F. Seiberling, Chairman, Subcommittee on General Oversight and Alaska Lands, April 27, 1977 (and accompanying petition), File-"Lake Clark National Park and Preserve," Harry Crandell Papers, Western History Department, Denver Public Library, Denver, Colorado.

	Total Harvest by Interviewed Household	No. Interviewed Households that Harvested
Moose	42	27
Caribou	128	27
Small Game	706	36
Ptarmigan (spruce hen)	1,853	37
Sea Mammals (seals)	2	2
Waterfowl	464	24
Salmon	22,245	41
Other Fish	7,385	42
Black/brown bear	17	11
Fox	333	17
Beaver	147	13
Land Otter	24	7
Mink	64	7
Wolverine	18	3
Lynx	7	3
Other	2	2

Surveys also collected data on the methods of harvesting practiced by subsistence users. Fall fishing was conducted with gill nets set along the shores of Lake Clark, Sixmile Lake, and the upper Newhalen River. Fish were filleted and dried, with a large percentage used for dog food. Fish for human consumption were most often smoked, but some were salted. Salmon which had already spawned were dried and eaten as *noodlevi*. Smaller mesh nets were used to harvest dolly varden, usually down the Newhalen River. Rainbow trout were caught with nets and hand lines near the mouths of spawning streams, especially on the Tazimina River and at Igiugig. Tiny brook trout were caught in creeks with hand lines in summer. White fish were taken with set nets and hand lines in both summer and winter. Fishing during the winter and early spring was done through holes in the ice made for nets or hand lines. Burbot were caught in winter with nets or hooks and lines. For hunting skiffs were used along the Chulitna River and the shores of Lake Clark. In winter snowmobiles were employed, but occasionally dog teams were still used.[26]

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26. "Proposed Lake Clark National Park/Preserve, Subsistence Use Area," ca. 1976, pp. 1-4, in RG 79, File-"Legislative Support Data, Proposed Lake Clark National Park, Alaska." Box Accession No. 079-83E0007, Alaska Task Force Legislative Support Data, National Archives and Records Administration, Federal Records Center, Seattle. Further information on subsistence in the Lake Clark-Iliamna Lake region during the 1970s may be found in Van Horne, *The Lake Clark Area, Volume I: Planning For People, Wildlife, and the Land*, pp. 45-47; Lael Morgan, "The Lakes: Magnificent Gap on the Map," *Alaska*, XLIV (February 1978), pp. 38-41, 88-92; Alaska Department of Fish and Game, Division of Sport Fish and National Park Service, *A Fisheries Inventory of Waters in the Lake Clark National Monument Area*, pp. 26-27, 114-15; Steven R. Behnke, *Background: Iliamna-Newhalen Subsistence Salmon Fishery, Technical Paper Number 44* (Dillingham, Alaska Department of Fish and Game, Division of Subsistence, December 10, 1981), pp 1-10; and Steven R. Braund, *Cook Inlet Subsistence Salmon Fishery, Technical Paper Number 54* (Anchorage, Alaska Department of Fish and Game, Division of Subsistence, December 1980 [Revised November 1982]), pp. 2-35, 79-80.

The impacts of the Interior department's proposals on subsistence use were analyzed during the mid-1970s. In 1975, for instance, the department's *Final Environmental Statement* on the Lake Clark proposal stated:

> The exact areas in which the hunting activity occurs have not been delineated, but it is thought to be confined to lands around the villages, within a radius of approximately 50 miles. There are 20 Native allotment applications within the proposal boundaries, and an additional 35 in the surrounding area of ecological concern, mostly concentrated around the shores of Lake Clark. These lands are probably used by the local residents for both subsistence and recreational pursuits.
>
> Some conflicts between local subsistence users and sportsmen are occurring in the lower portions of the Newhalen River, and possibly elsewhere, in the harvest of fish. Any increase in sport hunting and fishing by visitors from outside the area could, therefore, have an adverse impact on the subsistence pursuits of the local people. In view of the fact that subsistence pursuits within the proposal area are considered to be minimal, except in the areas around Lake Clark itself, the impacts of permitting sport hunting and fishing to continue probably would not be significant on subsistence harvest levels, although local residents might resent the intrusions upon village and subsistence activities. Improved access to other fishing waters in the proposal area could relieve some of the sport fishing pressures from waters used by subsistence fishermen....
>
> In the long run, protection accorded to wildlife habitat and populations, and to all subsistence resources, and the special recognition of traditional and existing subsistence lifestyles provided by this proposal would have a significant impact in maintaining future options for residents to continue to engage in a subsistence lifestyle.[27]

To better understand the impact of the Lake Clark National Park proposal on resource and subsistence use of the region, Steven R. Behnke of the Cooperative Park Studies Unit at the University of Alaska, Fairbanks, was commissioned to conduct a comprehensive study of the issue during 1976-77. In his report, published in 1978, he noted that a "wide variety of fish, game and other local resources are harvested by the approximately 230 residents of Nondalton and Lake Clark." (See the following page for a chart of the harvests of major species in the proposed Lake Clark National Park area during 1966-76). Many of their harvest activities occurred within the Lake Clark proposal. These activities were important to people who lived in the area, because there were few year-round employment opportunities. While most wage income was seasonal, local fish and game resources provided employment and food throughout the year.

Local resource utilization had more than merely economic value to the people of Lake Clark and Nondalton. Behnke discussed the socio-cultural significance of subsistence to the residents of the area, noting that its importance was "considerable":

> Use of the land and wildlife for subsistence is an important part of the cultural fabric of both Dena'ina and "white" ways of life in the Lake Clark area. Much of the history

27. U.S. Department of the Interior, Alaska Planning Group, *Final Environmental Statement, Proposed Lake Clark National Park, Alaska*, 1975, pp. 117-18.

HARVESTS OF MAJOR SPECIES IN THE LAKE CLARK NATIONAL PARK PROPOSAL AND AREA OF ECOLOGICAL CONCERN

SPECIES	Estimated Annual Averages 1966-1976		
Moose	25	-	30
Caribou	75	-	125
Black Bear	10	-	12
Grizzly	1	-	3
Sheep	0	-	3
Hares	200	-	300
Porcupine	100	-	125
Ptarmigan	500	-	600
Spruce Hen	100	-	150
Beaver	58	-	200
Muskrat	10	-	50
Land Otter	10	-	20
Mink	10	-	50
Marten	5	-	50
Wolverine	2	-	5
Wolf	1	-	3
Fox	50	-	200
Lynx	5	-	30
Ground Squirrel	5	-	15
Ducks	100	-	200
Geese	40	-	50
Salmon	8,000	-	30,000
Whitefish	800	-	1,000
Pike	300	-	400
Grayling	1,500	-	2,000
Char	50	-	100
Rainbow	150	-	200
Lake Trout	500	-	750

Source: Steven R. Behnke, *Resource Use and Subsistence in the Vicinity of the Proposed Lake Clark National Park, Alaska and Additions to Katmai National Monument*, CPSU Occasional Paper No. 15 (Fairbanks, University of Alaska, October 1978), 91.

and cultural heritage of the people of Nondalton is related to subsistence activities and lands in the Lake Clark proposal. This is reflected in language, stories, place names, and people's memories of the past. The land around Lake Clark is alive to the Nondalton Dena'ina through their hunting and trapping experiences and through the stories and place names which pass along the accumulated history and environmental knowledge of the Dena'ina. It is through present subsistence activities that these things are remembered, reinforced, and passed on to succeeding generations.

The Lake Clark proposal includes a large area which is of particular cultural significance to the people of Nondalton. Most of the adults on Nondalton grew up in it, have relatives buried there, and have continued to make use of the area. Certain sites have combined economic and cultural importance, such as the Kijik area, which is not only the site of a major 19th century Dena'ina settlement and graveyard, but also a major area for gathering fall salmon, and for hunting brown bear.....

To white residents of the area, subsistence activities and resources have meanings of their own. The American pioneer heritage and its Alaskan version include a high valuation of hunting and the use of wildlife for food. Among Lake Clark residents there is an element of "back-to-the-land" thinking, valuing individualism and self-sufficiency. The use of local resources for subsistence fits neatly into these concepts and lifestyles. Some elements of subsistence living, such as methods of putting up smoked fish, have been adopted from Natives, while others have come from the whole spectrum of American pioneer heritage.

