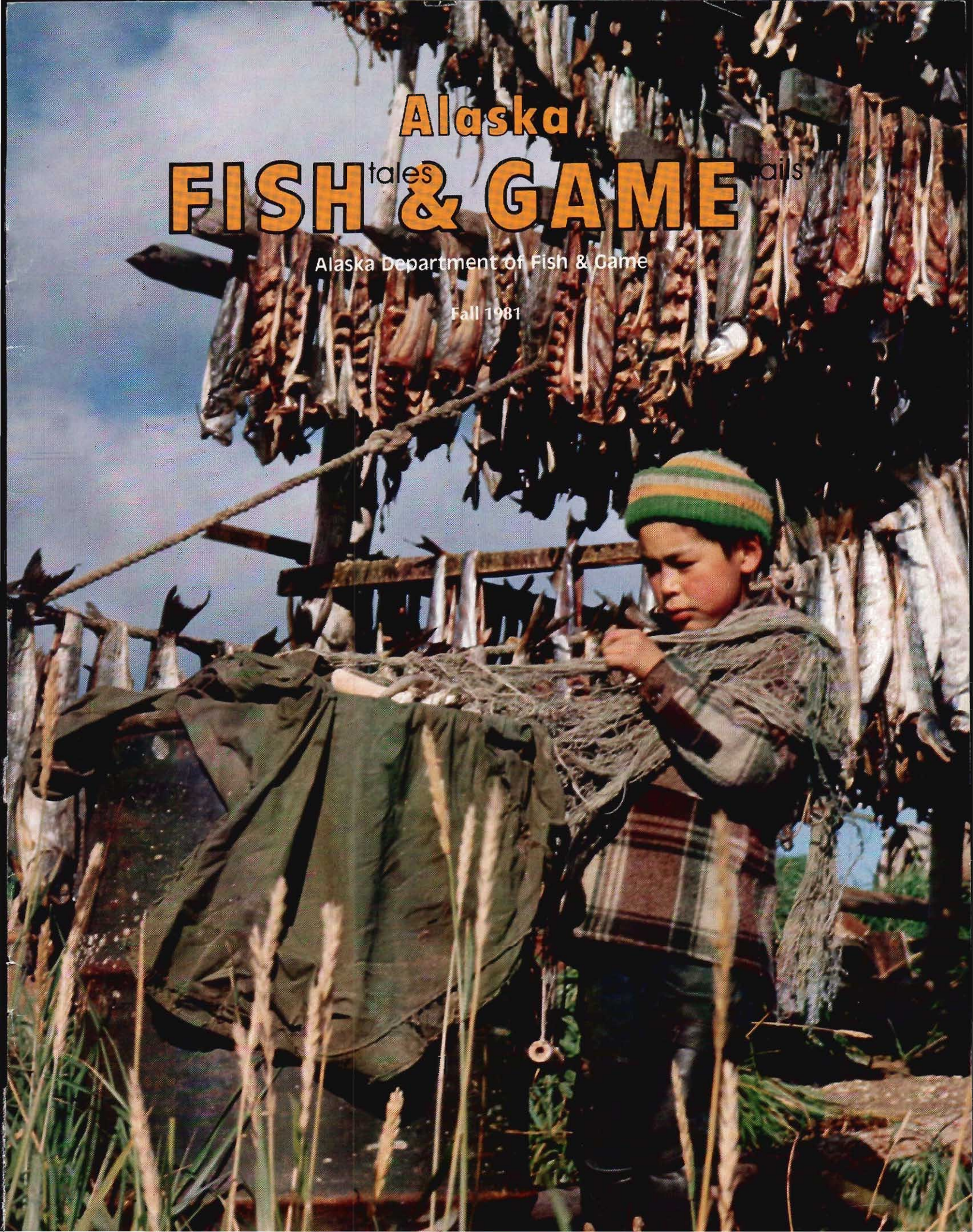


Alaska tales **FISH & GAME**ails

Alaska Department of Fish & Game

Fall 1981



Alaska FISH^{tales} & GAME^{trails}

Vol. XIII No. 3 Fall 1981

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ON THE COVER: A young boy in Deering stores nets after salmon fishing. This photo was made in the 1950's by Amos Burg. For more early photos see pages 19 and 20.

BACK COVER: Kelp beds provide important habitat for herring and many other Alaska fish. See story on page 12 for more on new ways of attracting valuable herring to kelp pounds. Photo by Kim Sundberg.



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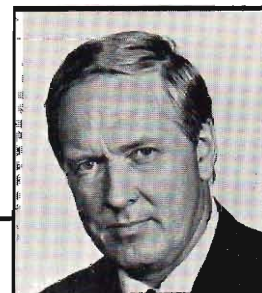
Kim Sundberg

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by Will

Staff

by Amos Burg



From the Commissioner

Two years ago this magazine published a special issue on subsistence. At the time the Alaska National Interest Lands Conservation Act was not yet resolved, the Department's Subsistence Section had just been created, and the Boards of Fish and Game had recently adopted policy and procedures for implementation of the subsistence law that the Legislature passed in 1978.

There were many unanswered questions at that time: What would be the definition of subsistence? Would certain federal land classifications in Alaska prohibit subsistence use of the resources on those lands? What would be the role of the new Section? Would the broadly defined and flexible policy of the Boards work? What would be the relationship between Federal and State law with regard to subsistence?

We have by no means answered all the questions. In fact, we now have some new ones. However, this second look at the topic, two years later, can answer some.

One of the gray areas that remains is the difference in the definition of "subsistence uses" in State and Federal law. While both establish subsistence as a priority, and establish the same conditions for determining how to proceed when limitations are necessary to protect the viability of wildlife populations and to ensure the continuation of subsistence use, the definitions of "subsistence use" differ somewhat — and that difference may cause problems. The Federal definition refers to "customary and traditional use by rural Alaska residents," while the State definition describes the term as the "customary and traditional uses in Alaska of wild, renewable resources for direct personal or family consumption. . . ."

The possibility that Alaska will resume management of several of its marine mammals (now within the jurisdiction of the U.S. Fish & Wildlife Service) will add another dimension to subsistence management concerns, because these animals have been and are used extensively for subsistence. Commercial use was important in the past and could be expected to resume in time. The resolution of this issue remains with the U.S. Congress.

Proposed changes in international treaties regarding migratory waterfowl to permit a spring hunting season will add yet another potential area of subsistence resource use and management.

The last big question on the horizon is the fate of bills that have been introduced in the Alaska Legislature to repeal the subsistence law. In addition to the legislation, a drive for a ballot initiative to do the same thing has garnered hundreds of signatures.

Although these decisions are not in the hands of the Department, they are issues that directly affect the way the Department carries out its primary responsibility: to insure the perpetuation of all species of fish and wildlife in Alaska and to maintain optimal populations of these species.

Secondarily, we have the responsibility to provide for the human use of these wildlife resources in both consumptive and non-consumptive ways, including recreation, commercial and subsistence.

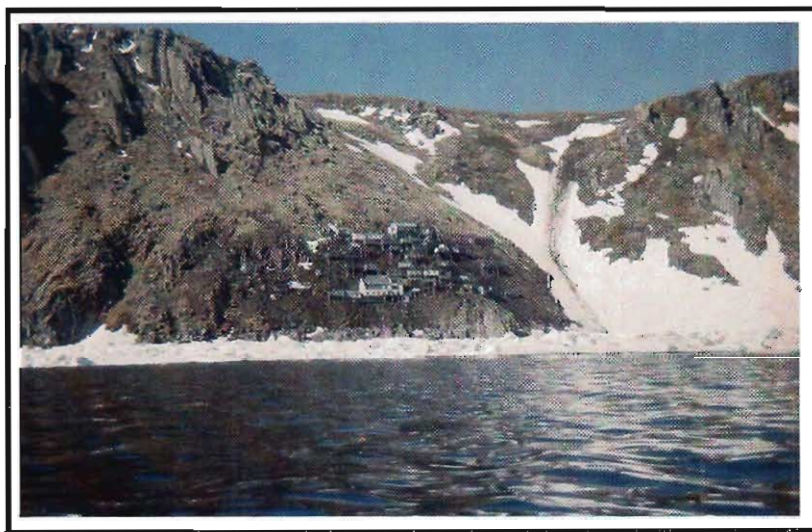
This second role causes the greatest problem — quite simply, the problem of people, and of trying to reconcile their many conflicting demands upon our fish and wildlife resources.

In some form or another, living-off-the-land permeates almost every Alaskan lifestyle with varying degrees of dependency, whether a person lives in rural villages such as Koyukuk, Shageluk, Emmonak, Ninilchik and Hoonah or in urban communities like Anchorage, Palmer, Homer, Juneau or Fairbanks.

We hope this issue of our magazine shows you some of the ways subsistence contributes to people's lives, and also helps to explain some of the tangled, thorny issues involved in managing our resources so those very diverse but rich ways of life can continue.

Settlement patterns of contemporary Ukiuvungmiut have undergone adjustment to meet the rapidly changing configurations of contemporary life.

Ukiuvungmiut: Cliff Dwellers of the Bering Strait



Story and Photos by Linda Ellanna

From the earliest exploration to the present day, Ukiuvok or King Island (as it was named by Captain Cook) and its populations, the Ukiuvungmiut, have captured the interest and inspired the imaginations of newcomers to the Bering Strait area (see map).

In comparison to other communities in Alaska, the island, its inhabitants and their walrus skin or frame houses on stilts have been the most frequently described, photographed, and painted by explorers, early commercial whalers, missionaries, teachers, and many others. Today the Ukiuvungmiut, who now reside in Nome, remain a focal interest of contemporary tourism. This fascination of many outside observers stems from their wonder of how a population of 150-200 people could have maintained a livelihood on this rocky island.

Extremely steep-sided, lacking even one beach, Ukiuvok is located near the middle of the Bering Strait over 30 miles west of the Alaska mainland. It is subject to powerful winds, currents, and ice movements, and virtually devoid of land mammals or birds, any diversity of edible vegetation, or salmon-spawning streams.

Not only did these "cliff dwellers of the Bering Strait" (as they were commonly called) survive under what has been variously described as "desolate," "barren," "isolated," "harsh," "spartan," and "poor" conditions, but they apparently have done so for some time. Based on ethnohistory, oral tradition, early documentation, and analogy to other Bering Strait insular communities in which archaeological work has been done, it is likely that the ancestors of the Ukiuvungmiut were on the island minimally several hundred years ago and possibly as long as 2,000 years or more.

However, perspectives on "desolation," "isolation," and "mere survival" are molded by the world view of the beholder. The human ecologist or anthropologist has a worldwide perspective on the way hunter/gatherer/fisher societies have changed through time. Such a perspective may offer a different in-

terpretation of the Ukiuvok island environment and the way the Ukiuvungmiut adapted to it and its resources.

In a perspective that spans both time and space, the adaptations of the Ukiuvungmiut and some other Bering Strait populations were highly successful. These people lived in communities far denser than was common in non-agricultural populations. They achieved increased longevity and the accompanying economic participation of elders. They also developed very sophisticated means for exploiting a rigorous maritime environment.

This society had the potential for surpluses necessary to maintain a widespread and intricate trade network, and included the development of complex social patterns necessary to most efficiently and productively use the resource base and ensure the distribution of these resources to all residents of the community.

Specifically, the Ukiuvungmiut developed a specialization focused on the ice-related hunting of marine mammals, particularly the Pacific walrus. Other marine mammals such as ugruk (bearded seal), spotted seal, and polar bear were supplemental, providing food and raw materials not available from walrus. There is negligible evidence to indicate any widespread hunting of large baleen whales by the Ukiuvungmiut even though they possessed the technology and hunting strategies necessary to do so.

It is clear, however, that they have long relied on the Pacific walrus, and their ecological setting was ideal for intercepting this species during its spring and fall migrations. But successful dependency on the Pacific walrus also required sociocultural and technological specializations.

The development of the large skinboat or *umiak*, the means to dispatch large sea mammals, and sophisticated and detailed knowledge of the marine environment with its moving sea ice and awesome currents were part of the technologic knowledge of the Ukiuvungmiut. The society also had to have the demographic resources and social means for organizing adult males into skinboat crews and



ways for individuals to accumulate the wealth, prestige and influence necessary to successfully recruit and retain a skinboat crew.

All this had to be passed on from one generation to the next in a community structure where the social and value systems ensured survival of all group members and appropriated labor efficiently by age and sex.

Despite the abundance and relatively constant annual availability of the Pacific walrus and other marine mammals, the need for terrestrially-based resources existed, but the small size of Ukiuvok made localized provision of such resources impossible. The

MAINSTAY--The Pacific walrus is still the mainstay of subsistence hunting and the central sociocultural focus of the Ukiuvungmiut even after nearly 20 years of relocation to Nome.

UMIAK--Through many Ukiuvungmiut now use aluminum boats, a few still build and use the traditional umiak, or skin boat, covered with the hides of the female Pacific walrus.

(Continued on next page)

Ukiuvungmiut adapted to these needs by developing trading networks to Siberia and to the Alaska mainland from Barrow to the Yukon Delta. Trade linkages to the adjacent Alaska mainland included, at least in the memory culture of living Ukiuvungmiut, marriage ties with the Kauwerak Inupiat, who were inland caribou hunters and the fishermen of Seward Peninsula. The settlement pattern of the Ukiuvungmiut is reflected in the Inupiat name for the island — Ukiuvok or "place where we spend the winter."

Indeed, the Ukiuvungmiut were able to live successfully on the island because they spent the fall, winter, and spring harvesting marine mammals as they became available. Other marine species were also utilized when available, such as migratory spring waterfowl and their eggs (the island is a nesting place for numerous migratory species), king crab, and others. Every summer, however, a substantial portion of the population would go to the mainland to trade, fish for salmon, obtain caribou (reindeer after the late 1800s), and pick greens and berries. The ties of the Ukiuvungmiut with Cape Woolley and surrounding areas and their populations on the adjacent mainland have persisted through time to the present day.

It is of interest to both scientists and lay persons to analyze the way a self-sufficient, hunting/gathering/fishing society adapts to change caused by forces outside of and different from their own culture. In this respect, the population of Ukiuvungmiut is an excellent case study.

The present site of the town of Nome was probably not aboriginally inhabited except by seasonally mobile small groups, as it is not a good site for hunting either large or small marine mammals in the spring or fall. The town was established as a consequence of the "gold rush," and soon became a center in which Inupiat populations of the Bering Strait/Norton Sound areas could obtain cash through longshoring activities or through the sale of ivory carvings, skin sewing, and so forth. With this cash the Inupiat could purchase a few coveted

commercial goods such as flour, sugar, coffee, tea, cloth or metal pots.

In historical perspective, this summer movement of the Ukiuvungmiut was initially only a minor variation on a time-tested seasonal theme. The main fabric of Ukiuvungmiut life remained basically unchanged given gradual technological shifts, that eventually would set the stage for more substantive and complex developments and bring about an increased reliance on cash. By the mid-1960s, however, some Ukiuvungmiut had come to Nome to reside for educational, employment, or medical reasons, and the Bureau of Indian Affairs decision to close down its island school at this time provided the ultimate pressure which was to result eventually in total community relocation.

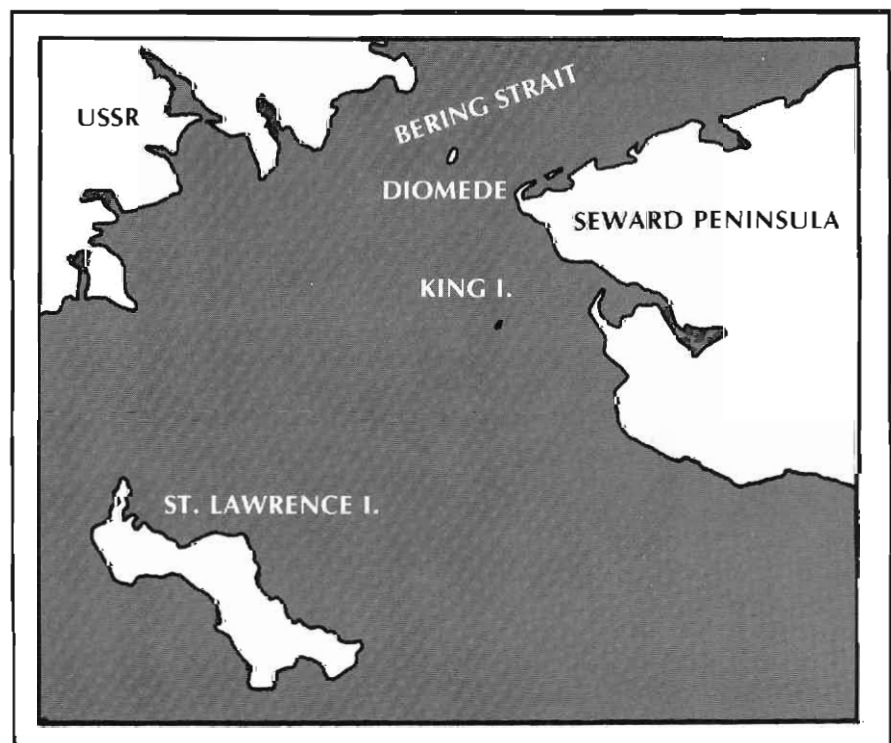
Despite nearly 20 years of relocation, the most basic features of traditional Ukiuvungmiut adaptation have persisted. Members of this population have established and retained membership in and identity with a subcommunity of Nome referred to as "King Islander" by both Native and non-Native residents of the larger community. Spring walrus hunting is still the singularly most highly valued activity in the eyes of contemporary

Ukiuvungmiut, although this pursuit involves a considerable expenditure of time and energy to get away from Nome's ice-choked coast into the strait proper. The other costly alternative used is to move boats, equipment, camping supplies, and families to Cape Woolley or Cape Nome for easier access to Pacific walrus migratory paths.

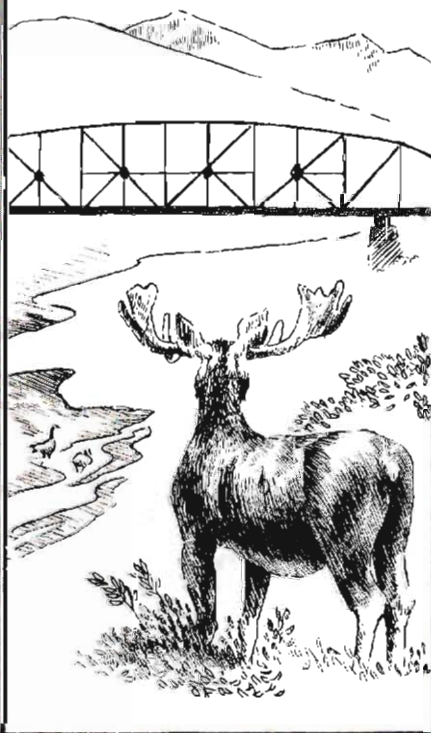
The inaccessibility of the relatively early cow migration to the Ukiuvungmiut in Nome has provided impetus to the gradual abandonment of the *umiak*, as the hides of the cow are essential to covering the large Ukiuvungmiut skinboats. Yet aluminum boat crews (and remaining skinboat crews) are basically recruited and sustained in accordance with traditional social patterns and interpersonal alliances. More essentially, marine mammals in general and walrus in specific are highly valued and considered an essential part of life for Ukiuvungmiut today, and internal redistribution networks have remained essentially intact providing for the nutritional, social, and emotional well-being of children and elders.

One notable change is that the elders play a greater direct role in the subsistence economy today than they probably did in the past. This

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ALASKA'S HABITATS



Coastal Management Program

By Debra Clausen

Alaska's vast (37,000-mile) shoreline and the coastal lands and waters adjacent to the shoreline, encompass the most productive fish and wildlife habitat within the entire State.

In Alaska, the productive coastal habitat is of both significant environmental importance and significant economic importance. Alaska's rich coastal waters provide spawning and rearing areas for the world's largest salmon runs, huge shellfish harvests, and a rapidly expanding herring fishery. The coastal lands and waters support waterfowl, fish, and marine mammal populations that are the cornerstone of the Alaskan subsistence lifestyle. Alaska's shorelands are the seasonal breeding and staging grounds of millions of waterfowl and shorebirds which move north each summer to nest and raise their young.

The Alaska Coastal Management Program (ACMP) has recognized the importance of maintaining coastal fish and wildlife habitats for this and succeeding generations. The ACMP Standards and Guidelines stipulate that coastal habitats "must be managed so as to maintain or enhance the biological, physical, and chemical characteristics of the habitat which supports living resources." To meet this requirement, Alaskan cities, boroughs, and coastal resource service areas (coastal districts) are now identifying and planning for the maintenance of important coastal habitats within their district boundaries.

With support from the Alaska Coastal Management Program under the auspices of the coastal district planning process, the City and Borough of Sitka requested the assistance of the Habitat Division of the Department of Fish and Game to conduct a fish and wildlife resource inventory and prepare habitat management recommendations for the loaded (urban) area of the City and Borough of Sitka. Maintaining the quality of life in Sitka while at

the same time simplifying State/Federal permitting processes were Sitka's major goals in undertaking this project. The Coastal Habitat Evaluation study was conducted over a year's period of time and included inventories of freshwater, wetlands and marine/estuarine habitats. A study of marine circulation was also included.

As a result of the study, management recommendations have been developed by the City and Borough of Sitka which will protect important coastal habitats, provide for continued public use of coastal resources, and allow for the growth of Sitka. These management recommendations include minimum setbacks on the banks of all anadromous fish streams; use of piling supported or floating structures instead of solid tideland fills; high value placed on the protection of coastal wetlands and estuarine tidelands from pollution and destruction; and developing a means of protecting points of public access to the shoreline and tidelands.

The study is also yielding benefits to Sitka in the form of general permits under the U.S. Army Corps of Engineers 404 permit process. Six general permits now pending have been developed by the City and Borough of Sitka. These six general permits cover: 1) piling supported or floating boat docks; 2) clean rock fill; 3) residential sanitary sewer outfalls; 4) residential utility services; 5) private vessel mooring buoys; and 6) culverted crossing of non-anadromous streams. General permits provide an expedited approval process for applicants wishing to conduct dredge or fill activities in non-critical wetlands. Once in place, the general permit process will be primarily administered at the local level by the City and Borough of Sitka.

