CRM

CULTURAL RESOURCE MANAGEMENT
Information for Parks, Federal Agencies, Indian Tribes, States, Local Governments, and the Private Sector

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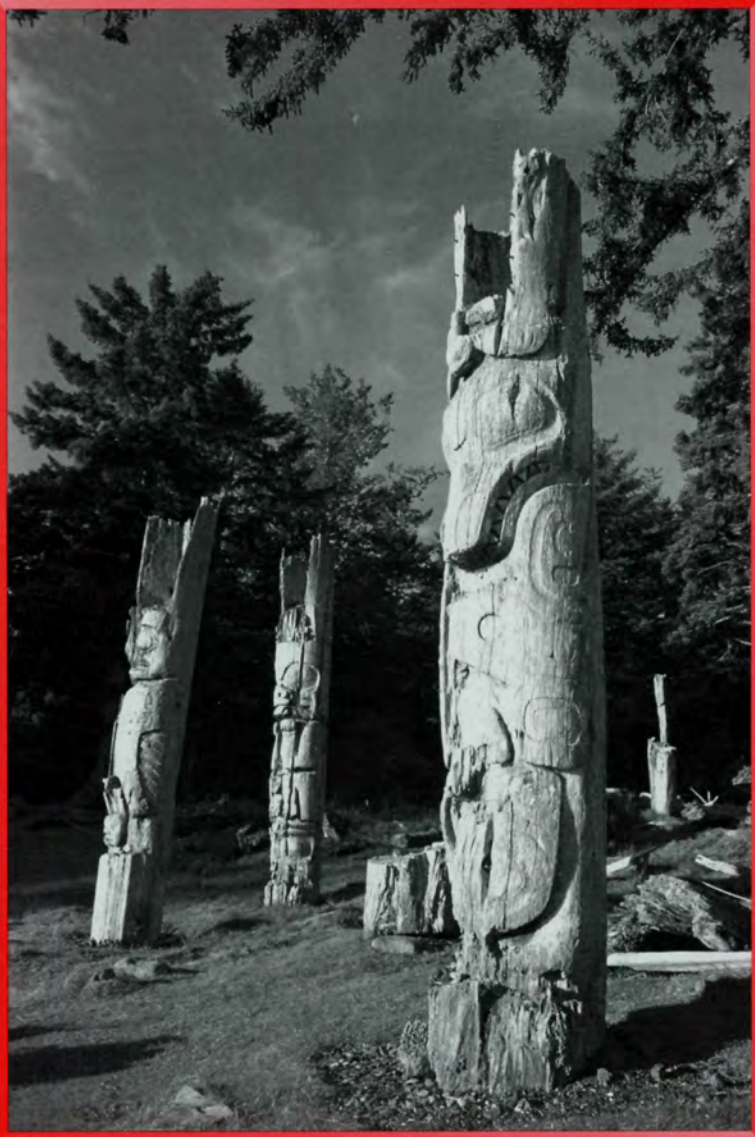
Parks Canada

Archeology and Aboriginal Partners



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Cover: Haida poles at the World Heritage Site of Ninstints, Haida Gwaii. Photo by Rolf Bettner.

***See map on page 51 showing location of sites discussed in this* CRM.**

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Sharing Experiences

It is with great pleasure that I welcome readers of *CRM* to this issue dedicated to the federal Canadian archaeology scene with a focus on Parks Canada. In these times of reduced budgets, expanded partnerships, and increasing interest in what we do, it makes good sense to use the *CRM* to share with a wider audience our experiences in managing archaeological resources.

You will see frequent reference to Parks Canada's Cultural Resource Management (CRM) Policy in this volume. This policy is a comprehensive statement of the principles, practice and activities we use in managing all types of cultural resources, including—but not limited to, archaeological resources. The objective of the policy is "to manage cultural resources administered by Parks Canada in accordance with the principles of value, public benefit, understanding, respect and integrity." The policy is our principal reference in evaluating development options or in seeking mitigation funds; it is our conscience in addressing all matters relating to cultural resources.

As a result of the creation of the Federal Archaeology Office within Parks Canada in 1995 (which consolidated the Department of Canadian Heritage's archaeological activities into one organization), Parks Canada now provides service beyond the boundaries of our National Parks and National Historic Sites. We are now actively providing policy advice and on-the-ground assistance to other federal government agencies in Canada in the implementation of the Canadian Environmental Assessment Act (1992). As well, we have made important advances in working with First Nations to ensure that aboriginal heritage—a significant part of the national heritage—receives the attention it deserves. This volume describes some of the many varied research and conservation projects that take place in our most highly valued natural and cultural areas. It documents the important role archaeology in Canada plays in fostering national awareness and reflecting the Canadian experience. I invite you to visit our National Historic Sites and National Parks to see for yourselves the central role of cultural resource management in Parks Canada.

—Christina Cameron
Director General
National Historic Sites
Parks Canada

Broadening Horizons

In the early 1990s, my predecessor, Jerry Rogers, and Christina Cameron agreed to cooperate in the production of *CRM*. The scope of this cooperative venture was to range from Canadian authors contributing articles, to joint production of one or more issues each year, to full issues on Canadian CRM topics—coordinated and edited by Canadian experts. I am pleased to report that we have accomplished all of this. With the publication of "Parks Canada: Archaeology and Aboriginal Partners" we have realized the hope of my Canadian counterpart, Christina Cameron, for U.S./Canadian cooperation on the *CRM* journal; and Jerry Rogers' wish to "draw more effectively upon Canadian expertise . . . to augment the technical information available to preservationists in the U.S."

The National Park Service welcomes this wide-ranging and interesting set of articles describing the archeological programs and projects of Parks Canada. The recent reorganization of federal archeological programs in Canada has resulted in a focus on care for federal archeological resources and archeological resources affected by federal actions. We compliment Parks Canada on this recognition of the special archeological expertise that it has provided for Canadian National Parks and its professional ability to provide programmatic and technical assistance to other Canadian federal government agencies. This focus and organization are similar to the range of national archeological responsibilities carried out by the archeology program of the National Park Service.

I look forward to other articles and issues of *CRM* devoted to CRM topics of interest to both Canada and the U.S.

—Katherine Stevenson
Associate Director
Cultural Resource Stewardship and Partnerships
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Robert M. Harrold

The Federal Archaeology Office

In 1988, the Government of Canada released a discussion paper titled *Federal Archaeological Heritage—Protection and Management*. The paper was a result of previous concerns expressed by the archaeological/heritage communities that there was no umbrella policy requiring that archaeological resources under federal jurisdiction be protected and managed. Recognizing that much of the responsibility for archaeological heritage in Canada rested with the provinces, the document examined what the federal government was doing with respect to the archaeological heritage within its jurisdiction and identified improvements that could be made to its approach in the future.

In response to the paper, submissions and presentations were received from many interested parties: federal agencies, provincial and territorial governments, Aboriginal groups, cultural and historical groups, the academic community and other members of the interested Canadian public. These efforts resulted in the preparation of the *Archaeological Heritage Policy Framework* (AHPF). Approved and announced by the Canadian government in 1990, the framework states:

> As heritage protection is an essential element in the affirmation of our Canadian identity, and as our archaeological heritage is a source of inspiration and knowledge, it is the policy of the Government of Canada to protect and manage archaeological resources.

The government also realized that the policy had to be developed from the framework and that legislation to effectively implement it had to be prepared and enacted. Federal archaeology legislation based upon further consultations and refinement of archaeological heritage concerns was drafted but was eventually put aside for the time being.

Context

In 1993, the Government of Canada established the Department of Canadian Heritage (DCH); legislation formally establishing the department was passed by the Canadian Parliament in the spring of 1996. Federal government initiatives and responsibilities addressing heritage matters were transferred and consolidated into this department. Two of the major programs included Parks Canada (transferred from Environment Canada) and Cultural Development and Heritage (transferred from the former Department of Communications). The Archaeological Services Branch, National Historic Sites Directorate, of Parks Canada provided archaeology-related advice, policy and services to Parks Canada land managers including the national parks, national historic sites, national marine conservation areas and historic canals. The Directorate for Archaeological Resource Management, Heritage Branch, was located within the Cultural Development and Heritage sector and provided advice and policy on archaeological matters for all federal lands and waters not managed by Parks Canada.

A year later, Canada initiated a government wide comprehensive Program Review of all federal departmental programs and activities in order to determine the best, most effective and cost-efficient way of delivering those programs and services that are appropriate for the federal government. Program Review directed that responsibility for archaeology within the federal government should reside in one organization to act as the government's focal point on archaeological matters. That new organization—the Federal Archaeology Office—was to reside in Parks Canada.

Role

The Federal Archaeology Office (FAO) will provide both federal and departmental policy and legislative initiatives and, within DCH, operational services. It will:

- have a federal policy role for the protection and management of archaeological resources on all lands and waters under federal jurisdiction, as well as those under direct responsibility of DCH (national parks, national marine conservation areas, national historic sites and historic canals) and those under cost-sharing and cooperative agreements;
- advise federal departments and agencies concerning the protection and management of archaeological resources;
- provide expertise in support of the establishment of new national parks and new national historic sites through research and advice to the National Parks Directorate and to the Historic Sites and Monuments Board of Canada (the DCH Minister's advisors on historic matters);
- represent DCH in providing advice on Aboriginal heritage issues in land claim and self-government negotiations;

- provide services and advice to Parks Canada park and site managers related to the survey, identification, evaluation, protection and presentation of archaeological resources;
- consult and negotiate with provincial and territorial agencies to harmonize research requirements (such as permits) and to assist with the development and administration of protection mechanisms for archaeological resources (such as heritage shipwrecks);
- interact with, and support stakeholder groups in the wider archaeological community, as well as with the public, to promote general awareness of archaeological resources and to facilitate resource protection and co-operative ventures;
- provide advice and services for *in situ* archaeological resources, archaeological collections/assemblages (artifacts and records) and data bases;
- participate in the development and delivery of heritage presentation and public awareness programs of DCH;
- participate with national and international organizations on improving awareness of archaeological issues and developing and promoting standards and guidelines related to archaeological heritage management, including information management.

Outside DCH, the departmental role will be mainly one of advice and guidance, with headquarters developing national standards and approaches based upon consultation and specialist advice.

The Canadian Environmental Assessment Agency, which is responsible for the *Canadian Environmental Assessment Act* (CEAA), recognizes DCH as an "expert department" for matters involving impact assessment on cultural resources. Although the CEAA primarily addresses the biophysical environment, it also addresses the changes to the environment that affect cultural resources (archaeological, paleontological, historical and architectural resources). As an expert department, DCH will provide information and advice to federal land managers and heritage agencies on the potential impacts of projects on cultural resources.

Organization

Currently (October 1996) the FAO is undergoing an internal reorganization to better meet the needs of the integrated responsibility for the new Office, the AHPF, the requirements of Program Review, the challenge of a redefined Parks Canada Agency and DCH. Within these broad parameters, the FAO-headquarters proposes to organize itself into five responsibility areas.

- **Federal Archaeological Resource Management** will develop and co-ordinate a national program for the protection, management and use of archaeological resources on federal lands and waters through the development of federal archaeological initiatives, policies and guidelines; develop impact assessment strategies and guidelines for archaeological/Aboriginal resources; and develop policies and direction for heritage shipwrecks in federal waters.
- **Aboriginal Heritage** will develop and co-ordinate a national strategy for Aboriginal heritage sites on federal lands and waters through the coordination of program requirements in support of pre-park establishment initiatives; support the Historic Sites and Monuments Board of Canada for the establishment of new national historic sites commemorating Aboriginal history; develop guidelines for the preparation of commemorative integrity strategies; provide advice to land claim and self-government negotiators; and prepare policies on Aboriginal/anthropological issues.
- **Underwater Archaeology**, as a centre of expertise for underwater archaeology, will continue to direct, manage and participate in federal marine archaeology activities for Parks Canada such as surveys, mitigation, monitoring, and training; prepare analyses of underwater archaeology issues such as heritage shipwrecks and international standards and advice; support the Historic Sites and Monuments Board of Canada for the establishment of new national historic sites commemorating underwater cultural resources; and advise other federal and provincial agencies on underwater archaeology matters. Underwater archaeology is a centralized unit based in headquarters.
- **Material Culture Research**, as a centre of expertise on European-based material culture, will continue to support Parks Canada's programs through the preparation of manuals and guides, glossaries, curatorial displays, research and training.
- **Archaeological Information Management** will develop and maintain information systems and data bases on federal archaeological resources; provide information presentation services such as photography and illustration; and manage the FAO's archaeological collection (artifacts and records).

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Susan Hum-Hartley

Is Shared Leadership An Oxymoron?

According to the dictionary: *to share* means "to join with others in doing or experiencing something" while *leadership* is "the capacity to lead; to guide on a way especially by going in advance."

Thus the question is whether or not archaeological resource management leadership can be achieved by sharing responsibilities and actions. The hypothesis put forward is that, in this day and age, it may be the only way to long-lasting success. Internally within Parks Canada, at the departmental level, between different levels of government, and with other stakeholders such as private stewards of cultural properties, interest groups like Save Ontario Ships and professional associations such as the Canadian Archaeological Association (CAA), there already exist numerous examples of collaboration to advance, advocate and promote the objectives of archeological resource management.

Current fiscal and political reality has had widespread direct and indirect impacts. Whether federal or provincial or territorial civil servants, academics or students, private consultants or public employees, all have been touched.

Globally, all levels of government have been undergoing significant and continuous budget reductions over the past several years. Program and service offerings once considered "untouchable" and for the public good have been severely curtailed or eliminated. The need to sustain some minimal level of professional capability, focus on primary mandate, and eliminate duplication has led to many of the current efforts to harmonize services across jurisdictional boundaries.

At the federal level in Canada, the government's recent focus was to reaffirm those fundamental responsibilities which are essential to achieving its mandate, and in the most cost effective means possible. With respect to archaeology, this resulted in a confirmation that archaeological resource management was an appropriate activity to meet federal land management and cultural resource management responsibilities. As a result, the Federal Archaeology Office (FAO) was established in 1995 within Parks Canada, a program in the Department of Canadian Heritage. However, the FAO is not new. It is an integration, rationalization and streamlining of both the organization and responsibilities of Parks Canada's former Archaeological Services Branch, and the former Department of Communication's Directorate of Archaeological Resource Management (DARM). The result, taking into account an overall 30% budget reduction, is a downsized and restructured organization, and the elimination of the popular *Access to Archaeology* grant program.

FAO merged responsibilities can be summarized as:

- the provision of advice to federal land managers in the protection of archaeological resources;
- the implementation of various commitments made in the 1990 Cabinet approved Archaeological Heritage Policy Framework,[1] which articulated the government's intentions with respect to the protection and management of archaeological resources, and
- the provision of policy and operational support to meet Parks Canada's archaeology requirements.

So, how does the concept of shared leadership apply from this federal viewpoint?

Within Parks Canada

Internally, within the Parks organization, there is a recognition that only certain responsibilities can and should be met by the FAO in Ottawa. They generally centre around national policy and legislative matters, and in specialty services such as underwater archaeology or material culture research that find their home there. Although the merger formed an organizational unit in Ottawa, the expanded mandate relies upon Parks' regional archaeology capability to support their colleagues in other departments in meeting their land management responsibilities. This, to date, has included providing technical advice and guidance to departments such as National Defence, and Indian and Northern Affairs, primarily as it relates to their responsibilities in meeting the *Canadian Environmental Assessment Act* (CEAA) and in the negotiation of land claim settlements. Prior to the merger between DARM and Archaeological Services, the main focus of Parks' professional staff was inward, to address national park and national historic site specific issues, a workload which, by itself, remains overwhelming. However,

the merger has expanded the horizon of responsibilities with minimal additional resources. The Department of Canadian Heritage's purpose is to ensure that the government's obligation for archaeological resource protection and management are met. Parks is collectively working together to produce the tools and guidelines essential to meet this obligation in a cost effective manner. The regions are assuming even more significant roles and demonstrating their capacity for shared leadership.