Behnke observed that the western portion of the various proposals for a Lake Clark National Park area included the traditional territory of the Dena'ina whose descendants lived in Lime Village and Nondalton. This area encompassed lands stretching from Stony River south to Lake Clark, down to Nondalton, over the Mulchatna River, and back to the Stony. Most of this area had been utilized for subsistence purposes by the residents of these communities for several centuries. The residents of these villages recognized that the distribution and abundance of fish and wildlife resources had fluctuated in the past, and they considered the western parts of the proposal as important reserves for times when they could not obtain resources closer to their villages.

Much of the park proposal, particularly the rugged mountainous portion, was not utilized presently for resource harvest by local residents. However, residents did make considerable use of other sections. Lake Clark and other portions of the proposal were important to residents who engaged in trapping, hunting, and fishing. Portions of the proposal were more accessible than areas north of Nondalton, and it had fairly good populations of lynx, which were then bringing good prices. Some areas of the proposal were lightly exploited, and thus provided good trapping and hunting opportunities.

Firewood and building materials were harvested around Lake Clark. They were an important economic resource to residents of the lake, and to Nondalton people with cabins and camps near the lake. There were few alternative sources available, since the best stands of accessible spruce and birch in the region were included in the park proposal.

Behnke concluded his study with "some speculations" regarding the impact of subsistence activities on possible future Park Service management in the Lake Clark region. Among other things, he noted:

> Most of the Lake Clark proposals recommend that sport hunting continue to be allowed in at least portions of the area....At present, for certain species, particularly moose, caribou and sheep, sport hunting exceeds subsistence hunting by several-fold in the region.
>
> If legislation enacting a park in the Lake Clark area authorizes "traditional subsistence uses," either with or without a clause limiting these to 1971 levels, a number of uses made by the people of Nondalton and Lake Clark of the proposal area will probably qualify. The most significant of these in terms of harvest, include moose, black bear and small game hunting, several types of fishing, trapping, berrying, and woodcutting around the shores of Lake Clark. Trapping, some moose and caribou hunting, and other activities incidental to trapping occur throughout a much larger area of the proposal. A few specialized activities, important more for their cultural associations than for their economic significance, also occur in the proposal, including brown bear and sheep hunting....
>
> The use of firearms, is of course, a necessary part of many harvest activities and there is the potential here for conflict with non-consumptive resource users, as well as questions of safety. Wood-cutting also presents a potential for conflict, since areas around the lakes and rivers, most desirable for recreational uses, are also the areas where local residents cut wood for camping, cabin construction, and for residential heating. In some cases such subsistence uses can have considerable impact upon vegetation. Park planning and regulations including zoning of activities in time and space, could prevent such conflicts.[28]

COOK INLET LANDS AND THE LAKE CLARK PARK PROPOSAL

During the mid-1970s controversy over Cook Inlet lands in the Lake Clark proposal led to litigation and ultimately a three-way land exchange between the Department of the Interior, State of Alaska, and Cook Inlet Region, Inc.[29] As a result of the land settlement, Lake Clark was effectively "nailed down" as a park unit, and the NPS adopted the concept of a "preserve" as a solution to the thorny problem of sport hunting, snow machines, and mining operations, and other types of activities not normally permitted in a national park. Thus, issues relating to the Lake Clark proposal would not only have consequences for landownership and utilization in the lake region but also have significant impact on subsequent discussions leading toward passage of ANILCA in 1980.

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28. Behnke, *Resource Use and Subsistence In the Vicinity of the Proposed Lake Clark National Park*, pp. 1-3, 84-106.

29. Unless otherwise noted, material in this section is derived from U.S. Department of the Interior, National Park Service, *Administrative History: National Park Service and the Alaska National Interest Lands Conservation Act*, pp. 162-68.

Frustrated by the lack of legislative progress on the secretary's December 1973 proposals and prompted by developments in the long-simmering Cook Inlet controversy over land claims, some NPS officials decided in late 1975 that one way of moving a larger Alaska bill might be to attempt to secure passage of legislation that provided for establishment of one or more areas. If Congress could be convinced to act at all, it might be prodded to take action on a larger package.

The Cook Inlet episode was a microcosm of the larger struggle over Alaska's lands, involving conflicting claims over the land, differences in interpretation of ANCSA, lawsuits, and the negotiated resolution of complex issues. The question at Cook Inlet revolved around the meaning of "lands of character similar" (deficiency lands), which were to be withdrawn for regional and village selection when lands in the immediate area were inadequate. In the Cook Inlet region, patterns of previous state selections and federal withdrawals prevented full entitlement.

The controversy had begun in 1972 when the Department of the Interior included a total of 209 townships (approximately 4,815,360 acres) to meet deficiency requirements in the 38,000 square-mile Cook Inlet region, some 1,100,000 of which were in the proposed Lake Clark National Park. While the Natives did not quarrel over the amount of land, they argued that only 691,000 acres of the withdrawal land fulfilled the requirements of "character similar," and "proximity," the rest being "mountainous or glacial." To resolve the issue, Cook Inlet Region, Inc. (CIRI) filed suit on March 21, 1973.

Although the Native corporation lost its case in the U.S. District Court, it appealed the decision, an action that could potentially have prevented congressional consideration of the areas involved for several years. In an effort to reach an out-of-court settlement representatives of the Department of the Interior began negotiations with the Natives and the state in April 1975. By December the negotiators had hammered out a three-way land exchange. Incorporated in Public Law 94-204, enacted on January 2, 1976, the Cook Inlet settlement gave the Natives land in several areas, including the Beluga coal fields north of Tyonek, selected parcels in the Kenai National Moose Range, and a "roughly two township strip along the west shoreline of Cook Inlet between the lower edge of Kamishak Bay and Harriet Point to the north of Tuxedni Bay." It also gave CIRI the right to develop a mining project on the Johnson River in the proposed Lake Clark National Park, and first right to concession operations in the park. The state received lands in the Talkeetna Mountains, in a d-2 area west of Iliamna Lake, and the Campbell airstrip tract in Anchorage.[30]

The agreement served to "purify" the Lake Clark proposal, removing some inholdings and freeing 750,000 acres on the south side, including the southern portion of Lake Clark and the Chinitna Peninsula, for possible inclusion in the park. By doing so it effectively secured Lake Clark as a unit of the National Park System. Equally important, Cook Inlet Region, Inc., agreed to support publicly the creation of a national park area at Lake Clark. Moreover, the agreement bolstered

30. Public Law 94-204, January 2, 1976. Section 12(g) authorized the preparation and implementation of a land use plan for lands on the west side of Cook Inlet. This study was completed in September 1982. Department of the Interior, National Park Service, *A Land Use Study and Plan of Native Village and Regional Corporation Lands On the West Side of Cook Inlet, Alaska*, by Charles Gilbert with Joan Hirschman and Carolyn Elder Brown, September 1982.

the Natives' confidence in the Park Service's intentions in Alaska, something that would be of increasing importance during the succeeding years.

Following the land settlement, the Park Service reevaluated its earlier proposals for the Lake Clark region. Planners postulated one solution to the particularly thorny problem of sport hunting – adoption of the newly established "preserve" parkland category. The concept of a "preserve" – an area set aside to protect resources while allowing activities such as hunting, fishing, and mining as long as those activities did not threaten the natural values – was not new. As early as 1958 the Park Service had proposed a list of preserves, and in 1969 Gates of the Arctic had been recommended for establishment as the first NPS preserve. In 1974 staff members of the Senate Interior Committee suggested using in Alaska the national preserve category which had been first used at Big Thicket, Texas, and Big Cypress, Florida, the year before.

The NPS Alaska Task Force planners were aware of that suggestion when they received instructions in January 1976 to study alternative management approaches to the Lake Clark area. After considering a variety of possibilities the group recommended a combination Lake Clark National Park of 1,800,000 acres, with a 1,800,000-acre national preserve encircling the western portion of the "core park." In the January 20, 1976, alternative study the task force discussed the rationale behind its recommendation:

> Although the resources of the entire Lake Clark area certainly meet the criteria for a national park...certain encumbrances and uses exist in a portion of the area which detracts from the basic purpose of a national park; preservation, protection, and public enjoyment. For this reason, the Alaska Task Force recommends national park designation for the portion that is free of detracting encumbrances and uses, and national preserve designation for the remainder of the nationally significant area. The two units are complementary to one another and both form a cohesive nationally significant area which cannot be reasonably further sub-divided. Moreover, one cannot exist without the other.