(Continued page 27)



whaling



HARPOONS POISED--The bow of this umiak is balanced over the water's edge with harpoons ready for striking whales that surface close to the ice. The harpoons are turn-of-the-century Yankee whaling weapons, and are attached to a float. After the float/harpoon is thrown to mark a whale, a bomb is fired from a shoulder gun, and the whale is followed by tracking the float. Photo by Barbara Taylor.

BALEEN--Bowheads filter small organisms in the water through the baleen that hangs from the roof of their mouths. The baleen is seen here in the mouth of a whale that has been turned on its back for butchering. Muktuk, or a layer of skin and blubber, is being removed from this whale. Each whaling crew sends a member to assist with the butchering and get a share of the meat. Members of the community who assist with the work also get a share.

Photo by Geoff Carroll



RESTING BOWHEAD--In their migration, bowheads are often seen resting at the surface. The identifying marks of a bowhead can all be seen in this picture: the white chin mark, the raised blowhole (which gives it its name "bowhead"), and the white markings in front of the flukes. Photo by Bruce Krogman, National Marine Mammal Lab, National Marine Fisheries Service.

ESKIMO WHALING CAMP--Canvas wall tents and wind breaks are typical of whaling camps on the edge of "ice leads" or cracks in the pack ice where open water remains. Eskimos maintain 24-hour whale watches despite sub-zero temperatures and frequent high winds. In this Barrow camp, whaling crews of four to 10 men remain from April through early June. Photo by Geoff Carroll.

To many people in the United States, the issue of subsistence hunting, or the concept of a subsistence dependence on wildlife, evokes images and ideas of Eskimos and whales. Indeed, in Alaska, any general discussion of subsistence is incomplete without mention of the bowhead whale and its importance to peoples of certain northern settlements.

The State of Alaska is not the managing authority for whales or subsistence whaling. However, both are of great importance to the citizens of Alaska, and the State government has remained involved in deliberations on the issues.

During the 1970's, the complex legal, political, biological and sociological questions surrounding a continuation of subsistence use of bowheads by Alaskan Eskimos have been hotly debated and contested at local, state, national and international levels.

The Yupik Eskimos of St. Lawrence Island and the Inupiat Eskimos of northern Bering, Chukchi and Beaufort Seas had successfully hunted the bowhead for centuries. In the middle 19th century, Yankee whalers found and began to overexploit this same population of whales. Yankee whaling underwent a transition from high seas, vessel-based whaling, to overwintering whaling ships near the northern summer whale feeding grounds, to shore-based whaling which partially adapted Yankee technology to the type of hunt successfully conducted by Inupiat whalers. These changes were necessitated by the decreasing numbers of whales and the greater difficulty of capturing them. Economic conditions ended the era of commercial whaling in the early 20th century.

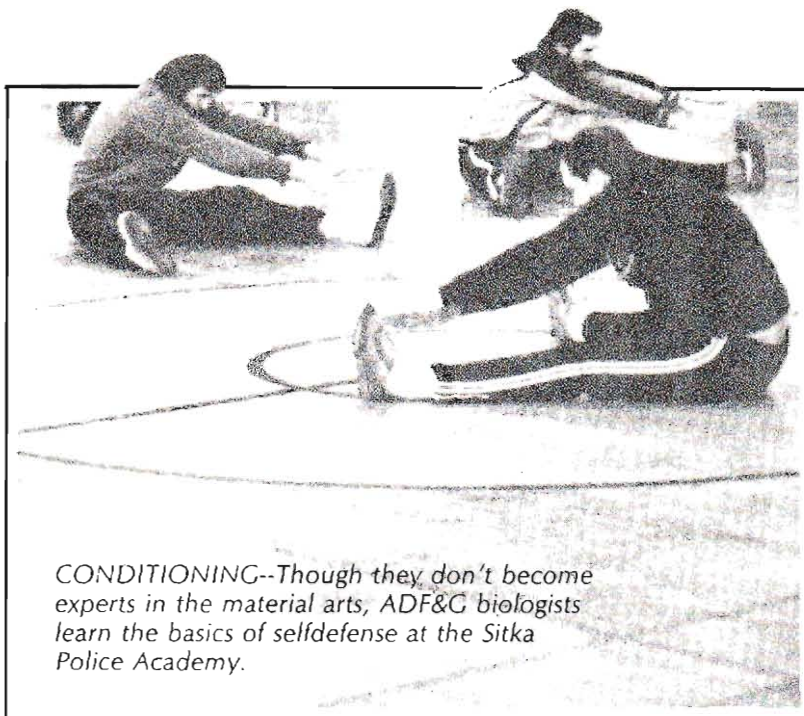
Aboriginal or subsistence whaling continued throughout the period of commercial whaling and, after

that endeavor ceased, to the present day. Three major changes had taken place in subsistence whaling: 1) the introduction of technology including bombs, which are delivered from "darting guns" or "shoulder guns;" 2) a reduction, through consolidation, of the number of sites from which successful subsistence whaling occurred; and 3) a significant reduction in the number of whales available to subsistence hunters. Other factors also changed, but not to the point of eliminating the material dependence on the annual whale hunts, or, perhaps of greater significance, the social and cultural importance of the whales and of whaling. In fact, a strong argument can be made that the sustained criticism and threats to subsistence whaling have greatly increased the social and cultural values involved in the whale/subsistence whaler relationships.

Technology may have compensated for reduced abundance, because bowheads were successfully taken even when the population was at its lowest level. Exact size of the current bowhead population in waters adjacent to Alaska is unknown. The best available information suggests a level of around 2,400. Recent harvests have averaged 26 annually from 1970 to 1975, and 23 from 1976 to 1980.

Regular whaling villages (those assigned a quota by the Alaska Eskimo Whaling Commission and the National Marine Fisheries Service) include the settlements of Gambell and Savoonga on St. Lawrence Island (inhabited by Siberian Yupik speakers) and the Inupiat Eskimo villages of Wales, Kivalina, Point Hope, Wainwright, Barrow, Nuiqsut and Kaktovik. Occasionally a bowhead is taken at another location.

The photographs opposite show a little part of the story of subsistence whaling in Alaska. ○



CONDITIONING--Though they don't become experts in the martial arts, ADF&G biologists learn the basics of selfdefense at the Sitka Police Academy.

Bootcamp for Biologists

Story and Photos by Mark Kissel

The trooper who picked us up at the airport for the short ride to the Public Safety Academy in Sitka had probably never seen such a scruffy bunch of "recruits" — at least not since the last class of Fish and Game personnel arrived for their week of law enforcement training. The trooper wore neat slacks, pressed to a sharp crease, his hair was short, his face shaved clean. We, the recruits, were mostly bearded, dressed in blue jeans, and wondering what we had gotten into.

The academy is a combination law enforcement college and dormitory, two stories high, and looking as new and clean as it did the day it opened seven years ago. After a brief orientation, the trooper told us to report to class the next morning in casual dress. Then he smiled, probably realizing that such an admonition was unnecessary with us.

The next day we were met by Cpl. Roy Harper, a friendly and enthusiastic instructor who told us

he would be with us until the First Sergeant returned to town. The First Sergeant! I had heard him mentioned the night before while chatting with several of the municipal police officers who were also there for training. Their training was much more extensive than ours — six weeks to our one week — and they had already met the First Sergeant. They mentioned him only by rank, and I thought I detected a bit of dread in their voices, something of the tone army recruits reserve for their drill sergeant. I decided not to be disappointed if the First Sergeant stayed out of town all week.

But he didn't. He was a muscular, broad-shouldered trooper with the gold stripes of rank bright on his upper arm. He addressed the class in an unexpectedly normal voice. "Hello. I am First Sergeant Jenkins. You can call me Dave." Okay! It wasn't going to be like army basic training; we wouldn't have to spit shine our red rubber

boots.

It was incongruous, certainly, this group of 21 biologists, fish culturists, and assorted Alaska Department of Fish and Game personnel attending the Public Safety Academy, but there was a good reason for it. Many ADF&G employees spend a substantial portion of their time in the field, where they may see people violating fish and game laws and regulations. The State Legislature felt that in such circumstances, employees of the Department should be empowered to write summonses, confiscate illegally taken fish and game, and, if necessary, arrest the violators. By law, the Commissioner of Fish and Game can appoint peace officers for this purpose.

The Commissioners of the Departments of Public Safety and Fish and Game agreed that these appointed peace officers should receive a short course in law enforcement. With the cooperation of the Department of Public Safety, a couple hundred ADF&G employees already have graduated from the special training course at the academy. The academy, by the way, also trains State Troopers, Fish and Wildlife Protection Officers, and most local law enforcement officers.

For their part, the Department of Public Safety is glad to have us, as fuzzy as we look. The State has about 96 permanent Fish and Wildlife Protection field officers — not very many for a state the size of Alaska. That number is soon to be augmented by an additional 15, and supplemented seasonally by 36 part-time employees. If all 147 were on duty at the same time, each would have a patrol area of more than 4,000 square miles!

But few cases are made while on patrol. According to F&WP Sgt. Robert Brown, patrol is actually the least effective way of catching violators, although it is an effective deterrent.

"There's just too much territory out there," he said.

Most violators are nabbed based on tips from citizens, people

who are concerned that their common resource is being abused and stolen by the thoughtless and greedy. The help that F&WP officers receive from citizens, from ADF&G employees, and from local law enforcement agencies allows them to serve the people of the state more efficiently.

In its 1981 Special Legislative Report, the Fish and Wildlife Protection Division states:

"We cannot measure the loss of resources in either economic or aesthetic terms that are related to illegal activity; yet, based on the requests we receive for more enforcement from fishermen groups, Native corporations, and the general public, we believe that loss to be significant."

Contacts with harvesters during 1980 showed that about 11 percent of commercial fishermen, 9 percent of sport fishermen, and 3 percent of hunters contacted were in violation of some fish and game law or regulation. Clearly, most of the resource users are law-abiding; in fact, they often provide the tips and information protection officers need to nab those who aren't.

F&WP officers have one of the most dangerous jobs in law enforcement. The people they contact in the field are generally armed, and they are often dozens, sometimes hundreds, of miles from assistance. When things get nasty, the protection officer has only his own skill and knowledge to pull him through. Fortunately, Alaska F&WP officers are well-trained professionals who handle their difficult assignments with aplomb.

The Wyoming Department of Fish and Game conducted a survey of law enforcement in the 50 states covering the years 1963 to 1972. The survey compared police officers with game wardens (or protection officers, as they are called in Alaska) and the findings were somewhat unsettling to the latter. Guns figured in 7% of the assaults on police officers, but in 51% of the assaults on protection officers. Of the assaults on police officers, 0.3% resulted in fatality; of the assaults on protection officers, 2.6% resulted in fatality.

Being a Fish and Game employee is not an entirely safe occupation, either, as some of my fellow students pointed out. One recounted that a man tried to gaff him during a creel survey, and another told of a man who forced him away at gunpoint when he tried to remove a beaver dam that was blocking salmon migration.

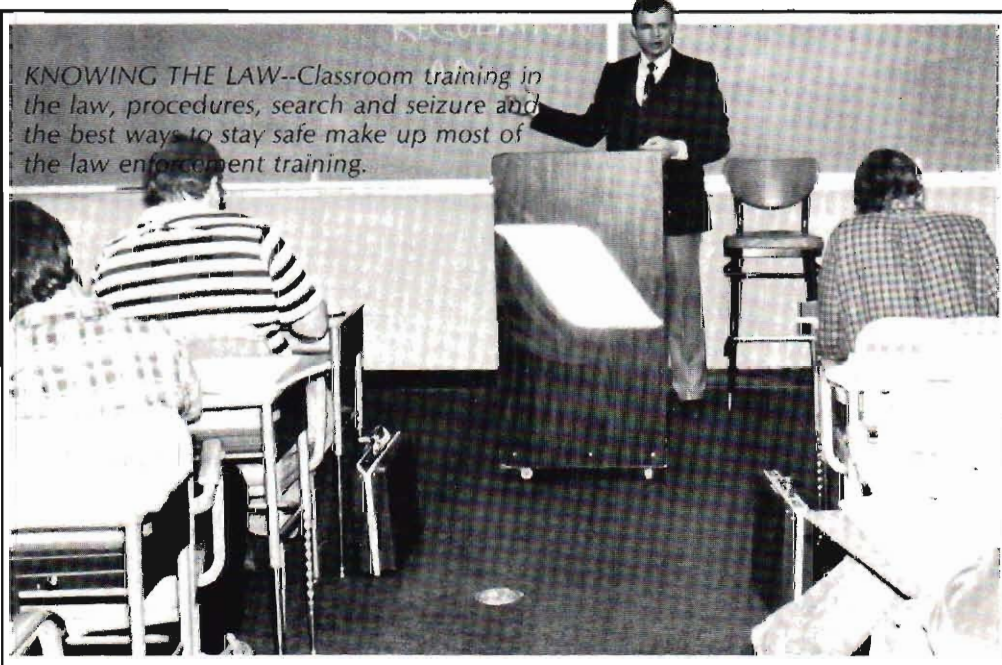
Alaska F&WP officers are not assaulted often, although some uncharitable individuals have taken potshots at their airplanes from time to time. Cpl. Harper told us in class that he had been assaulted seven times in his seven years of law enforcement. A person could be assaulted more than that just by hanging out in the wrong saloon. But anyone who enforces state laws must be prepared to deal with the problem of violence, and so that was part of our training.

We went through self-defense training each day. The purpose, Sgt. Jenkins told us, was not to learn how to beat people up. Looking at us, he must have known that would be impossible. Rather, the purpose was to help us avoid being attacked or hurt. We learned to block punches, to break out of holds, and to fall backwards and spring to our feet. We were as graceful as moose, as imposing as sparrows, but we learned to be aware, to be alert, and we learned how attacks develop and how to prevent them from occurring.

Most of the schooling, however, focused on the law, on correct procedures, the Miranda decision, search and seizure, and other things that are, let's face it, as exciting as a law library. We struggled through it, learned it, and on Thursday we had

(Continued on next page)

If all 147 field officers were on duty, each would have a patrol area of 4,000 square miles.



what was probably the most interesting and fun part of the course — the practicals.

We were divided into groups of four or five persons and sent out to assigned areas. Once there, we would find one of the instructors "violating" a fish and game law regulation. It was playacting, but it brought to life all the discussion and lectures of the previous three days. We made plenty of mistakes. One group went to talk to a woman who had (according to the scenario) advertised to sell a bear hide. They arrived to interview her, and immediately told her she had the right to remain silent. She did. End of interview.

And Cpl. Harper was obviously enjoying his role as an excitable deer poacher. He behaved reasonably at first, but when it became apparent that he would receive a summons, he began pacing, breathing heavily, and, if we did not control the situation, he would draw a handgun from a shoulder holster under his parka. He surprised one group with the gun, made them all lie down on the trail, and ran off.

Indeed, there was a serious purpose to the practicals. We learned things we never could in a classroom.

"We went easy on you fellows," said F&WP Sgt. Rich Graham, who flew down from Juneau to teach some of the sessions. "You should see what we do to the regular recruits. Have you ever seen grown men cry?"

On Friday we took the final exam, which was closely followed by graduation. Fish and Game Deputy Commissioner Don W. Collinsworth was there to distribute our badges in a brief ceremony. Suddenly, we were all peace officers of the State of Alaska.

No, we didn't magically become Baretta's and Kojaks. We didn't shave our beards or buy shiny black shoes. But we did, I think, learn how to be of greater help to the men and women who protect the resources we manage and enhance, and we gained a greater understanding of them and the job they do.

And, as Barretta says, "That's the name of that tune!"

Roundup



YOU CAN HELP

The fish and wildlife of the State of Alaska are common-property resources, which means they are owned commonly by all the citizens of the State. When someone takes fish illegally or shoots a moose out of season, he is stealing from us all. Even worse, he is taking animals that would otherwise reproduce the species. Illegal harvesting can lead to depressed or depleted fish and game stocks.

What can we do to stop it? According to Alaska Fish and Wildlife Protection Sgt. Robert Brown, protection officers rely on the public to report violations of the law. You can help by getting involved and becoming a good observer.

If you spot illegal activity, note the time, location, descriptions of the persons involved, their vehicle, their equipment, and anything that will help identify them. Make special note of any peculiarity, anything that makes them unique. If you have a camera, photograph them and their activity. Then report this information to your local Fish and Wildlife Protection officer or the State Troopers as quickly as possible. It is not necessary to leave your name with the authorities, but they will appreciate it if you do.

Observation and speed are critical. The protection officers will have little to go on if you tell them that three people in a green boat fished in a closed area three days ago. That's an example of too little information too late.

What you should *not* do is almost as important as what you do. Do not try to apprehend the violators yourself; that only places you in unnecessary danger. Protection officers are trained intensively for their duties, and they perform them very well. Let them handle it. And thanks for the help!

Trollers aid department on salmon tagging project

—Gary Gunstrom

While most commercial trollers in Southeast Alaska were ashore waiting for the salmon season to start, four of their compatriots were hard at work for the Department of Fish and Game.

Trollers and the Department, who have sometimes been at odds over fishing closures during the past several years, joined in a cooperative effort this spring to sample chinook salmon returns to northern Southeast Alaska.

Historically, most troll fishermen would have been busy in the waters of Cross Sound and Icy Strait during the spring season, which normally opens April 15th. This year, however, the State Board of Fisheries delayed the start of the season for one month, hoping to protect weak runs of Southeast Alaska chinook salmon bound for local spawning streams.

Because of the closure, biologists feared that returning micro-wire tagged salmon might escape capture. The tagged salmon, marked with an adipose fin clip, carry information vital to the management of Southeast Alaska stocks, and are returned to Department researchers when caught by fishermen.

In order to intercept those fish passing through during the closure, the Department set up a cooperative program with the Alaska Trollers Association. They hired four high liners to take biologists out during the closed season and troll for salmon.

In addition to catching fish to find those with the coded wire tags, the project included disc tagging of chinooks and a test of the relative mortality rates and catch efficiency of single and treble hooks.

The information from the tagging projects will help determine the contribution of Alaska chinook stocks to the troll salmon fishery during the early season (closed) period.

Four commercial power trollers, working on contract with the State, were able to catch and tag a total of 764 chinook salmon in the four-week period. The captured fish were tagged

with large, red disc tags which offer a \$2.00 reward to the person returning the fish. An additional incentive is a \$500 lottery drawing at the end of the season. The four boats that participated in the research fishery were picked with the assistance of the Alaska Trollers Association, a group that represents Alaska power trollers.

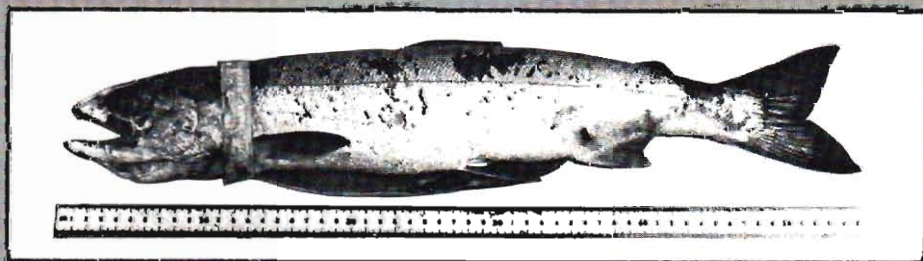
The vessels operated normally except that both single and treble hooks were fished in order to compare their effects on captured fish. Single hooks were typically fished off one side of the boat, trebles off the other, with the sides alternated every day in an effort to reduce bias. This part of the study was conducted in response to Board of Fisheries action which prohibited the use of treble

hooks during the 1981 season.

Each vessel had on board a biologist from the Alaska Department of Fish and Game or the Alaska Trollers Association.

The absence of an adipose fin on captured fish indicated that the salmon bore a tiny coded wire tag in its nose cartilage. The tag carries information on where and when the fish was tagged. These fish are of particular value to biologists in determining run timing and migration routes. Other chinook salmon, lacking any mark, were tagged with the colorful discs prior to release. Information from the returns of these tags can provide valuable information on where the chinook spend their summers feeding, where they mill before mov-

“Spinach tag” may be newest salmon identification



The Troll Salmon Fishery Management Program in Sitka reported recovery of a coho salmon in August with a thin plastic strap encircling the fish's body posterior to the head. The strap had evidently been in place for some time since examination of the fish showed the skin underneath the strap to be severely eroded and the flesh exposed.

The inscription on the strap was in Japanese. Translation of the writing, provided by Atsuo Tsunoda, an employee of the Alaska Lumber and Pulp mill in Sitka, was “Irima Tobu Agriculture Corporation-Spinach.” The strap had been used to bind spinach leaves and was apparently discarded by a vessel at sea.

The fish, caught by the salmon trolling vessel *M.V. Dorothy H II* (skipped by Charles Wilkes) off Pleasant Island, in Icy Strait (near the community of Gustavus) was landed at the Halibut Producers Coop. in Sitka last August. The small size of the salmon (21.7 inches long, and approximately 3.5 lbs.), relative to the time of year in which it was caught may indicate that the strap had a growth-inhibiting effect on the animal. A port sampling program conducted by the Division of Commercial Fisheries at the major ports of landing in Southeastern has shown the weights of landed coho salmon in early August to average 7-8 lbs.

Though the literature documents similar entrapment of fish, sea birds and sea mammals by such other artifacts of human commerce as plastic beer and soft drink can binders and aluminum “pop tops,” this is the first known occurrence involving a spinach binder. And, although the possibility exists that the strap was placed on the fish at sea by a mischievous Japanese fisherman, accidental entrapment would seem the more logical explanation.

Perhaps happenstance has shown us (1) a new method for documenting refuse disposal at sea, or (2) a new, low-cost method of salmon tagging!

ing into the spawning streams, and what stocks feed where and when.

In addition to the tagging operation, the onboard biologists sampled the fish for scales (age determination) and recorded length, capture injuries by severity and hook type, predator scars, etc.