With Other Federal Departments

Environment Canada:

The Canadian Environmental Assessment Agency, situated within Environment Canada, is responsible for administering the *Canadian Environmental Assessment Act.*[2] It has chosen to share responsibilities and leadership by designating some federal government departments as experts for certain matters. The Department of Canadian Heritage, as represented by Parks Canada, is considered by the Agency as the expert department for natural and cultural heritage, and as such, provides both the Agency and colleague departments advice and guidance on how to ensure projects under the scrutiny of CEAA take these resource concerns into consideration.

Active support of the Agency has allowed Parks Canada to prepare reference guides for environmental assessment practitioners. An example is the recently Agency publication, *Assessing Environmental Effects on Physical and Cultural Heritage Resources.*[3] This is one of several guides published by the Agency as supporting documentation for the Act. These, and other guidelines and tools Parks develops to meet internal policy requirements for impact assessment which go beyond those stipulated in CEA regulations, will be readily available to all interested parties.

Transport Canada:

Attempts at shared leadership can also be applied to Canadian Heritage's recent unsuccessful efforts to secure some level of protection for heritage wreck. While not a perfect solution or as all-encompassing as separate legislative efforts made in the early '90s, the proposal piggy backed on the initiative of Transport Canada to update the *Canada Shipping Act* (CSA) which has jurisdiction over all navigable waters and salvage. The intent of the enabling legislation, only triggered by agreement with provinces, territories or other federal government departments, was to remove potential heritage wreck from the current salvage provisions in the CSA and place them into a protective regime.

Unfortunately, the proposal generated some jurisdictional concerns which could not be overcome within the legislative timetable. It did, however, highlight a continued interest, by all parties, to work together in finding a mutually acceptable protective regime for heritage wreck. The Department is committed to develop other, hopefully more successful, strategies to meet the protective requirements identified.

Other stakeholders:

Aboriginal groups

Parks Canada's vision to support an expanded national historic sites system and promote cultural resource management is focused on partnership. A collective sense of responsibility and stewardship for the care and protection of resources is fundamental. Parks is particularly committed to the improved representation of Aboriginal history in partnerships with Aboriginal peoples. Consultations with a wide variety of Aboriginal groups in each region of the country is underway to ensure their support and participation in initiatives to commemorate their heritage, a priority of the National Historic Sites System Plan and the current government.

Sport Diving Clubs

The Underwater Archaeology Section of the FAO is no stranger to the collective approach. Last year marked the 30th anniversary of the formation of this internationally recognized group. With a solid research reputation, the past few years have seen increasing collaborative efforts. It started in 1995 to offer Nautical Archaeology Society (NAS) courses to interested and qualified groups to ensure the maintenance of archaeological standards with partnership arrangements. This education program developed in Great Britain is recognized internationally as the standard in underwater avocational training.

Recognizing the necessity of stakeholder participation, the group is involving more and more local volunteer sport divers in their work. Projects in Banff and Prince Edward Island National Parks have had great success, but the off-shoot of the work done on the French wreck *Corossol* in Sept-Îles, Quebec, probably best illustrates the results that partnerships with sport divers can render. Following this project in which local divers played an important role, other divers from the North Shore of Quebec informed Parks Canada of additional known wreck sites. One located between Baie Comeau and Sept Îles, at l'Anse aux Bouleaux, has turned out to be a significant find.

Due to unprecedented storm activity in the area in the past two years, the once unknown wreck was churned out of its 300 year resting place and was now subject to constant battering by the wave action in the bay it was located. Emergency site stabilization work and examination of initially found artifacts has lead to the eventual determination that this wreck is one of

the ships of Sir William Phips' failed expedition from the Colony of Massachusetts against Québec in 1690. Once primarily interested in salvage, the local sport divers formed an organization (Groupe de préservation des vestiges subaquatiques de Manicouagan) for the protection of submerged cultural resources in their area. They have actively and enthusiastically participated in the site work which commenced in the summer of 1995 and was expanded in 1996. Currently under negotiation is a unique collaboration of three levels of government (federal, provincial and municipal) and a local sport diving club focussed towards the protection and presentation of this important site and its artifacts.

Succession Planning

The Material Culture Research staff at FAO operates as a centre of expertise in the material culture of the historic period. This unit's work has traditionally supported internal operational requirements of Parks Canada's archaeological, curatorial and site interpretation programs.

Future priorities for this group will shift into two areas: publishing and training. Their work is already well known through publications such as: *Parks Canada Glass Glossary, Trade Ornament Usage Among the Native Peoples of Canada, The Wheat Pattern,* and *Lighting Devices in the National Reference Collection,* and specialized training courses offered through venues such as Council for Northeast Historical Archaeology (CNEHA) workshops. With downsizing and the anticipated increasing use of consultants and volunteers, it is even more important for the material culture researchers to pass on their specialized and unique knowledge.

To capitalize on existing research expertise FAO plans include material culture readers. These will be brief guides to dating, identifying and describing such diverse artifact groups as 19th-century glass tableware and domestic electrical artifacts. Also planned are larger, more detailed studies, such as a guide to 17th- to 20th-century table cutlery.

Potential partnerships with universities will be explored to assist in training students in material culture. While every province in Canada has one or more degree programs in archaeology, there are very limited opportunities to study historical archaeology. The collective unique knowledge embodied in the Material research group and the vast Park Canada collections can make significant contributions.

Conclusion

What has been reviewed are diverse approaches being pursued by the Federal Archaeology Office, Parks Canada, in a spectrum of archaeological matters to share federal leadership in a variety of important areas of legislation, management, knowledge, and protection. The one unknown which may significantly affect the manner in which these responsibilities are delivered is the creation of the Parks Canada Agency.

Parks Canada has developed a business plan approach to meet its future challenges. It is the mechanism to fulfill obligations to expand both the National Parks and National Historic Sites systems, while ensuring protection and presentation of current parks and sites, service to clients, and wise and efficient use of public funds. Conceptualized two years ago, the business plan approach has no doubt supported the government's decision to create a Parks Canada Agency within the Department, announced in the budget speech in February 1995. Not intended to either privatize or commercialize the national treasures, the Agency status will undoubtedly provide a greater degree of organizational, financial, and administrative autonomy, essential if the ambitious Business Plan goals are to be achieved. Despite the desire to be "nimble," Parks is fully committed to fulfilling its mandate to protect and present places which are significant examples of Canada's cultural and natural heritage. Time will tell, as the department prepares for the creation of the agency, how the impetus toward shared leadership in achieving this mandate will not only be maintained, but expanded.

Notes

1. Canada. Department of Canadian Heritage, *Archaeological Heritage Policy Framework,* Minister of Supply and Services Canada, 1990, Cat. No. Co22-93/1990, ISBN 0-662-57510-5.
2. *Statutes of Canada* 1992, Chapter 37, Bill C-13, Assented to 23rd June 1992.
3. Canadian Environmental Assessment Agency, *Reference Guide on Physical and Cultural Heritage Resources, April 1996,* Minister of Supply and Services Canada 1996, ISBN 0-662-24599-

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This paper was presented at the Canadian Archaeological Association conference, May 1996, Halifax, N.S.

Martin Magne, Kurtis Lesick, Peter D. Francis, Gwyn Langemann and Rod Heitzmann

Archaeology—A Crucial Role in Ecosystem Management

Clovis point and Pelican Lake point from 8,000 ft altitude in Banff National Park

Parks Canada is wresting with fundamental issues regarding management of National Parks ecosystems. We wish to discuss here four topics central to the ongoing debates, focussing on the role that archaeological research can play. The principal topics are:

- Natural regulation versus human manipulation of the environment;
- Factoring past human interactions with the environment in contemporary management practices;
- Understanding historical variability in the ecosystem; and
- Employing historical and archaeological research in a multi-disciplinary context to contribute to ecological integrity.

Background

Ecological management of National Parks can take two extremes: allowing "nature to take its course" with no active human management, or intervening constantly and deliberately to maintain a "slice in time." Within our National Parks system, we have examples approaching each of these extremes. In between them is a tremendous range of practices and philosophies; these derive from real management needs as well as political realities.

Mountain District ecosystem managers have proposed significant interventions to manage wildlife and vegetation. Employing background literature studies and computer generated models, key actions are being advanced as most feasible and of least public risk, for elk population reduction, carnivore enhancement, and vegetation renewal. Cultural information contributions to these studies and models require adequate consideration of the roles of Aboriginal peoples, of the limitations of the archaeological record, and keen awareness of the nature of paleo environmental knowledge.

There is for example, excellent anthropological evidence for Aboriginal burning in mountain environments of Alberta and British Columbia. This evidence is not voluminous but it is fairly extensive, ranging from the southern West Slopes of the Rockies to the northern East Slopes. The literature points to Aboriginal burning of many different kinds—fires to encourage certain fruiting bushes, to encourage ungulate forage, to drive animals for hunts, or accidental fire from camps. Any or all of these would account for the "mosaic" observed in times past, but direct evidence of Aboriginal fires is lacking. Vegetation managers are making great use of proxy data—changes in fire regimes as indicated by tree ring studies, macro-charcoal in pollen cores, and so forth. To date, however, very little or no direct consultation with local Aboriginal people has taken place about past burning practices. In addition, the 13,000 year-old pollen record is remarkably coarse and finer resolution is required to illuminate patterns or events at the 10 to 100 year level.

The faunal management hypothesis held by Kay, that Aboriginal people "overkilled" elk in the mountains and were responsible for the low ungulate population levels apparently witnessed by early explorers of the west, is a highly debatable one. It does appear the elk levels were low, but why did they not recover following the drastic decline of Aboriginal populations in the early historic period? Why does the archaeological record not show an "overkill horizon"? If Native people were killing elk in this manner, where are the bones? Did early European hunting, or the introduction of horses, significantly modify the environments employed by elk? The conclusions that have been reached to date are but one possible answer.

The question remains: what roles did Aboriginal peoples and early Europeans play in shaping the mountain ecosystem? Certainly, both groups were an integral part of it. But whether they had long-lasting, but small-scale effects, large-scale and long-term effects, or temporary, local effects, are all questions we only have opinions on at the present time.

Discussion

A key issue in Parks management is the mediation of human recreational use and impact with biodiversity and ecological integrity. With the

Elk management is a highly debated topic in the mountain parks.

growth of public utilization of Park resources the importance of addressing the inter-relationships of cultural and ecological systems will only increase. Archaeology and history are in a good position to situate human cultural systems within a more expansive enviro-ecological understanding. With such an understanding it is possible to make more informed management decisions with regard to public impacts within a National Park environment.

The priority of maintaining ecosystem integrity as outlined in the 1988 amendments to the *National Parks Act* necessitates a firm reckoning of the constitution of ecosystems. This has proven somewhat problematic in that it has been difficult to isolate the criteria for optimal conditions comprising an ecosystem. The environmental, climatological, vegetational and faunal elements all fluctuate throughout time within and across ecoregions. Further, it is becoming increasingly apparent that much of what is deemed natural landscape has been at least partially determined by past human activities. Hence the designation of any landscape as "virgin" and "natural" is both arbitrary and erroneous. Throughout time any one region has experienced many different configurations of ecological variables.

Ecosystem management becomes critical when any one species becomes too successful in its simplification of the landscape, especially to the detriment of other species. One position is that only because of biological diversity between and within species can an ecosystem adapt to environmental changes. With greater biodiversity comes an overall increase in adaptive potential and thus a larger range of environmental conditions can be endured. If one particular organism is unable to deal with change another species can fulfill its niche. Without diversity, in a simplified habitat characterized by the specialization of a few species, the failure of one species to adapt to fluctuating environmental conditions could bring about complete systemic collapse. Hence, as a management scheme, it is in the best interest to ensure that diversity is maintained and no one species is able to dominate the landscape.

This is the goal at present with regard to the contemporary human component in the mountain Parks. There is great concern about the sustainability of many forms of human impact upon natural habitats in the mountain Parks. Yet human participation in these ecosystems is probably well-engrained. It is apparent, for instance, that without episodic burns in montane and sub-alpine meadows intense colonization by one species often upsets the ecological balance. Aboriginal burning probably helped sustain the "patchwork mosaic" of vegetation in the montane regions. In this way, though the human role in ecosystem dynamics is understudied and not widely recognized, it is nonetheless central to ecosystem integrity. It must not be overlooked that the present ecological status of the National Parks has been influenced by at least four levels of human participation: prehistoric-aboriginal, historic fur trade and industry, tourism and recreation, and the impact of Parks Canada.

Ecosystem baselines are not "flat"—they fluctuate dynamically rather than being static. Archaeological and palynological information contribute a long-term perspective to these fluctuations, but are at the same time coarser than the contemporary environmental data. Establishment and use of baseline criteria for ecological integrity require very firm and defensible information on the relative stability, agents of change, and natural variability in the mountain ecosystem. Proper evaluation of the existing evidence requires team approaches by qualified professionals with full awareness of inherent biases in existing data and professional standards. The Kay studies were indeed extensive, but problematic as to elements of archaeological taphonomy and severe bias in consulting archaeology data. In addition, paleovegetation reconstruction based on pollen analyses have primarily looked at gross-scale time intervals associated with climatic change and have not focussed on detailed examination of the more recent (ca. 2000 year) past that would include both fine-scale climatic change and disturbance ecology.

Traditional environmental knowledge (TEK) of First Nations peoples with respect to the Canadian Rocky Mountains is thought to be considerable, although very little has been systematically gathered. TEK is only occasionally regarded as a potential management tool in the Mountain District, but is an accepted and useful component of land management in the Northwest Territories and Yukon. A study being completed at Waterton Lakes is the only comprehensive one ever undertaken in the Mountain District. The Waterton-Glacier Ethnoarchaeological Project by B.O.K. Reeves has resulted in a much improved picture of Blackfoot plant uses and interests there. Kootenay National Park's environmental history study proposes consultations with Elders concerning ungulate history in particular. The Stoney, Sarsi, Métis,

Beaver, Slave, and Cree people of western and northern Alberta also have very significant contributions to make to our knowledge of ecosystem processes in the mountain parks.

The contemporary anthropological and archaeological literature addresses many processes and concepts that have been developed to model and conceptualize ecosystems. Such concepts have often been extended to human population dynamics, including those of prehistoric, hunter-gatherer past. Some of the basic biological concepts to consider are:

- Keystone species;
- Predator/prey relationships;
- Prey switching;
- Edge effect;
- Optimal carrying capacity;
- Optimal foraging strategies;
- Effects of fire;
- Species diversity.

Some concepts applied specifically to human population dynamics include:

- Human subsistence strategies;
- Human adaptation;
- Environmental manipulation by use of fire and other techniques;
- Hunting strategies;
- Optimal foraging theory applied to hunter-gatherers;
- Aboriginal overkill;
- Post-Columbus epidemics and population decline;
- Post-Pleistocene extinctions. We need to consider all of these in a systematic and scientific manner.

What to do?

A thorough multi-disciplinary study is required by the body of scientific and historical disciplines that relate to population dynamics, biology, ecology, anthropology, and archaeology, to identify alternative models of human-environment dynamics within the larger Rocky Mountain ecosystem. A professional workshop has been held recently to frame the key management issues within an understandable perspective and to begin testing models with regards to a longer term perspective.

This workshop sought to reach agreement on what is "natural variation" and how this was represented in the past. It helped to delineate the bounds of our knowledge, to provide focus for work in areas where information is lacking. What we do about the variation we can agree upon, or how we respond to it, should be the subject of future discussion. Our objective is to have people who come at the issue from a historical perspective and an ecological perspective agree on the concept and research goals.

The Mountain District needs to develop a long-term multi-disciplinary research strategy, which will address the role of humans in the mountain ecosystem over time. This would involve

- working with other ecosystem researchers, historians and park managers to identify the research questions of most pressing common interest, and to identify our knowledge gaps;
- reviewing known archaeological site information to identify key sites with the potential to address such questions;
- carrying out site survey to identify new sites for time periods or environments of interest where there are no known sites;
- carrying out multidisciplinary excavations at selected sites;
- analysis of results focussing on changes or lack of changes in human-ecosystem interactions through time; and
- integration of results with other ecosystem specialist studies, and integration of results into natural and cultural resource management practices.