The national park unit would encompass the central and eastern mountains and some portions of the western foothill lakes area. The park would contain "essentially unencumbered landforms and biota free of adverse uses." Key management policies in the park area would include:

1. Sport hunting and subsistence use would not be permitted within this unit, providing an opportunity for the national visitor to observe and photograph unhunted wildlife populations.
2. No new entry mineral or other resource extraction would be permitted, perpetuating the superb scenery.
3. Village selections under ANCSA would be traded out or acquired with the consent of the villages. Condemnation would be suspended for these particular acquisitions in accordance with existing agreements.
4. All other private property within the national park unit would be traded for comparable sites within the national preserve or outside the proposal area altogether. In lieu of trade, a private inholding could be acquired outright.
5. Motorized land vehicles would be prohibited.

6. Minor facility development for visitor use and administration.

The national preserve portion would encircle the west side of the park unit and include Lake Clark, the western foothills region, and the area along the Cook Inlet coast south of the park. The preserve designation provided management flexibility, particularly with regard to activities traditionally prohibited in national parks. Yet the preserve concept would ensure that appropriate regulations were promulgated to provide for "the perpetuation of the nationally significant resources and public enjoyment of the area."

The task force discussed its reasons for proposing the national preserve designation in its alternative study. These included the fact that

> recent amendments to ANCSA provide for the mining of portions of two townships in the Johnson River area, and additional valid mining claims exist in the Kontrashibuna watershed. Also, a number of valid native allotments and other private lands occur along the shores of Lake Clark, and native selections have been made along the Cook Inlet coast and within the river valleys which drain into the Inlet. In addition to this private ownership pattern, a significant portion of the proposed national preserve is presently used for subsistence purposes and for sport hunting.

Thus, management policies, which reflected current land use patterns and anticipated visitor uses in the preserve area, would consist of the following:

1. New mineral entry would not be permitted.
2. Sport hunting and subsistence uses would be recognized as legitimate and will be managed for.
3. Snow machine use would be permitted in certain areas but other all-terrain vehicles would be prohibited.
4. Nearly all proposed physical development required for visitor access, use, and administration would be done in the national preserve area.
5. Village selection areas on the south shore of Tuxedni Bay and on Chinitna Bay would be identified for eventual trade out or purchase.[31]

Although Park Service planners were divided over this recommendation, the Washington Office accepted it with some modifications. In March 1976 the NPS proposed a bill to establish Lake Clark National Park and Preserve, Aniakchak Caldera National Monument and Preserve, Harding Icefield-Kenai Fjords National Monument, and Aniakchak Wild River. Nothing came of the proposal, however, and when legislation was introduced on August 26, 1976, it addressed only a Lake Clark National Park, and did not mention a preserve. Nevertheless, the preserve concept provided one answer to the difficult problem of nontraditional NPS activities in park units in Alaska. The concept of using a preserve category in Alaska would be available when Congress began to address the question of Alaska national interest lands the following year.

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31. National Park Service, Alaska Area Office, Lake Clark National Park Alternative Study, January 20, 1976, pp. 4-5, Alaska Collection, RG 36, Alaska Administrative History (85-42), Box D, Folder-Cook Inlet-Preserves, National Park Service History Collection, Harpers Ferry Center.

DESIGNATION OF LAKE CLARK NATIONAL MONUMENT: 1978

When it appeared that protracted political wrangling would prevent Congress from meeting its December 17, 1978, deadline for designating the national interest lands, President Jimmy Carter took steps to protect those areas. On December 1, 1978, Carter, in the most sweeping application of the Antiquities Act of 1906 in history, designated seventeen national monuments in Alaska that totaled approximately 56,000,000 acres. Of this total, some 41,000,000 acres would be managed by the National Park Service and would nearly triple the size of the National Park System.[32]

One of the areas designated was Lake Clark National Monument, consisting of approximately 2,500,000 acres. The proclamation read in part:

> An area in south-central Alaska contains examples of geological phenomena associated with two major mountains chains, the Alaska Range and the Chigmit Mountains, in an array that includes jagged peaks and two symmetrical, steaming volcanoes. These volcanoes, Redoubt and Iliamna, have been listed on the National Registry of Natural Landmarks.
>
> The area's land forms also contribute to an outstanding example of ecological diversity in zones which remain relatively unspoiled for continued scientific research. Large mammals such as moose, caribou, Dall sheep, grizzly bear, black bear, and wolverine occur in natural populations. Whistling swans nest and rare trumpeter swans assemble in the area. Other birds, including bald eagle, gyrfalcon, osprey, and endangered peregrine falcons, breed within the area. Seabird colonies occur along the coast. One of the most stable natural populations of caribou in Alaska, the Mulchatna herd, calves and migrates within the area, offering significant opportunities for scientific study of this mammal.
>
> Sockeye salmon runs within the area are exceptional. The area includes the upper drainage of the Kvichak River System, which is the single most productive spawning and rearing habitat for red salmon in the world, and the subject of scientific research for many years.
>
> Historical resources of the area are significant Kijik Village, on the shore of Lake Clark, is the site marking the first known Russian exploration of the region in the late eighteenth century. The area holds great promise for the discovery of further evidence defining the impact of the Native-European contacts.

The proclamation designating Lake Clark National Monument recognized the significance of subsistence activities for local residents within its boundaries. Thus, provision was made for its continuation under the new land management status. One paragraph in the proclamation stated:

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32. U.S. Department of the Interior, Office of the Secretary, News Release, December 1, 1978, "National Monuments To Protect Unique Public Lands In Alaska," Alaska Collection, RG 36, Alaska Material (DSC 84-39), Folder-"Alaska National Monuments Proclamations, 1978," National Park Service History Collection, Harpers Ferry Center.

> The land withdrawn and reserved by this proclamation for the protection of the geological, archeological, historical, biological and other phenomena enumerated above supports now, as it has in the past, the unique subsistence culture of the local residents. The continued existence of this culture, which depends on subsistence hunting, and its availability for study, enhances the historic and scientific values of the natural objects protected herein because of the ongoing interaction of the subsistence culture with these objects. Accordingly, the opportunity for local residents to engage in subsistence hunting is a value to be protected and will continue under the administration of the monument.

The proclamation, however, authorized the Secretary of the Interior to issue appropriate regulations, including regulation of the opportunity to engage in a subsistence lifestyle by local residents. The secretary could close the monument or portions of it to subsistence uses "of a particular fish, wildlife or plant population if necessary for reasons of public safety, administration, or to ensure the natural stability or continued viability of such population."[33]

After its designation as a national monument the Lake Clark region was hailed as a microcosm of all of Alaska's many scenic and natural wonders. For instance, in a special National Geographic Society publication entitled, *Exploring America's Backcountry* (1979), John Kauffmann described the beauty and attractions of the area:

> Think of all the splendors that bespeak Alaska: glaciers, volcanoes, alpine spires, wild rivers, lakes with grayling on the rise. Picture coasts feathered with countless seabirds. Imagine dense forests and far-sweeping tundra, herds of caribou, great roving bears. Now concentrate all these and more into less than one percent of the state – and behold the Lake Clark region, Alaska's epitome. It is not the state's biggest, highest, or most remote wilderness. But it *is* one of the most varied, boasting almost every type of Alaskan landscape.[34]

ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT OF 1980

After considerable deliberation Congress reached agreement on an Alaska lands bill, and on December 2, 1980, President Jimmy Carter signed into law the Alaska National Interest Lands Conservation Act (ANILCA). When he signed the bill Carter observed that "never before have we seized the opportunity to preserve so much of America's natural and cultural heritage."[35]

ANILCA was a milestone in the history of conservation in America. Never before, and surely never again, would lands be preserved on such a vast scale. The law provided for the protection

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33. Proclamation 4622, December 1, 1978, Lake Clark National Monument, By the President of the United States of America, *Federal Register*, Vol. 43, No. 234, December 5, 1978, pp. 57079-86.

34. John Kauffman, "Lake Clark, The Essence of Alaska: Tundra, Glaciers, Mountains," in National Geographic Society, *Exploring America's Backcountry* (Washington, National Geographic Society, 1979), pp. 179ff. Also see *Los Angeles Times*, April 20, 1980.