While the capture effort was straightforward, the tagging technique was unique! Unable to use standard fish culture anesthetics for fish immobilization because of U.S. Food and Drug Administration restrictions, the biologists developed an "electronarcosis" procedure used in the British Isles in the mid-1960s. Briefly, the procedure employed an electrified "capture basket" with positive and negative electrodes at either end, the power emanating from a 12-volt car battery. When lifted aboard, the

fish encountered the electrodes which immediately caused their muscles to "freeze." The fish thus became immobilized without use of drugs. Biological data collection and the tagging procedure were conducted in less than one minute, then the electricity was turned off and the fish returned to the sea. Salmon held in live tanks onboard showed no "after effects," and, indeed, one tagged fish was recaptured within days of its handling and release!

The data analysis for this "mini" research program, which ended in May, is as yet incomplete, though as of Sept. 15, 33 tags had been recovered from the Southeast Alaska commercial and sports fisheries and one tag from Neah Bay, Washington. A complete report will be presented to the Alaska Board of Fisheries at its meeting in December.

Letters to the Editor

Dear Editor,

Greetings and congratulations! Your publication has scored a great hit among sportsmen and readers both far and near. Please extend our Club's subscription.

E.K. Browne, Secretary
Southeastern Alaska
Mountaineering Assn.
Ketchikan, AK

Dear Editor,

My compliments on the two recent issues of the resurrected publication *Alaska Fish Tales & Game Trails*. It fills a unique role in providing Alaska residents with popular-style but authoritative information on the State's fish and

Kelp pound enclosures add to herring fishery

— Rich Randall

Herring continues to be one of the most sought after yet elusive of all of Alaska's fishing resources. The evolution of the commercial fisheries for herring in Prince William Sound has followed an erratic pattern, and is presently the most diversified herring fishery in the state. There are four distinct fisheries that target on herring in the Sound: a spring sac roe fishery, a wild spawn-on-kelp fishery, a pound culture spawn-on-kelp fishery, and a fall and winter bait and food fishery.

The most unusual of all of these is the spawn-on-kelp fishery. The method of harvest is novel, with divers, not nets or pots, going into the deep water to harvest the product. Prince William Sound has the largest spawn-on-kelp fishery in the state and the only one that is harvested in deeper water by divers. The annual guideline harvest for this fishery is 400,000 pounds.

The whims of both Mother Nature and the marketplace determine whether any season is going to be a success or failure for the hundreds of fishermen who participate. The fishery is unique in that the final product

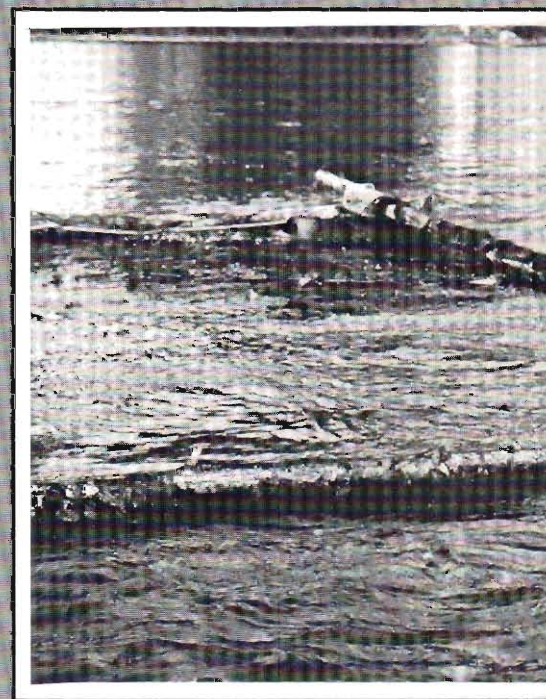
is actually a combination of both an animal and a plant resource (herring spawn on kelp). In order to be marketable, the harvest must contain clean kelp of a particular species, have herring spawn of adequate density, and occur within a relatively short span of time before the eggs begin to hatch.

In an effort to eliminate some of the uncertainties from the fishery a small group of fishermen has been busy during the past few years developing the state's newest herring fishery, a pound spawn-on-kelp fishery. The goal of this venture is to confine mature herring in a small enclosure or pound along with carefully selected kelp and, they hope, force the fish to deposit their eggs there. The operation requires a broad range of fishing skills and equipment including the construction of a floating and portable fish impoundment structure, diving equipment for the collection of kelp, a spotter plane to locate the fish, a purse seine and boat to capture the herring and knowledge of the required handling and processing of the final product.

The 1981 season in Prince William Sound saw a dramatic increase in the participants in the fishery. Eight of the 18 pounds constructed managed to produce about nine tons of finished eggs and kelp out of a guideline harvest level of 16 tons. Many of

the unpredictable aspects of the wild spawn-on-kelp fishery remain and, although the successes of the pound operators remain limited, many lessons were learned this season that will help shape the future direction and development of this new fishery.

Fishermen secure kelp pound enclosure



wildlife resources and their habitats. As a 25-year resident who hunts and fishes, I am particularly pleased by the balanced treatment of controversial issues, and the low-key advocacy of cooperation, rather than confrontation, between the State, the "Feds," Alaska Natives and other special interest groups.

Sincerely,
Theodore R. Merrell, Jr.
Program Manager,
Environmental Impact
Programs
National Oceanic &
Atmospheric
Administration

Dear Editor,

Please correct me if I'm wrong, but the beautiful color photo of the "white-tailed" ptarmigan on the cover of *Alaska Fish Tales & Game*

Trails is really a Rock Ptarmigan.

Note the black eyeband plus ribbon of black feather on the tail.

Absolutely no sarcasm involved here! I really do enjoy your publication and glad you're publishing it again.

Very Sincerely,
Chuck Heath
Wasilla, AK

You are absolutely right about our cover ptarmigan, and the photographer and I are feasting on crow pie! Had we consulted our bird book, we would've seen immediately that the white-tail is so called

because it's the only ptarmigan that has absolutely no black on its tail. Thanks for pointing it out.

Editor

CORRECTION

In the Spring issue of *Alaska Fish Tales & Game Trails*, our map of the Alaska National Interest Lands Conservation Act units incorrectly showed that hunting and trapping are prohibited in National Preserves. Hunting and trapping are allowed in Preserves; they are not permitted in Parks and Monuments.

Gold is not all that glitters

— Hal Dinkins

Before it again became profitable to mine Birch Creek drainage for gold, the creek ran clear and pure from break-up in May to freeze-up in October. In early June of 1974, my wife Joyce and I joined six friends to canoe from a point at ninety-five mile on the Steese Highway to a place called "Jump-off" where Crooked Creek, Birch Creek and the Steese come together 150 miles to the north and a few miles beyond Central, Alaska.

Exciting white water, good food, including bread baked in an oven constructed with flat rocks, tall tales around the camp fire and good fellowship marked the first three days of our float. We had expected to see a cross section of the region's wildlife, but except for a nest of ravens and their parents, the upper reaches of the creek drainage seemed notably empty of wild creatures.

Because of the pressure of affairs in Fairbanks, Joyce and I had to leave our friends as they stopped to explore some of the ridges along the mid-section of the river. We camped and dined that evening on freshly caught grayling at South Fork.

After breakfasting on the remnants of our previous day's grayling catch, we pushed off for a long day of canoeing. As we reached the edge of the Yukon Flats east and south of

Medicine Lake the shores came alive with wildlife. Beaver plunged into the water ahead of us while the ponds and sloughs teemed with ducks and lesser Canadian geese. As we approached the junction with an unnamed tributary we spotted the pair of bald eagles that nest there each year in a cottonwood overlooking their favorite fishing spot. Thirty minutes later we drifted past and awakened a bull moose dozing in a lush willow patch.

Most interesting of all, however, was the sleek black bear that appeared far ahead of us on the left shore. The bear was preoccupied with food and we managed to paddle quietly up to within 100 feet of him. We took his picture as we carefully paddled toward him.

The bear and I observed each other, both of us remaining motionless, for several seconds. Then hoping for a good action shot I very slowly set my camera on infinity, a high shutter speed and adjusted the lens opening. I then nudged the gravel. The bear's actions reminded me of a hot rodder throwing gravel. By the time he reached the brush 50 yards away he was doing at least 30 miles per hour.

By then it was time for a late lunch and as we rested and mused over our exciting morning we observed that not all of the riches to be obtained from Birch Creek come from gold. That trip and especially that half day will always "glitter" in our memories.

Rich Randall received both his B.S. and M.S. degrees in wildlife biology from the University of Nevada prior to taking a permanent position with the Commercial Fisheries Division of the Alaska Department of Fish and Game in 1973. He worked in Bristol Bay from 1973-80 before transferring to Cordova to assume his present responsibilities as the Prince William Sound Area Management Biologist.



From the Cabin Wall

By Will



As I pulled into Bruce's driveway I had no idea I was about to receive an object lesson in subsistence of a different kind. It was, after all, a chill late November morning in Southeastern, and at 5:30 a.m., my thoughts were centered more on a second cup of coffee than anything else.

Bruce and I planned to take his skiff out to one of the small islands north of Juneau to spend the day hunting deer. We had high hopes of connecting; the deer population was good throughout the area.

The launching went smoothly and as we headed up Lynn Canal I huddled in the bow. Even through heavy wool I was quickly chilled. It may have been barely freezing to a thermometer, but the wind was from the north and seemed to pick up speed with every yard we progressed.

It was the wind, finally, that caused us to switch to Plan B. The only anchorage on the island we originally planned to hunt was exposed. Plan B called for a different island and a protected cove.

Cold as we were, the sunrise was unforgettable. The fog lifted, long shafts of light lit the glaciers as we passed and shreds of cloud over the mountains caught the light and threw it back in rose and gold. The shadows of resting seabirds were long on the water. Our own shadows

ran ahead, leading us north.

As we passed one rocky islet, a massive sea lion slowly lifted its head to watch. The lone bull was hauled out, basking his length in the sunshine. We wondered at the strength that had dragged his great bulk to its perch on a boulder at least 10 feet from the water level.

By the time we landed, out of the wind, we were ready to shed parkas and get to work. Bruce took the west side of the island, I the east. We would walk opposite sides of the island's spine, to meet at the northern end if all went well.

The rest of the morning we stalked through the brush. We moved slowly, stopping frequently to scan the undergrowth, bending to peer under branches, turning to check our back trail. So the first few minutes I could hear Bruce's deer call, then brush and distance separated us, and I was alone.

Except for isolated patches, the little snow we'd had was gone, washed away by rain the previous week. Fresh deer sign was even more scarce.

Bruce and I missed each other at the north end of the island, and by the time I got back to the boat he was eating lunch in front of a smudgy little fire fed by waxed cartons and visqueen left by some previous "outdoorsman."

After lunch we tried one more island, an even smaller one, hardly larger than a couple of football fields. We were quickly convinced it was not our day to kill deer; there was even less sign on the second island.

The skiff was drawn up on a little spot of beach. The waves sparkled, the sky was the transparent blue of late fall, and Bruce and I needed no other encouragement to sit down against a handy log.

As we rested, the sea lions arrived in a herd of 30 or so. One, extra brave or curious, came within 10 yards. An amicable bunch, they watched us as closely as we watched them. Several even ventured a noisy opinion on the proper way to cook seafood — "raaaw!"

The sea lions eventually decided they'd had enough and

went off in search of more amusing company. Bruce and I felt like sea lions ourselves, basking in the sunshine with our wool shirts off and heads pillowed on a log. Both of us fell asleep, lying in comfort on the sand.

The sun had moved by the time we woke up, and the November chill was back in the air. We loaded up and headed for home, body-tired but mind-refreshed.

Subsistence? You bet! You see, for a lot of people, no matter what their background, subsistence is largely a state of mind. Filling the larder is only part of it.

Hare

Snowshoe and tundra hare are delicious if properly and promptly prepared, a process which begins in the field. Always wear gloves to gut and skin hares. If you plan to freeze the meat, dry the pieces before wrapping. Use a double layer of wrapping or two heavy-duty freezer bags to prevent punctures from bone ends which can lead to freezer-burned meat.

Hare with sour cream

Sprinkle serving size pieces with salt, pepper and paprika. In a separate container, mix ½ cup red wine, one can of condensed cream of mushroom soup, one cup sour cream, a dash or two of Worcestershire sauce, and a couple of teaspoons of minced onion. Put the hare in a crockpot or dutch oven and pour the sauce over it. Cook all day on low heat.

Fried hare

Fried hare is great, but special care should be taken to make sure it's not too tough. There are two ways to do this. The first method is to coat the pieces with corn meal or flour (as you would chicken), brown it lightly, then reduce heat and cover the pan, simmering until it's tender. This results in a very moist coating and takes a long time. For a crispier coating in a shorter time, first boil the hare until it's almost tender, then pat the pieces dry, roll them in corn meal or flour, and fry them as you would chicken. ○



Title VIII: Federal Land Managers View Subsistence

By Suzanne Iudicello

One of the greatest concerns during the debate over the Alaska National Interest Lands Conservation Act (ANILCA) was whether or not subsistence uses would be permitted in the newly designated Parks, Monuments and other systems. A part of that question also centered around whether the State would retain its management authority over the wildlife resources on those lands.

The flurry of emotion and rhetoric has died down, and Alaskans have lived with the settlement of "D-2" for nine months now. Many of their concerns were alleviated by actual provisions in the law, and the remainder are in the process of being solved through comment periods and revisions of proposed regulations for the various conservation systems.

Although the T's have yet to be crossed and the I's dotted, the consensus among federal land managers in Alaska is that traditional fish and game management activities and responsibility are retained by the State; the allocation of those resources to subsistence user belongs to the Boards of Fisheries and Game -- and that's the way they'd like to keep it. The significant new consideration the State must take into account is that management will have to be compatible with specific-

ly stated purposes for which each conservation unit was established.

The federal land designations in Alaska — some of which have been in place for years and others which came with the enactment of ANILCA — are the National Wildlife Refuge System, the National Park System, the Bureau of Land Management System, National Forests, National Wild and Scenic Rivers, and other Federal Public Lands. The agencies with responsibilities among those systems are the U.S. Fish and Wildlife Service, the Bureau of Land Management and the National Park Service, all in the Department of Interior, and the U.S. Forest Service in the Department of Agriculture. The total of previously designated federal lands plus the ANILCA acreage add up to 220 million acres in federal management in Alaska.

What's going to happen on those lands now?

Probably very little that's any different than what happened in the past, according to the Alaska Region administration of the four agencies.

In a nutshell, here's what ANILCA does:

On National Forest Lands, sport hunting and

(Continued on next page)

fishing, commercial fishing, trapping and all subsistence uses have been allowed in the past, and will continue to be allowed. In National Wildlife Refuges, managed by the Fish and Wildlife Service, hunting, fishing and trapping are permitted; subsistence hunting, fishing and trapping for local, rural residents are allowed as are commercial fishing operations. All recreational and many development uses are allowable on BLM lands, and subsistence uses are permitted in all BLM land systems.

All sport and subsistence hunting, fishing and trapping are allowed in National Preserves, which are managed by the Park Service. Subsistence hunting, fishing and trapping are allowed in all **new** Park designations except Glacier Bay and Katmai, where the additional acreage is not open to subsistence. The new Kenai Fjords National Park is the only new area completely closed to subsistence use. None of the previously existing park acreage, such as at Denali (formerly Mt. McKinley), Katmai, Glacier Bay, Sitka and the Klondike Gold Rush National Historic Park, is open to subsistence uses.

Keith M. Schreiner is the Regional Director for the U.S. Fish and Wildlife Service here. Under ANILCA, his agency has responsibility for habitat management as well as protection of fish and wildlife

"We share fish and wildlife management with the State, he said, "but the primary responsibility lies with the State, particularly in the setting and enforcing of regulations."

Schreiner sees his agency having a "limited responsibility" under Title VIII, and foresees mainly cooperation between the two entities in the way of information exchange, memoranda of understanding, monitoring and so forth. In its primary role of habitat management, Schreiner said, the Fish and Wildlife Service likely will provide assistance to the State by serving resource users in the development of trails, roads, campgrounds and similar habitat functions.

With regard to subsistence use, Schreiner said his agency would continue a "passive monitoring capacity," primarily listening and working with subsistence users, officials, getting to know field people and being "supportive of the State's operations."

"We clearly see the State having the primary responsibility for management of all resident fish and wildlife," Schreiner said. "At a minimum, setting the regulations on hunting, fishing and trapping, and enforcing them." He speculated that at such time as the new National Wildlife Refuges might be staffed, which they are not now, the regional refuge people might have local knowledge of populations and species that the State didn't have, and there would be more of an active information exchange in that case

In the area of non-resident wildlife, Schreiner said, there are several concerns on the horizon that would directly affect subsistence users. "We're involved now with the question of a spring waterfowl hunt," he explained, "to legalize spring hunting so that it can be regulated and controlled, particularly where rural residents are dependent on it as a food resource."

Schreiner said his service has had a long history of managing migratory waterfowl in cooperation with the State, and that relationship has been "quite workable."



The migratory waterfowl that pass through Alaska are governed by many international treaties with Canada, Japan, Mexico and the Soviet Union, Schreiner explained. "In many cases, the treaties are in conflict. We're trying to amend them so they can work in concert."

He said the spring hunting would be jointly enforced as is the fall hunting. The U.S. would set the gross outside limits, then the state would refine the regulations, bag limits and so on by region.

"I see no reason why the same system wouldn't work with a spring hunt. If it were deleterious, we could close it," Schreiner said. "Now we have no control. In the present situation, enforcement is difficult if not impossible."

Another management issue of importance to subsistence users that will be decided on the federal level is a proposed change in the Marine Mammals Act. Schreiner pointed out that now the Fish and Wildlife Service has management authority for walrus, sea otters and polar bears. In proposing amendments to that Act, "we're hoping the State will regain that responsibility," he said. "These species figure significantly in subsistence; in fact now are taken only for subsistence purposes," Schreiner said. "We think the state is better equipped and staffed to handle the management of them."

The Forest Service, too, agrees that "one leadership



role in management of the resource is the most successful." John A. Sandor, Regional Forester for Alaska, said his agency's handling of subsistence will be "consistent with all other forest practices and management — we'll rely on the Department of Fish and Game for all fish and wildlife management and allocation."

The Forest Service is taking the approach that lands under their management have always been, and will continue to be, multiple use lands. They view subsistence, Sandor said, as a use of the land for everything that is available, not just wildlife used for food. "It can be the taking of berries, edible plants and other wild, renewable resources for shelter, food fuel, clothing, tools and so on."

Since their role is primarily one of habitat management, that is how they will deal with subsistence uses. "In forest management," Sandor said, "you try to look at integrated resource management. The question now is how do you weave subsistence use into that?"

The Forest Service plans to use existing methods to accommodate subsistence use on its lands, namely the "NEPA Process," that process of assessing environmental impacts mandated by the National Environmental Protection Agency (NEPA).

"Every time we do an environmental assessment or Environmental Impact Statement," Sandor explained, "one of the criteria we'll evaluate is subsistence use and the impact of any proposed

management activity on it."

That process will involve notification to the State, Fish and Game Advisory Councils, Local Fish and Game Advisory Committees and other groups concerned with subsistence. Comments would be gathered at a public hearing to determine the kinds and extent of subsistence use in the area and what effects the proposed forest management activity might have on it. The third step, Sandor explained, would be to determine whether the effects are restrictive, if the management action is necessary and if there are any ways to minimize its impact on the subsistence users in the area.

The critical issue will be the allocation of resources, he said, "and we rely on the Department and the Boards of Fisheries and Game to do that."

The BLM is similar to the Forest Service in that it operates on a multiple use concept on its lands, and will also accommodate subsistence through the NEPA process.

"There will be a more conscious effort on the Bureau's part to assess what subsistence uses are and how proposed developments impact them," said Curtis V. McVee, State Director for BLM in Alaska.

In its permitting process for allowing development activities on public lands, BLM now will first determine what kinds of use occur there, where the resources are located, and whether or not existing uses are seasonal. "We'll look at the proposed operation with respect to a permit or judgement of 'would it impact those uses?'"

If there is no effect on subsistence use, he said, the normal process for determining other environmental implications would proceed. If a determination is made that the development would impact subsistence, then the Bureau would examine possibilities for mitigation.

"It's all part of the public review process," he said. "If there is no possibility we could mitigate the effects of development, then we'd have to make a decision based on all the considerations, such as benefit to a group versus an individual, and so on."

In determining the kinds and extent of subsistence use on BLM lands, McVee said the Bureau will rely on the State to gather most of the information in addition to what is garnered from local groups at public meetings.

There are several issues on which McVee thinks subsistence users will want to air concerns over other uses of BLM lands: offroad vehicle designations; expanded mineral leasing and terrestrial oil and gas leasing; overall access to public lands, and reindeer grazing.

The first three issues, he explained, will need to be studied in relation to their effects on the local subsistence uses that occur in the areas proposed for opening. The last involves competition for grazing between the domestic reindeer raised near Kotzebue and the wild caribou that are used for subsistence by people in the area. "What's an equitable distribution of grazing land between the domestic and wild?" he asked.

(Continued on page 34)

Every year many decisions affecting the subsistence harvest of fish and game are made by government agencies and private organizations. These decision makers must answer many difficult questions. Will habitat be protected in a particular area? What safeguards will be used to reduce adverse impacts of resource development activities? How will the harvest of fish and game be allocated among users? Where should state land disposals occur?

Wise resolution of these and other issues can happen only if the people making decisions have reliable information about the interests affected by their choices. The Alaska Legislature foresaw this need for subsistence information in 1978 when it created a new section in the Alaska Department of Fish and Game to "compile existing data and conduct studies to gather information . . . on all aspects of the role of subsistence hunting and fishing in the lives of the residents of the state" and to perform certain other functions. The Subsistence Division has no authority to make regulations or manage resources; nor does it have enforcement responsibility. But its research role has developed as broadly as the legislative language suggests.