Just as ecologists have tended to view humans as "stressors" on ecosystems, archaeologists have been guilty of viewing ecosystems as "conditioners" of human adaptation. It's time we came together.

Wickiup, of unknown function, Jasper National Park.

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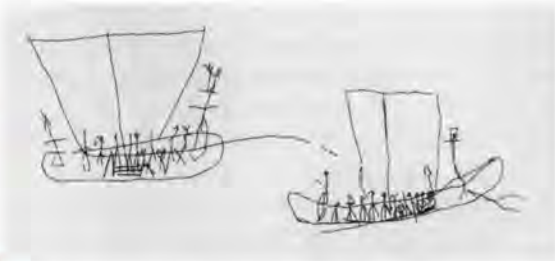
The Cultural Landscape of a National Park



Petroglyph showing two large canoes with sails at Peter Point, Kejimkujik.

In the spring of 1995, the Minister for Canadian Heritage, Michel Dupuy, passed a recommendation of the Historic Sites and Monuments Board of Canada (HSMBC) that "the cultural landscape of Kejimkujik National Park which attests to 4,000 years of Mi'kmaq[1] occupancy of this area, and which includes petroglyph sites, habitation sites, fishing sites, hunting territories, travel routes and burials is of national historic significance...."

Established in 1964, Kejimkujik National Park in southwestern Nova Scotia protects an area of mixed forest and inland lakes which nurtures rare plant and animal species such as the Water Pennywort and Blanding's Turtle (Drysdale, 1986). The Park also contains a unique combination of cultural resources reflecting the close connection between Mi'kmaq culture and the environment. From its beginnings, the Park has recognized the value of these cultural resources and has included interpretation of Mi'kmaq history in its public presentations.

Over fifty cultural sites are known, including four petroglyph sites, three major settlements, numerous small camps, stone eel weirs, portage routes, 19th-century family reserves and a 19th-century cemetery (Ferguson 1986). The lakes, rivers and forests have provided food, clothing, shelter, spiritual comfort and access to a broad network of travel routes connecting the Atlantic coast to the Bay of Fundy. Throughout the 19th and 20th centuries, they also provided economic support for a thriving guide business for hunting and fishing enthusiasts.

Workshop delegates Alex Michael, Grand Chief Syliboy, Pauline Lewis, Daniel Paul and Rob Ferguson examine the petroglyphs at Fairy Bay. Photo by R. Swain.

Declaration by the Minister of Canadian Heritage was the culmination of a two-year collaborative effort between the Mi'kmaq First Nation of Nova Scotia and Parks Canada employees. It is unique in the Canadian National Parks system in recognizing that a natural landscape of national significance is equally of value as a cultural landscape, and that the two are inextricably linked.

The initiative to recognize Aboriginal history at Kejimkujik as a National Historic Site originated with a review of the Systems Plan for National Historic Sites (NHS). The Systems Plan (1979-81) was a strategy approved in 1981 to expand the Parks network, recognizing the need to represent more completely the diversity and complexity of Canadian culture. The NHS Systems Plan Review, (1996), emphasized the need to improve the representation of Aboriginal peoples, women and cultural communities.

In Kejimkujik National Park, the lake shores contain some of the most significant galleries of Aboriginal art in Atlantic Canada at four separate petroglyph sites. The petroglyphs, many of them dating to the 19th century, are incised into soft slate, providing intricate details of everyday life: figures of men and women in traditional dress; canoes and sailing ships; porpoise and moose hunts; houses, churches and altars; hand and footprints; names and dates.

Mi'kmaq spokespersons have frequently expressed concerns for the protection of the Kejimkujik petroglyphs. During a national workshop on Aboriginal history, Dr. Peter Christmas of the Mi'kmaq Association for Cultural Studies (MACS) identified the petroglyphs as one of the important cultural resources of the Mi'kmaq First Nation. Chief Frank Meuse of Bear River First Nation stressed in two reports for Parks Canada the need for protection of Mi'kmaq cultural heritage in the park (Johnston 1993:ftn43; Sable 1992:2-8). These concerns led Parks Canada staff in the Atlantic Region to recommend the Kejimkujik petroglyph sites for commemoration by HSMBC. This recommendation required the support of the Mi'kmaq people and consultations were initiated.

Initial contact was made with the four Band Chiefs of southwest Nova Scotia, two Elders of the nearby Wildcat Reserve and Dr. Christmas of MACS. All agreed that commemoration of the petroglyphs was a positive step in recognizing the important role of the Mi'kmaq First Nation in our national heritage. A subsequent meeting, co-chaired by Dr. Christmas and myself, was convened in September 1993, bringing together Grand

This petroglyph group, incised into slate bedrock at George Lake, shows Mi'kmaq men and women in the traditional costume popular in the late 18th and 19th centuries. Photo by B. Molyneaux.

Chief Ben Syliboy and two Captains of the Mi'kmaq Grand Council, Chiefs and Band representatives, members of the Confederacy of Mainland Mi'kmaq, the Mi'kmaq Education Authority and MACS, as well as Parks Canada staff from the Park, regional office in Halifax and Ottawa headquarters.

Delegates visited the petroglyphs and stopped at the historic cemetery for a blessing from the Grand Chief. During the following discussions, Mi'kmaq participants redirected the focus beyond the petroglyph sites to a recognition of the Mi'kmaq relationship to the landscape as a whole. A committee of Mi'kmaq and Parks Canada representatives was struck to present the cultural landscape of Kejimkujik as a site for national commemoration.

The resulting report includes an account of the consultation process, the concerns raised during these consultations, and a synopsis of the continuous occupation record (Committee for the Kejimkujik Petroglyphs, 1984). Unresolved land claims, control of the story, recognition and preservation of Traditional Knowledge, protection of the cultural resources and respect for heritage resources were identified as concerns. A final draft was presented to the Nova Scotia Chiefs, and with their approval it was submitted to HSMBC in November 1994, and passed on for declaration by the Minister.

The establishment of a new National Historic Site requires an understanding of the commemorative intent and the commemorative integrity as outlined in the Cultural Resource Management Policy of Canadian Heritage (1994). As a first step, a full inventory of cultural resources is being prepared using a Geographical Information Systems mapping program. This will include all known cultural resources as well as land-use patterns identified from documented sources and recorded Traditional Knowledge. An update of cultural sites by an archaeological team of Mi'kmaq and non-Mi'kmaq researchers was delayed this season by local concerns over the disturbance of sites, and has been restricted to a re-examination of existing information. Steps have been taken to co-operate with a land claims initiative of the Nova Scotia Mi'kmaq, in an oral history program. Future developments for presentation of the Aboriginal heritage in Kejimkujik will proceed with direction from the Mi'kmaq community.

The concept of the "cultural landscape" in so-called natural environments is gaining currency in our vision of the land around us (see, for example, Zacharias 1994). Kejimkujik National Park/National Historic Site allows us to celebrate this wonderful union while honouring the outstanding contribution of the Mi'kmaq people to our nation's heritage.

Note

1 The spelling of *Mi'kmaq* uses the Francis/Smith orthography developed by Bernard Francis and Douglas Smith and widely accepted throughout Nova Scotia (Francis 1988:239)

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Abandoning the Cult of the Artifact

Cultural Landscape Management on the Chilkoot Trail

Situated at the northern end of the Alaska panhandle and straddling the international border, the Chilkoot Trail has been one of the most important routes into the northwestern interior of the continent. A Tlingit trade route, the Trail became internationally famous at the turn of the century, as it witnessed the passage of thousands of gold seekers into the Yukon during the last great North American gold rush.

The Canadian portion of the Trail, 26.5 km long, runs from the Chilkoot Pass, at the Alaskan border, to Lake Bennett in northern British Columbia. The Trail offers immense variety and density in its cultural resources. Scattered along the trail are numerous remains associated with the gold-rush such as tent and structural platforms, refuse middens, boat remains, tram carts, quays and bridge footings—many of which are concentrated at 12 major areas or "historic nodes." Ten nodes are located in the upper sections of the trail and correspond to favoured stopovers where gold-rush "stampeders" temporarily cached supplies before relaying them farther along the trail. In addition there were two semi-permanent encampments where stampeders built boats for the continuation of their journey to the goldfields. The largest of the two sites was Bennett City, on Lake Bennett, at the junction of the Chilkoot and White Pass trails.

The general terrain around Bennett is rolling and rugged. The site's core was constructed on a hillside which slopes down to the water's edge. Unstable sandy soil and thin vegetation have contributed to erosion and the creation of sand dunes. These conditions led the Stampeders to build terraces supported by retaining walls in order to create or maximize space. Lake Bennett's population, which at its peak contained upwards of 20,000 gold seekers and entrepreneurs had a significant impact on the environment. Evidence of their efforts—scalloping out the hill side and extending platforms out over the water for their homes and businesses, and constructing roads, docks, and a bridge—still exists. It is the accumulation of these remains which speak of the frantic days of the gold rush. It requires some imagination to understand this when viewing the terrain and vegetation.

Interest in the Chilkoot Trail, re-kindled in the 1960s, led to a steady growing volume of recreational hikers. The Chilkoot Trail may be the only national historic site in Canada where recreational activities such as backpacking and camping in and around historic features is encouraged.

Most visitors do not intentionally damage the fragile features, but heavy foot traffic and uncontrolled wandering, in concert with natural processes, can cause severe damage. Throughout Bennett townsite, new paths have been cut into steep slopes and banks as people take shortcuts to the historic trails and main road, move from terrace to terrace, or access the lakeshore. Once such paths are created, they gradually widen with use, vegetation dies and erosion begins.

The historic Bennett City townsite at the convergence of the Chilkoot and White Pass trails. Illustration by D. Elrick.

Indiscriminate camping has also been responsible for much damage. Campers securing their tents during windy conditions or building fire rings have often used cobbles from retaining walls and other historic features. This has led to the walls' gradual collapse. As the walls collapse, the terraces slump, destroying the historic landscape.

In response, in 1971 Parks Canada began to provide visitor services and institute visitor safety measures, trail maintenance, and some modest on-site interpretation. As anticipation grew during the 1980s that the Chilkoot would acquire full national historic site status, an inventory of the cultural resources was begun in preparation for site development associated with the 1996 gold rush centennial. However, establishing an artifact inventory for an area the size of the Chilkoot Trail was a monumental task involving the handling, and displacement of a multitude of fragile artifacts, a mountain of paper, and an immense amount of time. It became apparent that for the visitor to experience their cultural heritage through an outdoor museum concept, and to contribute to site developmental needs, a change in emphasis, away from the artifact, was necessary.

The public continues to perceive archaeology as primarily about site-specific excavation and the recovery of artifacts. This is often spoken about as the unearthing of historic riches. However, the Chilkoot Trail, with most of its remains situated on the surface provides the opportunity to show how or why archaeological features could or should be saved for future generations to enjoy in-situ. Even the most decayed and scarcely traceable of remains may reveal something of the past and of ourselves. The slightest terrain modification, vegetational differences or soil discoloration can tell a story. Archaeology has a special role to play in awakening a sense of wonder for the process of decay, or transformation of a living system. It can contribute broadening awareness of the diversity and cultural depth which exists within our environmental surroundings.

As a result Parks Canada chose to view the Bennett townsite as a landscape feature, a product of the interplay of humans and nature, since present-day recreational use continues the historic interaction between people and the land. The plan was to develop the site as an outdoor museum in a manner that would take into account visitors' needs without unduly compromising the historic site. Observation of the long-term destructive forces at Bennett indicated that guiding the use of the site was necessary to accommodate historic preservation and modern recreational activities.

Site development which focussed on guiding foot traffic, reduced erosive effects. This was accomplished by maintaining the stabilizing vegetation, which helps hold the loose, sandy soil in place. Directing individuals to the historic main road through one access trail reduced some of the problems created by hikers terrace-hopping to reach their preferred camp location. In addition replacing loosened or displaced cobbles in some of the major retaining walls increased overall site stability and protected significant cultural features which would have been impacted by erosion as the retaining walls collapsed.

Bennett City in 1898.

Bennett City in 1991. There is a lack of vegetation in the historic photo compared to the more recent one.

Eroding paths show the destructiveness of uncontrolled foot traffic. Recent construction of a staircase has directed foot traffic on the slope alleviating this problem.

Areas selected for camping were limited to those areas which could be accessed by a major historic trail and situated in relatively broad flat areas just off the main historic road. It was also recommended that placing both interpretive and directional signs in a manner that would draw people directly down the slope, using the historic trail, and to the historic main road would mitigate path braiding and erosion. It was also suggested that the construction of public facilities and the formalizing of camping at locations immediately adjacent to the historic main road would eliminate much of the terrace hopping. A public shelter constructed on an old building terrace and tucked up against the terrace wall would act as a barricade to pedestrian traffic. The location of the building's entrance and exit would influence people's circulation on the site. Indicating historic water access points would reduce trampling of foundation features near the water's edge. Such steps were means of replicating present site-use patterns to those of historic Bennett. Thus site development became a tool of cultural resource management by minimizing landscape stress.

The goals are to maintain the overall landscape by using the site development to promote present-day site use to be comparable to traditional historic use. In order to measure the effectiveness of these recommendations, a regular monitoring program was required to record the form which site changes were taking and to measure the effectiveness of the various proposals on maintaining site/people interactions.

The purpose of the monitoring program was to identify areas of site degradation and to measure the effectiveness of the various proposals in stopping or reversing degradation. Observations in 1995 showed that reconstructed retaining walls had assisted in stabilising the hillside. Camping was prohibited on the upper terraces which has reduced the degree to which the edges have crumbled as well as reducing the climbing which had occurred up and down the slopes. Placing staircases at the locations chosen for direct access to the historic main road focussed foot traffic, controlling site circulation and lessening erosion. Paths which were previously used indiscriminately were closed off using vegetation replanting or simply blocked with deadfall. In addition an interpretive program was being developed which was to assist in providing messages to site visitors.

Although shrinking funding has limited a number of proposals such as the warm-up shelter and reduced the level of visitor education, many of the proposals have had a positive effect on the site. The movement away from an artifact focus to a more generalized landscape management approach, and a shift in philosophy spurred by the CRM policy has allowed site managers to work towards maintaining the cultural/natural relationships at the site. No longer was there the perceived need to either salvage or avoid archaeological sites if they were in the way of development, or to reconstruct if they were to be interpreted.

Cobbles loosened from a historic retaining wall because of visitor traffic. A combination of signs, staircase construction, and cobble replacement have contributed to site stabilisation. Photo by K. Lunn.

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Pierre Beaudet

Archaeological Monitoring

Butchery or Surgery?

I would like to quote an excerpt from a 1996 article printed in a Canadian newspaper, *The Globe and Mail:*

> Rome—Once again, digging up the streets to modernize the capital has rewarded Romans with a slice of their past. This time, the prize is a cluster of Renaissance-era Jewish temples thought destroyed in a fire.
>
> For a couple of years, cobblestone streets in the neighbourhood known as the Old Ghetto have been ripped up so Rome's utility companies could lay down new lines....
>
> All traces of the synagogues had been believed destroyed by a fire in 1893.

The discovery of temple ruins, whether Jewish, Greek or Roman, can be considered a *definitely* remote possibility in the trenches of our North American cities, parks, forests and fields. Almost as remote, some Quebec City archaeologists would say, as finding the grave of Samuel de Champlain, the city's founder, under Buade Street in Old Town. There, rumour as it, it waits to be discovered despite extensive roadwork and other infrastructure disturbances. However these are not reasons to give up or curtail the practice of archaeological monitoring wherever warranted.

Opinions are sharply divided on the practice of monitoring excavations conducted for non-archaeological objectives. Often taken for granted in our historic urban and rural districts, it has recently come under somewhat vigorous attack by some public and private sector advocates, particularly those concerned with the reduction of costs. For some, "archaeological monitoring is bunk and useless! It may ease some people's conscience, but it's only supervised destruction with no benefits for knowledge." For others, to the contrary, it is viewed as "an excellent means of investigation with the least expenditure possible!"

Butchery or surgery—what is it really?