35. *Weekly Compilation of Presidential Documents*, Vol. 16, No. 49, December 8, 1980, pp. 2753-2787.

of critical wildlife habitat through the addition of 53,720,000 acres to the National Wildlife Refuge System (nine new areas and six additions to seventeen existing ones). Segments of 25 free-flowing rivers were added to the Wild and Scenic Rivers System, with portions of twelve others designated for study as potential additions. The Forest Service would manage two national monuments – Admiralty Island and Misty Fjords, as well as additions to Chugach and Tongass national forests. More than 2,000,000 acres were taken out of proposed Yukon Flats National Wildlife Refuge to be managed by the Bureau of Land Management as multiple use areas – Steese National Conservation Area and White Mountains National Recreation Area. Some 56,400,000 acres were added to the National Wilderness Preservation System. ANILCA extended, finally, National Park System protection to ten new areas and additions to three existing ones that totalled 43,600,000 acres of land. As described by Congressman Morris Udall of Arizona, one of the bill's principal supporters, the Alaska parks would

> offer the full range of nature and history in Alaska, mighty land forms and entire ecosystems of naturally occurring geologic and geomorphic processes, intricate water forms and spectacular shorelines, majestic peaks and gentle valleys, diverse plant communities and equally diverse fish and wildlife.[36]

Virtually all the new lands included in the National Park System under ANILCA had been identified as potential parklands or areas of ecological concern in 1973.

ESTABLISHMENT OF LAKE CLARK NATIONAL PARK AND PRESERVE

One of the new units of the National Park System established under ANILCA was Lake Clark National Park and Preserve. Title II, Section 201(7)(a) of the act stated:

> Lake Clark National Park, containing approximately two million four hundred thirty-nine thousand acres of public lands, and Lake Clark National Preserve, containing approximately one million two hundred and fourteen thousand acres of public lands....The park and preserve shall be managed for the following purposes, among others: To protect the watershed necessary for perpetuation of the red salmon fishery in Bristol Bay; to maintain unimpaired the scenic beauty and quality of portions of the Alaska Range and the Aleutian Range, including active volcanoes, glaciers, wild rivers, lakes, waterfalls, and alpine meadows in their natural state; and to protect habitat for and populations of fish and wildlife including but not limited to caribou, Dall sheep, brown/grizzly bears, bald eagles, and peregrine falcons.

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36. *Congressional Record*, House, November 17, 1980, pp. 10532-*passim*. Also see U.S. Department of the Interior, National Park Service, *Administrative History: National Park Service and the Alaska National Interest Lands Conservation Act*, pp. 237-41; William C. Everhart, *The National Park Service* (Boulder, Colorado, Westview Press, 1983), pp. 131-32; and Richard C. Davis, ed., *Encyclopedia of American Forest and Conservation History* (2 vols., New York and London, Macmillan Publishing Company and Collier Macmillan Publishers, 1983), I, p. 12.

The preserve adjoined the park on the south and west in an area of foothills, lakes, rivers, and tundra plains.[37]

Section 203 of ANILCA directed that Lake Clark National Park and Preserve was to be administered pursuant to the NPS organic act of August 25, 1916, as amended and supplemented. The organic act states in part that "the service...shall promote and regulate the use of...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." In addition, Section 1313 of ANILCA permitted sport hunting, trapping, and subsistence use in the preserve, and Section 201(7)(b) permitted subsistence in the park.

Various sections under two titles of the act contained provisions that would impact selection of Native and state lands within the park and preserve boundaries. Title IX related to implementation of the Alaska Native Claims Settlement Act and the Alaska Statehood Act, and amendments to ANCSA and related provisions were contained in Title XIV.[38]

Upon its designation as a unit in the National Park System, Lake Clark National Park and Preserve received considerable publicity from conservationists, scientists, and wilderness lovers. In 1982 William E. Brown, an NPS historian, noted the park/preserve's significance and values:

> Distilled in the Lake Clark country are the many splendors of Alaska. In this one place – compressed and crafted by Nature's several forces – classic natural landscapes crowd together: fjords, coastal rain forest, glaciated mountains overtopped by ragged peaks and steaming volcanoes, pendant mountain lakes, and river-laced foothills fading into tundra plains and boreal forest....
>
> Lake Clark is not Alaska's biggest, highest, or most remote wilderness. But its diverse physiography comprehends what is probably the most complete microcosm of Alaska's scenic, wildlife, and geologic resources. Sheltered by its mountain ramparts, it was, until the advent of the floatplane, one of the state's most isolated fastnesses. Even today, away from the lake shores, there is hardly any evidence of human presence. The historic trails of Native traders between Bristol Bay and Cook Inlet are overgrown, except where maintained by wandering animals.[39]

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37. These specific purposes were supplemented by the general purposes of all conservation system units established under ANILCA, as defined in Section 101(a), (b), (c), and (d) of the act. See the following page for a copy of the boundary map of the park and preserve.

38. Public Law 96-487, December 2, 1980. For further information on how ANILCA would affect rural Alaskans see "Rural Guide to Alaska Lands Act, Supplement to the *Tundra Times*," Special Edition, [1981], pp. 1-12. Copy on file in Park Administrative Files, Lake Clark National Park and Preserve, Port Alsworth.

39. William E. Brown, *Alaska National Parklands: This Last Treasure* (Anchorage, Alaska Natural History Association, 1982), p. 54.

IMPACT OF ANILCA ON LAKE CLARK REGION

The establishment of Lake Clark National Park and Preserve would have significant impacts on the Lake Clark region in terms of its management and utilization. Among the most significant provisions of ANILCA that would affect the park/preserve were designation of three wild and scenic rivers within its boundaries, wilderness designation and review, and subsistence use. Besides these issues were the implementation of NPS policies governing resource management, visitor access and utilization, land protection, and park administration – preservation-oriented polices that, under the authority of the NPS organic act of August 25, 1916, tended to restrict recreational use and the rights of existing landholders.

Designation of Wild and Scenic Rivers

Title VI, Part A, Section 601 of ANILCA provided for the addition of portions of three rivers within Lake Clark National Park and Preserve to the National Wild and Scenic Rivers System. The three rivers (only the portions of the rivers within the boundaries of the park/preserve were designated) were the Chilikadrotna (11 miles), Mulchatna (24 miles), and Tlikakila (51 miles).

In 1975-76 the National Park Service requested that the Bureau of Outdoor Recreation conduct independent evaluation of the resources of the three rivers for possible inclusion in the National Wild and Scenic Rivers System, established by Public Law 90-542 on October 2, 1968. The law provided for a system of rivers to be preserved as free-flowing streams accessible for public use and enjoyment. Eligible rivers or portions of those rivers could be designated as "wild," "scenic," or "recreational." Rivers were classified according to the natural qualities they possessed and the evidence, as viewed from the river, of man's presence in the area. A "wild river" had little evidence of man's presence, was free of impoundments, and was generally inaccessible except by trail. A "scenic river" had relatively primitive shorelines, was largely undeveloped, but accessible in places by road. A "recreational river" had more development, was accessible by road or railroad, and may have been dammed.

Once a river was designated a component of the National Wild and Scenic Rivers System, the objective of the managing agency was to preserve or enhance the qualities which qualified the river for inclusion within the system. Recreational use must be compatible with preservation.[40]

After a field inspection of the Tlikakila River during the summer of 1975, the Alaska Field Office of the Bureau of Outdoor Recreation recommended that the river "from its headwaters to its mouth at Little Lake Clark" be designated as a "wild river area." The entire river drainage was located in a "pristine, wilderness environment," and the outstanding values associated with the area included "scenic, recreational, wildlife, and geologic." While the river had limited access

40. U.S. Department of the Interior, National Park Service, *The National Parks: Index 1985*, p. 92.

and its current recreation use was low, it was accessible for floatplanes and had potential for increased recreational use. It provided outstanding recreational "float boating" opportunities.[41]

Following field inspections of the Chilikadrotna and Mulchatna rivers during the summer of 1976 the Bureau of Outdoor Recreation concluded that the entire Mulchatna River and its major tributary the Chilikadrotna River, met the criteria established for inclusion in the National Wild and Scenic Rivers System as a "wild river." Outstanding values associated with the river included "scenic, fish, wildlife, and recreational (including wilderness)." The study stated:

> However, the values associated with much of the Mulchatna are not unique or even superior when compared to the outstanding values of other rivers in Alaska or to rivers in the Bristol Bay region. Scenery, fish and wildlife resources, and recreational experiences found along many segments of the Mulchatna are duplicated if not exceeded by those associated with other river areas in the region.
>
> The Chilikadrotna River is one of the most outstanding "float" rivers in the region and in the State. Continuous swift water and long stretches of exciting, yet readily navigable rapids combine with high scenic, fish, and wildlife values to provide exceptional recreational values. Access is readily available by floatplane, yet limited to the headwater lake and a downstream "take-out" on the Mulchatna. Thus, virtually all of the 60 mile long Chilikadrotna (and a minimum 25-mile segment of the Mulchatna) is largely inaccessible and provides a wilderness environment.