Since starting operations in mid-1979, the Subsistence Division has already produced more than 30 major technical reports. These materials and new projects have been used by fish and game advisory committees, local communities, regional organizations, state and federal agencies and private industries.

The Division conducts active field research programs in all regions of Alaska. Staff members currently are located in or scheduled for Anchorage, Barrow, Bethel, Dillingham, Fairbanks, Ft. Yukon, Galena, Juneau, Kotzebue, Glennallen, Nikolai, and Nome. Although their offices may be in these towns, their work takes them into smaller communities throughout Alaska. Projects have ranged from gathering basic information requested by the Alaska Boards of Fisheries and Game to sophisticated mapping of community resource use patterns and consultation on the

Subsistence Division: Two Years Later

By Denny Kelso
Photos by Amos Burg

monitoring of industrial impacts.

More than 35 major projects are currently in progress. They cover a variety of subject areas, for example: statewide analysis of regulatory impacts on subsistence (Subsistence Regulation Review Project); gathering data for use in assessing potential development impacts (Susitna Basin Resource Use Analysis, Haul Road Community Impact Assessment, Yukon Delta Sociocultural Systems Analysis); conducting baseline research for use in planning processes (Port Clarence — Imruk Basin Subsistence Baseline Study, A Preliminary Baseline Study of Subsistence Resource Utilization in the Pribilof Islands); gathering information for use by the Alaska Boards of Fisheries and Game (Norton Sound — Bering Strait Subsistence King Crab Fishery, Upper Kuskokwim Subsistence Use Study), mapping of subsistence land and resource uses (Nuiqsut Land Use Study, Upper Yukon — Porcupine Community Study); and identifying all available information sources (Subsistence Regional Bibliographic projects: Yukon-Kuskokwim Delta, Bristol Bay, and Southcentral). Subsistence Division staff members also assist fish and game advisory committees, meet with local communities about resource management issues, and provide recommendations to a variety of state and federal agencies, including the Boards of Fisheries and Game.

In order to perform such diverse functions, Subsistence Division staff members have training in variety of applied disciplines and skills: anthropology and other social sciences, biology, conservation

education, fisheries, geography, law, natural resources conservation, practical subsistence experience, wildlife management, and others. In addition, almost all these men and women live full time in the areas where their work is conducted; some speak Native languages.

Although the Subsistence Division's "resource specialists" and "technicians" have widely ranging skills and interests, their projects have a common thread which sets apart their work from that of the Department's management divisions. Subsistence research is conducted primarily using social science research methods rather than traditional biological study techniques. That is, the Division's

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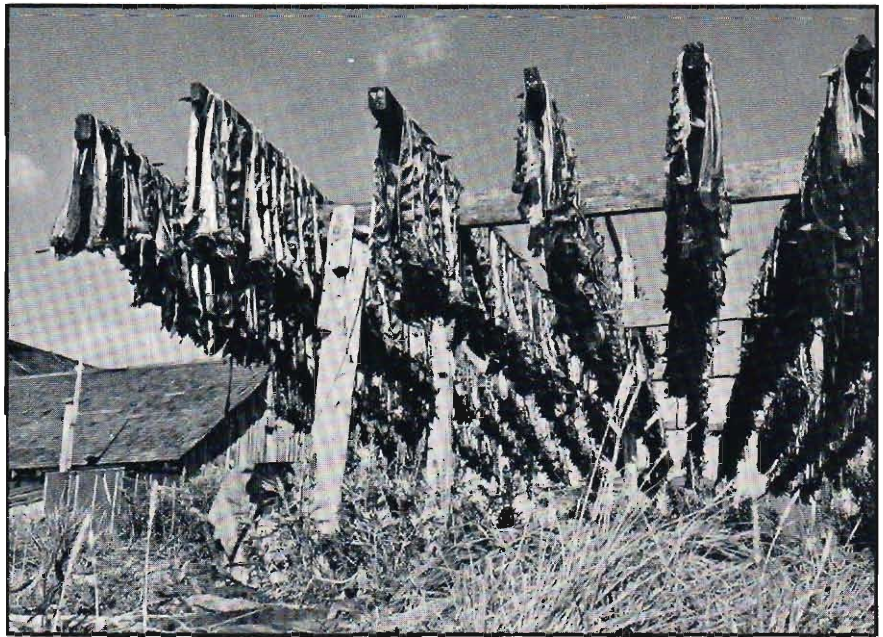
SUBSISTENCE SCENES--These photos were made during Amos Burg's travels throughout Alaska over the past 50 years. They show (clockwise from lower left) an ivory carver in Kotzebue; pulling salmon nets; duck hunter in Pt. Barrow; waterfowl for winter, Norton Sound. On next page, racks of fish dry in Deering



research utilizes modern ways of seeking answers to questions about human communities and their relationships to the environment — including fish and game resources — around them. For example, depending upon the specific problems being studied, the methods employed might include literature reviews, survey instruments, participation-observation techniques, structured interviews, biographical maps, and many others. The information gathered is then “processed” using established statistical and computer techniques when appropriate to the questions being studied. Finally, the results of the project are expressed in the form that conveys the information most usefully; this often means a written report, but it also may involve maps, computerized data storage and other work products.

Here’s an imaginary but realistic example of the path a research project might follow. Let’s say that Mary is the Subsistence Division’s resource specialist in a particular area; she lives and has her office in the town that is the main population center of her area. She works closely with the Division’s technician, Al, who grew up and still lives in a small, nearby community.

Mary and Al have talked with many hunters and fishermen as well as with local and regional organizations about potential resource problems. They have learned that many people in this area and their representatives are concerned about certain key issues: What impacts on subsistence harvests may occur if oil and gas exploration proceeds on western Alaska’s outer continental shelf? Will national wildlife refuge regulations allow established hunting and trapping opportunities to continue? Can the state’s regulations be changed to allow hunting during months when people really need the meat? Will the local patterns of land and resource uses be considered as the state and federal governments develop land use plans and classifications? After comparing these issues to problems already being studied by the Division and after talking with the



Can the state’s regulations be changed to allow hunting during months when people really need meat?

Department’s game, fisheries, and habitat biologists in the area and to representatives of other agencies, Al and Mary decide that the concerns described above should be treated as program priorities for the Subsistence Division.

After reviewing available information in the scientific literature, Mary consults with the Division’s research director about what study design would be most effective. After considering several combinations of social science methods, they decide that all three of the problem areas identified by local people can be addressed by a study which gathers baseline information about subsistence use patterns and activities in the area. They also conclude that the work can be accomplished best through a combination of field observations and interviews. The data then will be subjected to certain computer operations before being presented partly as mapped information and partly in written technical reports. Al agrees that the design will work in the villages and suggests that certain aspects of the study be

timed to correspond with the traditional round of seasonal activities for the area.

Before doing any field work, Mary and Al present their project design to the local and regional organizations whose members might be affected by their work. They request approval for conduct of the research and offer to make their findings available to participating local communities when the project is complete. They also suggest the use of certain precautions in gathering and presenting the data in order to safeguard privacy and confidentiality.

After receiving approval to do the research, Al and Mary begin their systematic field studies. They plan to ask each person in their study to help complete a map showing where that person has hunted and fished this year and in the past. Mapping takes a long time, so after evaluating all the available information on the area, they decide to take a “sample” of this community instead of trying to make a map for every person. Mary calculates that, with the time

People were so busy fishing that no one was interested in talking about activities that were still weeks away

available, she and Al can interview people in half the households of each village. They are careful to include both Native and non-Native people in their sample. Al points out that some local residents — primarily the older people — are not comfortable speaking English. This is no problem for Al, since he already speaks the local Native language; but it will make Mary's part of the project more difficult and may reduce the accuracy of the information gathered. Mary decides to hire a local person to work with her in each village for part of the year.

After they have prepared a written plan for all phases of their study, Mary and Al travel to the first community. They take their time in the village — meeting people, listening, and making sure they cover all parts of their research plan. In order to complete the work, Mary or Al will return frequently to this village — usually for several days at a time. Whenever they have the opportunity, Mary and Al go with local people on hunting or fishing trips in order to observe and record the activities. For example, Mary stayed for a week at two different fish camps; she helped with the work, watched the activities around her, and made many pages of notes. The families in the camps talked about fishing and the various places where local people have their camps. They also carefully marked their own fishing sites on Mary's maps; she coded each map so that the activity and the person providing the information could be remembered. Mary wanted to get information about hunting and other resource uses. But people were so busy with fishing that no one was interested in talking about activities that were still weeks away; so Mary saved most of her questions for later village visits. Meanwhile, she helped people fill out their "catch calendars," did her own harvest assessment, and learned as much as

she could about the role and importance of fishing in this community.

In the village, Mary and Al follow their research design carefully. Several people have suggested to Al a list of families that are highly successful at hunting and fishing. Al decides to include as many of them as possible in his sample; but because they are so busy with subsistence activities, he has trouble finding them at home and he must wait until a later visit to meet with them.

Instead, Al first talks with some of the local elders; he knows that the older people usually have a tremendous amount of information about patterns of resource use and about local practices. Al spends several hours with each person. Al has a specific set of questions and topics written down, but he listens and lets the conversation develop naturally. For example, one of the elders, Walter, is well-known as a hunter and has been one of the community's most respected leaders. Walter knows the country so well and has hunted and fished in so many areas, that his map takes a long time to complete. Al asks if he can talk with Walter again when it is time for trapping, and Walter agrees; he also suggests that Al talk with another older resident, Anna, who knows the community well.

When Al tries to talk with Anna, though, he finds she is reluctant to participate. "One other time I talked about these things with someone who came to our village to ask questions," she says, "and that information was used to make it harder for our people to hunt. I don't want that to happen." Al explains how his study will be used and why it is so important; he points out that the Village Council has approved the project and that the study will be reviewed by the community for accuracy. Al also shows Anna the maps he is making and tells her about the special steps taken to safeguard privacy. After considering all this, Anna agrees to participate in the study; but she cannot talk with Al now because she must go to Anchorage for a few days where her son is in the hospital. Al says he will contact Anna on his next visit to the village.

Similar patterns of fieldwork are conducted by Mary and Al in each village which is part of the study. Opportunities for observing and interviewing are not always available since subsistence activities are seasonal. In addition, projects are under way in other areas. As a result, the overall field effort takes several months.

When the field work has been completed, Al finishes the compilation of data while Mary prepares to apply certain statistical analyses and other computer operations. The statistical tests are used to help insure that the data are interpreted correctly; some of the computer operations are designed to speed the analysis, while others are used to improve the data presentation for the final report. Even with the assistance of a computer, this stage requires several weeks of work.

After the analysis of the data, Mary writes a first draft of the report. By this time, Al already is working on the data from another project. The draft report is then "circulated for comment." It is sent to other offices of the Subsistence Division, to other divisions of the Department, to the local and regional organizations that assisted the progress of the research, and to other people or agencies having an interest in the subject. Mary and Al also travel to each of the communities that participated in the study; they explain what their research shows and how these results may be interpreted. Finally, after all the interested individuals and organizations have had an opportunity to suggest changes, the draft is finalized and released to the public.

The final report of this study is then used by the Subsistence Division in making its recommendations to decision makers who can affect the issues which stimulated the research in the first place. Sometimes the Division's reports are used directly by regulatory bodies or private organizations; for example, Mary will present her report to the Board of Game at their next regulatory session and will submit the final version to be included as part of the hearing record. In

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Legends

“Subsistence” is a word and topic that is much in the news these days. There are many definitions. In fact, much of the talk about the subject is because leaders can’t all agree to the same definition, or how to interpret definitions.

Basically, “subsistence” refers to a way of life that relies on the resources of the land — the animals, birds, fish and plants — for survival. That is, if you were living by subsistence, you wouldn’t always be able to buy your food and clothing at the grocery store or run to the hardware shop for your tools. Instead, you would hunt, fish and trap for food and for the materials for clothing, make your own tools, build your shelter, gather fuel and so on.

But the subsistence way of life has more to it than where you live and what you eat or how you get it. It has customs and traditions that dictate the way people live together and do things for each other. These include

community sharing and one community trading with another for things it doesn’t have.

In early times that was absolutely necessary, because there were no restaurants or doctors or repair shops to rely on. People depended on family and on their community to make sure everyone had food, shelter and clothing. The relationships among people were as important as the relationship between the people and the land.

Some of the old Eskimo and Indian legends add a little perspective. In a lot of those stories, you know, the hunting and fishing part of the tale is only the wrapping, and the important part is the way the story teaches a person how to live. There is a Tlingit story about a salmon sack that makes a good example. The story goes something like this:

Once there was a young boy who lived with his widowed mother on an island. Although the people who lived nearby were fishermen who brought in

salmon and halibut, they would not share with the boy and his mother, who were very hungry. One day some townspeople let the boy go fishing with them. When he got to the fishing grounds and got his first bite he began to pull his line in very quickly. As his line came in, salmon began to pop tail first out of the water all around the boat. No one could figure it out, but the townsfolk grabbed the salmon by the tails and put them in their boats. When the boy finally got his line in, he discovered it was attached to a huge sack full of salmon with just their tails sticking out. There were so many salmon that all the boats were filled and everyone, even the boy and his mother, had lots to eat. It was always like that years ago, when poor people brought luck to their villages.

Stories to teach young people how to handle other people and animals are common to all people. Part of the “subsistence way of life” itself has its own way of teaching

people to respect the things around them.

Another Tlingit story is about Daytgas, who was fed from the sky.

Daytgas was a chief's nephew who lived in his uncle's house. When everyone was asleep, he would get up and hold his blanket over the coals to warm it before going back to bed. One time, food was very scarce and the people in the village were starving, so when Daytgas got up to warm his blanket, he wished for some smoked salmon to fall on the blanket through the smoke hole in the roof. He did this every night but it never happened. Then one night, as he was standing by the fire, a voice told him, "Daytgas, stretch out your blanket." When he did, wondering all the time who was calling him, half a salmon fell from the smokehole onto the blanket. In those days, each person had his own food boxes. Daytgas was not a greedy person, so he cut the fish into pieces and put each piece into an empty food box. All at once, every one of those boxes was full of salmon. Daytgas did not tell anyone of this.

His uncle had two wives, and the younger was always good to Daytgas. Even though food was scarce, when they had salmon she always saved him a little piece. The next night, after he ate his little bit of fish, he heard the voice again. He ran to stretch out his blanket but nothing happened, so he decided to make another wish. When he wished for some oil to eat with the salmon that came the night before, he was almost knocked down by a whole sackful which dropped through the smokehole. Again, Daytgas shared his prize among all the empty boxes, and again they were magically filled. This happened again and again, with fresh berries, cranberries preserved in grease, venison, and

soapberries.

The next morning his uncle's house was crowded with people begging for food, but the chief could give them nothing. Then Daytgas spoke up, saying, "Why are these people leaving without having eaten?" Daytgas didn't usually talk much, so when he spoke to say something stupid like that, his uncle became very angry. "If you have so much to say why don't you feed them," he exclaimed. And Daytgas said, "Okay, I will."

Daytgas went to the food boxes his uncle thought were empty, and everyone thought he was crazy. When he returned, however, he had a box that looked very heavy, so his uncle kept quiet and waited to see what would happen. Daytgas first gave salmon to everyone, then oil, then venison, then berries, and finally soapberries, which the young boys whipped to make dessert.

Daytgas did not tell anyone where the food came from. Instead, he let people think it belonged to his uncle, the chief, which made the old man very pleased, because Daytgas had kept up the villagers' respect for their chief. Then his uncle said to Daytgas, "You have done well. Another person might have kept the food hidden, but you have brought my village people and myself to life. Because you have saved us all, you may take your choice of my two wives."

Daytgas thought for a while, then said he would take the younger wife for his own, because she had always been kind to him. In later years, he became very wealthy, but was always good to the people of his village and to his uncle.

So you see, subsistence traditions mean more than just hunting and fishing. They also have a lot to teach us about sharing.○



Advisory Committees: Making a Difference

By Suzanne Iudicello

The simple act of catching a fish or an animal for food isn't so simple anymore. The layers of management by local, state, federal and international authorities; the interconnected laws, regulations, seasons, bag limits and boundaries; the committees, councils, boards, commissions and task forces can overwhelm even the most sophisticated and informed user of fish and wildlife resources.

But though the process seems cumbersome, it is accessible. At least that's how people feel who are involved in that process at their community level.

When the Board of Fish & Game was created at Statehood, a means was created for local people to present their views to the appointed members of that Board in their deliberations over the allocation and regulation of Alaska's fish and game. The stated

purpose of the committees was, and is, "to provide a forum for the collection and expression of opinions on matters relating to the management of fish and wildlife resources."

The committees are representative of all the user groups in an area, and usually include people from several communities in an area unless the town is large enough to have its own committee. There are presently 67 advisory committees all over the state. They meet regularly before Board meetings, discuss proposals and changes that affect their area, sometimes submitting their own proposals as alternatives to those presented by the Department.

Who are the advisory committees? What do they talk about? How do they feel about the process? Can they make a difference?

Noorvik is located on the southeast bank of a channel in the Kobuk River, about 45 miles east of Kotzebue. The village was established by Kowagmiut Eskimo fishermen and hunters from Deering in the early 1900s.

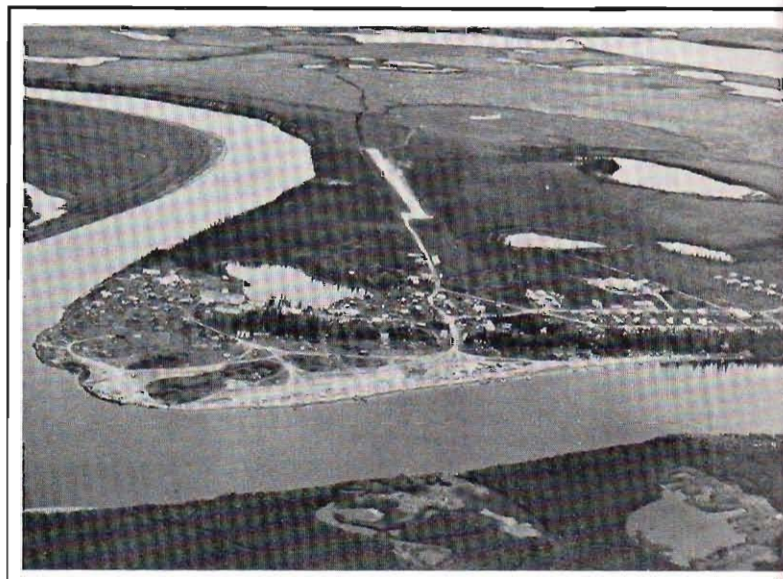
Subsistence is the major economy for the village's 500 residents, based on caribou, fish, waterfowl, small game and berries. Some moose are taken, and a few families have gardens. Some supplementary cash income derives from a few jobs in the village and seasonal employment in Kotzebue, Nome or Fairbanks.

In January, the Boards of Fish and Game approved the organization of an advisory committee in Noorvik after a request from a number of residents in the region. They've only had a few meetings so far, but they have had results.

"Noorvik and the surrounding communities depended on subsistence living through the centuries," explains Jake Wells, chairman of the committee. "This is the first time the federal and state governments have really started clamping down on fish and game management. The advisory committee is a vehicle through which we can express our views about that."

Because subsistence is the central theme of life in Noorvik and surrounding villages, people stay on top of things affecting it, Wells said. At their first meeting in February, the Noorvik committee members, local residents and representatives from the Department went over proposals to be presented at the March Game Board meeting; in particular, those dealing with the Western Arctic caribou herd.

"People depend on that herd for subsistence," Wells pointed out. "We wanted to know what the status of the herd was, because the decline in the 70s had limited the harvest. It's been a main concern over the years."



NOORVIK--The village lies on a bend of the Kobuk River east of Kotzebue. Subsistence is the major economy for Noorvik's 500 residents, and caribou have been the main focus for Advisory Committee attention.

FISHING FLEET--While Kodiak has always supported an active fishing fleet, the developing herring fishery there has become an important Advisory Committee topic.

After the committee heard a positive report on the population of the Western Arctic caribou, they proposed an increased harvest to the board. Wells carried the committee's proposal to Anchorage.

"It was my first meeting. I had to get comfortable, so mostly I observed how they do business; I got to know people."

Wells said he was impressed with how "open" the board was. "They weighed each subject and were very democratic about listening."

The board did approve the increased harvest for the Western Arctic caribou herd, and became more flexible on opening and closing dates for hunting, Wells said. "When we have our next committee meeting, the people will be happy to hear that," he said.

Wells plans a year of learning and listening for his committee. "For the advisory committee member who travels to the statewide board meeting, you need to have good, specific information at hand. We'll probably learn more about the caribou herd and other game animals so we can answer specific questions," he said. They also plan to move the meetings around to balance the attendance and get opinions from each village. The next meeting will be in Kiana, where two members reside.

Another issue that will continue to crop up, Wells observed, is the definition of "subsistence." "It's not the proper word; the state, federal and administration people haven't defined it. More people will become involved in stating their opinion of what subsistence is," he said.

Wells believes that issue is going to be an important one "for the rest of our lives." He said more rural people will become involved as they face the conflicts over subsistence. "When urban Legislators introduce legislation to repeal subsistence, people out here get pretty upset," he said.

In contrast to the new, five-member committee in Noorvik, Kodiak's committee has been going a long time, and Chairman Sid Omlid has been involved "at least since the beginning; 18 or 20 years."

The 11-member Kodiak committee, despite problems with weather and fishing cutting into attendance, sometimes draws as many as 150 to 200 people to meetings. They always have press coverage, and even have had committee meetings broadcast over the local radio station. Their members represent groups from business owners to guides, from village residents to the cannery industry, seiners to gillnetters.

"We have a lot of support from the public here," Omlid said, "and a good turnover of members. We're always getting new people involved."

The primary industry in Kodiak is fishing, so the issues that concern the committee most of the time are on that subject. "The biggest issue for the last couple years," Omlid said, "has been the herring fishery. It's the most pressing because it's a developing fishery. We're concerned that we get an orderly fishery that doesn't deplete the stock."