A purely theoretical examination of monitoring does not give a satisfactory answer to this question, particularly in light of its variable application in a wide range of contexts. Accordingly, I will try to provide an answer regarding the merit of monitoring by examining its use within an organization I know well, Parks Canada. Actual examples encountered by staff archaeologists and consultants will help illustrate what I believe is a practice that, when used judiciously, can serve well both research objectives and cultural resource protection.

Parks Canada operates a large network of National Parks and National Historic Sites that, in principle, enjoy a high level of cultural and ecological protection. It also provides advice and professional guidance to other federal land managers—departments and agencies—responsible for sites where archaeological resources are often much more vulnerable.

For Parks Canada, in the context I am familiar with, monitoring has often proved to be a useful way of acquiring information rather than a just difficult and frustrating experience. But it takes a lot more than just passive observation to make it into worthwhile tool.

Yes to monitoring, but not just monitoring

Monitoring of excavations makes up a large part of an archaeologist's field time even within the protected confines of Parks Canada's national parks and historic sites. It is carried out either in the context of well-planned major or minor operations or as a result of housekeeping activities and emergencies.

To choose monitoring as a means of mitigation is a difficult choice and requires careful con-

Monitoring excavations at the St. John's Bastion, Quebec City. Photo by Robert Gauvin.

Monitoring excavations at the St. John's Bastion, Quebec City. Photo by Robert Gauvin.

sideration for its results can be either harmful or positive, not only for the cultural resources concerned, but for our ability to make other future judicious decisions.

Choosing to monitor everything, indiscriminately, can be the worst decision of all, for in the end, we may no longer have the credibility required for our recommendations to be taken into consideration, either by our professional colleagues of other disciplines and field personnel involved in the projects or by those who foot the bill, from the land manager to the public. Thus, it is our responsibility to determine carefully for each case what means of mitigation—if any—are justified by a specific site and context.

Recommendations must take several factors into account: our knowledge of a site from previously conducted field work or documentary sources, the nature and relative value of the putative resources, and the type of work being subjected to mitigation. Their interplay should largely determine the usefulness of monitoring as a mitigative response, either as a stand alone measure or as part of a wider archaeological strategy.

Each monitoring activity which does go ahead, whether major or minor, planned or urgent, must be viewed by its practitioners as an opportunity to discover or, at least, to further document the archaeological identity of a site. The smallest of these may often serve only as "archaeopsies" or soundings, helpful in the diagnosis of a site for future reference, while large-scale ones may well provide a wider picture and a wealth of data which would otherwise have been lost. Either, however, may lead to situations where more meticulous archaeological work is required, including salvage excavations.

Monitoring is not a panacea that can be applied to all sites in all circumstances. At Parks Canada, it is applied, in isolation or by itself, in certain emergency situations where excavation work is on a very small scale and the potential is relatively limited, or for very large construction sites where we are mainly concerned with recording architectural remains or where archaeological field work alone is not cost effective or a feasible alternative.

In most cases, however, monitoring is only one step in a broader research design, a process which may include establishing a site's potential and resource inventory, selective excavation, monitoring, data analysis and the publication of results.

The Fortifications of Québec

The Fortifications of Québec, through a series of major stabilization projects, has repeatedly provided excellent examples of the use of monitoring as a key element in our overall archaeological strategy. Indeed, with their extensive earthworks set against massive masonry walls—often several metres in height—the fortifications lend themselves well only to very selective manual archaeological investigation. Access to much of the archaeological strata and hence data relies, in great part, on the observation of excavations conducted in the course of the stabilization work itself. Thus, following the selective investigation of particularly rich or fragile sectors, archaeologists have spent weeks and often months watching the swaying motion of power shovels, examined the ill-defined sides and base of trenches, and recorded thousands of scraps of information relating to the anatomy and evolving function of entire defensive works. Previous defence alignments, buttresses, cannon embrasures and, in more than one instance, burial places have all been discovered or unearthed through careful and attentive monitoring.

Let us examine more closely a specific sector of the fortifications known as St John's Bastion. For nearly three years, one of our colleagues, Robert Gauvin, braved its heights and depths, the rain and the cold, to record a host of observations. When first undertaken, merits of this lengthy monitoring project could well have been questioned for two somewhat similar works, the St Louis and Ursulines bastions, had already been examined, and the richest sectors of the site itself carefully excavated. However, despite evident kinship, no two defensive works of the city's western front are the same in their history, function and physical characteristics. These differences and some notable similarities now form a quasi-anatomical portrait of a complex structure whose configuration evolved considerably through time (Gauvin, 1993).

Looking back, we can definitely say that the monitoring was worthwhile. Apart from the data regarding the site itself, we also gained insight concerning construction practices that extend well beyond the works in question. For example, what

at first appeared to be insignificant anomalies on the interior face of the bastion's walls revealed themselves to be, through cross-site analysis of structural recordings, convincing evidence of the fleeting existence of temporary passageways designed to facilitate the carting of materials and the razing of the walls. For those with an interest in fortifications, an article on this subject will appear in an upcoming issue of the Council for Northeast Historical Archaeology journal.

The importance of careful monitoring of non-archaeological excavations could also be exemplified through discussion of several other recent projects conducted by Parks Canada at Grosse-Île-and-Memorial-to-the-Irish NHS (disinfection building and new utility services), along the Lachine canal and elsewhere.

The eye of a good observer and the hand of a quick writer—for monitoring and recording—are thus inseparable partners in the process in question. So is peripheral vision.

Peripheral Vision

The organizer of a recent workshop on monitoring, in a list of questions prepared for speakers, brought out the concerns of some people regarding the value of monitoring for research, as it is often a narrowly focussed activity whose direction is dictated more by the developer than the archaeologist (Conference of the Association des Archéologues du Québec, April 26-28, 1996). Such concerns are justified and constitute a major challenge that is often difficult to meet. There is, indeed, a great risk that data collected through scatter-shot monitoring will be consigned straight to oblivion. Disconnected data, technical reports, multiple clients and limited circulation are all serious obstacles or deterrents for those interested in making sense of this research.

Accordingly, archaeologists responsible for monitoring must possess a very broad peripheral vision or otherwise all sense of context may be lost. One must look beyond the trenches! A difficult task in the controlled archaeological investigations, this process can become a nightmare in the difficult and urgent conditions of most monitoring situations.

Data Linkage

Peripheral vision, even supported by a minimum of prior documentation, is not sufficient. We need the ability to combine data from successive and neighbouring work sites. This requires the pooling of data and records to provide an overview. At Parks Canada and in some large municipalities such as Quebec City and Montréal, we are fortunate in that we can keep composite and updated maps of remains for almost every site, so that even the smallest discoveries can potentially be integrated. But overall, public repositories of archaeological documentation appear to have difficulty in even keeping abreast of basic collecting and filing, let alone the establishment of basic linkage mechanisms or databases.

A Capacity to Intervene

In addition to developing effective peripheral vision and linkage mechanisms, another major ingredient must be present to make monitoring an acceptable data collection tool for research purposes. That is the possibility, when required, to conduct appropriate salvage excavations despite the disruptions involved in the developer's schedule. This concession, often difficult to negotiate even within the context of Parks Canada, is one that often makes all the difference between the destruction of a site and its preservation. Legislation and regulations alone are not sufficient for effective intervention. Awareness and good will on the promoters part as well as persuasive archaeologists are also required!

The work carried out at Cap Tourmente, which is described in a new work published in French by Les Éditions du Septentrion in co-operation with Parks Canada and the Canadian Wildlife Service (Guimont 1996), is one instance where monitoring and digging followed each other as in a relay race, putting the runners to the test throughout the process. The result was the discovery, among other remains, of fragile yet diagnostic components of Samuel de Champlain's 17th-century agricultural establishment. The increased awareness by management

The temporary vaulted passageways observed through monitoring at the St. John's Bastion, Quebec City. Photo by Robert Gauvin.

and the public concerning the reserve's significant cultural heritage resources was also a most important outcome of this relay project.

Work carried out at the site of the wheelwright's shop at the Forges du Saint-Maurice NHS during repairs to a waterway is another excellent example of the interaction between monitoring and other forms of archaeological mitigation (Drouin 1995). In this case the sequence was: monitoring of trenching, discovery of remains, testing, rescue excavation and a change of plans by which the further disturbance of archaeological resources could be avoided. This quick succession of events, with monitoring at its source, thus served to increase our knowledge of the site and to ensure the conservation of significant archaeological remains directly tied to the object of commemoration of the site.

Conclusion

I would like to express the view that monitoring has proven to be an important tool in the practice of archaeology, one which deserves to be used whenever justified. When carried out under favourable conditions by competent practitioners, monitoring can serve both as the front-line in the protection and recording of our buried heritage, and with the right ingredients, as a rich documentary source for the study of our past.

Summary

Archaeological monitoring is bunk and useless! It may ease some people's consciences, but it is only supervised destruction.... Archaeological monitoring, what an excellent way to investigate a site without having to pay too much! Butchery for some, surgery for others—let's put things in perspective.

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NPS Archeology Program

In the U.S., the National Park Service carries out the archeological responsibilities that Parks Canada has taken on for national parks and federal agencies in Canada. Since the beginning of the 20th century, when the Antiquities Act that protected archeological sites on public lands became law and began to influence public policy, the NPS has been relied upon as a source of expertise and knowledge for public archeology in the U.S. These government-wide archeology and historic preservation responsibilities were expanded in 1935 by the Historic Sites Act and again later by the National Historic Preservation Act, the Archaeological Resource Protection Act, the Abandoned Shipwreck Act, and the Native American Graves Protection and Repatriation Act.

At one time, NPS archeologists provided professional and technical support for all agencies. However, since the 1970s, other public agencies, in particular land management agencies, have built professional staffs in archeology. These agencies now undertake their own archeological activities.

The NPS archeology program provides for the identification, evaluation, interpretation, protection, and preservation of archeological resources in national park units. We also carry out the leadership and coordination of federal archeology programs assigned to the Secretary of the Interior by several United States statutes. The coordination and leadership of federal archeology by the NPS is exercised through regulations, guidance, and cooperative activities with other federal agencies on topics of special importance. Current examples of such topics are: archeological collections management, public outreach, the protection of archeological resources, and providing appropriate access to archeological information and records.

We hope to continue to share program information and technical expertise with our partners in Canada.

—Francis P. McManamon
Chief, Archeology and Ethnography Program
and Departmental Consulting Archeologist
National Park Service

Helen Dunlop and Suzanne Plousos

The Threatened Archaeological Collections Project

Wellington boot excavated from a military latrine at Fort Wellington, Prescott, Ontario.

In 1990, the *Threatened Archaeological Collections Project* (TAC) began as a national initiative recommended by the Heads of Archaeology within the Canadian Parks Service (now Parks Canada). The project was designed to meet our preservation mandate and was further inspired by an evolving awareness of Cultural Resource Management principles. In Ontario Region, the project matured in response to expanded consciousness of CRM philosophy and altered the course in reaction to changing political climates.

Initial work in 1991 determined the scale of national collection problems and made recommendations for improved storage, conservation and conversion of handwritten inventories to electronic systems. During this preliminary stage, some explosives and hazardous materials were encountered in Parks Canada collections. In Ontario, removal of unstable black powder armaments was incorporated into project objectives the following year. An assemblage from Fort Wellington, a 19th-century British military site, assumed priority not only because of black powder concerns, but also due to large amounts of wet organic materials requiring immediate conservation.

The movement within North American cultural institutions to address Aboriginal concerns in the management of archaeological collections, influenced the project in 1992. Work plans were altered to focus on collections with Native human remains in anticipation of re-interment by descendant groups. Assemblages with significant Native components were also emphasized to prepare material of interest to Aboriginal communities in presenting their history and culture.

Visible results of the TAC project occurred in 1993 when the collection was moved to a warehouse with a controlled environment, expanded layout space and increased storage capacity. The facility was also designed to house curatorial collections and a conservation laboratory. That same year, work on archival storage of archaeological records was well underway. But, in the following year, the effects of dwindling fiscal resources were felt within government agencies. Overall government restructuring resulted in shifting the old Canadian Parks Service from the Department of Environment to the new Department of Canadian Heritage. In Ontario Region, archaeology as a distinct section ceased to exist and was incorporated into a multidisciplinary CRM section. Archaeological and curatorial collections staff was amalgamated, and Ontario region and national conservation labs were consolidated in Ottawa. All this had significant impact on the TAC project.

With impending staff reductions and smaller budgets, could continued expenditure on collections be justified? Yes, preservation of cultural resources is integral to Park Canada's mandate. Although short-range funding was reduced, commitment to the project was spread over a longer time period. Despite fewer resources, a CRM approach meant strategic management of collections, not just archival storage of the by-products of archaeological research activities. Site managers, interpretive staff, curators and historians needed to know the value of these resources. Promoting interpretive potential, establishing research and conservation priorities, and improving accessibility became paramount. Collections had to be processed and organized into meaningful tools applied to build a stronger appreciation of Canadian cultural heritage. Artifacts had to be assessed for their historic value and/or associations with commemorated activities, events and/or personages and for their potential to develop new themes, such as cultural landscapes, women's history and ethnicity. The publication of *Guidelines for the Management of Archaeological Resources in the Canadian Park Service* in 1993 was timely. It provided preliminary criteria for evaluating archaeological resources, dividing them into categories of level 1, 2 and "other." Level 1 resources were those directly related to the commemorative intent as designated by the Historic Sites and Monuments Board of Canada (HSMBC). These would receive highest priority for preservation and presentation activities. Level 2 resources were defined as having historic value, but were not directly related to the commemorative intent of a national historic site, or were from sites that had not yet been reviewed by the HSMBC. Preliminary

Cornwall collections facility showing the archaeological project layout areas.

criteria for assessing level 2 resources considered archaeological, historical, and material culture contexts. "Other" resources were not deemed to have historical value and would not be managed under CRM policies.

These evaluation criteria had to be applied to a variety of site assemblages from National Parks (NP), National Historic Sites (NHS), and Canals. Ontario sites range from Native archaic to contact period burials, encampments, villages, etc.; late 18th-century fur trade posts; 19th-century British defensive works; canal engineering structures and buildings; logging and fishing camps; Victorian domestic houses, and Prime Ministers' residences. Some assemblages were collected during surveys of large areas, some from salvage monitoring, others were from intensive investigations. Collections sometimes represented single components but were more often from sites with long-term occupations and multi-component features pre and/or post dating the commemorated period. Within these diverse collections were level 1 and level 2 resources: artifacts provocative of the lives of past inhabitants. However, assemblages also contained redundant piles of rusty nails and construction materials, faunal remains, ecofacts, and soil samples many from poor or unknown archaeological contexts. Maintaining and archiving such artifacts was questioned and the impetus for de-accessioning and "right sizing" the collection arose. Thorough documentation, correlating archaeological context to historical phases was required to establish resource level prior to conserving, sampling, and/or de-accessioning.

Three pilot projects addressing evaluation were launched in 1994. The first was Woodside NHS, the boyhood home of William Lyon Mackenzie King, Canada's 10th Prime Minister. A report describing presentation and research potential of the material culture by historical phases was prepared for Woodside. Artifacts associated with the commemorated period were highlighted and shown to have significant influence on King's growth within the material world of Victorian family life. The following year, this report was revised to incorporate ongoing site resource evaluations by the Woodside cultural resource management committee. Resource levels were assigned to the archaeological contexts correlated to historical phases and "other" material was identified for de-assessioning. Artifacts were sent for conservation and a resource collection of level 1 material was initiated for site use.

The second project examined a Laurel burial mound assemblage, ca. AD. 950, associated with Manitou Mounds NHS. Manitou Mounds is a large, significant habitation and ceremonial centre in continuous use from the Archaic to Historic Ojibwa periods. Management of the site involved a partnership between Parks Canada, the Province of Ontario and the Rainy River First Nations Band. Through negotiations, arrangements were made for analysis of the human remains by a MA student at Lakehead University. With Band consent, a representative sample of artifacts, found within the mound, was reproduced for a resource collection. All burial material was re-interred at the site in June 1995 during a ceremony conducted by the Band. The ongoing analytical report describes the material associated with the mound fill and highlights its relevance to the themes and objectives of the NHS.