Thus, the Chilikadrotna "from Twin Lakes to its mouth along with approximately 67,000 acres of land comprising the immediate environment of the river" was recommended for classification as a "wild river area." The Mulchatna drainage above Keefer Creek, however, was recommended for management by the state "as a special area to protect fish and wildlife resources and to maintain high quality primitive recreational activities such as hunting, fishing, floating, and hiking."[42]

The designation of the Chilikadrotna, Mulchatna, and Tlikakila rivers as units of the National Wild and Scenic Rivers System under ANILCA had implications for utilization and NPS management of those areas. According to the *General Management Plan* for the park and preserve that was adopted in August 1984, the three rivers were to be managed as integral portions of the park/preserve.[43]

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41. Bureau of Outdoor Recreation, Alaska Field Office, "The Tlikakila River: A Wild and Scenic River Analysis," February 13, 1976, pp. 24-26, Record Group 79, Records of the National Park Service, File-"L58/Lake Clark." Box Accession No. 079-83B0007, Alaska National Petroleum Reserve Cultural Research, National Archives and Records Administration, Federal Records Center, Seattle.

42. Bureau of Outdoor Recreation, Alaska Field Office, "The Mulchatna and Chilikadrotna Rivers: A Wild and Scenic River Analysis," October 1976, pp. 46-50, RG 79, File-"L26-4/The Mulchatna and Chilikadrotna Rivers Wild and Scenic River Analysis," Box Accession No. 079-83A007, Alaska Task Force C/O Files, National Archives and Records Administration, Federal Records Center, Seattle.

43. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve*, pp. 22-23.

Wilderness Designation and Review

For more than a century one of the attractions of Alaska has been its wilderness values. In 1879 John Muir observed: "To the lover of pure wildness Alaska is one of the most wonderful countries in the world." A century later, in 1979, Jay Hammond, Governor of Alaska and a resident of Port Alsworth, echoed Muir's sentiments by noting:

> Certainly our tourism has worldwide implications. It's growing substantially each year, and one of the reasons is that we do have some remaining untouched wilderness. One of the major reasons people come up here is that they look at Alaska as a unique experience that they can't get anywhere else.[44]

Thus it was in keeping with the continuing lure of Alaska's wilderness ideal, as well as compliance with the Wilderness Act of 1964, that one of ANILCA's key provisions was wilderness designation.

Title VII, Section 701(6) of the act designated some 2,470,000 acres (later revised to 2,619,550 acres), or almost 65 percent of Lake Clark National Park and Preserve, as wilderness under the provisions of the Wilderness Act of 1964 (Public Law 88-577). Most of this acreage was located within the national park, but it did include some portions of the national preserve. Wilderness character and values were defined in Section 2(c) of the Wilderness Act:

> A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

The areas so designated were to be administered "for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness."[45]

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44. Quoted in Roderick Nash, "Tourism, Parks and the Wilderness Idea In the History of Alaska," *Alaska In Perspective*, IV (No. 1, 1981), p. 1. The entire 27-page article explores the historical development of the wilderness idea and its importance in attracting tourists to Alaska.

45. Public Law 88-577, September 3, 1964.

Management requirements for wilderness areas that were established under ANILCA varied from other wilderness areas not affected by ANILCA. Because of the traditional uses and means of access, relatively few roads, great travel distances, areas of vast size, and often severe weather conditions common to most NPS units in Alaska, ANILCA made special provisions for certain types of access and uses in Alaska wilderness that would generally not be permitted in wilderness in the lower 48 states. Specifically, ANILCA allowed, under reasonable precautions to protect natural and other values, the use of snowmachines, motorboats, airplanes, and other means of nonmotorized surface transportation for traditional activities, including travel to and from villages and home sites.

ANILCA also permitted, subject to reasonable regulations, a variety of other activities and developments in wilderness. These included:

> temporary access compatible with purposes of the Alaska mineral resource assessment program; adequate and feasible access to inholdings by private landowners, and temporary access by private landowners or the state for survey, geophysical, exploratory, or other temporary uses that do not do permanent harm to resources; access for subsistence purposes; existing public use cabins, restricted as necessary to preserve the wilderness character of the area; new public use cabins if necessary for the protection of public health and safety; and navigation aids, communication sites, and related facilities for weather, climate, and fisheries research and monitoring. Temporary facilities related to the taking of fish and wildlife are also allowed within wilderness in national preserves.[46]

Thus, the National Park Service continued to allow the traditional use of such mechanized access as airplanes, motorboats, and snowmachines in designated wilderness areas of Lake Clark National Park and Preserve. This mechanized access included floatplane landings on Turquoise Lake, Upper Twin Lake, Lachbuna Lake, Little Lake Clark, Kenibuna Lake, Summit Lake, and Crescent Lake. In addition, planes landed on gravel bars such as the Neacola, Tlikakila, and Tuxedni. Airplane landings were also possible on snowfields and tundra areas. Snowmachine access occurred most commonly in river valleys and in the limited foothills and tundra portions of wilderness areas. Motorboats operated on a number of bodies of water throughout the park and preserve.

The activities and developments permitted by ANILCA in wilderness areas for subsistence use and the taking of fish and wildlife were also of significance for Lake Clark National Park and Preserve. As mentioned previously, subsistence was allowed in both the park and preserve, and sport hunting was permitted in the preserve.

Subject to the provisions of ANILCA, the Wilderness Act, and its own legislative mandates and management policies, the National Park Service developed objectives to promote quality wilderness experiences for visitors to Lake Clark National Park and Preserve. To achieve this purpose the NPS in 1984 established several measures that would restrict activities in designated wilderness areas. These measures included:

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46. U.S. Department of the Interior, National Park Service, *Final Environmental Impact Statement, Wilderness Recommendation, Lake Clark National Park and Preserve, Alaska*, August 1988, p. 6.

1. The National Park Service, as part of its cabin management strategy, is identifying all cabins on federal lands within the park and preserve. As cabin guidelines are completed, determinations will be made by the superintendent as to which may be permitted to continue under restrictions deemed necessary to preserve the wilderness character of the area. No cabins may be used as a base for commercial purposes, and no charge may be made expressly for the use of any shelter or cabin on federal lands within wilderness.

2. No natural landing area may be "improved" to facilitate landing within wilderness. If determined to be detrimental to wilderness values, natural landing areas may be closed to such future use....The single developed airstrips near Two Lakes will not be maintained. During the life of this plan, the Service will work to mitigate resource damage in this area to the extent that it is possible and reasonable. The ATV trails, trash, and shacks are of primary concern....

3. No docks may be provided on wilderness waters and no other temporary or permanent structure provided to facilitate use of approved motorized equipment.

4. No new public use cabins or shelters will be provided within wilderness until the National Park Service...reviews wilderness use and needs at Lake Clark.[47]

In addition to designating wilderness areas, Section 1317(a) of ANILCA required the Secretary of the Interior to conduct a wilderness review of "all lands within units of the National Park System...in Alaska not designated as wilderness in this act." Within five years all NPS nonwilderness lands in Alaska were to be evaluated for their suitability or nonsuitability for wilderness designation. The secretary was to report his findings to the President, who had an additional two years to present his recommendations to Congress.

The suitability review for Lake Clark National Park and Preserve, which was incorporated in the 1984 *General Management Plan,* found that approximately 1,240,280 nonwilderness acres, or 31 percent of the park/preserve, were suitable for wilderness designation. The area determined to be suitable for possible wilderness recommendation encompassed the scenic lands and waters along the north and west sides of the park and preserve and the southeast portion of the park between Chinitna Bay and Redoubt Bay. It included the glaciated mountain terrain in the extreme northern portion of the park on the divide between the Kuskokwim, Skwenta, and Chilligan rivers, and portions of the Stony, Telaquana, Mulchatna, Chilikadrotna (including the Lower Twin Lakes area), Little Mulchatna, and Kijik rivers, which featured open, rolling tundra-covered foothills with spruce/birch forests along the major stream courses. Other wilderness study areas included the isolated forested parcels of federal land west of Lake Clark, one near the Chulitna River, and another northwest of Hoknede Mountain; most of the tundra and forest land within the Lower and Upper Tazimina lake drainages, the Black Peak area; the Crescent Lake area; portions on either side of the Crescent River drainage; and the majority of the coastal forested lands along Cook Inlet between Chinitna and Tuxedni Bays.

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47. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve,* pp. 23-26.