He explained that in the past few years, the Kodiak herring fleet has jumped from three or four boats to more than 200 seiners and gillnetters. "It's expanding fast; we're trying to keep up with it because we don't want to deplete isolated stocks."

One of the activities the board felt threatened those stocks was the practice of using aircraft to both spot herring and direct the boat specifically in order to "set" it over the fish. "We were afraid that could wipe out the stock in a year," Omlid said.

A member of the committee made a proposal to eliminate the practice of using a circling aircraft to direct the boats on where to set their nets. This regulation proposal was circulated, then discussed at an advisory board meeting.

"I run a meeting to allow the public to speak," Omlid said. "We take all comments from anyone who wants to make them." The advisory committee accepted the proposal on a 10 to one vote. It then was forwarded to the Board of Fisheries with the committee's recommendation.

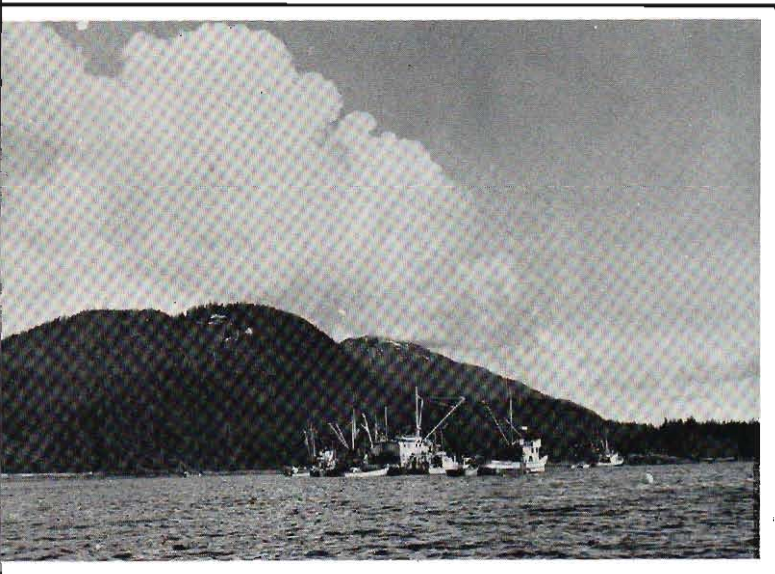
"They listened attentively," Omlid said, "and asked a lot of questions. It was not onesided; there was a lot of controversy throughout the process. In the end, they relied on Kodiak to make the decision and adopted the proposal with only one negative vote."

Omlid feels the board generally follows the recommendations of the local committees. "Of the 20 or 30 proposals we submitted, they went against the committee on only one," he said. "Maybe some of the arguments that come up are bigger than the local level. Their job is the big picture; the overall view. But they really are receptive to local points of view."

Omlid attributes his committee's success to two things: support of the community for the local advisory process and cooperation from the Department. "The local Fish and Game office serves as secretary to the committee, keeps minutes and records, calls the members prior to meetings and drafts letters," he explained, greatly adding to the good attendance at Kodiak's meetings.

"We have some disgruntled people who didn't get their way on something, but it's not because they didn't have the opportunity to air their opinions."

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A Legislative Perspective

By John Hecht

In 1978, the Alaska Legislature passed a law making "subsistence" a priority use of fish and game resources. From inception, the statutes have created controversy, and have aggravated traditional tensions between rural and urban dwellers in Alaska.

Dissatisfaction with the law and its implementation has led a group of citizens — primarily from Anchorage, Fairbanks and Juneau — to conduct an initiative campaign to give voters an opportunity to repeal the law. This caused legislators from all over the state to take an additional look at the law, its meaning and its support.

During the first session of the Twelfth Alaska Legislature, most attention focused on subsistence was in the House of Representatives. After the longest organizational battle in state history, Jim Duncan (D-Juneau) was finally selected Speaker of the House in February. He received the bare minimum votes possible: 21 out of 40. Duncan garnered crucial support from the so-called "bush caucus" for his organizational plan.

In addition to Legislators from the north and west of Alaska, the caucus included supporters from small towns and rural areas. Second-term Democrats Jack Fuller, Nome; Vern Hurlbert, Sleetmute; Fred Zharoff, Kodiak, and freshmen Tony Vaska, Bethel; Joe Chuckwuk, Dillingham; Al Adams, Kotzebue; Bette Cato, Valdez, and Ben Gruessendorf, Sitka, made up the caucus.

Duncan responded to this support by appointing a "Special Committee on Subsistence" to examine the statute and issues raised by it. He named as "pro-" members Chairman Vaska, Fuller and Chuckwuk. Two "anti-" representatives, Ramona Barnes

(R-Anchorage) and Bob Bettisworth (R-Fairbanks) were named to the committee.

Two legislators who were not on the committee but were later to take key roles on the issue during the session were Eric Sutcliffe (R-Unalaska) and Ken Fanning (L-Fairbanks). Sutcliffe is the only Republican from a bush legislative district, and had indicated to his caucus — three quarters of whom were from Anchorage — that he probably would be voting against them on matters of subsistence.

Fanning, a guide and trapper, is a leading opponent of the law. While not listed as an original sponsor of the ballot initiative, Fanning is registered to carry initiative petitions.

As chairman, Vaska scheduled weekly meetings for the committee, some conducted on the Legislative Teleconference Network, which has stations the length and breadth of Alaska. There were also meetings held in cities and villages outside Juneau. Both tactics enabled persons on all sides of the issue to present their views from the farthest flung communities to the urban centers. However, Vaska received repeated criticism from the minority on the committee for "stacking" the testimony.

The results of the hearings and additional research were presented in mid-May, when two "draft" (preliminary) reports were issued for public review and comment. One reflected the majority committee view (Democrat and pro-subsistence);

The 1978 Subsistence Law covers the following areas:

- The establishment of the Subsistence Section of the Department of Fish and Game, and the duties of the Section.
- The granting of powers to the Boards of Fisheries and Game to establish subsistence regulations and to allocate resources to subsistence users on a priority basis when there is a scarcity of those resources. The criteria the Boards must follow when determining eligibility include "customary and direct dependence upon the resource as the mainstay of livelihood; local residency; and the availability of alternative resources."
- The power of the Boards to regulate subsistence in individual game units.
- The continuance of the traditional barter system.

There were three identical bills introduced this year to repeal the law. They are SB 355 by Sens. Kelly and Bradley (both Republicans from Anchorage); HB 615 by Rep. Sam Cotten (D-Eagle River); and HB 343 by 10 Republicans and the two Libertarians. Another bill, SB 598, was introduced in the Senate by Charlie Parr (D-Fairbanks), but takes a different approach to amending the existing statute.

The initiative would repeal the same sections of the subsistence law as the pending bills. It would, however, add new language to the statutes which would prohibit distinctions in the allocation of fish and game based on economic status, land ownership, local residency, past use or dependence on the resource, or lack of alternative resources.

If approved by the voters, the initiative would become law 90 days after the votes have been officially counted and certified. The Constitution says the Legislature cannot repeal an initiative for two years, but may amend it anytime. — J.H.

the other contained the minority's reasons for opposing current statutes and comments on the draft committee report.

The Committee's report addressed the historical background which led to the present law, and its interpretation of the intent. The report argued that the law is constitutional — especially in regard to equal protection. It emphasized that fish and wildlife resources are held in "public trust," are managed on a sustained yield basis, and subject to preference among beneficial uses.

"The fact that most rural Alaskans are Natives, and most subsistence activity occurs in rural areas," the report said, "in no way limits participation to one particular racial group."

The minority view included a great deal of information not presented by the majority report. Not surprisingly, it argues that the current law is unfairly discriminatory, and should be revised or abolished. It supports regulation and allocation of fish and game, but on an equal opportunity basis for all, regardless of need.

But in mid-June, in the now famous "coup," Duncan's House organization fell apart, and he was eventually replaced as Speaker by Joe Hayes (R-Anchorage). A "coalition" was formed by the 16 House Republicans, the two Libertarians, and six Democrats: Adams, Chuckwuk, Fuller, Hurlbert, Cato and Russ Meekins of Anchorage.

One of the quiet pledges in the formation of the Coalition was to keep the divisive issue of subsistence on the back burner until a compromise could be worked out that might satisfy — somewhat — both sides and to prevent the new caucus from splitting.

Sutcliffe and Fanning were appointed to co-chair the House Resources Committee, which among other matters, handles legislation on fish, game and subsistence. Fanning, who had been out-spoken in his opposition when he was a minority member of the committee, became muted on the subsistence issue.

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Alaska's Habitats

Armed with the results of this cooperative study the City and Borough of Sitka has finalized its district coastal management plan. The plan presents a blueprint for urban development in coordination with fish and wildlife habitat protection. Sitka will be submitting its district coastal management plan to the Alaska Coastal Policy Council for approval this fall. A copy of the Final Public Hearing Draft is available from the Planning Office, City and Borough of Sitka, Box 79, Sitka 99875. Copies of the final coastal habitat studies reports are available from the Department of Fish and Game Habitat Division, Marine Coastal Habitat Management, 333 Raspberry Road, Anchorage, Alaska 99502.

At the present time more than 20 coastal districts have begun the planning process and approximately 10 more may begin planning this year. With such a large number of plans now underway, providing technical assistance to coastal districts is both an important and a challenging part of the Department's role in the Alaska Coastal Management Program. However, it is not the Department's only ACMP function.

The Commissioner of the

Department of Fish and Game is also designated as one of the seven State officials to serve on the 16-member Alaska Coastal Policy Council. As Council member, the Commissioner is responsible for providing direction and oversight to the Alaska Coastal Management Program. In addition the Department is responsible for implementing the ACMP in its own daily actions. All permits issued by the Department for activities occurring in the coastal zone are certified to be consistent with the ACMP. At the present time, Department actions must be consistent with the Standards of the ACMP. As district programs are approved, Department actions must be consistent with those plans as well. An ACMP consistency determination is also made on all Federal and State permits reviewed by the Department.

The Department is an active and supportive participant in the Alaska Coastal Management Program because it is through comprehensive coastal management planning that the health of Alaska's coastal fish and wildlife resources can be maintained and adequately protected for the benefit of this and future generations of Alaskans.

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Debra Clausen is the coordinator for the Department's Coastal Zone Management Program in Anchorage. A habitat biologist, she holds B.S. degrees in environmental studies and cultural anthropology from the University of California at Santa Cruz. Since joining the Department in 1975, she has concentrated on habitat management and land use planning in the CZM program.

Kim Sundberg has been with the Department's Habitat Division since 1975, where his work has concentrated on coastal zone management, oil and gas development and the development of major energy facilities in Alaska. He received his bachelors degree in biological oceanography from the University of Washington and has focused his experience on marine biology and oceanography.

Sitka Sound

By Kimbal Sundberg

The rich variety and abundance of natural resources and the high quality of life found in Sitka is due in large measure to the diverse and productive fish and wildlife habitats present in the coastal zone. Local fish and wildlife resources have been of considerable socio-economic value to the community ever since the Sitkakwaan of the Tlingit Indians located on a site that is now Sitka. The Indian River was an important source of salmon, the forests provided deer, the wetlands provided clams, mussels, abalone, and seaweed, and the ocean provided halibut, rockfish, and marine mammals.

Today, the City and Borough of Sitka lies within the Tongass National Forest on two major islands in Southeast Alaska, Baranof and Chichagof. Its 4,600-square-mile area includes about 3,400 square miles of land and 1,200 square miles of water. It is roughly the size of the State of Connecticut. With the exception of several scattered logging camps, fishing camps, and isolated homesites, the permanent population is located at Sitka, a community of over 7,000 situated on the eastern shore of Sitka Sound. Steep shorelines forested with Sitka spruce and western hemlock rise above the fjords, embayments, and myriad of islands and rocks that comprise Sitka Sound. The geomorphology of the region is a result of both volcanic and glacial forces that were active in recent deep fjord-type estuaries, steep shorelines, morainal outwash streams, volcanic ash soils, and cinder cones.

The productivity of the marine waters is closely related to circulation. The upwelling of nutrient-rich water along the coast and subsequent mixing with

freshened inshore waters has a determinant effect upon primary productivity and the basis of marine food webs. The seasonality and retention time of fish and shellfish larvae in gyre systems influences and location and productivity of fishing grounds. Circulation also affects the pathways, assimilation, and concentration of pollutants in the marine environment. In Sitka Sound, circulation is related to the

northward flowing Alaska Current which enters from the south and exists to the north around Cape Edgecumbe. Drift bottle data suggests a cyclonic (counterclockwise) gyre in the vicinity of Vitskari Rocks, a rich fishing ground for salmon and halibut and feeding area for marine birds. Drift bottle data also illustrate how pulp mill wastes flow out of Silver Bay and influence the southern shore zone of Sitka, principally Thimbleberry Bay, Jamestown Bay, and the islands south of the Japonski causeway. Herring surveys indicate that spawning no longer occurs in these areas.

As with all habitats found in the Sitka area, streams are greatly influenced by the surrounding landforms. Streams typically flow from relatively short, steep drainages and are characterized by highly variable flows, low temperatures, and unstable beds. Nearly all streams support pink salmon spawning, coho salmon spawning and rearing, and Dolly Varden. Natural and man-made barriers restrict salmon spawning to the lower reaches of many of the streams. Some of the more extensive stream habitats support chum salmon, sockeye salmon, cutthroat trout, and rainbow/steelhead trout. Pink salmon are numerically dominant in nearly all systems with

peak, odd-year escapements ranging from several tens in the smaller creeks to over 50,000 in the Katlian River. Besides contributing aesthetically to the area, stream habitats contribute to the local fishery resource which is utilized for commercial, recreational, and subsistence purposes.

Man's impacts on stream habitats in the Sitka area have adversely affected natural salmon production. These include out-of-stream water diversion, siltation, channelization, gravel extraction, migration barriers and water quality deterioration from solid waste leachate and urban runoff. Hatchery facilities at Sheldon Jackson College and Starrigavan Creek have mitigated some of the lost production from Sitka area streams; however the Starrigavan Creek facility was recently closed. A new hatchery facility in Silver Bay is planned.

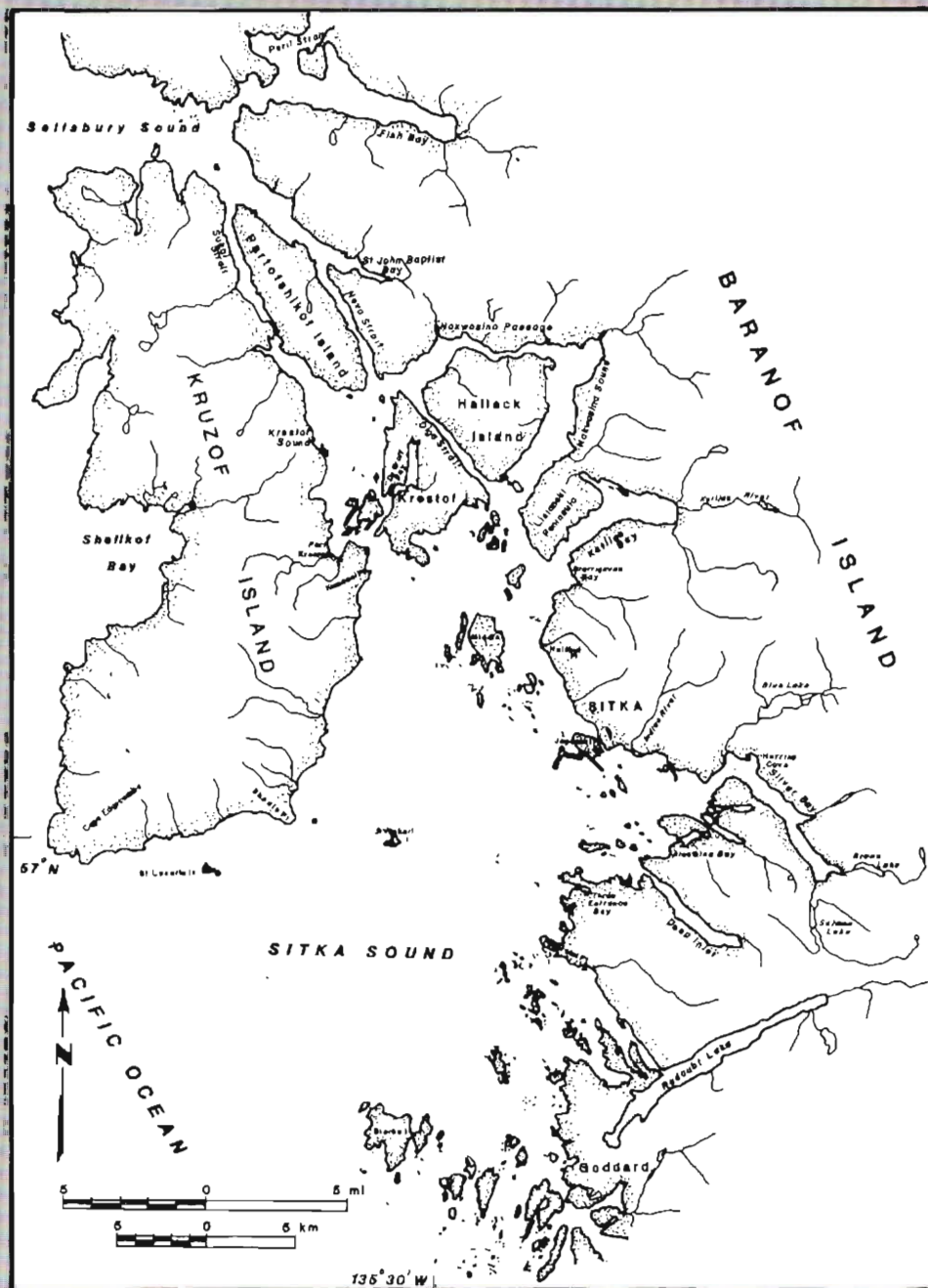
Wetlands comprise less than 10% of the shorelands of Sitka Sound, yet certain types of "wetlands" perform important biological functions. Coastal wetlands include low gradient shorelands that occur at the heads of bays and on alluvial deposits at stream mouths. Coastal wetlands and their adjacent estuarine waters are highly productive feeding and resting areas for approximately 70 species of waterfowl and shorebirds. Peak bird usage of these areas occurs during spring migrations. The use of coastal wetlands for nesting is minimal. Coastal wetlands also provide high value food for brown bear and Sitka black-tailed deer.

Estuarine tidal flats often occur in conjunction with coastal marshes and are vegetated with patches of algae and extensive shallow water eelgrass meadows. Invertebrate life

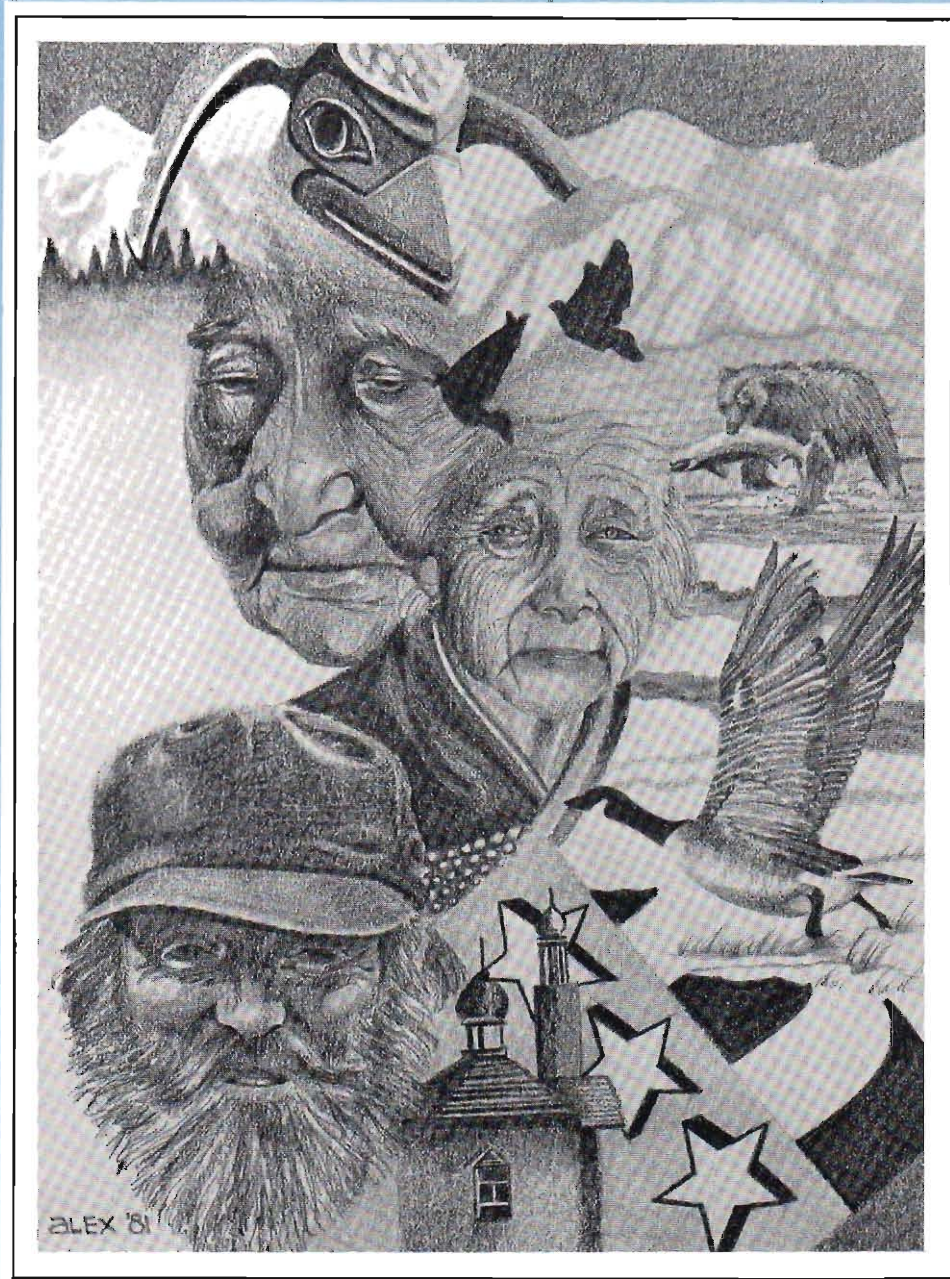
including clams and polychaete worms is generally rich on estuarine tidal flats making them important feeding areas for birds, fish and wildlife. Eelgrass meadows are utilized extensively as spawning areas for herring and provide nursery areas for juvenile herring, salmonids, bottom fish, crabs and shrimp

Estuarine tidal flats are a limited habitat resource in Sitka Sound because of the generally steep and rocky character of the shore zone. These habitats support numerous species of commercial, recreational, and subsistence value including salmon, herring, dungeness crab, shrimp, bottomfish, and clams. Because of their importance to the Sitka area ecosystem, estuarine tidal flats should be protected from unnecessary destruction when waterfront developments are planned.