The third pilot project dealt with assemblages from Pukaskwa NP, excavated or collected during surveys of petroform sites, Blackduck and contact period campsites and historic logging, fishing and trapping sites. A preliminary report correlates the material to historic phases in the Lake Superior Basin and shows the interpretive poten-

Future Prime Minister, "Willy" King (right) grew up at Woodside in a close family environment rich in material expression.

tial of artifacts in demonstrating human adaptation to a changing natural and cultural environment.

In January 1996, in response to internal reorganization and implementation of business practices within government, a business case was prepared for the TAC project. The case provided an option analysis, but highlighted the importance of collection evaluation for effective resource management. The document accentuated interaction between TAC staff and site resource managers. Input into artifact evaluation, report format, and development of site resource collections was encouraged and presentation of results was emphasized.

Fort George, commemorated for its role in the War of 1812, was selected from the regional business plan as an ideal site for collection applications. Upcoming displays were scheduled and upgrades to furnishing plans anticipated. In addition, funding from Parks Canada Headquarters provided an opportunity to consolidate collections from recent archaeological investigations with Fort George material excavated prior to the establishment of Ontario Region. The combined assemblages have greater potential to enhance such themes as: British military presence in the Niagara Peninsula, American occupation of the fort, and Aboriginal involvement in the war. Artifacts may also reflect the activities of women and children within the military community.

Our future aspirations are to continue to expand awareness of the collection as a significant cultural resource and to improve technological applications. In responding to changing issues, the TAC project has remained current and continues to receive support. Indeed, the recent Parks Canada focus on revenue generation is gradually increasing use of artifacts as prototypes for heritage products. Site recognition and use of material culture research to augment presentation programs and develop educational products will remain a major objective. Finally, concern for outmoded and incompatible databases that inhibit collection accessibility and management must be addressed. Upgrading computer systems to meet new technological advances will improve efficiencies and open collections to new and broader audiences: audiences who are intrigued by the meaning and significance of the material realm in understanding the past and in enriching the future.

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Jennifer F.A. Hamilton

Preserving Archaeological Collections for the Future

The importance of archaeological collections and their associated records to research and the interpretation of the past is well known and documented. These collections represent the total of our physical evidence of human activity at a site, they are non-renewable and thus, the need to ensure their protection is essential for the education of present and future generations.

Since 1991, archaeology staff, Prairie and Northwest Territories Region, Department of Canadian Heritage, Winnipeg have conducted a program of *Threatened Collections Projects* to assess the condition of the artifacts and to upgrade storage conditions to contemporary collections management standards for long-term storage and preservation. This initiative was driven from a larger national study which identified that archaeological excavations conducted by Parks Canada have produced site collections totalling more than 25 million specimens. Of these, it was estimated that less than 1/2 of 1% have been identified for conservation treatment. However, the proportion of a collection which usually requires conservation treatment should be closer to 5%-8% of the collection. This discrepancy was recognized, as was the fact that many of the site collections are over 25 years old and need improvements to their storage and packaging in order to arrest or prevent accelerated deterioration and loss of crucial information. Furthermore, Parks Canada's Cultural Resource Management Policy and the Archaeological Collections Management Directive indicate that artifacts held by Parks Canada and deemed necessary to maintain the integrity of the assemblage must be accorded appropriate collections management and conservation treatments to ensure their continued survival. This study resulted in launching a multi-year project to review all the backlog archaeological collections to address the threats affecting their long-term preservation.

To date, through the Threatened Collections Projects, 50% of the Prairie and Northwest

Territories Region's, approximately 2 million archaeological specimens recovered over the past 20 or 30 years have been reviewed and upgraded to collections management standards. This has been accomplished at a cost of $750,000. Included in this cost are the resources used to create a site specific reference collection of artifacts which represent the themes or commemorative integrity statements identified for National Historic Sites or Parks.

Mobile Shelving at Professional and Technical Services in Winnipeg houses the bulk of the archaeological artifact collection for Parks Canada's Prairie and Northwest Territories Region.

Typically and of no surprise, the archaeological collections comprise a variety of materials including ceramics, glass, metal of various kinds (ferrous, brass, lead etc.), organic materials like wood, leather, bone, and inorganic materials like stone, brick, plastic. These collections have received a wide variety of processing treatments from being cleaned, sorted by material and inventoried by function and provenience, to having received no cleaning, no sorting or no inventory processing. Although the collections were stored in adequate boxes and under proper storage conditions, many of the artifacts were in paper bags and packed so that metal rimmed tags, tape and other unstable materials were in direct contact with the artifacts, contrary to modern conservation practices.

To address the improper storage conditions, the artifact collections received the following mitigation actions:

- All artifacts were repackaged in plastic bags, ensuring that any unstable packaging materials were not attached to or in direct contact with the artifact;
- Metal rimmed tags, tape and other unstable materials which have been used in direct contact with the artifacts were removed;
- Dangerous artifacts such as live ammunition or artifacts constructed using dangerous materials (e.g. asbestos) were properly documented and disposed of or rendered safe;
- Artifacts which were beyond the point of salvage (Surplus Dead Specimens-SDS) were documented where possible and disposed of in an appropriate manner;
- The condition of the artifacts were assessed and those requiring conservation treatment were identified for future treatment.
- Artifacts destined for regular storage were sorted and boxed by provenience and by material type so that they can be stored in proper environmentally controlled locations, for ease of future monitoring and for management of the collection.

The artifacts were then placed in one of six environmentally controlled storage locations within the Parks Canada archaeology laboratory facility. This placement was based on the artifact's material type, state of preservation and interpretive or reference status. These storage locations include:

- Mobile Shelving—This area stores the bulk of the collection in double-walled cardboard boxes with lids. The main material types stored on these shelves are glass, ceramic, metal and fauna.
- Oversize Shelves—Located in the general mobile shelving area, larger artifacts are stored on fixed shelving. These are artifacts too large to fit in our standard storage boxes and therefore will not fit on the mobile shelves.
- Humidity Room—Housed here are primarily organic materials such as textiles, leather and wood at a controlled temperature of 68°F and relative humidity of 52%.
- Freezers—We have two chest freezers and an upright freezer to temporarily store organic material recovered from wet sites which await conservation treatment or analysis. Permanently stored here are rubber artifacts such as rubber boots.
- Dangerous goods cabinet—For the temporary storage location of dangerous goods prior to either documentation and disposal or a process to render them safe.
- Reference Collection Cabinets—Artifacts selected for a site-specific reference collection are stored in these drawered cabinets.

As well as upgrading the storage of the artifacts, the computer database for recording and managing artifact information was also upgraded.

Artifacts selected for a site-specific reference collection are placed in drawered cabinets for greater accessibility.

Reference collections artifacts received protective mounts for storage in drawered cabinets.

Archaeology staff use the computer system, DOSSIER driven by Progress software. A portion of this upgrade included adding to the database a number of information "tools" for managing the collection. These include, an "assessment year" code indicating the year the artifact was assessed; a "threat" code which reflects the level of deterioration and priority for conservation treatment (i.e. Surplus Dead Specimens, Existing, Imminent, Anticipated, Stable, Conserved); a "location" code which indicates the storage location; and an "evaluation" code which is based on the commemorative integrity statement developed for the Site or Park which indicates whether or not the artifact is of national significance. This information allows for easy and accurate tracking, at any given time, of the significance, condition and location of an artifact.

In addition to improving storage conditions, some artifacts are selected for a site-specific reference collection. This collection includes examples of the different artifact types recovered from a particular site. These artifacts tend to be those which are complete, but more importantly, reflect the activities and features of the site and are representative of the themes and commemorative integrity statement identified for a specific site. Artifacts selected for this special collection receive conservation treatments ranging from *preventative* such as protective mounts for storage to *intervention* such as electrolysis. These artifacts were either placed in the cue for conservation treatment or if they were already conserved, they were placed in storage cabinets to allow monitoring for deterioration and greater accessibility for reference and presentation requirements.

The site specific reference collections, which to date comprise some 10,000 artifacts, not only allow easy access to artifacts but also serves as a marketing tool to promote the collection and increase the potential for research. The reference collection limits duplication in the conservation of the same type of artifact and includes within it comparative type collections available for specific artifact studies.

Initiatives such as the Threatened Collections Project make the best use of scarce resources by reviewing the collections according to a set of priorities and selecting artifacts most worthy of conservation treatment. Furthermore, by applying the principles of collections management to each and every artifact, the protection and preservation of the physical integrity of these artifacts and associated records has greater success. The maintenance of the integrity of the information these collections embody is accomplished and, finally, it ensures access to artifacts and information for interpretation and research.

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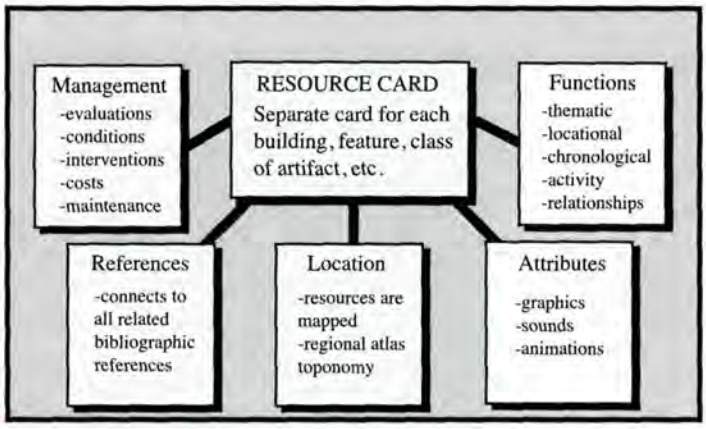
Gary Adams

A New Tool for Cultural Resource Management



Some tools available for a specific resource.

In 1995, a new interactive management tool for cultural resources was delivered to the Manitoba North National Historic Sites. The delivery of that tool from the regional archaeologists was the culmination of a long process of interaction between site operational staff and regional experts all of whom had a single objective—to more effectively protect and present the cultural resources of a National Historic Site. The project started over a year earlier when the superintendent came to archaeologists at the Regional Service Centre with a specific problem. She needed an on-site inventory of the cultural resources related to York Factory to record their evaluation and to track both decisions on, and the activities related to, cultural resources on the site. In subsequent meetings between Site staff and the project team, an additional goal was added to make this inventory useful in the development of presentation programming. What makes this whole process noteworthy, is the complexity of the issues and the novelty of the solution.

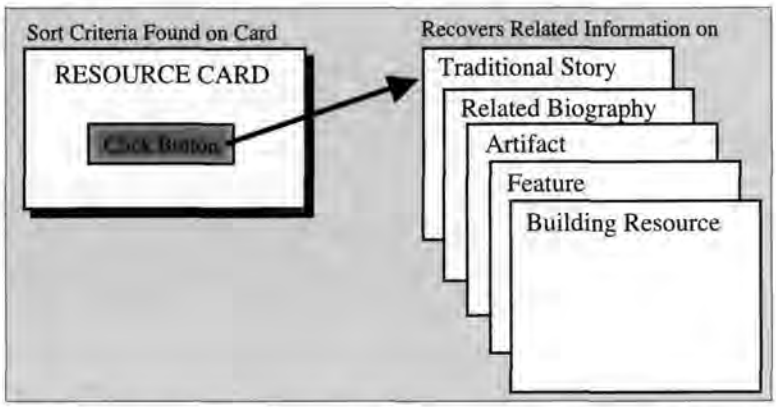
As a National Historic Site, York Factory carries several intrinsic issues. Although only one major building survives, dating to the 1830s, the actual historic site contains the well-preserved, historic remains of more than 100 structures, dating back to 1789. Along the lower portion of the Hayes River, upon which the site faces, and the adjacent Nelson River, there are remains of additional fur trade sites and resources. As a block, they represent the core history of the Hudson Bay Company and exploration of Western Canada back to its beginnings in the early 1600s. However rich and significant the resources, the site is currently isolated in the sub-arctic Hudson's Bay Lowlands. The nearest communities are over 150 km away and accessible only by air or boat. This makes the site's cultural resources very difficult to manage.

The site is also one of the best documented in the entire Parks Canada network. There are tens of thousands of pages of archival material directly related to the site, numerous historical treatments, seven seasons of archaeological research, and over 200,000 artifacts. The issue for park interpretation staff is most often one of just where they start looking.

The numerous resources that needed tracking was the primary concern of the park superintendent. She wanted to have a system that would allow her to record the heritage values, threats, and interventions to the various *in situ* resources. It was important to her to know who did what to the resources over a period of time. The interpretation staff were looking for a solution to a different problem. They had to interpret the site and create programs for it in Churchill, 200 km to the north. They did not have the benefit of being able to use the site's *in situ* resources directly. With the wealth of information available, they needed mechanisms to sift through massive amounts of data; relate it to resources that were not on hand; and deliver messages to the public.

The final product, *A York Factory CRM Toolkit*, was developed to provide solutions to all of these problems. It emerged as a Hypercard™ stack on a Macintosh Computer. The heart of the project is a database of more than 1500 cultural resources representing buildings, archaeological sites, archaeological features, and artifacts from the site and its immediate environs. Each resource is accompanied by basic information and a brief description that might include its history, importance to the site or role in a broader perspective. What was avoided was the dry, formal descriptions that archaeologists tend to rely on. For buildings and features, each resource is handled as a separate entity while artifacts have been combined into a generic typology. In this way, all horseshoes, hammers, and hasps are treated as single entities.

The cultural resources are further supplemented by a series of over 500 information records that identify heritage values for the resources. Separate information sets are available for historical, ethnographic, topographical, traditional knowledge and ecological information. The key criterion for selecting which additional information to incorporate in the *Toolkit* was that it complement the actual resource data and could be



Cultural resource sorting technique.

linked directly to a resource. In this way, a traditional story about weddings at York Factory would be connected to the church feature.

The special capabilities of Hypercard™ were exploited to take this basic information farther than a basic database could handle. The resources were divided into several groupings that reflected the geographic and historic development of the site. This allowed the developers to display each grouping on a site map. Little complementary features were developed to further enhance the information or clarify issues. There is a small historical atlas that relates the site to the long-term ecological and cultural history of the region. An animation demonstrates the monumental effects of the riverbank erosion that has wiped out over 100 years of historical resources. Another sequence shows how various features from differing occupations are superimposed. There are illustrations of more than 100 resources, a complete interactive bibliography of references, and smaller, complementary stacks to provide detailed information.

All of this information is only as good as it is useful. As a management *Toolkit* to implement Parks Canada's Cultural Resource Management Policy, several special features are installed. The click of a button on any cultural resource will provide a management card for it. This card indicates the heritage, a history of interventions and a description of its condition and the nature of any threats to it. Site managers can also define five additional text fields to track their own issues and information. There is also a process involved to help the site determine the level of significance of the resource as defined by the policy. Each resource can be evaluated within the policy, using on line aids such as site commemoration statements, site themes and sub-themes, and related information to refine its values.

The tools provided for the interpretation of the resources are of a different nature. While the massive amounts of information and the extensive bibliography are important in their own right, the site staff wanted this program to be the first line of inquiry when answering questions of the public or developing an interpretive program. Added devices to help them were: attached pictures and photographs of artifacts and buildings; a comment field on every record; lists of artifact catalogue numbers for pre-selected displayable specimens; and a series of individual notepads that could be generated for each person and/or project. To help the user work with the data, each record has a blank field to keep additional notes and there are menu-driven sort, find, and "bookmark" functions. All of this is explained in an on-line help stack.

The most valuable innovation was a sorting and selecting mechanism that allowed someone to call up all of the resources and related information by special topic. To the best of our knowledge, this is the first database in Parks Canada that lets site staff access information on such disparate resources as archaeological artifacts, landscape features and historic buildings with a single search. Four sets of topics were discussed and incorporated into this product as menu-driven searches for use by the park staff. The first of these is the locational, breaking entire site into small segments on a map. Clicking on any portion of the map will assemble all of its resources. Among the uses for this is a mechanism to evaluate cultural resources in an environmental impact assessment. The second grouping activates on the themes and sub-themes of the site. Clicking on any sub-theme will generate a subset of all its related resources. The third set is a chronological sequence that divides the 300 years of occupation by the Hudson's Bay Company into logical chunks based on significant events in the site's history. The final set associates activities. Here, the archaeologists who compiled the information were on familiar ground, using activities to define patterns of representation. Additional topic areas can be custom designed, based on key words so a program developer can design a presentation around any desired topic and instantly assemble a list of all related resources whether they are on site, in storage, or in the hands of another agency.