The vast majority of the nonwilderness study area was untouched by man. Only nine rustic lodges, about 50 widely scattered fly-in or walk-in cabin and camp sites, one short trail, and one small mining claim group interrupted the natural landscape. Opportunities for solitude and primitive recreation were abundant.

The wilderness study areas were evaluated for wilderness designation suitability by the National Park Service during 1986-88. The review found that about 69,500 acres of these lands and waters were privately owned. While these private lands were suitable for wilderness designation because of their undeveloped character and natural values, they were ineligible for designation unless acquired by the federal government. In addition, approximately 262,420 acres had been selected by Native and village corporations under ANCSA. Selected lands would remain in federal ownership until they were conveyed. Although they were suitable for wilderness designation because they were undeveloped and retained their natural values, the lands would no longer be eligible for designation once they were conveyed unless later acquired by the federal government. If any of the lands were not conveyed to private ownership, they would remain in federal ownership and be considered for wilderness designation.

One mining claim group of nine unpatented claims was located on Portage Creek along the north shore of Lake Clark. These lands would only become suitable for wilderness if the National Park Service acquired and restored them in the future.

After the three-year period of study and assessment the National Park Service issued its wilderness recommendations for Lake Clark National Park and Preserve in August 1988. The proposed action recommended that no study lands be designated wilderness. The *Final Environmental Impact Statement (FEIS)* accompanying the recommendation described the impacts of this proposal:

> No additional protection would be provided for the area's resources and values, and the potential for future development would continue to exist. The proposed and possible developments under this alternative would disturb less than 10 acres of vegetation and wildlife habitat and in the short term would have no significant impacts on the pristine lakes, wild rivers, and rolling tundra-covered hills in the western part of the preserve and the glacial valleys, coastal plains, steep mountains, coves, and bear habitat along Cook Inlet in the eastern part of the park. However, naturalness, solitude, and primitive recreation would be progressively disrupted by airplane overflights and landings and by widely dispersed recreational activities. Over the long term this alternative would result in major deterioration of wilderness character, reduction in wilderness size, and destruction of some wilderness values that would be irreplaceable. There would be no impacts on subsistence activities. The impacts on mining are unknown and uncertain.

Two other alternatives were analyzed in the *FEIS*. One considered 808,050 acres in the study area for wilderness designation (subject to Native conveyances) and 19,300 acres as a potential wilderness addition. The other examined 1,082,420 acres for wilderness designation (subject to Native conveyances) and 69,500 acres as a potential wilderness addition.[48]

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48. U.S. Department of the Interior, National Park Service, *Final Environmental Impact Statement for the Wilderness Recommendation, Lake Clark National Park and Preserve*, pp. i-v, 1-25.

Subsistence

ANILCA authorized subsistence activities throughout most Alaska federal lands, including much of the National Park System. Subsistence uses were permitted in all preserves, and Section 201(7)(b) of the act stated that such "uses by local residents" were to be allowed in Lake Clark National Park "where such uses are traditional."

Congress recognized the importance of subsistence access, the growing pressures on subsistence resources, and the lack of alternative resources for Natives and other rural residents of Alaska. Consequently, Congress established an administrative structure to sustain opportunity and provide access for subsistence lifestyles in Alaska. Furthermore, Congress provided subsistence use precedence. All other use of federal land in Alaska must minimize negative effects on subsistence opportunity and, in the event of fish and wildlife rationing, subsistence use had priority.

Title VIII of ANILCA laid the legal foundation and established the procedural framework for subsistence management and use. Section 802 provided that

> consistent with sound management principles, and the conservation of healthy populations of wildlife, the utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources of such lands; consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for each unit established...the purpose of this title is to provide the opportunity for rural residents engaged in a subsistence way of life to do so.

Section 803 defined subsistence uses as

> the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.

Section 804 stated the preference of subsistence uses over other activities in the units established under ANILCA and described the priority criteria to facilitate that precedence:

> the taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes. Whenever it is necessary to restrict the taking of populations of fish and wildlife on such lands for subsistence uses in order to protect the continued viability of such populations, or to continue such uses, such priority shall be implemented through appropriate limitations based on the application of the following criteria:
>
> (1) customary and direct dependence upon the populations as the mainstay of livelihood;

(2) local residency; and
(3) the availability of alternative resources.

Administration of the subsistence program in national preserves was not specifically outlined by ANILCA. It is apparent, however, that Congress intended subsistence access to federal lands other than national parks or monuments to be directed by regional advisory councils and administered by the state of Alaska in cooperation with and monitored by the Secretary of the Interior.

Congress delegated management of subsistence use of national parks and monuments to subsistence resource commissions and the state of Alaska in cooperation with the secretary. Each park or monument open to subsistence use was required to maintain a subsistence resource commission composed of three members from the coinciding regional advisory council engaged in subsistence use of that park or monument. The secretary must adopt both regional advisory council and subsistence resource commission recommendations unless they violated recognized principles of wildlife management, threatened wildlife populations, contradicted the purposes for which the area was established, or impaired subsistence viability.

The secretary was authorized to ensure that rural residents "engaged in subsistence uses shall have reasonable access to subsistence resources on the public lands." He was to permit

> appropriate use for subsistence purposes of snowmobiles, motorboats, and other means of surface transportation traditionally employed for such purposes by local residents, subject to reasonable regulation.

Aircraft could not be used for subsistence purposes.[49]

In June 1981 the National Park Service incorporated the ANILCA provisions and their procedural applications in the *Code of Federal Regulations* (36 CFR 13) covering the administration of NPS units in Alaska. Since ANILCA restricted subsistence use of NPS areas to "local rural residents," the regulations refined this concept. A "local rural resident" was either someone with a primary, permanent home within designated resident zones, or someone qualified to hold a subsistence permit. "Resident zones" included areas within an NPS unit and communities near any park area whose members customarily and traditionally used a park or monument for subsistence purposes without reliance on aircraft access (although access by aircraft might not disqualify a community in extraordinary cases). Six resident zones were established for Lake Clark: Iliamna, Lime Village, Newhalen, Nondalton, Pedro Bay, and Port Alsworth. Subsistence permits were available for local rural residents independent of resident zones, and superintendents were authorized to issue permits to individuals if they had

49. Public Law 96-487.

customarily and traditionally used a park or monument for subsistence purposes without the aid of aircraft.[50]

For lack of statutory definition, the NPS also developed in-house operational guidelines for the meaning of "traditional." Thus, the NPS stated that "to qualify under ANILCA, a 'traditional means' or 'traditional activity' had to be an established cultural pattern, per these definitions, prior to 1978 when the unit was established."[51]

During the early 1980s the subsistence program in Lake Clark National Park and Preserve developed under the direction of the Park Service in cooperation with the Alaska Department of Fish and Game. By 1984 the park's *General Management Plan* noted that subsistence activities in and adjacent to the park/preserve had the following characteristics:

1. Persons engaging in subsistence activities are primarily those whose homes are on Sixmile Lake, Lake Clark and the coast of the park.

2. Primary subsistence uses within the park and preserve are salmon fishing under terms of a permit issued by the state, moose hunting under state season and bag limits, and berry gathering.

3. Most use occurs by means of boat, three wheeler, snowmachine, and foot travel.

4. Most subsistence opportunity in the Lake Clark/Sixmile Lake area exists within the preserve and on adjacent lands and waters outside the national park boundary.

5. Firewood and house logs may be cut on public lands under the terms and conditions of a permit issued by the superintendent. Dead or down wood may be gathered without a permit.

6. Subsistence trapping within the park and preserve boundary occurs on a limited basis primarily on lands adjoining Lake Clark, the Chulitna River, and along the coast.

7. Scattered residents living elsewhere within and adjacent to the park and preserve also engage in subsistence activities.

8. Last year it is estimated that 400 user days were spent in the park and preserve engaging in some form of subsistence activity.

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50. Part 13-National Park System Units In Alaska, Subpart B-Subsistence, *Federal Register*, Vol. 46, No. 116, June 7, 1981, pp. 31860-64. Also see David Aaron Funk, "The Alaska National Interest Lands Conservation Act and the National Park Service In Alaska: A Primer On Access" (Unpublished thesis, Master of Urban Planning, University of Oregon, 1990), pp. 17-32. and Morris, *Subsistence Production and Exchange In the Iliamna Lake Region, Southwest Alaska, 1982-1983*, pp. 1-148.