A comprehensive and sound coastal management program requires an understanding of the coastal ecosystem and its various components. Effective habitat protection requires an understanding of both the environment as it now exists and the probable outcome of changes that will result from man's activities. Sitka is considering adopting a program which attempts to balance the need for long-term habitat protection with that of the rational development of coastal resources. Sitkans will have to determine whether buffer zones along streams, preservation of productive wetlands, encouraging the use of piling rather than solid fill for waterfront development, maintenance of urban water quality and future intensive study of habitat problem areas makes sense for the long-term economic health and quality of life for the community. ○



an eagle speaks



I have been told that my Great-grandfather (Kookash) lived until the day I was born; that my Tlingit name (Caw-Goo-Woo) has been passed on from one generation to the next as one life ends and the new one begins; that my father's clan (Tak-wa-na-dee) has lived on and used the land (hunted, fished, trapped, gathered and preserved food) in and around Sqaw-on (Hecata

Island), Warren Island, and the waters surrounding those areas since the beginning of time; and that our cultural, social, and economic well-being is tied to our ability to protect that land.

I have also been told that I can be proud of the accomplishments of both the Eagle and Raven sides of my family.

I was warned that there were non-Tlingits moving into my world in greater and greater numbers; that some of them were bad; that some were weak and foolish; and that some of them were worth adding to the clan or tribe for the new ideas and strong blood they possessed. I was told that these newcomers did not respect the boundaries of our territory (and the territory of the Tlingit nation); and that it would be necessary to learn about the world outside in order to protect our resources and our clan survival.

These new intruders who claim the right to rule over us and who now claim ownership of our land and the resources are here to do more than just trade — they are coming to participate in the harvest — to settle on the land for longer periods of time. A few have stayed for more than one generation, some have chosen to remain outside our culture — separate and apart — but to start new tribes. Others have joined our clans and become one of us. The majority come for a few years and leave.

We are now called a territory. I am told we are not citizens of this "Territory." Our people are not allowed to participate in the operations of this new Government. They elect their leaders — these leaders create new laws, contrary to ours, on who owns which resources and who is permitted to harvest those resources, including when those resources may be harvested. How can these newcomers tell us what to do? We have extended the courtesy of allowing the Russians to trade and establish a small center from which to operate. We have allowed the Americans the opportunity to harvest the resources (even though they have no limit to what they want), and to settle on the land we are not using right now. We have allowed them to encroach on some of our traditional hunting and fishing territory owned by the Tribe or Clan.

These newcomers are presumptuous, even rude; they are now telling us we need their license to hunt and fish. It is a lifetime license and costs very little but what right do they have to grant permission to me to use my Grandmother's land? Did she sell it to them? Did she give them permission to do this thing? She tells me no. What can be done to correct this travesty of justice? My Grandfather told the Clan and the Tribe that we should organize and use their own court system to correct this overthrow of our established system. He also stated that even though the Russians were not honest in their dealings with the Americans over the sale of Alaska, they did specify the need to protect some of the Native rights. In addition, aboriginal rights were recognized by the central American government (United States).

Since that time (as far back as I can remember) I have learned many new things, the most important of which was that the information passed on by my family was accurate; that their predictions were true; that what we had was coveted; and that our way of life would change. I have since learned that cultural

change is constant and necessary if cultures are to grow and remain strong.

The Russians have come and gone. What they left behind in people has been added to the clan through my Grandmother's side of the family. The leaders of that nation who passed through our land were dishonest. They sold what was not theirs — our land and its resources.

The U.S. Court of Claims was only authorized to settle our challenge to their authority over our land and resources with payment for damages and transfer of title. This was not satisfactory, so the movement to settle via the U.S. Congress was supported by and coordinated for all Native Alaskans.

An agreement was reached on December 18, 1971, and signed by the President. In addition to the transfer of land and payment of compensation, it included the understanding that hunting and fishing rights would be protected on federal lands. This agreement was completed when Alaska passed its subsistence law in 1979. When the U.S. Government passed the Alaska National Interest Lands Conservation Act of 1980, the protection of hunting and fishing rights was assured.

We had agreed to share some of our original rights to provide for our families with other residents of the State. As part of this agreement the federal government and the state government have passed laws, as intended by our contract with the U.S. Government, to provide for a subsistence priority on both federal and state land. Some of the more recent residents resent this protection afforded by the government to help compensate for all we have given up. If this is so, then we must withdraw and protect what we have left, renegotiating those items on hunting and fishing rights that the state is not willing to acknowledge (as other states and the federal government failed to honor treaties with other Indian Tribes in the Lower 48).

I am told that the opponents of subsistence priorities wish to eliminate the priority totally, that others wish to make it a welfare program, ignoring the cultural, economic, and social dependence we have on this activity. Also ignored is the fact we agreed to include others as a courtesy to their adopting and accepting our way of life.



I remember as a child picking and drying seaweed, slipping on the kelp-covered rocks, holding the bow line of the rowboat as the waves tried to pull the boat into deep water. I remember digging my feet into the sand and having to let the rope slip through my hands — crying because I didn't want the boat to get away, and because I was determined to carry out my assignment.

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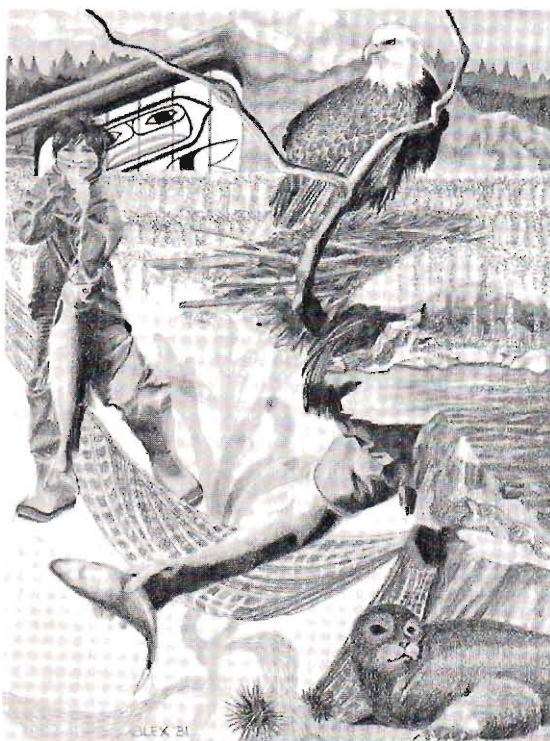
The gum-boots (snails), abalone, seal meat and other food we brought with us were delicious. I was full, happy that the boat was now taken care of, and ready to play games on the beach.

I thought of the time, two months earlier, when I was on a different beach eating roast herring and freshly boiled herring-spawn-on-branches at Sqaw-on. The air was much cooler then and the water was not as warm as now.

The comfort of the warm sun, drying the seaweed, was so different than last February when I was so cold helping my uncles find and dig clams. I could barely feel my feet and hands they were so numb. The lights from the gas lanterns cast long shadows causing me to think about the legends of Land Otter (Kush-Da-Caw), Devil Fish (Octopus) and Sea Lion. Remembering these stories made me scurry closer to my mother who looked at me and smiled. Once there, I noticed how big and strong my father was, and thought of his ability in an earlier life to tear a sea lion in half, and felt secure. Besides my hands were getting warm.

The next thing I remember was fishing for sockeye for the winter's supply of dried, kippered, and plain canned salmon. Boy, that was fun. The smoke stung my eyes, but my Grandmother didn't even notice the smoke. The half dried fish and boiled potatoes were sure tasty. Especially when dipped in the fresh smoky flavored seal oil we got during the trip for seaweed.

I guess we're going after Yein (Sea Cucumber) and gum-boots in the morning. The tide is low at 6:05 a.m. and the sun will be out (according to my Grandmother). She also told me that Raven is predicting lots of Yein.



There is so much to remember — when to go, what to get, how to prepare the food for preserving it, and how to save it for the winter. Now they want me to go to school to learn to read and write; to learn about the legends of the non-Tlingit — about how they live, think, and talk. I hope I can remember it all. Some of their ways are so foolish.

I have gone to school and learned much. The most important thing I learned is about the quality of one's life: what one does with that life, and how one fulfills one's mission in life are among the most important aspects of that quality.

I am back in Alaska and am appalled at what has happened while I was away. It's still good to be back. Maybe it's not too late.

I see that the legislative opponents to subsistence are getting together with some members of the bush caucus to talk compromise. Is that just a legislative compromise with the understanding that the avenue for repeal will be left open to the referendum process? Don't they know that can't be compromised?

I am concerned. What else do I have to give up? What else can I give up and still remain healthy culturally and psychologically? I can make a living in other ways, but they are attempting to destroy the very base of my culture — the most important ingredient. They wish to totally domesticate me. I won't let them. I have reached the point of no return. If I give away anything else I will have given away my children's and grandchildren's birthright. We will all be reduced to fish and reindeer in fishtraps or livestock pens. We will lose too much of what is good in life.

We must no longer be generous and accommodating. We must no longer give away our rights or we will have nothing to pass on. We must begin to focus on the rights we still have and protect them, even if it means leaving some of our friendly neighbors to fend for themselves for a while.

The question now becomes one of choosing the best form for protecting those rights.

- is it the State?
- is it the BIA?
- is it the U.S. Congress?
- is it other nations sympathetic to our plight?
- is it all, some, or none of the above?
- is there some alternative we have not yet tried?

We must sit and talk before we decide. We must unite, coordinate, and prepare those that will lead.

I am getting old and tired. The fight has been long and hard. We have made some strong enemies. I will go to sleep for a while. When I awake as a new born manchild my vigor will be restored. O

(Continued from page 25)

Advisory Committees

Goessel's committee covers the largest territory in the area, some eight million acres, and has nine members from eight far-flung communities: Stevens Village, Beaver, Circle, Chalkyitsik, Birch Creek, Venetie, Arctic Village and Ft. Yukon. The region includes two different Athapaskan dialects plus English, "but everybody does okay," Goessel says.

They do have some logistical problems with weather and distance in trying to bring the members together, but regular attendance by committee members — and sometimes as many as 200 local residents — is not uncommon.

"I believe the advisory committee process works. We have excellent communication with both boards," Goessel said. "The only weak link in the chain is the need for more communication between the advisory committee and the executive director to keep us informed of current developments — especially during the legislative session."

Unlike his counterpart in Noorvik, Goessel doesn't believe the proposed legislation to repeal the subsistence law will become a big issue. "The law as it stands now is definitely workable. Within the next couple months or years, people will become educated to the realities of living in the bush, and it won't be a problem."

"When both sides of the story get out, and people are aware, they'll make the right decision."

While the Noorvik committee and the Kodiak committee tend to concentrate their interests on subsistence and commercial fishing respectively, some committees have to deal with differing and sometimes conflicting interests of various user groups.

In Stevens Village, which lies on the banks of the Yukon, downriver from Ft. Yukon, that hasn't been a problem yet. According to Ron Goessel, chairman of the Ft. Yukon Advisory Committee, "the subsistence fishery coexists rather well with the commercial fishery in this neck of the woods, because there's not much commercial fishing!"



Due south at Delta Junction, which lies between Fairbanks and Tok on the Alaska Highway, the committee chairman isn't quite so philosophical.

Many people in Delta have for years traveled to Chitina to dipnet salmon out of Woods Canyon. The practice is opposed by commercial fishermen in Prince William Sound, and the board closed the dipnet fishery several years ago.

"We can demonstrate that there's no way dipnetters can damage the fishery," says chairman Charles Boyd, "but they don't listen."

"Every year we submit proposals, but there's no way to open it up until the board changes. As long as so many members are involved with commercial fishing they won't open up Woods Canyon to the dipnetters."

Other than on that issue, however, Boyd feels the relationship between boards and committees is a good one. "At the start, everyone resented the 'unexperts'; the local hicks getting involved. But it's better now," he observed. The board allows committee chairmen to participate in their discussions, he said, "and they see the value of local information."

Though the Delta committee is small, five or six members, they get good attendance when issues of areawide interest arise. For example, the matter of bison and barley.

"We've been trying to preserve the bison, but there's a lot of conflict with agricultural interests," Boyd pointed out. While the committee has never submitted actual proposals, he said, there have been many public meetings and hearings at which local residents expressed their support of the concept of a free roaming herd. "And the board concurs," he said.

Boyd says he intends to stay involved. Now in his "second or third" year as chairman, he's been with the advisory committee about 10 years. As a self-employed guide and trapper, he feels he has the time to devote to advisory committee business and the travel and time involved in attending board meetings.

"The people that show up for committee meetings, that are most involved, really like to hunt; they're trappers and guides. There's a lot of local knowledge around here that can relate past to present; make the board cognizant of precisely what certain changes will mean."

His Kodiak counterpart agrees:

"Anyone interested in fish and game resources should get involved in the process and understand it. Your voice will be heard and considered. This system gives us the ability to have the maximum involvement from all the citizens in the state."

Omlid has this last word of advice for the prospective committee member. "Your ideas will gain support according to their merit and the number of votes you can muster!"

POTENTIAL CONFLICTS--The Delta Junction Advisory Committee has spent much time discussing the potential conflicts between agricultural interests in the area and those who wish to preserve Alaska's free-ranging bison herd.

Federal View

Aside from those potential issues, McVee doesn't expect much conflict to occur. Basically, he said, the matter of allocating wildlife resources is a State responsibility. "In an instance where habitat is jeopardized or damaged, we'll work out a joint plan," he said.

In the meantime, the guidelines the Bureau will use in determining whether or not to permit proposed developments on public lands include the following instructions:

- the State handles matters of allocation;
- the Bureau does not plan any regulations;
- the subsistence will be a required evaluation as part of NEPA;
- the Bureau will provide assistance to local Regional Councils;
- will participate actively with the State;
- minimize habitat changes as they affect subsistence;
- and avoid areas during key lifecycle times.

Perhaps the most concern about subsistence use occurred in the discussions of what would take place in the State's National Parks. The controversy, meetings and hearings went on for several years in Alaska and in Washington, D.C., finally amassing more public comment in the proceedings than on any public debate since the Civil Rights Act 20 years ago.

John E. Cook, Alaska Regional Director for the National Park Service, is confident that that process gave the public the opportunity to make what has been the greatest impact on regulations ever, and has resulted in a flexible and "finely tuned" approach to uses in National Parks in Alaska.

"If you just look at the preamble," Cook said, "you can see the impact that the public had." The proposals for regulations governing subsistence and other uses in National Parks in Alaska was taken to small communities, sportsmen's groups, public meetings and gatherings all over Alaska, he said. "An individual even went down the Yukon in a boat to pass out the regulations to give everybody an opportunity for comment," Cook pointed out.

As a result, the park regulations for Alaska are tailored to what people wanted and needed, and reflect the uniqueness of the Alaska lifestyle. Cook pointed out the example of firearms: "Historically, firearms are not allowed in National Parks. The first regulations had a prohibition here, too. The public said 'Wait! We need them for personal protection.' So now they're permitted in the newly established units."

Other accommodations in the regulations also reflect the uniqueness of Alaska, particularly the means of transportation that have been traditional and are necessary because of the lack of a road system.

With regard to subsistence uses in particular, Cook said, "they will be as they were last year, three years ago, whenever. It will be the role of the State to insure that happens," he said. "Our relationship with the State is spelled out in the Act. The State is the primary manager of resident fish and game and we look to them to continue that role."

Cook sees that the National Park Service will be working jointly with the State and the U.S. Fish and Wildlife Service in determining what uses occur, when and where they occur. The Boards of Fisheries and Game will set seasons, bag limits, methods, means, and so forth, but these regulations will have to be compatible with the stated purposes for which the Parks exist, Cook explained. Ultimately, the Park Superintendent has the authority to manage the park unit, according to the law, and could theoretically close a park to hunting, fishing or trapping, even if a season had been set by the Boards. On the other hand, any hunting, fishing or trapping activities that take place within the Parks must be consistent with State and federal law governing those activities.

In planning park development, subsistence also will be a factor as it might be affected by roads, campgrounds, concessions and other recreational activities. "There's more to subsistence than fish and game," Cook said, "we've got to look at plant foods, firewood, timber; all the renewable resources. In the evolution of planning parks, the public will continue to be involved; it's an ongoing thing," he said.

Basically, the matter of allocating wildlife resources is a State responsibility.

So it seems there is little left to fear of the warnings and admonitions that were part of the "D-2" rhetoric that claimed the State was losing its right to manage fish and game, or that traditional uses would no longer be permitted on vast acreages of land.

Not quite.

There is one cloud on this rosy horizon; one big "IF." That "if" is inherent in the assumption that the State's subsistence law and its handling of subsistence as a priority use continue to parallel the language of the federal law.

As one federal official put it: "It depends what the State does. If they don't comply with national law, we have no alternative but to assume the management role on lands we administer. If the State does what the federal law says, then we'll continue in a passive role."

"We're fervently hoping they do so." ○

*Suzanne Iudicello joined the Department as editor of **Alaska Fish Tales and Game Trails** in September after working as a writer/editor and newspaper reporter for the past 10 years.*

Subsistence Division

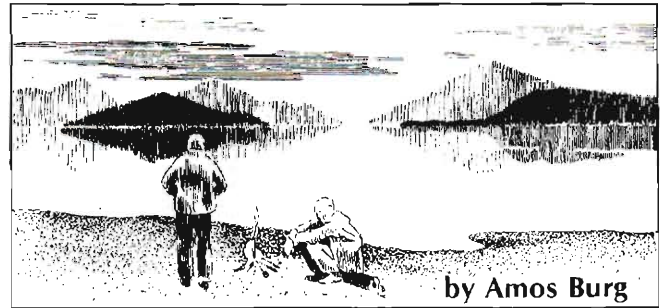
In addition, the affected local communities and their representatives may choose to use the information in the report as part of their own presentations before policy-making agencies.

★ ★ ★

This brief description of the Subsistence Division's program responsibilities, particularly its research functions, gives only a partial picture of the Division's work. As land uses, resource competition, and harvest opportunities have changed, demands for Subsistence Division research data have increased dramatically. With the new Alaska National Interest Lands Conservation Act, a new set of information needs has been identified. The provision of research and technical services to the regional fish and game advisory councils has become one of numerous important added responsibilities. The full significance of the Legislature's command — to study "all aspects of the role of subsistence . . . in the lives . . . residents of the state" — is becoming more apparent as these new functions are addressed. But the challenge of these tasks and the importance of the underlying resource policy decisions make the Subsistence Division's role an exciting and meaningful one. ○

Dennis D. Kelso is Director of the Department's Subsistence Division, a position he has held since February after serving a year as the head of the Fairbanks regional office for Interior Alaska. He was graduated from Harvard Law School in 1977, and holds an undergraduate degree in psychology from Iowa State University. He has published several papers on the legal issues surrounding subsistence.

Campfire Reflections



The Great Caribou Migration

"It will be an epic greater than the Covered Wagon," Jesse Sill, veteran newsreel cameraman and producer assured us. Jesse had just made me and my deep-sea shipmate, Fred Hill, partners in filming the annual migration of the caribou crossing the Yukon River. Hundreds of thousands of them, as Jesse described it, an epic greater than the vanished bison herds on the Great Plains.

The time was 1928, the golden age of movies, when almost anyone with a motion picture camera and a meager budget could make a movie. I was to be the cameraman and director and Fred, known as "Spoke" because he hailed from Spokane, was to get star billing along with the caribou. Spoke has an unlimited deep-sea skipper's license and was an able boatman. Jesse was to supply the camera and teach me how to crank it, read light, and other tricks of the trade.

Spoke and I were to defray all our expenses in the field and bring back the epic migration on the exposed film. Jesse was to develop and print the negative in his Portland laboratory, then distribute the film to the world which, we imagined, was already waiting for it with bated breath.

By the time we'd bought our outfit and canoe and steamer passage to Alaska, our expedition purse was flatter than a Swedish pancake. But we figured once under way in our paddle-propelled canoe, our expenses would be minimal. We'd live in a tent, cook over a campfire and supplement our bacon and bean diet with an occasional fish or grouse. We didn't have to apply to Central Casting for talent — the caribou would act for free.

Our plans began to expand beyond just filming the caribou migration. We'd canoe the entire length of the Yukon, meet the native peoples and learn all we could about the country.

(Continued on next page)

June 19, 1928, after disembarking from the S.S. *Yukon's* steerage at Juneau, we launched our canoe "Song O' the Winds" and paddled south 25 miles for Taku Glacier. Here I tried to display my flair for show biz by staging a gag shot that I thought would wow the audience. I directed Spoke to climb on an ice floe with a paddle, shake a mutinous fist at me as he paddled furiously back to Seattle. After filming a glacial avalanche thundering off the face of Taku Glacier, we headed north up Lynn Canal for Skagway.

At the time, every suitable island in South-eastern Alaska was used as a fox farm, so we'd paddle in and stop for a coffee mugup. Isolated as these island dwellers were, we were always welcome with our tidbits of gossip from the outside world. We noticed the sea around the islands was fished heavily to supply a king's feast for the foxes — kings, silvers, pinks, dogs, halibut and an assortment of scrap fish. Everything went into the cooking pot or was hung on the drying racks. Even the mouths of nearby salmon creeks were looted of salmon bound upstream to spawn. With such dependency on the sea's resources for fox food, we could see that either low fur prices or more stringent fishing regulations (whichever came first) would eventually doom the island fox farms.