Both the site and service centre staff are pleased with the product as it exists but its true potential lies in the flexible nature of the HyperCard™ style of program. It is very easy to add to any part of it or to attach new components. It is customized around a specific site, but can be easily modified to accommodate any site or to add others. New modules are being planned and some of the original components have already been upgraded.

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S. Biron Ebell and Gary Adams

York Factory's Octagon
A Multifaceted CRM Challenge

York Factory Depot. The three story section in the centre was constructed in 1831. The sections on each side were constructed in the following two years. Photo by S. Biron Ebell.

In Canada, management of federal buildings that have been designated as heritage properties, are regulated under the Canadian Federal Heritage Buildings Policy. As well, the new Parks Canada Cultural Resource Management (CRM) Policy (1994) provides guidelines for protecting and presenting all forms of cultural heritage resources, including sub-surface remains. A dilemma can arise when restoring a designated heritage building impacts significant archaeological resources. This predicament became a reality at York Factory National Historic Site in northeastern Manitoba. There, the challenge was to comply with Canadian Federal Heritage Buildings Policy conservation requirements while still preserving and protecting archaeological resources.

The most visible and spectacular aspect of York Factory National Historic Site is the over 150-year-old Hudson's Bay Company warehouse and packing room, called the Depot. This building, imposing in its scale even when constructed, became the central focus of the entrepot's activities over time, consolidating almost all of them under one roof.

Both time and the environment have left their marks on the Depot. As part of a large trading centre, today it stands alone on unconsolidated, saturated, permanently frozen river silts on the left bank of the Hayes River, about 8 km from Hudson Bay in Manitoba. Its proximity to Hudson Bay assures that winters are long and cold, and the summers short and wet. The Depot is large, measuring about 30 metres square, with an internal courtyard measuring 11 by 16 metres. This wooden frame building was constructed in sections over a seven-year period beginning in 1831.

By the 1990s the ground floor had severely deteriorated, being displaced vertically by permafrost and completely worn through in some areas. The building itself has sunk in the saturated soil and as a result of the vertical displacement, some floor boards were broken off where they were trapped under the building. When the flooring was removed, the substructure—consisting of heavy, square timber floor joists, sleepers, and mud sills—was found to be rotten and no longer provided necessary structural support.

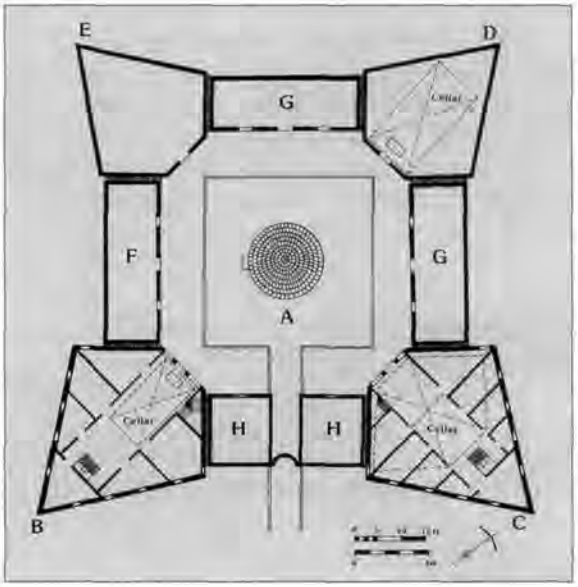
A series of monitoring and assessment studies over the 1970s and 1980s, revealed that the environment reacted with the building in complex ways. Successful, long-term stabilization of the Depot required addressing how the environment impacted the building and vice versa. The ground under the Depot is water logged. Depending on the season, all footings, floor substructures and pillars are either saturated or frozen, thus accelerating substructural deterioration. Further, the building had been constructed without eaves troughs. Rainwater leaving the building's roof pooled under the floor, adding to the natural moisture problem. Apparently this was anticipated in the original building design. Archaeological work revealed that box drains were initially installed, connecting the courtyard to exterior drainage ditches. Since the building was closed by the Hudson's Bay Company in 1957, they had not been maintained and were found filled with silt.

The effects of frost heave were devastating. It caused the ground to shift in response to temperature differentials created by the changing seasons and the insulating effect of the building itself. As a result, the ground floor was displaced vertically as much as 30 cm inside the building envelope. Displacement was so pronounced that, at one time it was believed that the floor was designed purposely to "float" inside the Depot walls. In truth, the building envelope and floor sat upon the same mud sills. However, the floor was displaced with such force that the mud sills were severely distorted or broken away from the building structure.

All of this was analyzed and identified during the site's Management Planning program conducted in the mid-1980s, where it was decided that a long-term Depot conservation and management strategy needed to be developed by Parks Canada. Part of that strategy included structural stabilization and repair which was implemented in 1992. This was necessary to assure the Depot's longevity and to make it safe for the public.

A small excavation under the Depot floor in 1982 indicated that remains of an earlier structure existed there (Adams 1985:150-154). At that time, these remains were not considered to be in any danger if the Depot floor were replaced using structural methods similar to those employed in

the past. The planning team, including an archaeologist, historian, heritage structures engineer and site operational staff, agreed on a methodology. The decision was to simply remove the old floor and substructure, excavate to a depth that would permit the floor to be reinstalled at its original level relative to the building envelope, then reinstall it; excavate drainage and insulation trenches and install them; and then redo the landscape. This work was premised on a belief that the earlier structure's remains were very fragmentary and that the eventual engineering solution would not seriously impact them.



Joseph Colen, the Hudson's Bay Company "resident officer" created this plan for a "Commodious Fort... at York Factory..." in 1786. Shown here are structural details of the Octagon, the fortress-like structure that housed the company officers and men and also served as a warehouse. Redrawn by D. Elrick.

With these parameters in mind, the floor was removed by archaeologists in 1991, and the fill excavated between the floor joists. What they found under the floor were well-preserved remains of the "Old Octagon," a fortress-like building constructed by the Hudson's Bay Company between 1788 and 1795 [Ebell and Priess 1993]. Remains of this structure were often found above the bottom of the Depot building envelope. In the following two years, additional remains were found when the floor was completely removed and insulation and drainage trenches were excavated outside the Depot walls and in the courtyard. In almost every incident, remains of the "Old Octagon" impinged on the planned floor reinstallation. Therein lay a serious heritage dilemma, pitting preservation of the standing Depot building against the buried structural remains of the "Old Octagon."

The York Factory Octagon was patterned after 18th-century European military fortifications. It consisted of five-sided, two-storey flankers or bastions located at each corner, interconnected by four enclosed rectangular structures called curtain sheds. The whole structure enclosed a roughly octagonal courtyard. Sometime after its completion, a "men's cook room" was attached to the exterior of the south west curtain.

By 1831, after only 35 years of service as a warehouse, and officer's and men's quarters, the Octagon had to be replaced. Its weakness lay in the rigidity of its solid wooden and brick walls. Such structural technology may have been appropriate for the British climate, but it did not permit the Octagon to flex with the heave and pressure of northern Canadian permafrost. Thus, the foundations and the structural envelope deteriorated quickly.

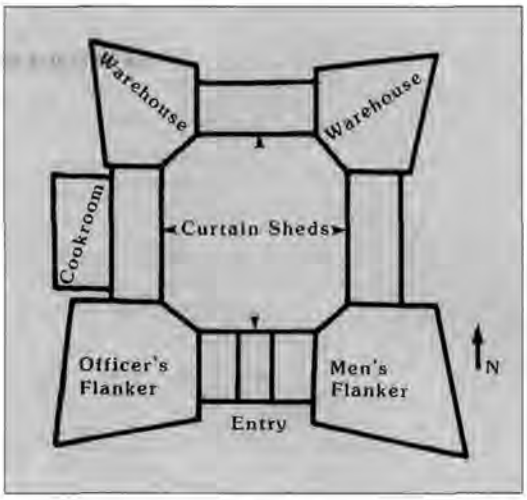
The Octagon was demolished and replaced, section by section, over an eight-year period. By 1838 the Octagon was gone and the Depot stood in its place, looking much as it does today. Even though the Octagon was demolished over a century and a half ago, and its remains have been impacted by Depot construction and numerous subsequent repairs as well as relentless frost-heave, archaeologists found its remains remarkably well preserved. These include four flanker cellars (two of which were open and filled with water), footing remnants of all flankers and curtains, a fireplace or chimney foundation, footings and possible oven from the cook room, and a thick refuse deposit encircling the Octagon exterior. In one of the many ironies of this project, the very environmental features—the cold, waterlogged ground, permafrost and poor drainage—that were destroying the integrity of the Depot, were working to protect the Octagon remains. These conditions also served to protect highly vulnerable artifacts such as organic fabrics, clothes and tools; delicate associations such as bead patterns; and a myriad of important scientific remains: bone, seeds, plant remains, even hair and skin.

Depot restoration required achieving three interdependent objectives. The first concern was to reinstall the floor and footings. This was deemed necessary to continue to permit use of the building by the public. To protect this new flooring, a drainage system was re-established to prevent water accumulating under the floor. Finally, the ground had to be stabilized to prevent both the building and the floor from moving. The dilemma arose in 1992 when the extent of the modification to the structure and the surrounding environment threatened to impinge on the recently discovered remains of the Octagon.

In the initial plans to stabilize the ground under the building, permafrost engineers had recommended installing insulation in shallow trenches excavated next to the exterior walls, around the courtyard, and under the entirety of the new floor. This would allow the ground to freeze under and around the building creating a solid permafrost platform for it. Similar techniques are used in other permafrost regions of the world to create stable building surfaces. For this to succeed, they also created a drainage system to prevent water from accumulating under the floor to prevent frost heaving. This assured that the new

footings will last. These solutions required significant modifications to the extant ground surface both inside and outside the Depot.

As defined by the *Parks Canada Guiding Principles and Operational Policies* (1994:78) both the extant Depot structure and the "Old Octagon" remains are nationally significant cultural resources. The management planning program had not anticipated that there could be a conflict between cultural resources and no guidelines had been set in place against this eventuality. Initially, it seemed that successful Depot restoration would impact the Octagon remains to an unacceptable degree under the new policy. Both structural engineers and archaeologists were convinced that the cultural resources under their care were of national significance and required primacy in any intervention. In reality, both resources were of equal significance and each required its own set of protection and presentation measures. It was fundamental to any solution that plans to meet the objectives of the engineers in a context that was acceptable to the archaeologists would include input from several disparate disciplines, including permafrost engineering, landscape architecture, structural engineering, ecology, and archaeology. It also fell to Parks Canada managers to develop a team approach since various heritage interests were lining up on one side or the other.



A detail from an anonymous drawing of York Factory dated 1815. Note the cook room added to the exterior wall of the west curtain shed. Footings and possible oven remains from this cook room were uncovered by archaeologists in 1992. Redrawn by D. Elrick.

A number of specific problems had to be addressed. Of major concern was the heritage significance conflict between the Octagon remains and the Depot. Depot structural integrity and occupant safety had to be achieved without seriously impacting the buried Octagon remains. At the same time, construction impacts on the Depot's complex environmental integrity had to be anticipated and mitigated. How, then, could Depot restoration be accomplished without significant impacts to the Octagon remains? As a result of cooperation in the field between archaeologists and restoration technicians, modifications were made to the restoration design that did not significantly compromise either the Depot or the Octagon.

The two open cellars were pumped out, lined with geotextile—a water permeable fabric—then filled with soil. This will preserve the wooden cribbing, reduce the moisture trapped under the new floor, and provide future archaeologists with a stratigraphic reference point between 19th- and 20th-century cellar fill. Restoration technicians inlaid insulation around the Octagon footing remains that were exposed in the insulation trenches outside the Depot and in the courtyard. These features experienced almost negligible disturbance while at the same time achieving required insulation levels.

The floor substructure was redesigned to bridge large sections of *in situ* Octagon remains. However, Depot floor installation did not occur without some impacts to Octagon remains, and it was sometimes necessary to negotiate changes in floor design to assure that important Octagon features such as structural corners were preserved. Special floors of reduced thickness and structural strength were installed in some cases so thick artifact deposits and Octagon remains would not be disturbed. But, to assure the Depot's continuing structural soundness, deep trenches were required in strategic areas, both for support and drainage. In one instance, a footing had to be installed that impacted Octagon cellar remains and cross timbers. Unfortunately there was no room for negotiation in this case. Without this footing, the Depot could not be restored to structural soundness. The only alternative was to record the *in situ* remains and the subsequent disturbance.

Unfortunately, impacts to the artifact refuse deposits were not so easily mitigated. The artifacts were usually found in a single stratigraphic layer. The insulation trenches completely encircling the Depot had to penetrate into (but not through) these deposits. A small back hoe was used in the excavation and, of course, random testing by archaeologists failed in almost every instance to predict the location of significant artifact deposits. As a result, when artifact concentrations were encountered, hand excavation had to be done quickly, usually just ahead of the machine. In spite of the rush, three fragments of intact bead work were recovered, as well as a bear claw necklace, clothing remnants, a felt hat, three human molars (containing large caries), and other fragile artifacts too numerous to mention.

In one area of heavy artifact concentration, a special recovery program was implemented. To assure that artifacts were not lost and received appropriate protection, the artifact layer was carefully stripped away using shovels and stockpiled by horizontal provenience. Later, artifacts were recovered from the stockpile while the restoration crew carried on with their insulation installation and landscaping.

As an aside, the artifact-rich organic layer contains garbage discarded around the walls of the

Octagon: probably much of it thrown from the windows. A layer of sand covering the deposit in some areas, suggests that an attempt was made to reduce the odour of decaying organic wastes. This speaks of what was acceptable sanitary conditions at the time!

The restoration of the Depot at York Factory was achieved and all of the engineering objectives were met. In the process, from design to finished product, the actual foundations and environmental systems were modified or redesigned to protect the subsurface remains of the Octagon in as many places as possible. *In situ* artifacts did not fare as well but concessions were made by all involved personnel to remove artifacts in as scientific a manner as possible within the constricted time frames. This was accomplished primarily as a result of learning that the new policy expects Parks Canada to respect all cultural resources equally. Through the evolution of the project a necessary sense of co-operation and teamwork was built between archaeologists and restoration workers in the field, to solve mutual CRM concerns.

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Karlis Karklins

Tales that Privies Tell

Excavating the latrine at Fort Wellington.

Excavating an old latrine may not sound like much fun but it can provide a great deal of information concerning the lives of the people who used it. This is especially true when the recovered material is carefully analyzed and interpreted, something that many researchers do not undertake either because of tight timetables or a lack of the required knowledge. Fortunately, in the case of Fort Wellington, a 19th-century British fort in the city of Prescott, Ontario, a thorough interdisciplinary study was possible. The resultant knowledge significantly altered existing perceptions of life at the fort and led to the revision of the interpretation program at the site. Fort Wellington was established overlooking the St. Lawrence River during the War of 1812 to ensure that the vital transportation route linking Montréal and Kingston remained open. The fort was abandoned in 1826, but reoccupied in 1839 in response to the Rebellion of Upper Canada. A number of alterations were made at this time, including the construction of a three-storey blockhouse and a latrine. The fort was garrisoned by battalions of various regiments over the years, as well as several militia units. The elite Royal Canadian Rifle Regiment (RCRR) inhabited the fort from 1843 to 1854.

A stabilization program was conducted at the fort from 1990 to 1992. This was accompanied by investigations undertaken by archaeology staff from the Ontario Regional Office of Parks Canada in Cornwall, Ontario, under the direction of Joe Last. The work included the investigation of the gate entrance, the west palisade curtain wall and the latrine.

While much useful information was obtained from all the excavations, most of it came from the fill of the garrison privy. This unique structure—the only extant wood-framed military latrine of its age in Canada—consists of a hipped-roofed structure divided into three rooms. The southern-most room was for the enlisted men. It lacked seats, so the men perched precariously above a bench along the east wall using hand holds. Women used the central room which had a two-seater arrangement,

A display interpreting village life in the Fort Wellington barracks.

while officers utilized a one-seater in the northernmost room.