51. Quoted in Funk, "Alaska National Interest Lands Conservation Act and the National Park Service in Alaska," p. 21.

In 1984 a subsistence resource commission for the park was established. It consisted of three members appointed by the Secretary of the Interior, three by the Governor of Alaska, and three by each regional subsistence council. On the initial commission, members included Wassie Balluta, Sr., Lary J. Hill, and Charles Homberger, all of Iliamna and all appointed by the governor; Glen Alsworth, John Branson, and Glen Van Valin, all of Port Alsworth and all appointed by the Secretary of the Interior; and George Faerber of Trapper Creek, Mike Delkittie of Nondalton, and Peter Trefon of Iliamna, all appointed by regional subsistence councils.

One of the most critical issues confronting NPS management at Lake Clark was the prospect of increasing numbers of persons moving to private lands within the area and thus qualifying as local rural residents for the purposes of subsistence hunting, fishing, and timber cutting. This would require continued monitoring to assess user impacts on fish, wildlife, and timber stands.[52]

By the late 1980s NPS studies indicated that the principal area of subsistence use in the park/preserve centered in the more accessible regions around Lake Clark, Kontrashibuna Lake, and the Tazimina Lakes. The villages whose members conducted most subsistence activities in the park/preserve were: Newhalen (population 165), Iliamna (population 126), Pile Bay Village (population 5), and Pedro Bay (population 70), all of which were located on the northern shores of Iliamna Lake; Port Alsworth (population 25) on Lake Clark; Nondalton (population 234) on Sixmile Lake; and Lime Village (population 48) on the Stony River north of Whitefish Lake.

Estimates of harvest figures for 1987, although somewhat rough, provide a picture of general subsistence use in the region and the park/preserve during a typical year. These estimates were:

Subsistence Resources	1987 Estimated Regional Harvest	1987 Estimated Park/Preserve Portion
bears	107 animals	10 animals
moose	164 animals	65 animals
caribou	179 animals	100 animals
Dall sheep	107 animals	7 animals
furbearers	2,421 animals	530 animals
small game	1,786 animals	1,200 animals
waterfowl	1,750 birds	930 birds
fish	164,286 fish	16,560 fish
berries	67,429 pounds	7,200 pounds
plants	16,186 pounds	2,000 pounds
firewood	1,321 cords	75 cords
house logs	714 logs	100 logs

52. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve*, pp. 17-18. Also see Memorandum, Glen Alsworth, Chairman, Lake Clark National Park Subsistence Resource Commission to Village Leaders, Iliamna, Newhalen, Nondalton, Port Alsworth, June 12, 1989, Park Administrative Files, Lake Clark National Park and Preserve, Port Alsworth.

The primary species taken for subsistence use in the park/preserve were moose, caribou, fish (mainly sockeye salmon), and berries. Subsistence harvests varied from year to year, however, because of such factors as weather, migration patterns, and natural population cycles. By weight in pounds, the estimated overall subsistence pattern of the region was characterized by the following proportions:[53]

Edible Subsistence Resource	Percentage	Edible Subsistence Resource	Percentage
bears	1	small game	2
moose	35	waterfowl	2
caribou	10	fish	20
Dall sheep	3	berries	15
furbearers	5	plants	7
		Total	100

Implementation of National Park Service Management Policies

With the establishment of Lake Clark National Park and Preserve, NPS took over administration of a remote, sparsely settled, and largely undeveloped mountainous region rich in ecological and physiographic diversity. The largely untamed resources of the region had been little impacted by human activity or federal land management policies. Residents in the sparsely populated region utilized the area and its resources to support their traditional lifestyles that had evolved, yet remained fairly constant, over the centuries. Sport hunters and fishermen and other recreationists had been coming to the region in increasing numbers for several decades, but their activities had not had a major impact on the relatively unspoiled wilderness values of the region. Implementation of NPS policies, however, would impact the Lake Clark area in the future.

In August 1984 the National Park Service developed a *General Management Plan* for the park and preserve. The plan contained the overall management concept for the park/preserve and specified the minimum requirements for management of the area during the succeeding five to ten years. The management concept included six principal points that summarized the resource preservation-oriented policies that the Park Service would implement in managing the park and preserve and regulating use of its resources:

1. Lake Clark National Park and Preserve will be managed to achieve its legislated purpose as part of a larger mosaic of regional lands in state, Native, and private ownership dedicated to a variety of conservation and economic uses.

2. For lands and waters under its authority, the National Park Service will emphasize the continuation of the natural processes that have shaped the landscape and sustained the plant and animal populations found on these lands and waters. In so doing, the Park Service will cooperate with the state and others to manage fish and

53. U.S. Department of the Interior, National Park Service, *Final Environmental Impact Statement for the Wilderness Recommendation, Lake Clark National Park and Preserve*, pp. 35-36.

wildlife populations in their natural species diversity, to protect habitat, and to maintain healthy populations of fish and wildlife.

3. Enjoyment of the resources will be encouraged by providing opportunities that range from a remote wilderness experience to comfortable lodging and guide services for people who are interested in leisurely enjoyment of the pristine beauty of the region.

4. The National Park Service will rely on the private sector and Native corporations to provide a variety of services and accommodations for appropriate visitor uses of the park and preserve.

5. Regulation of the extent and number of participants engaging in approved uses and the means of engaging in such uses on federal lands will be undertaken where necessary to protect resources from impairment and degradation, to protect plant and animal habitat, to maintain natural and healthy populations of fish and wildlife, and to provide opportunities for solitude and a wilderness experience in some areas of the park and preserve.

6. The NPS will work cooperatively with others within the park and preserve and the surrounding region to ensure, to the extent practicable, that their differing management objectives and activities for lands under their ownership or management authority are compatible. The NPS will emphasize protection of the resources of the park and preserve and enjoyment thereof by visitors to the area.[54]

Thus, the *General Management Plan* was predicated on managing the park and preserve as part of a larger ecosystem of wild lands. It called for cooperation with the state of Alaska, Native corporations, private businesses, and commercial operators to provide for the management and use of resources within lands (federal, private or nonfederal) in and near park and preserve boundaries. It called for extensive study and research to manage ecosystem habitat and ensure natural and healthy populations of fish and wildlife. The plan provided for a minimum Federal development, calling only for the establishment of three field management sites, two of which would require modest developments for NPS on-site management. These were at Port Alsworth and at either Keyes Point or elsewhere on Nondalton land when the levels of private facility development and visitor use would justify it. Other federal development would involve various visitor information sites and seasonal tent platforms for management of remote areas. It called for the use of technical assistance, cooperative agreements, and other means to ensure that nonfederal lands within the park and preserve boundaries would be managed in a manner as harmonious as possible with the intent of ANILCA and the purposes of the park and preserve. The plan sought the minimum acquisition of targeted lands needed to protect wilderness values and areas of outstanding value for resource protection and visitor enjoyment.[55]

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54. See Appendix I for a copy of the Management Objectives for the park and preserve.

55. U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve*, pp. 1, 7, 49-50, 75-77. Also see U.S. Department of the Interior, National Park Service, *Land Protection Plan, Lake Clark National Park and Preserve, Alaska*, 1986 (Draft).

APPENDIX A

MANAGEMENT OBJECTIVES, LAKE CLARK NATIONAL PARK AND PRESERVE: 1984

The following management objectives were derived from the intent of Congress in establishing the park and preserve and the determination of the National Park Service to pursue basic operations necessary to systematically manage and protect park resources while supporting established subsistence and recreational activities. The objectives describe the conditions that will prevail when the general management plan is fully implemented.

ADMINISTRATION

Lake Clark National Park and Preserve will be administered and managed as a natural area of the National Park System according to all applicable laws, regulations, executive orders, and policies.

Programs for protecting and preserving resources, serving and protecting visitors, interpreting natural and cultural values, and providing administrative support will be implemented by a professional staff operating with adequate funding.

Managers of the park and preserve will work closely with concerned and knowledgeable individuals, groups, agencies, and institutions to gather information and develop cooperative management programs and agreements.

The special expertise and knowledge of people living in the area will be utilized by hiring local residents for park jobs in accordance with section 1308 of ANILCA.

NATURAL RESOURCES

Natural resources will be managed for the protection and perpetuation of ecological systems and for the education and enjoyment of the public.

Ecological systems will evolve in response to natural processes.

Undisturbed environments will serve as benchmarks for measuring the effects of human activity on similar landscapes elsewhere.

Man is an integral part of the ecosystem and will be encouraged to recognize ecological balances.

CULTURAL RESOURCES

Cultural resources will be professionally identified and evaluated, and a program of preservation and management will be implemented.