At Berner's Bay we encountered two lonely prospectors, George Deedley and Frank Fremming, who vied with one another to show us hospitality. Frank had spent 30 years and as many grubstakes, blasting a 1,000-foot tunnel through solid rock searching for the mother lode. "Maybe the next blast," he told us wistfully . . . "and there would be enough gold for everyone," he said generously, even us.

In Taiya Inlet 10 miles from Skagway, we spent a day filming an eagle's nest which involved a shaky 75-foot climb up another tree to get above the nest for a camera position. This exposed us to the dive-bombing of the irate parents trying to protect their two plump eaglets.

When we resumed our voyage, we sighted a lone boatman rowing toward us along the shore scanning the tree tops, his 30-30 in readiness. He was a bounty hunter seeking out a precarious living shooting eagles at a dollar a bird, paid by the Territory. We watched him with edgy concern. When shots rang out, we knew that he had located our eagle tree. He'd probably saw the tree down to get the young. We continued our paddling to Skagway wrapped in gloom.

From historic Skagway, Gateway to the Golden Interior, we portaged on the narrow-gauge White Pass Railway over the 2,900-foot summit of White

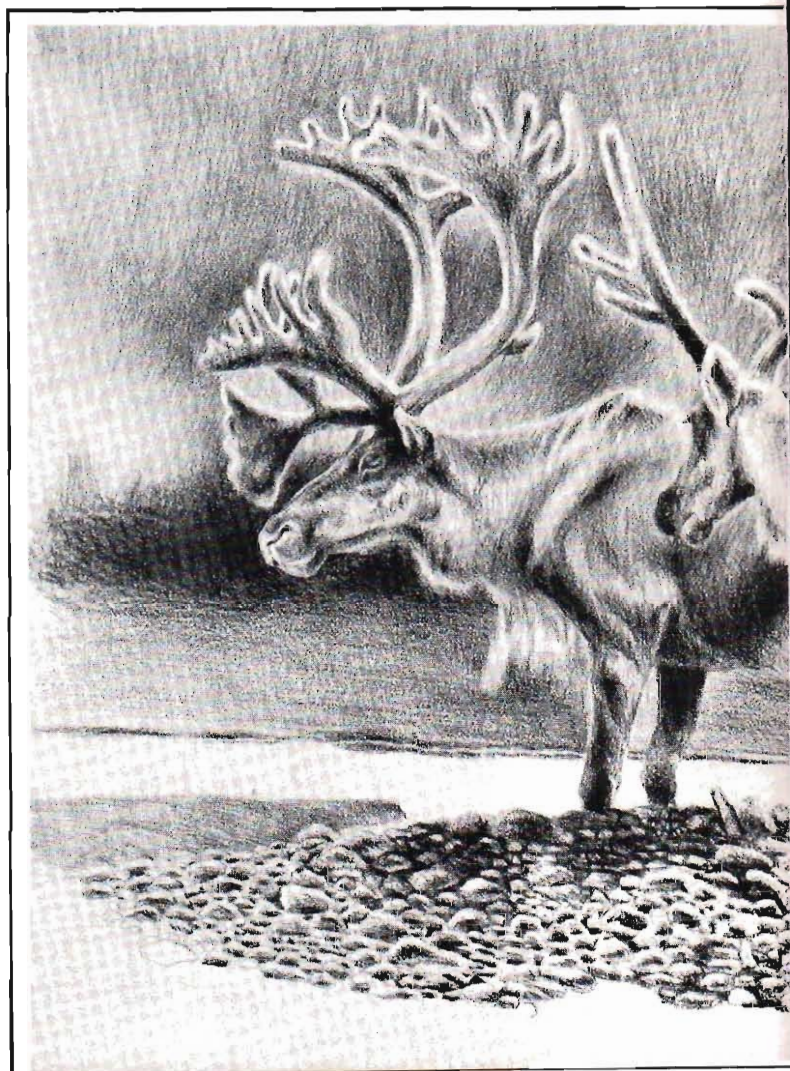
Pass, 41 miles to Lake Bennett. Here we launched our canoe in the lake only a few miles from where the trickling snow waters gave birth to the mighty Yukon River. Hoisting our sail, we scudded northward on the 2,000-mile water trail to Bering Sea.

In a few days we'd portaged Miles Canyon and Whitehorse Rapids and traversed the 30-mile-long Lake LaBerge. The river below the lake was swift and winding and we made good time.

We stopped to film at Athabaskan villages and fish camps, since the story of the caribou was tied closely to the story of the people.

At Little Salmon, the whole village had been stricken with influenza. The Natives were netting king salmon, the fishes' flesh soft and ragged from bucking the gritty, glacial Yukon current during their long 1,500-mile odyssey from Bering Sea. The fish were cut in strips and hung on crude drying racks along with moose and caribou meat. Winter trapping of lynx, marten and mink generally brought in a few dollars.

We passed the village of Carmacks and below it a dilapidated log roadhouse at Yukon Crossing used by the winter stageline between Whitehorse and Dawson. A half-eaten sandwich and a half-drunk cup of coffee on the table



indicated the roadhouse keeper's quick departure to the Outside after a snow-bound winter.

Shortly below Yukon Crossing, we shot the foaming breakers of Five Finger Rapids. At Fort Selkirk where the Upper Ramparts begin on the Yukon, a Royal Canadian Mounted Police Corporal told us thousands of caribou were crossing the Yukon downriver.

The next morning our caribou saga really began. While cooking breakfast a band of several hundred caribou split in a "V" and passed on either side of our camp so close we could hear their clicking hooves. They waded into the Yukon and easily breasted the swift current on their easterly crossing. We followed them to the bank, swinging our cameras into action to record the dramatic scene. The caribou made an impressive sight with their huge antlers silhouetted against the sky as they stood on the opposite shore gazing at us.

All day long we encountered scattered caribou bands swimming the Yukon. We rowed down on them with Spoke pulling hard at the oars. I used our small spring camera to follow the action. Caribou hairs are hollow and buoy the animals as they swim, propelled by powerful strokes of their widespread hooves. I estimated

their speed at two miles an hour. Spoke, who was perspiring at the oars, rather heatedly argued they were making 10.

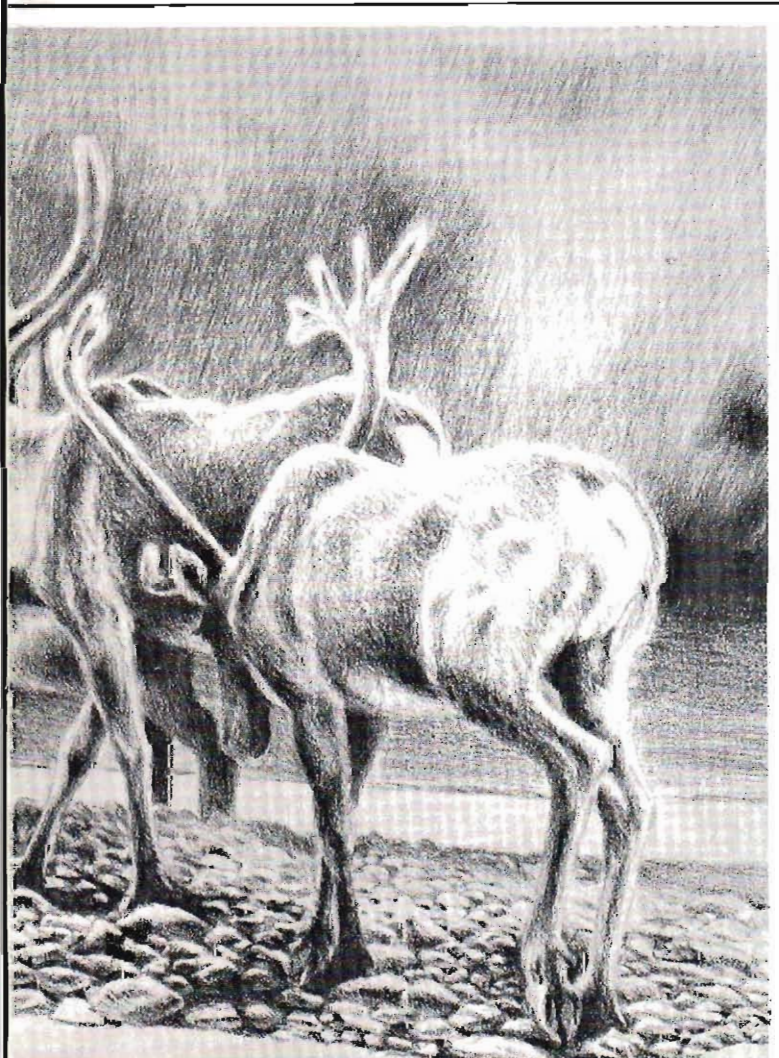
All day long we encountered and filmed small and large bands crossing the river, always in an easterly direction. Since caribou have non-pugnacious natures, we often rowed into the midst of large swimming bands, taking a chance of being swamped in an area of antlers for that one elusive dramatic shot.

As days passed on our downstream journey, the bands of caribou we encountered intermittently never seemed to diminish in number.

Their never-ending numbers filled us with awe. Campfires of hunting parties blazed on many bars as Indians, miners, woodchoppers and trappers shot caribou and labored to put away their winter's food supply.

These barren-ground caribou were members of the Fortymile herd which was estimated to number a half million animals at the time of our voyage. They occupied a range almost equal in area to the State of Washington. It extended from Whitehorse in Yukon Territory north 600 miles to the White Mountains in Alaska. There east from Fairbanks, 400 miles across the Alaska-Canada boundary to the Mackenzie Mountains. On these yearly migrations a caribou would cover around 1,000 miles.

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A severe decline struck the Fortymile herd shortly after our voyage. By 1938 the huge migrations across the Yukon had almost ceased. By the early '40s, the Fortymile herd of 500,000 had dwindled to around 10,000 animals. Biologists cited several possible causes: deterioration of range quality, trampled and fed upon by so many animals; destruction of range by fires; later as the decline accelerated, excessive hunting pressures.

We found that the curiosity of the caribou often overcame their timidity and fear. Once we landed at the head of a sandbar to film a band of several hundred animals milling about on the lower end. When I had walked almost to them, I found my camera jammed. As I ran back to the canoe for my changing bag, I heard the beat of hooves behind me. When I looked around I found the whole band following close at my heels. Spoke said later they must have mistaken me for a fellow caribou. The caribou stood in a semi-circle and watched while I used my black bag to unjam my camera. Then suddenly they seemed to understand the situation and their curiosity turned to alarm as they spun and fled in erratic retreat.

Below Eagle, in Alaskan territory, the migrations began to ease, and when we passed Circle City and entered the Yukon flatlands, they

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In 1778 when Captain James Cook first sailed into the waters which would later take his name, he found the area teeming with a variety of marine life. It was this varied abundance of wild resources that supported several small Tanaina Indian villages.

This group of Athabascan speakers was found in the area of what is today Anchorage, along the Susitna River, on the inlet side of the Kenai Peninsula and in the Iliamna Bay area. More inland groups occupied the area northeast of Lake Iliamna and Lake Clark, along the Mulchatna River and the Stony River to its junction with the Kuskokwim.

Owing to the variety of marine and land resources of Cook Inlet Basin, the Tanaina lived a way of life unique from other Athabascan groups. Living on the sea coast they utilized mainly marine resources, while the inland groups hunted primarily caribou and moose. The Tanaina culture was greatly influenced by the Eskimos who had inhabited the Inlet prior to the Indians' arrival. The basis for the Tanaina economy was the salmon. Because it was an abundant, reliable source of food, the Tanaina maintained semi-permanent sedentary villages in the coastal areas. Another important part of the Tanaina economy was the rich trade with the surrounding tribes — the Kodiak and Chugach Eskimos, and the Tanaina, Ahtna and Ingalik Indians.

The existing trade economy of the Cook Inlet Tanaina provided an excellent opportunity for the first Russian traders in 1786 to expand their operations from Kodiak Island. Russian Orthodox Missionaries who often accompanied the traders vehemently pursued the conversion of the Indians' religious practices. Suppression of the Natives intensified and what resistance they posed was unsuccessful against the Russians' relentless force. As Russian occupation of Cook Inlet expanded with forts at Kenai, Kasilof and English Bay, trading intensified and the Tanaina, through Russian subjugation, became deeply involved in the fur trade.

Changes in the Tanaina family system resulted from the trade

Tyonek Yesterday and Today

Story and Photos by Ron Stanek

enterprises. Wealth made it possible for the successful hunters to gain prestige and leadership. The Russians made it a practice of taking a successful man and making him a *toyon*; a position nonexistent in aboriginal Tanaina culture. The chiefs were would-be leaders through whom contracts for goods could be made. Wealthy individuals were soon able to support a number of relatives who then became obligated to stay with them to work and hunt in exchange for care and protection. As a man's number of followers grew, so did his wealth, which was often demonstrated through the potlatch, an elaborate gathering or ceremony at which food and gifts are lavishly distributed by the host.

The 1867 sale of Alaska to the U.S. ended the period of Russian monopoly on the fur trade. The new American free enterprise system greatly inflated the market. Indians were allowed to incur debts with the American companies, as with the Russian. The bottom soon fell out of the fur market and over-hunting made many animals scarce. The companies attempted to collect from their debtors and the wealthy Tanaina chiefs were no longer able to support their large families.

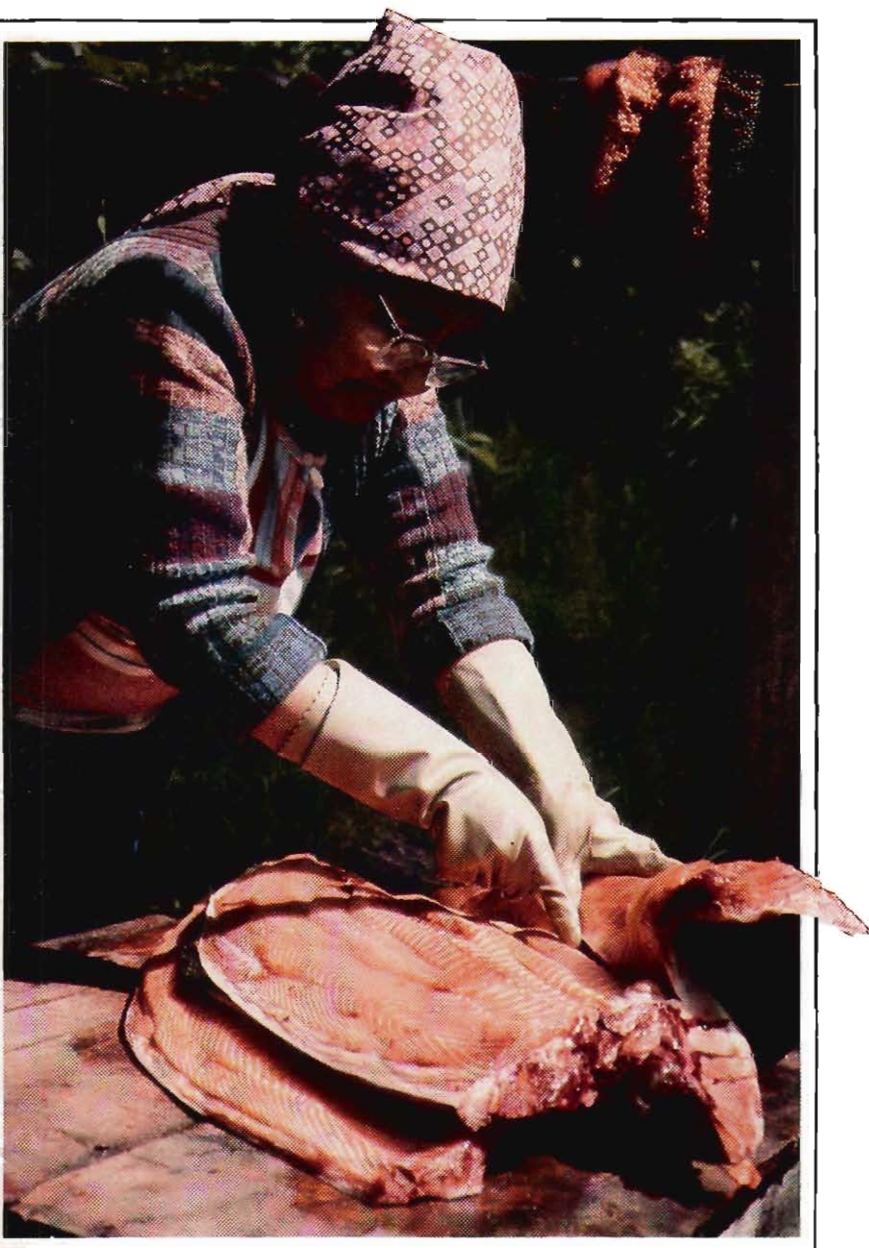
In the 1890's two burgeoning industries, mining and canneries, relieved some of the hardship brought by the downfall of the fur trade. Though mining had little influence on the Tanaina economy, commercial fishing proved both helpful and harmful. The commercial fishing industry was extremely wasteful and reduced the escapements to the rivers where the Indians fished. Commercial fisher-

men in their growing numbers crowded the Indians from their better fishing sites and for 25 years excluded them from the commercial industry. During that time Indians sometimes worked in the canneries. This meant being at work all day, everyday during the season. For those accustomed to a hunting and gathering way of life, cannery work was not acceptable. Finally Indians were able to gain access to the setnetting areas and became involved in the industry to a limited degree.

Despite the subjugation, inter-marriage, and introduction of Russian and American social and economic ways on most inlet communities, Tyonek remained ethnically unchanged throughout the 1800s. Perhaps it was able to retain much of its identity because of its long existence prior to the Russian era. It is thought to have been established when the Tanaina first moved into the inlet in prehistoric times.

Even today Tyonek is 95% Tanaina Indian, and maintains many social and cultural traditions. Subsistence use of fish and game still remains a significant part of the economy and culture. Specifically the preparation methods and usage of salmon, particularly king salmon, are major vehicles for the continuation of language and sharing traditions.

In mid-May when the kings start moving up Cook Inlet to their spawning areas in freshwater streams, they move in shallow waters along the shoreline. Whereas in early days fish were caught in streams and rivers with weirs, baskets, and spears, today nets are



frozen each part is cut in a specific way for smoking or salting. Starting with the head, it is usually separated from the body and split with two cuts from the lower surface resulting in a butterfly appearance. This is either soaked in brine and smoked or salted in buckets. Tails and fins are usually smoked or salted and, along with heads, made into soup.

Fillets are processed in several ways depending on size. Any size may be made into *suluna* or salted and packed into barrels or buckets. Smaller fillets are cut one inch thick with the skin left on and fried into *vava*. The most popular method is to cut fillets of larger kings in strips, soak them in brine, and smoke them for *valik*. Backbones from which most of the meat is removed and smoked are made into *kiytin* for use in soups. Fish eggs are stored in oil and later mixed with berries, or to ferment for *chugulin* or "stinkfish," which is like a pudding.

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SUMMER'S WORK—A woman fillets king salmon that will then be cut into long, narrow strips and smoked for *valik*. Strips of eggs hang in the background.

PATTERNS — King salmon eggs and backs are dried before they are put in the smokehouse. Each preparation method has its own cutting pattern.

placed along the inlet at low tide to catch the kings as the tide floods. Fresh kings are processed several ways, some the same day. Usually the large fish — 20 to 40 lbs. — are left covered, preferably with grass, in a cool place for two or three days. The latter practice may be related to customary practices associated with the beliefs against eating the first salmon on the same day caught. Processing fresh salmon usually leaves the flesh dry and somewhat tough. Leaving it lie results in a curing which releases oil into the flesh making it tender, more palatable and easier to cut.

Almost every part of the fish is used, and when not canned or



Through the Looking Glass

Story and Photos by Dick Bishop

One of the most satisfying things I've done in my life was to spend two years living in the Alaska bush on a subsistence basis. To do so was to succeed in capturing one of those elusive personal ambitions bordering on daydreams, or fantasies, that we all have. Daydreams are valuable, because a little imagination can renew your belief that you can do almost anything, even though you realize that while your imagination can move mountains, you're standing there with nothing but a number two shovel in your hands! Maybe because I only imagined a molehill rather than a mountain, this particular daydream became a reality for me and my family.

We moved to the bush in June 1975, after years of thinking about doing it, looking for a place to go, and working for the Department of Fish and Game in various remote parts of the State. We'd developed many warm friendships with people living in the bush, and an admiration of those exceptional people who found great personal satisfaction and composure in living close to the land. We wanted to share their perspective, if possible, not from the "outside," but from the "inside." We wanted to step "through the looking glass." When finally the opportunity came, we went — lock, stock, and dog team!

By then the first few volleys of the D-2 battle had produced a hail of propaganda, pro and con, but facts were painfully scarce about what people were actually doing in many of the proposed Parks and other designations. The National Park Service sponsored subsistence use studies where Parks were proposed in order to better understand an aspect of resource use that they were being committed to allow and protect.

I was hired for a few months to document what, if any, subsistence

uses occurred in the proposed north extension to McKinley Park. I already knew that subsistence uses occurred, contrary to a statement made in the draft environmental impact statement. But facts demonstrating the kinds and extent of resource uses were needed.

From what I had heard and read, if resource uses were not documented, the odds were good that they would be prohibited in the new additions to the Park. If that happened, people living at Lake Minchumina, Telida, Bearpaw, Kantishna, and perhaps even as far away as Nikolai could lose the use of an area where hunting, trapping, and fishing had been pursued by both Natives and whites for 60 to 70 years, and by Natives alone for much longer.

Being hired for the job solved a problem for us that is faced annually by most people in the bush — how to make the cash that's become a virtual necessity in today's subsistence-oriented bush economy. Trapping usually provides at least part of the cash, but fur values are notoriously unpredictable, and when they're low, cash is in short supply. Times have changed since the days when hunting, fishing, and some trapping provided an acceptable living. The means to obtain additional cash vary, from qualifying for some form of government aid, to commercial fishing, guiding, taking a job, or running a business.