Excavation of the latrine's interior uncovered an exceptionally wide array of period artifacts, revealing that, contrary to all rules, the facility had been used extensively as a trash dump and, contrary to specified procedure (and luckily for researchers), was never really cleaned out. As interpretation at the site relates to the 1840s RCRR occupation of the site, Suzanne Ploussos, Material Culture Researcher from the Ontario Region Office, initially identified the relevant layers of latrine fill on the basis of such tightly datable items as belted balls for the Brunswick rifle, military insignia, and marked smoking pipes and ceramics. Various members of the staff of the Material Culture Research section of the Federal Archaeology Office, National Historic Sites Directorate, Ottawa, subsequently verified and refined the attributions, and reported extensively on the recovered artifacts and their significance.

Military equipment was found to be in a minority, the reason being that worn out or broken material had to be turned in for replacement and the discards were then disposed of officially. On the other hand, a truly incredible amount of household refuse was dumped into the latrine (165,000 artifacts were catalogued!), including a large gridiron that could not have been easily sneaked into the structure. This suggests that some rules and regulations concerning privy use were not strictly enforced during the RCRR's stay. The material also reveals that, rather than an austere and regimented life at the fort as implied by historical documents, the enlisted men and their families lived fairly sedentary lives typical of the working class.

Just about every form of household item was represented in the latrine fill. There were eating and cooking utensils, glass tablewares and storage containers, a fair number of worn-out boots and shoes, sewing materials and hardware, both furniture and builders'. There were also clay tobacco pipes and such diverse objects as tools, barrel hoops and toothbrushes. The wives and children of the soldiers were represented by such items as jewelry, clay marbles and a doll.

However, the bulk of the recovered material consisted of ceramic objects. Coarse earthenware from Ontario potters and stoneware imported from England primarily related to food preparation and storage, though quite a few stoneware blacking and leather polish bottles were also found. But fine ceramics predominated, principally in the form of tablewares (plates, bowls and teaware) and toiletwares (mostly chamber pots), as well as ornamental pieces and decorative items. As a group, these were the most telling items. Except for several pieces of porcelain, all the material is attributed to the enlisted men and their families. Its presence suggests that the men had sufficient earnings to support their dependents in comfort and even in some gentility. Its diversity (over 100 different patterns of teaware alone were recovered) reveals that the ceramics represent individual purchases and not a standard military issue as had generally been supposed.

Furthermore, the inhabitants obviously desired decorative household furnishings and small luxuries. Personal property was regularly used and visible in the barracks and this was obviously accepted in a military environment. Victorian domestic conventions were clearly observed, especially at mealtimes. The presence of all this material further implies that each family had storage space apart from the area around and under each bedstead; the possessions of an enlisted man were generally confined to this small area. Finally, it appears that children were not only accommodated at the fort, but also somewhat indulged.

The information derived from the latrine at Fort Wellington paints an entirely different picture of daily life among its inhabitants during the 1840s than had previously been derived from historic documents. As a result, visitors to the site are now presented with a drastically different and much more accurate view of British military life in Upper Canada than before. This would not have been possible without a thorough study of the recovered material. Far from reflecting a sparse military existence, the material reveals that the fort was more akin to a working-class community. Silent for many years, the latrine at the fort has truly spoken volumes about the 200 or so men, women and children who used it some 150 years ago.

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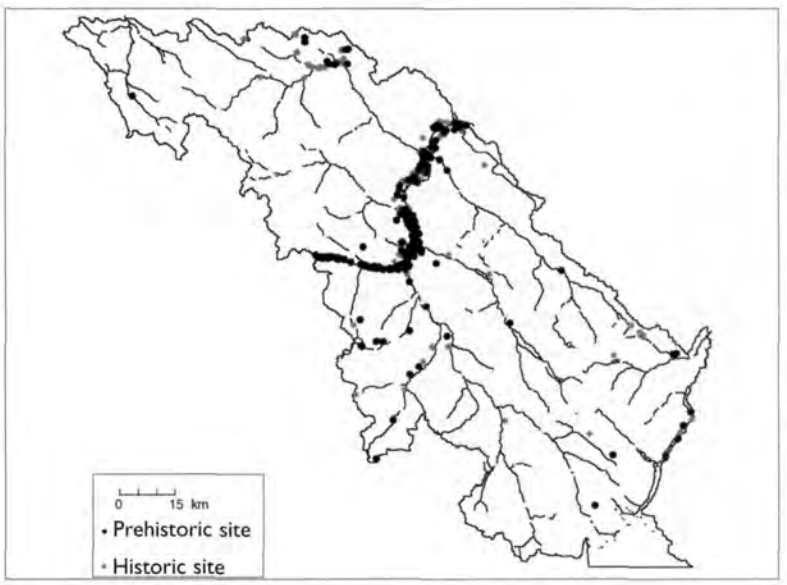
Martin Magne

How Much Archaeological Inventory in Large National Parks is Enough?

The Athabasca Valley in Jasper, looking south.

Inventory implies completeness: an inventory of a store's stock means that every item is accounted for, as is its value. An archaeological inventory of a park implies to managers that we know all that's there, and it means that we can offer an appraisal of the worth of various resources. Archaeological inventories hardly ever approach that kind of ideal, or they do so with probabilistic models. The varying degrees of uncertainty we have about the nature of the resources very directly affect the ways we will manage them. In most North American CRM, archaeological inventory precedes or is undertaken along with, an assessment of the value (or significance) of those resources for purposes of determining their fate in the face of impending impacts. Rarely are there chances to re-examine those kinds of inventories—we have to live with the first attempts, thus in the absence of thorough archaeological investigations, very little information is available to allow long-term planning. In contrast to many development-driven management systems, in Parks Canada we are fortunate to have opportunities to manage archaeological resources' conservation far more often than their destruction. This allows for continuing checks on what "universe" the record appears to reflect, leading to refinement of our estimate of that universe, without losing a significant part of the record. The nature of the inventories we maintain in National Parks, with this overriding conservation ethic, is therefore somewhat different from other more widespread archaeological resource inventories. In fact the inventories are growing, as they are on developing lands, and the in-situ resources are not depleting as rapidly. This should ultimately lead to a situation where reasonable levels of certainty may be gained concerning the types of sites present, their condition and threats, and their scientific, cultural and public values.

Distribution of archaeological sites in Jasper.



Other than ideal financial and human resourcing, three inherent factors largely determine the completeness of an inventory: site visibility; the size of the area of concern, and the variety of prehistoric and historic archaeological resources that are present. In places with high degrees of surface exposure and little deposition, full surficial coverage may be possible. In those instances, perhaps even fair accounts of "value" can be derived easily, but while large, stratified well-preserved sites are usually considered more important, some recognition is given to maintaining adequate representation of more ephemeral ones. Certainly exercises in value benefit greatly from having large amounts of comparative data. In very large areas, particularly those with forest cover, only intense and long-term efforts may offer more than glimpses at promising terrain. With either good or bad knowledge, we use what we know to determine the fate of archaeological sites whose demise is imminent.

In the Canadian National Parks and National Historic Sites system, the value or relevance of archaeological sites may also be in the nature of their national commemoration, if any exists, which determines the level of protection that will be considered. Sites of national significance will receive greater attention than those not

Distribution of archaeological sites in Banff.

so recognized. All in all, however, the system is quite conservative; many types of resources are preserved, and are considered of great value. For example, prehistoric Aboriginal sites contained within National Historic Sites created with recent military history themes are accorded great protection. Indeed, by and large, the various kinds of National Historic Sites we have are well inventoried for all kinds of archaeological resources, owing mainly to their relatively small size.

In National Parks, a principal value of prehistoric archaeological resources lies in their place within the Parks' ecosystems. Another key value is their importance to First Nations peoples. Understanding the full the range of human activity to be found, past and present, is critical to proper ecosystem management. Much of what archaeologists do can be tied in direct parallel to natural resource preservation ideals: maintenance of diversity, preservation of endangered resources, influences on and from neighbouring areas, and public appreciation of these. Like natural resource managers we need to have predictable data, sound ways of monitoring the status of our resources, adequate means of assessing their value in relation to a larger picture, and the ability to interest people in what we do.

Why Inventory? How Extensive and Intensive?

We inventory for many reasons: to gather baseline data; to allow proper management by having readily available broad and detailed knowledge of our "universe"; to anticipate future impacts by human and natural agencies; to add to our knowledge of local to continental patterns; to allow integration of archaeological resource management programs with natural resource management, visitor services programming and other Parks/NHS needs. In new Parks or Historic Sites, inventory facilitates preparation of long-term management plans. I am interested in examining the levels of inventory work existing in two existing large parks. Can our experiences with Banff and Jasper help us design what we do with new challenges? Do we have sufficient knowledge?

Banff and Jasper were never inventoried archaeologically at the time the parks were created, but that is now expected almost as matter of course in new park developments. Those two Parks have been investigated by means of subregional surveys to some extent, and a great many sites have been found in impact assessment studies. In both parks, early non-intensive surveys in the 1970s have been replaced largely by impact assessments, including some fairly large-scale ones, and some directed surveys. Early surveys were scattered and did not contribute a great deal to in-depth understanding of human occupation of the parks, however we should recognize that western Alberta and eastern British Columbia did not have very well-developed culture histories or settlement pattern schemes at the time. Even now we have only a sketchy understanding of the role of the Parks' prehistoric sites within the frameworks that exist for these larger areas.

Inventory should cover the full extent of the area of concern, depending on the nature of previous work. The actual intensity of any particular inventory project has many dimensions: whether to undertake surface survey only, whether or not to shovel test, whether or not to test once sites are found, whether or not to undertake marine surveys, whether to examine high altitudes, how to reach remote areas, how large crews should be, whether or not to undertake probabilistic or judgmental survey, how to incorporate traditional Aboriginal or ethnographic knowledge into the studies. All of these factors can be equated with cost, a limiting criterion in how much we do. The efficiency of undertaking intensive inventories appears to be related to a Park's history, with greatest efficiency over the long term being reached by surveying as completely as possible at the outset of Park establishment, while in older Parks, the focus is where management needs are immediate.

Jasper and Banff: What We Know

Jasper is over 10,000 km^2 in size, Banff is over 6600 km^2 in area. Both have extensive mountain ranges approaching and over 3,000 m in elevation, and large river drainages. Banff overall is probably more favourable for human occupation and the archaeological record may reflect that rather well. Jasper was first surveyed archaeologically in 1970 and 1971, Banff in 1969. Jasper has on record 423 archaeological sites of various types, for a known site density of 0.04 sites/km^2. Banff has 625 sites on record for a density of 0.1

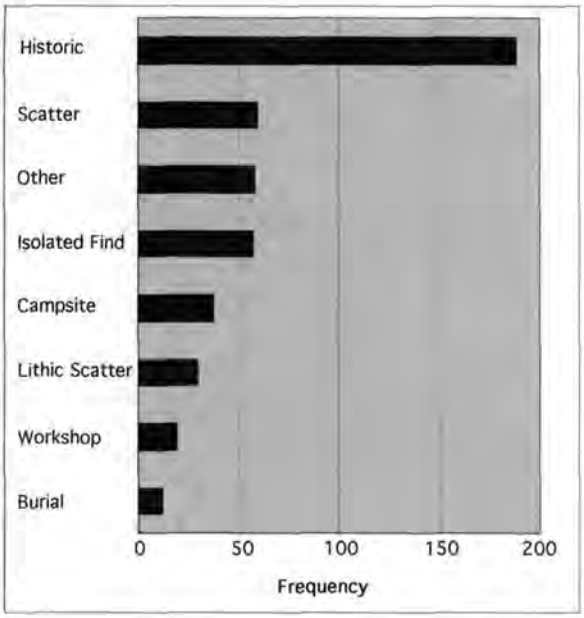


Chart of condensed site type frequencies for Jasper.

sites/km^2. Many different kinds of sites are known in each (see graphs): prehistoric lithic scatters dominate the database, but many historic period sites are known as well. There is no obvious bias in terms of overall representation—each park appears to have about equal relative representation of site types.

Interestingly enough, a very liberal calculation indicates that about 10% of the area of each of the two parks has been surveyed at least in a cursory fashion. (calculated by estimating the linear distance of covered areas with a 1 km buffer). It would be far too simplistic to simply multiply the known frequencies by 10 to yield a predicted "universe," particularly since only some of the attractive, "high potential" areas have been covered by intensive surveys. But the pattern of site occurrence within each is a bit different: if we consider the density of sites in relation to area actually examined, Banff shows an apparent density of 1 site/km^2, while Jasper's apparent site density is 0.3 sites/km^2. Banff would appear to have three times the site density that Jasper has.

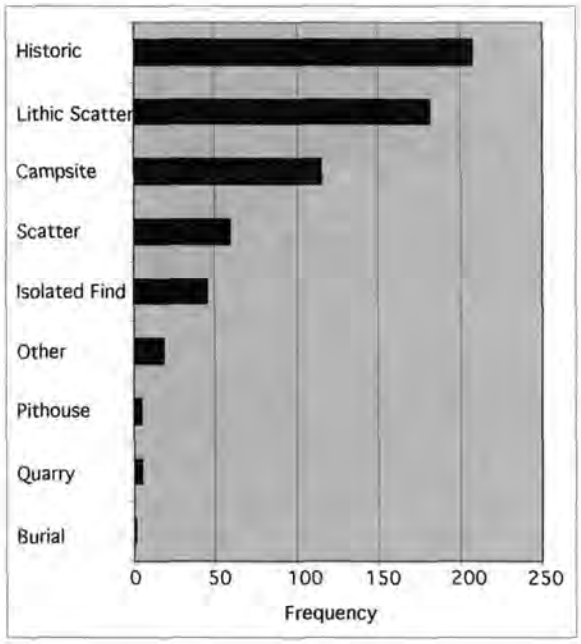


Chart of condensed site type frequencies for Banff.

Up to 1988, Banff had seen about twice as many archaeological projects as Jasper: about 35 to 16. It is slightly misleading to compare these figures, since some projects were extensive surveys, others were single-locus impact assessments, others were assessments of 20 or more development projects. Apart from this, though, the historical pattern of investigation within each park is much the same: in Banff, 116 sites were recorded in 1969; 41 were recorded in Jasper in 1971. In 1981 and 1982, 112 sites were recorded in Banff, while 140 recorded in Jasper in 1983. Another 127 in Banff in 1987, 208 in Jasper between 1985 and 1987. However in the two recent years, 1992 and 1993, 78 new sites have been recorded in Banff, only 2 in Jasper. What these patterns demonstrate is that intensive survey work can yet reveal substantial new data, but also that we may be approaching a fall-off point, where considerable numbers of new sites may not be always forthcoming with new surveys.

What the numbers do not demonstrate is that, particularly in Banff, re-investigation of certain areas can produce highly significant new information. The older (ca. 10,500 BP) Vermilion Lakes sites were found, for example, during the Trans-Canada Highway assessment and mitigation studies in a valley where many sites had been known. In addition, it is interesting to note that often, very significant resources are recorded only uniquely or recently: For example, in Jasper, a First World War internment camp was recorded in Jasper in 1986; several Aboriginal burials were recorded only over six years since 1971 and most recently in 1991, two habitation caves were noted, one in 1991, a fur trade post in 1985, and only one split-log tipi has been recorded, that being in 1971.

How intensively have the sites themselves been investigated? Not surprisingly, most sites are simply recorded upon their initial discovery. About half have been tested with only 1 m^2 or smaller, single shovel test units. Excavation of sites is not a significant activity until the second or third visits. In Jasper 87 sites have seen second visits, 199 in Banff. Sixty-one sites in Banff have seen three visits, 23—four visits, and 8, five or more. One site has been revisited, recorded, tested, and excavated, on eight separate occasions. In Jasper, only three sites have been visited three times. Overall then, many sites are recorded, but their surfaces have barely been scratched.