Cultural resources will be interpreted for the enjoyment and education of the public, and special emphasis will be placed on working with local residents and Native corporations to protect, perpetuate, and experience the cultural heritage of the area.

Resources found to be significant will be nominated for inclusion on the National Register of Historic Places and the Alaska Heritage Resource Survey and preserved from loss or deterioration.

VISITOR USE AND INTERPRETATION

Opportunities will exist for both the general public and the local residents to enjoy a wide variety of outdoor recreational activities and educational programs.

Types and areas of visitor use will conflict as little as possible with the opportunity for local rural residents to pursue traditional lifestyles.

The expected increase in visitor use will be accommodated while maintaining the established character and quality of the visitor experience.

Resources will be interpreted to illustrate ecological diversity and successional stages, the ongoing processes that are shaping the landscape and causing ecological change, the development of human cultures from ancient to present times, and human and environmental interactions over time.

VISITOR PROTECTION AND SAFETY

Qualified field personnel will provide emergency and law enforcement services.

Information will be available to the public informing them of the inherent dangers faced in a vast wilderness environment.

PLANNING

Subsequent action plans for the park and preserve's management and development will be formulated in close cooperation with adjacent landowners, state agencies, and interested groups and institutions.

CONSTRUCTION

Facilities will be constructed in selected locations to serve as bases for visitor services and NPS operations. If facilities are located outside the boundaries and in the vicinity of Lake Clark, Native lands will be considered in accordance with section 1306 of ANILCA.

New construction will be architecturally harmonious with the natural and cultural setting and designed and built with the most suitable materials and equipment to conserve resources and protect the environment.

COMMERCIAL SERVICES

Visitor facilities and services will be provided by the private sector through a system of commercial use licenses and a concession management program.

Native corporations and local residents will be given preference for the provision of visitor services, in accordance with section 1307 of ANILCA.

LAND PROTECTION

As additional federal lands are conveyed to private ownership, special emphasis will be placed on cooperating with landowners to ensure that development is compatible with the purposes of the park and preserve.

Cooperative agreements with adjacent land-managing agencies and resource managers will promote compatible and complementary management and use.

A land protection program will achieve resource management objectives through land exchange, donation, cooperative agreements, and the land bank provisions of ANILCA.

SUBSISTENCE

Cooperative studies, agreements, and programs will guide the management of subsistence activities.

The occupancy, use, or disposition of lands will, to the extent possible, avoid placing restrictions on subsistence activities, in accordance with section 810 of ANILCA.

U.S. Department of the Interior, National Park Service, *General Management Plan and Environmental Assessment, Lake Clark National Park and Preserve,* pp. 75-77.

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The Native Allotment Case Files at the Bureau of Land Management, Anchorage, provide useful insights into traditional and contemporary use of lands in the park and preserve. The Denison Diaries and Branson Journal in the park/preserve office in Anchorage offer glimpses of everyday life of nonnative settlers in the Lake Clark region during the 1940s, early 1950s, and mid-1970s. The Survey Field Notebooks at the U.S. Geological Survey in Anchorage provide eyewitness accounts of Geological Survey expeditions that traversed the Lake Clark region during the period from the early 1900s to the late 1920s. Record Group 75 at the National Archives and Records Administration, Seattle Branch, provides material on native schools and reindeer herding operations in the Lake Clark region, while Record Group 79 at the Federal Records Center in Seattle contains data on the resources and background to establishment of Lake Clark National Park and Preserve. Materials in the National Archives in Washington, particularly Record Groups 22 and 49, are helpful in terms of data on fish and wildlife and railroad rights-of-way in the Lake Clark region, respectively. Considerable data on the resources and establishment of the park/preserve are found in the National Park Service Washington Office's Legislative Division and the Interior Department Law Branch's files. The files in the National Park Service's Alaska Regional Office and the park/preserve's office at Port Alsworth contain useful documentation pertaining to management of the area during the 1980s. The "Historical Interviews" by Sara Hornberger at Port Alsworth offer insights into white settlement and activities in the Lake Clark region during the 20th century.

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The works most useful for understanding Russian exploration, settlement, fur trading, and missionizing in the Cook Inlet-Lake Clark region are those by Afonsky; Andreyev; Bensin; Chemenko, Agravat, and Blomkvist; Coxe; Dmytryshyn and Crownhart-Vaughan; Dmytryshyn, Crownhart-Vaughan, and Vaughan; Gibson; Golder; Gregov; Lisiansky; Masterson; Michael; Oleksa; Ricks; Starr; and Tompkins. Of particular significance are the Russian works edited/translated by Pierce and Pierce and Donnelly and published by The Limestone Press.

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Works covering the history of Alaskan exploration that provide useful data on exploration of the Lake Clark region include those by Brooks, Shalkop, and Sherwood. Works containing helpful information on the American fur trade in the Lake Clark region include those by Kitchener and Oswalt. Books providing useful data on commercial salmon fishing in Alaska, Cook Inlet, and Bristol Bay include those by Cooley and Roppel, while helpful works on big game hunting and sport fishing include those by Dufresne, Leopold and Darling, and Sherwood. Among the books that provide background on the activities of white settlers and entrepreneurs in the Lake Clark-Iliamna Lake region in recent decades are those by Frome, Gerken, and Keith.

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The study on the Bristol Bay environment by the University of Alaska provides considerable information on the historical development of that region. The studies by Behnke provide the most comprehensive data on subsistence and resource utilization in the Lake Clark region. Also helpful for these topics are the studies by Morris, Wolfe and Ellanna, and Wright, Morris, and Schroeder. The translations by Black and Sudcamp provide access to important documents concerning Russian exploration and Orthodox priest records of the Lake Clark region that were previously unavailable in English. The Cook Inlet Historic Sites Project study provides data on cultural sites in the park and preserve, and the *Documents Relative to the History of Alaska* contain a wealth of data on Russian history, particularly Orthodox missionizing activities, in the Lake Clark region. The study by Hornberger is the best available source on white settlement in the Lake Clark region, and those by Smith provide excellent data on Orthodox church development. The studies by Kresge, Fison, and Gasbarro and Rogers offer considerable information on the development of the Bristol Bay region, including portions of the Lake Clark-Iliamna Lake vicinity. The archeology study by Smith and Shields provides a wealth of data on the prehistory as well as historical development of the Lake Clark region.

PERSONAL INTERVIEWS

Conducted by Sara Hornberger (listed chronologically):

Terry and Victoria Gill, Port Alsworth, August 29, 1984
Agnes Cusma, Nondalton, September 17, 1984
Floyd Dennison, Anchorage, September 26, 1984
Jay and Bella Hammond, Lake Clark, November 3, 1984
Fred Walatka, Anchorage, January 14, 1985
Dennis and Millie Branham, Chris Branham, and Hank and Audrey Rust, January 16, 1985
Craig Coray, Anchorage, January 16, 1985
Ruben Gaines, Anchorage, January 16, 1985
Catherine Trefon Balluta Hill Wilson, Anchorage, January 18, 1985
Sophie Austin, Jimmy Balluta, Andrew Balluta, and Macy Hobson, Nondalton, February 21, 1985
Paul Zackar, Nondalton, February 22, 1985
Mary Hobson and Agafia Delkittie, Nondalton, March 16, 1985
Sharon Van Valin, Lake Clark, March 28 and April 22, 1985
Annie Quapaw and Ruth Nielsen Groat, Kokhanok, April 1, 1985
Bernie Hadfield, Naknek, April 10, 1985
Funa Melognak Hornberger, April 20, 1985
Jack and Lyn Vantrease, Port Alsworth, April 29, 1985
Mary Hobson, Lake Clark, May 1985
Bert and Ida Carlsen Crater, Lake Clark, August 3, 1985
Oren and Mrs. Hudson, Anchorage, August 30, 1985
Sonja Seversen Arduser and Mary Seversen Wassenkari Clark, Anchorage, November 16, 1985
Parascovia Rochl, Palmer, November 17, 1985
Roy and Claudine Coray Wright and Paul Coray, February 1, 1986

Conducted by John Branson (listed chronologically):

Babe Alsworth, 1975
Alex Trefon, Anchorage, February 26, 1993
Ray and Linda Williams, August 1993
Mike Delkittie, August 3, 1993
Fred Rochl, Jr., Anchorage, September 1, 1993
John Lee, September 2, 1993
Katie Wilson, Naknek, October 21, 1993
Chuck Hornberger, June 24, 1994
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Walter Seversen and Anne Seversen Monsen, June 27, 1994

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