Through a happy combination of circumstances, we wound up living at Lake Minchumina, a large lake lying at the head of navigation on the Kantishna River drainage and only 14 miles from the Kuskokwim River. The country around there is typical of Interior Alaska, with broad river valleys, vast black spruce flats stretching away to the Alaska Range and a sampling of

white spruce/birch forests, lake-studded flats, and old, low mountains. Even for Interior Alaska, it's kind of "hungry country" for most resources; I'd say it's serene, rather than spectacular country.

People have lived in the area since prehistoric times. Far to the east near the Parks Highway is the Dry Creek site, one of the older archaeological sites in Interior Alaska. At Minchumina, several archaeologists have found house sites, stone tools, and other evidence of man around the lake. Working in our garden was always a little lighter because we'd occasionally find fragments of stone blades left there by a much earlier resident. Historically, early writers like Sheldon, Wickersham, and L.L. Herron mentioned people living in the Kantishna-Minchumina-Telida area around 1900. From Edward Hosley's anthropologic studies, I estimated that prehistorically there may have been 45 people seasonally living in an approximately two-million-acre area north of the former McKinley Park between present day Telida and the Parks Highway. There are about the same number today, including some who also use the area seasonally. In the old days, scarcity of game caused seasonal use. Today it's scarcity of jobs plus social or medical factors.

Since around 1900, there has been a trickle of trappers, prospectors, and travelers passing through the area. The earliest known white settler at Minchumina was Edward Kammersgaard, who arrived in 1917, later established a roadhouse, and left in the '30s. There were up to 14 trappers based at Minchumina during the late '20s and early '30s, but most left when fur prices fell. Since 1940, between low fur prices, the end of dog team

mail runs from Nenana to McGrath, and the lack of gold in the country (except in the Kantishna area), there has been little reason for people to stay unless they happened to like living there, as a few people do. The country never had a high "carrying capacity" for people, and it doesn't now. But it has always provided a satisfying life for a few people.

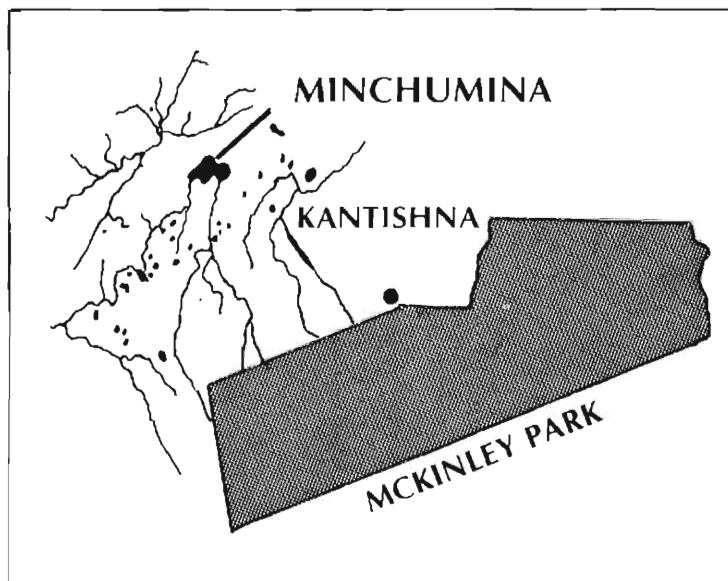
We quickly discovered that living on a subsistence-type basis was a lot different than reading or hearing about it. The seasons dictated our work and play, and the weather set the daily schedule.

"There's a time for every purpose under heaven" was impressed upon us repeatedly, sometimes the hard way. If we missed the good fishing period, which we did the first year, we had to fish longer, harder, with less success. When that happened we found that our sled dogs didn't like eating marten carcasses at all, but wolf and wolverine weren't too bad! We also learned that there is no room for a lazy or mean dog when food is short.

The season cycle of things to do kept us busy. In early spring firewood had to be cut and split to be ready for use when winter set in. And that had to be done before gardening started because the garden was essential. We didn't have the money or the logistics to feed a family of five without it.

We didn't hunt unless the season was open, which meant that between the last muskrat we ate in June until we began getting game in fall, we ate fish unless we happened to get a bear.

The seasons provided our only "freezer," so only a little dried meat was left after break-up. Moose were scarce enough that we were lucky to get even one. By spring, only the inedible antlers were left. I'll never forget one potluck picnic with friends on a beautiful summer day.



Working in our garden was always a little lighter because we'd occasionally find fragments of stone blades left there by a much earlier resident.

Their steaks were beef, ours were whitefish! Fortunately, we think whitefish is delicious!

When moose season came, we ate, slept, breathed, and dreamed moose hunting until we succeeded, in killing a moose. Virtually all other activities ceased. The season was early, short, and limited to bulls only, and moose were scarce. A moose meant the difference between a meager winter menu and a healthy, satisfying one. We could not have afforded to buy the equivalent. At one desperate point, I thought about taking a moose after the season if need be, and rejected the idea. It would have been illegal, of course, but some of the reasons for the law became much clearer: moose were scarce, and also, if I took one out of season, I was cheating on my friends and neighbors who I knew were trying to abide by the rules too. Besides, as a former Fish and Game biologist, I couldn't ignore the logic underlying

seasons and bag limits. It was going to have to be a legal moose or whitefish and beans that winter! I packed up and went moose hunting with new determination. At 8 p.m. on the last day of that season, my wife, Mary, shot a bull as the sun set and the full moon rose. I have never appreciated a moose so much in my life!

Getting a moose was cause for celebration, had there been time, but Jack Frost was poised to pounce on our precious garden! As soon as the moose was safely home, we rushed to harvest the spuds, cabbage, and carrots. It was usually a close call but we always got the lion's share.

After the garden harvest, there was usually just time before snow and a hard freeze to pick a batch of lowbush cranberries. We used wild berries in place of canned and fresh domestic fruit, so we prized them highly for variety and vitamins.

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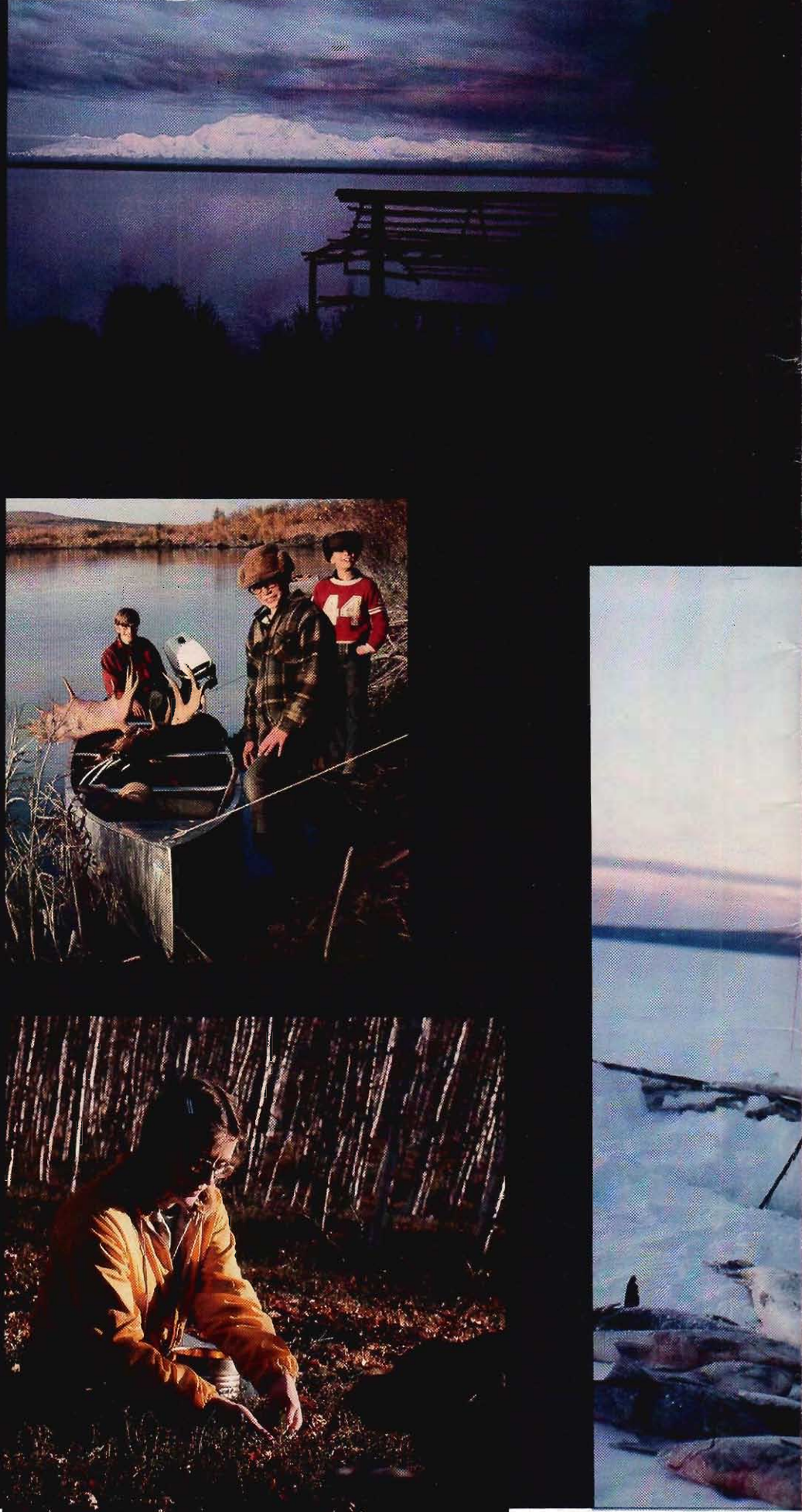
There was only one more major seasonal task to do before settling in for a nice quiet winter of trapping, wood hauling, and correspondence school. At Minchumina the time to get ahead on dog food was in the fall, when whitefish came into the lake to spawn. From the first part of October to mid-November fishing was good (for some unaccountable reason, perhaps years of low water levels, it no longer is good at any season). We set several gill nets which we checked until freeze-up when we could no longer get around in a canoe. Then after a few days, when the ice was thick enough to support us, we reset the nets under the ice, a technique well-known in the bush, but one we'd never used before. We were able to stockpile several hundred frozen fish which would last most of the winter. Hauling fish was the first job of winter for the dogs, and they were wild to go after a summer of lying around. For a couple weeks they had only two speeds: stop and full-throttle! It's tough to stop or steer a frenzied dog team on practically glare ice!

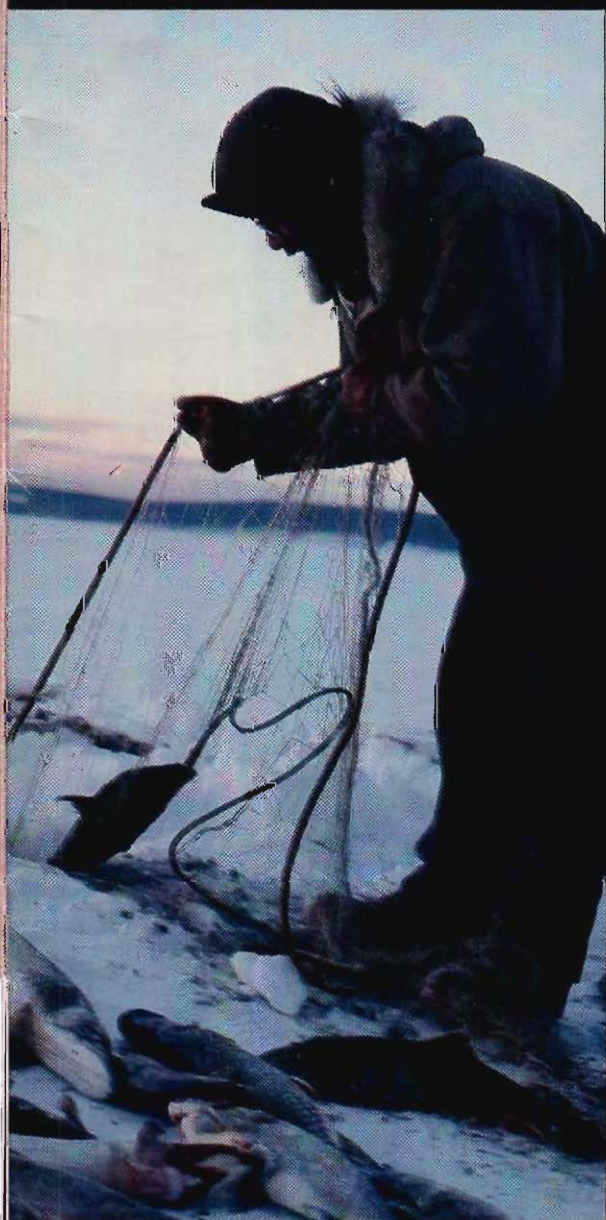
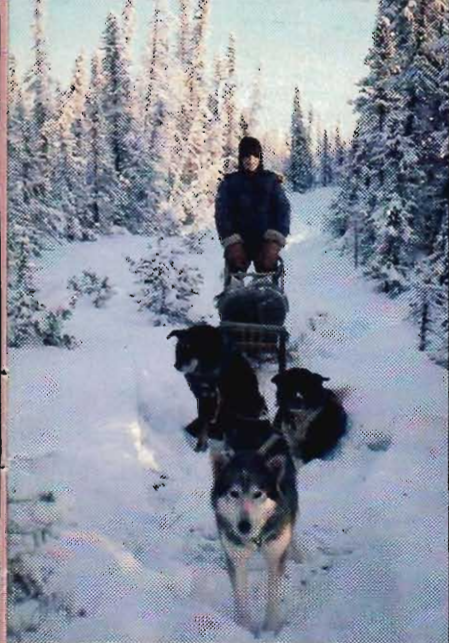
Correspondence school began right after moose season, when we joked about Mary becoming "Mrs. Bishop," the teacher. The three boys spent half the day in school, and the other half running their own traplines, doing chores, and playing. They became proficient trappers and dog mushers — as well as wood-splitters and fish cooks! The lake and woods had been a little formidable to them at first, but after

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THROUGH THE

SEASONS--(Clockwise from upper left) Autumn sunset; trapline run; hauling water; winter morning; fuel supply; summer's abundance; spring garden chores; ice fishing; cranberry crop; successful moose hunters.





(Continued from page 4)

Ukiuvungmiut: Cliff Dwellers of the Bering Strait

may be because younger people have more diffuse interests and demands. Another factor, however, is the disruption of the passing on of knowledge related to marine mammal hunting from one generation to the next. The priority placed on marine mammal hunting and its cultural context, though, is still pervasive enough to attract younger Ukiuvungmiut (who have migrated out of the area) back to the Nome/Cape Woolley vicinity each spring.

The settlement patterns of contemporary Ukiuvungmiut have undergone adjustment to meet the rapidly changing configurations of contemporary life. Today most Ukiuvungmiut reside in Nome during the winter and many migrate to Cape Woolley and, at the earliest possible time, back to their island home where they hunt walrus, *ugruk*, and gather bird eggs before returning to the mainland to assume salmon fishing, berry picking, and all other facets of contemporary Ukiuvungmiut life in Nome. A continued analysis of contemporary Ukiuvungmiut sociocultural patterns and their relationships to a marine mammal hunting ecology will provide greater insight into the ecology of hunter/gatherer/fisher populations in general, and the way such populations adapt to the conditions of contemporary life. ○

Linda J. Ellanna was recently named Deputy Director of the Subsistence Division after serving as the assistant director for research for the Division in Nome. She has done research in the Bering Strait area since 1968, and is currently completing a major research report on Bering Strait island ecology and its relationship to population structure. She received a bachelors degree in anthropology from the University of Wyoming and is presently a candidate for her Ph.D. in biological anthropology from the University of Connecticut.

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A Legislative Perspective

A few days later, Vaska resigned from his chairmanship of the Special Committee on Subsistence, saying at the time he was the "... only member of the committee that is not privy to the deal cut by the coalition."

A test of the coalition's unity came that same day, when Sam Cotten (D-Eagle River) moved to have HB 615, a subsistence repeal bill he sponsored, pulled from the Resources Committee. Barnes accused Cotten of trying to protect his own political interests, but Cotten responded that the "reorganization" had freed him of his obligation to hold rank with the (former) Democratic majority on the matter of subsistence. His motion garnered only four votes.

The session adjourned with no further action on the bills. But legislators have agreed to a series of monthly meetings beginning in Anchorage in September to see if a compromise can be reached. The Alaska Federation of Natives — strong backers of the original legislation — has announced it will participate in the meetings.

However, Sam McDowell of Anchorage, a prime sponsor of the repeal initiative, has been quoted as saying that his group will not be involved. "We have given up on the Legislature," McDowell said.

There are more than a thousand persons carrying petitions for the initiative, and about 16,000 signatures are needed to place it on the ballot in November, 1982. The deadline is next January, and a staffer in the Division of Elections indicated unofficially, "it looks like they will make it."

The ramifications are wide-ranging. Knowledgeable persons on both sides feel there is a very strong chance of voter approval, as matters stand now. This is especially so since the state's two largest cities are hotbeds of initiative support. No matter what legislative compromise is reached between now and January, it seems unlikely the anti-subsistence members in the House would campaign publicly against the ballot measure.

But the Bush members of the Coalition will need some very strong assurances that their constituents' needs — some priority access to fish and game — can be met. If that is not forthcoming, for whatever

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Campfire Reflections

ceased altogether. But our caribou encounters were not quite over.

Camped on an island below Fort Yukon, we were busy stoking our campfire with willow twigs to cook a pot of beans. Suddenly we heard a great splashing commotion. A large band of caribou emerged from the river and came charging through our camp. Several got tangled up on our tent ropes and tore it loose from its moorings; equipment was kicked and battered and scattered helter skelter. We did not have a guest book, but one huge antlered bull left his autograph, a perfect hoof imprint right in the middle of our bean pot.

The next morning we shoved "Song O' the Winds" into the Yukon and pushed off to continue our voyage westward to Bering Sea. We were probably in for a few more flurries of excitement, but we felt that filming the great Fortymile herd, migrating by the hundreds of thousands across the historic Yukon, was an adventure that could never be topped. ○

reasons, there could be another reorganization of Alaska's House. ○

Freelance contributor John Hecht served four years in the Navy, including service in Viet Nam. He returned to college and graduated from the University of Idaho, majoring in communications and political science. He has reported on and lobbied in both the Idaho and Alaska Legislatures. He recently opened his own business in Juneau, Southeastern Communication Administrative Media Services.

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Tyonek Yesterday and Today

The traditions of trade and expression of wealth through the potlatch have had an interesting history of progression. In pre-Russian and American times they were expressed through the exchange of luxury items of copper, cedar arrows, and hides. As the fur trade became the dominant force of the economy, trade and wealth were conveyed through beads, coffee, tea and other modern wealth symbols. Sharing of equipment, fishing sites and the catch is also a common demonstration of wealth and is important to the individual's initiative as it was in the class systems in aboriginal times. ○

Ron Stanek is a resource specialist with the Subsistence Division in Anchorage. He holds a B.S. in Wildlife Biology from Colorado State University and an M.S. in Recreation and Park Administration from Western Illinois University. He joined the Department in 1980 after working for the U.S. Fish & Wildlife Service, and has conducted research on Tanaina subsistence activities in Tyonek.

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Through the Looking Glass

a year it was all part of their playground, and definitely preferable to those stuffy books!

Trapping occupied a fair amount of our winter time, although for various reasons I did less trapping than I'd planned. We came to realize that there's a lot more to raising a family this way than simply plopping down somewhere in the woods and spending our time hunting and trapping. Our admiration for those who succeed in maintaining a family or just themselves on a subsistence-type basis increased immeasurably.

I began by saying that those two years comprised one of the most satisfying things I'd ever done. I neglected to say that both Mary and I agreed we'd never worked harder for that long in our lives. We had few conventional labor-saving devices available so the operation ran mostly on hand labor. At times trying to accomplish a task was frustrating because of the time and effort required or the lack of suitable materials. Some jobs took so long I began referring to them as "stone-age craftsmanship"!

From the standpoint of financial security, there's little to recommend the life-style. In years of high fur prices, it's possible to make a substantial income, but in the long run, the average income is low. By using snow machines and other more modern tools, the time element can be reduced, but those tools require a greater time commitment to the cash economy. That means less time for jobs at

home which can be serious. For example, one man in Telida worked as a guide during hunting season, but that precluded his own moose hunting at the best time. There's no built-in retirement plan either.

So where did the satisfaction come from? For us I think it involved many things. We prized the degree of independence we had. Although we did our share of bumbling, we achieved a measure of self-sufficiency that was immensely satisfying. But we also appreciated better how much we depended on the rest of society for mail service and other services we didn't pay for as well as the supply of commercial goods we used. We felt it was a privilege rather than a right to live as we were, and we should not use that privilege to deny others' privileges. We learned much faster about wildlife and wildlands as hunters and gatherers than we had previously. The difference in perceptiveness was remarkable and so was the fact that it extended to all things, not just those we tried to eat or burn. Finally, I think our perspective was irrevocably affected. There, we were clearly very much a part of the community of plants, other animals, and people, subject to many of the same whims and forces of nature as the rest. We used that community, but we also admired, respected, and tried to protect it too. Maybe that's what living close to the land means. I think we succeeded in stepping "through the looking glass."

Fortunately, wildlife and wildlands are held in similarly high regard by many others whose lifestyles are different than those I've described. Their continued interest and support in conservation depends on ensuring that their privilege to use wildlife and wildlands also persists. ○

Dick Bishop is the Regional Supervisor for the Game Division in Fairbanks and the Interior. Among his special assignments for the Department have been state land disposals and the monitoring of national interest lands legislation in Congress. He joined the Department in 1965, and has served as a game biologist, area biologist and research coordinator. He also has been a visiting professor in wildlife management at the University of Alaska, and completed a study of subsistence use in Interior Alaska while pursuing that lifestyle himself. He received his bachelor of science degree in wildlife management from the University of Minnesota and a master of science degree in the same field from the University of Alaska.