In terms of cultural themes, we know that the Parks were occupied for at least the last 11,000 years and that there was widespread use of nearly all environments by Aboriginal peoples, (although ironically we have difficulty documenting recent band-level occupations by archaeological and ethnohistoric means). We have excellent records and archaeological signs of early exploitation of the parks by fur-trade interests, mining and logging, railroad companies, and other commercial activities of many kinds.

The pattern seems to be that new kinds of important resources continue to be found in Banff and Jasper, yet relatively large areas of each have been looked at. In terms of total area, about 90% of each is in need of survey. Much effort would be required to reach reasonably complete coverage. Even if only one-quarter of the unsurveyed areas has any "potential", about 20% of this kind of area of each Park has not been examined, or 1328 km^2 in Banff and 2175 km^2 in Jasper. While it may appear that 80% coverage is plenty, even a 10% sample of those remaining areas would require large-scale projects. Yet we continue to focus almost entirely on mitigating development impacts in areas we already know much about and ignoring the rest. What about natural impacts? In many areas we are forced to neglect natural impacts of moderate scales, although the National Threatened Sites Program (some examples of which are discussed elsewhere in this issue) has addressed many instances of severe natural damages.

There are two obvious biases in our resource data: severely clustered survey areas and site distributions, and diversity of site types. The distribution maps show clear concentrations in the large river systems such as the Bow Valley in Banff and the Athabasca Valley in Jasper. However, in two seasons of high-altitude survey in Banff recently, in areas well away from development threats, over 80 new sites were discovered, one a Clovis surface find. We have surprisingly few rock art sites in Banff, despite many located on each side of the Park, few kill sites, and few recent or proto-historic Aboriginal sites despite known frequent use. Banff has recently yielded a series of housepit sites, a common characteristic of Plateau settlement, that raise intriguing questions about the extent of Plateau peoples' movements across the Rockies. A series of interesting historic Aboriginal sites in Jasper have not been re-examined that have potential to yield information regarding a completely unknown but critical geographic area of occupation by Athapaskan peoples. This part of western Canada is not very well known in the ethnohistoric literature, however, this is the probable homeland of Beaver and Sarsi peoples, close relatives of the Apache and Navajo, whose history is also of great interest to many. These historic sites have potential threats from controlled forest burnings and natural deterioration; we have no idea whether there are more than those recorded, or what potential information the sites contain, or what other kinds of related resources might reside nearby. In general, prehistoric settlement patterns do not appear to have well-balanced representation even though substantial ground areas have been examined. We do need to relate more directly to the archaeological record of neighbouring areas, though, to determine if that under-representation is an artifact of park boundaries.

Where Does it End?

Formally, an inventory ends when its terms of reference have been fulfilled: whether within a certain timeframe an entire park area has been examined; whether an entire park area has been sampled systematically or randomly, whether the existing data are sufficient to allow management planning, or when the project runs out of money. Realistically, our inventories of these large Parks will never end. Currently we operate under an ecosystem paradigm that requires us to know a lot more about human-environment interactions than we do now. Future research and management paradigms should be more encompassing than the sub-regional studies we do now. We hope that GIS capabilities will lead to linked databases that can examine very broad patterning. Frankly I do not believe that 100% inventory can ever be reached with archaeological resources, without, paradoxically, eliminating the resource itself. The question is that of how intensively each site should be examined.

In sum, it is my view that large-scale inventories should continue but that we need a thorough assessment of what we have, some kind of middle-ground standard that would see more research with known sites. We should use the high-tech resources at our disposal to make the best use of our time and money, and to efficiently model our management methods and we need to consider areas around our National Parks more carefully in framing our models. It would be interesting, for instance, to compare archaeological site discovery and loss records for particular site types across park, private, and provincial lands. We need more co-operative endeavours with our provincial neighbours and private industry to merge our knowledge, to more fully come to grips with what do and do not know.

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David Arthurs

Imperilled Patrimony

Rescuing Threatened Archaeological Resources in Kluane National Park

Aerial view of Bighorn Sites 1 and 2 at confluence of Bighorn Creek and Donjek River, Kluane National Park Reserve. Photo by David Arthurs.

The loss of archaeological patrimony is one of the most challenging issues confronting cultural resource managers the world over. Parks Canada is charged through its Cultural Resource Management Policy with the dual mandate of protection and presentation of the cultural resources under its care. One tool by which this is accomplished is the National Threatened Sites Program.

Threatened Sites are those which are identified through formal evaluation to be currently at risk, or are expected to be threatened by major damage or loss within 10 years of their assessment, and which require intervention above the level of routine maintenance. The threats considered under this program are primarily the result of natural processes such as accelerated erosion, or may stem from visitor impacts. For inclusion on the National Threatened Sites List, archaeological resources should retain structural and stratigraphic coherence, and should be sufficiently intact to provide information useful to program interpretive goals, or to enhance the understanding of Canadian history.

These sites are given priority in the allocation of increasingly scarce heritage resource funds. They may be recommended for regular monitoring, stabilization, or, in situations where preservation is not an option, rescue excavation. Sites which have been adequately mitigated, are no longer at risk, or from which all material evidence has been removed, may be retired from the list.

Approaches to the implementation of the program differ in the regions across the country. In the Prairie and North West Territories (PNWT) Region, responsible for cultural resources in National Parks and National Historic Sites in the central Canadian provinces and the north, Threatened Sites Program funding has been used primarily to evaluate and assess threats to cultural resources, and to monitor threatened sites, in order to provide data for effective management decision-making. In some circumstances, Threatened Sites monitoring has led to specific mitigation projects mounted by the National Parks or National Historic Sites themselves.

Among the major Threatened Sites initiatives of the past few years was a mitigation project in Kluane National Park Reserve, in the southwestern Yukon Territory. During a 1990 patrol through the northern part of the park, Kluane Park Wardens discovered a cluster of precontact archaeological sites perched on the high bluffs overlooking the Donjek Valley. They were heavily impacted by wind erosion and mass wastage, and inspection by Archaeological Services staff indicated that these sites, the largest concentration of precontact components known in the park, held valuable information on the cultural history of the area which was rapidly being lost. It was recommended that several be identified as Threatened In-situ Archaeological Assets under Parks Canada's National Threatened Sites Program.

Several of these sites, including two at the confluence of the Bighorn and Donjek Rivers, were selected for further examination. The objectives of the investigations were to salvage cultural deposits eroding from the edge of the high bluffs overlooking the Donjek River gravel bars, and to gather environmental data to better understand the context of human occupation and land use in the valley in antiquity.

Bighorn Creek Site 1 stretched for over half a kilometre along the Donjek river bank. Here, wind erosion had taken a heavy toll on the cultural resources. Strong winds, generated by the glacier at the head of the valley, have scoured out deep channels in the loess soils that mantle the 30-metre high bluffs along the river corridor. This action has in places cut through some three to four metres of overburden, exposing the deeply buried cultural deposits.

Several charcoal-laden hearth features have been exposed in the blowouts. Lithic debitage, tools, and fragments of animal bone lie scattered down the erosion slope. Among the surface recoveries were microblade tools of obsidian, basalt, and other materials, lanceolate and notched projectile points (some of the former with ground bases), and large oval basalt bifaces. A few artifacts appeared to be associated with a compact red-brown palaeosol which had developed on an early post-glacial loess in a grassland environment between 8,000 and 2,800 years ago. Others appeared to have originated both above and below the White River Ash, a distinctive band of tephra

Rescue excavations at Bighorn Creek Site 2, Kluane National Park Reserve. Photo by D. Arthurs.

from a volcanic event which has been firmly dated to 1,250 BP and forms a convenient horizon marker. There was evidence in the soil column of periodic inundations, when a glacier surging out of a side valley created an ice dam across the river, flooding the upper reaches of the Donjek Valley several times between the end of the Hypsithermal and the modern era.

In addition to controlled surface collection, limited salvage excavations were conducted in areas of the site heavily impacted by erosion. The principal area excavated was found to be a small sheep hunting campsite, occupied briefly, and perhaps periodically, between about 1,800 and 1,650 years ago. Among the recoveries were the remains of a small birch bark container, found beside an eroding hearth that produced a calibrated radiocarbon date of 1,800 BP. Two other hearths contained charred coniferous needles, some of which could be identified as black spruce. Neither birch nor black spruce are found in the area today. An unfinished ladle fashioned from mountain sheep horn found on the surface produced an AMS date of about 1,650 BP, suggesting that it probably related to the major occupation. This extends this technology, documented in historic times, back nearly two millennia.

Bighorn Creek Site 2, on the point overlooking the confluence of Bighorn Creek and the Donjek River, presented a different but no less challenging situation. The ever-shifting braided stream channels continually destabilize the bank, and large blocks of soil exfoliate from the flanks of the point and slide downslope into the river, taking with them the cultural deposits.

Excavations were strategically situated along the slump blocks, to salvage cultural resources in immediate peril. These deposits were found to be stratified, representing at least four occupations between about 2,000 and 600 years ago. In each, the bones of mountain sheep attested to the major activity associated with the occupation. The mountain slopes flanking the Donjek Valley are the most northerly all-season range for Dall's sheep in North America, and the evidence demonstrates continuity in the harvesting of this resource over several thousand years.

Limited testing was performed on a third site, farther up the Bighorn Creek canyon, where a crescentic knife of Native copper had been recovered by park staff. A hearth eroding from the cut bank nearby yielded a calibrated radiocarbon date of 1,161 BP, making this one of the earliest dated copper specimens from the Yukon.

Ancillary studies are under way to determine the environmental context of the Donjek sites through an analysis of faunal and floral remains and gastropods. As well, the trace element fingerprinting of the copper artifact and various lithic raw materials from the park should assist in determining regional resource acquisition and distribution patterns over time. It is anticipated that the evidence collected from these and other Donjek Valley Threatened Sites will permit construction of a detailed cultural chronology for the period between about 4,000 and 600 years ago, which will reflect the complex interplay between people and the environment in antiquity.

In spite of their heavily impacted condition, the Donjek Valley sites have contributed a wealth of information to the cultural history of Kluane National Park Reserve. Through the vehicle of the Threatened Sites Program, it was possible to identify the need for mitigation of these imperilled resources and recover critical data before it was too late.

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Peter D. Francis

Threatened Archaeological Sites in the Mountain Parks

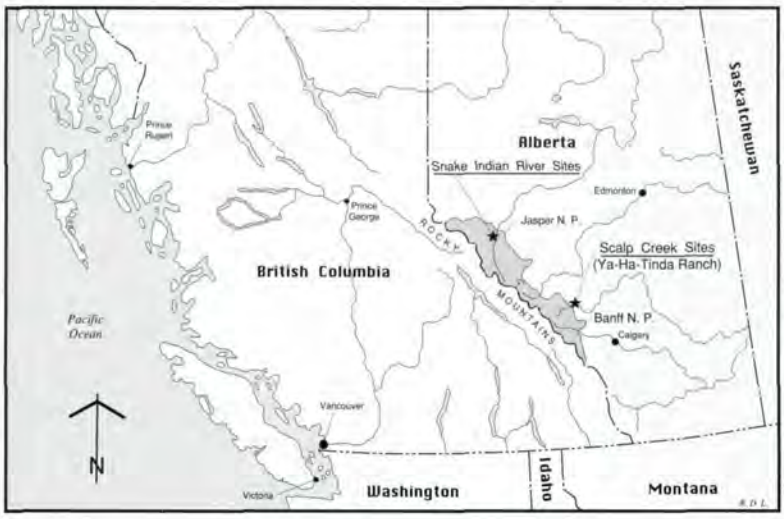
1996 Jasper-University of Alberta Field School excavations in progress.

Over the past three years, the Threatened Archaeological Sites Programme has become an important aspect of the practice of cultural resource management in the national parks of the Canadian Rocky Mountains. This article will describe two multi-year projects from that programme which were instigated in response to natural rather than anthropogenic threats to significant aboriginal archaeological resources. The Scalp Creek Threatened Sites Project located at the Ya-Ha-Tinda Ranch Crown Leasehold has been approached as a mitigative and research study. The Snake Indian River Threatened Sites Project, located in Jasper National Park, has evolved to a focus for academic teaching and postgraduate research within a partnership initiative between Parks Canada and the University of Alberta.

A threatened *in situ* archaeological resource has been defined by Parks Canada archaeologists as *"a site containing significant cultural resources that are threatened with premature damage or destruction within the next ten years as the result of accelerated erosion, vandalism or changing patterns of use"* (Lindsay 1988: Appendix A). A National Threatened Archaeological Sites List is maintained by the Federal Archaeology Office in Ottawa; annual updates and revisions to that inventory are provided by the six regional Parks Canada Archaeological Services offices.

Mitigative measures to address threats to *in situ* archaeological resources can take the form of either an attempt to stabilize the site in its present state or an excavation to record artefacts and contextual information before irretrievable loss. The factor of cost for site stabilization usually precludes that sort of protective approach, but occasionally a combination of site stabilization and archaeological intervention measures has been employed (e.g., Francis and Langemann 1993). In the case of both projects discussed herein, stabilization of the site environment was impractical due to the severity and extent of the erosion.

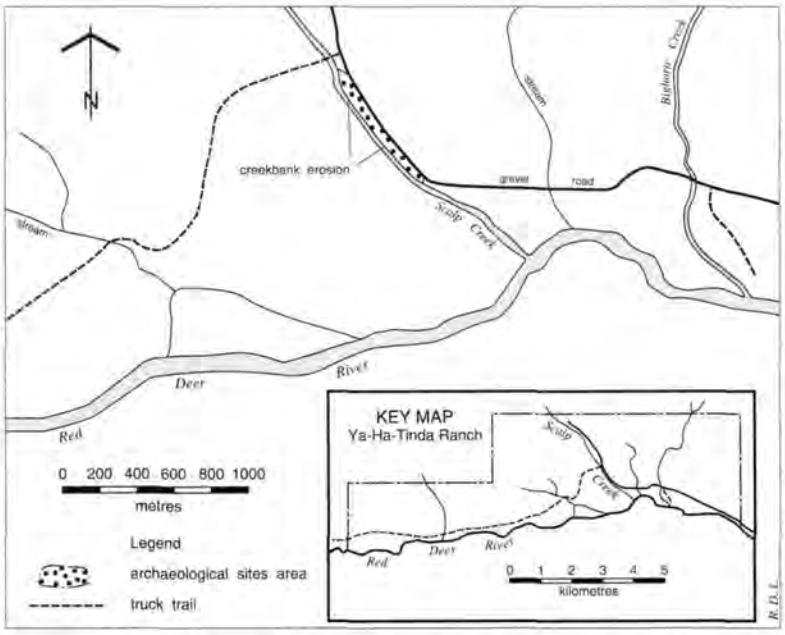
Threatened archaeological sites programme in Alberta.



Scalp Creek Threatened Sites Project

The Upper Red Deer River Valley is a promising area within the Eastern Slopes region of the Canadian Rocky Mountains for yielding scientific evidence for human activity that reaches back in time to the early peopling of North America. The first archaeological field work within this valley system, including Banff National Park and the adjacent Federal Crown leasehold, Ya-Ha-Tinda Ranch, identified evidence for prehistoric occupation throughout Postglacial times. More recently, the Archaeological Survey, Provincial Museum of Alberta has investigated a very early complex of archaeological sites in James Pass, immediately east of the Ya-Ha-Tinda Valley, with an age of 10,000 years for the earliest occupation (Ronaghan 1993; Beaudoin et al. 1996). It is within the context of this archaeological background that archaeologists from Parks Canada's Alberta Region initiated a programme of survey, excavation, and resource management of the Ya-Ha-Tinda Ranch (Francis and Magne 1993).

The Ya-Ha-Tinda Ranch is situated approximately 15 km east of the eastern boundary of Banff National Park, just inside of the East Front Ranges of the Canadian Rocky Mountains. Its name (i.e., from the Lakota [Stoney] language: *ya-ha*=mountain; *tinda*=prairie or meadow) describes a rolling grassland meadow surrounded by high mountain ranges. This tract remains one of the



Location of Scalp Creek Threatened Sites Project.

very few unspoiled representatives of the Montane Ecoregion in Alberta. The ranch incorporates approximately one-fifth (i.e., 3,945 hectares or 9750 acres) of the valley floor area of the intermontane Ya-Ha-Tinda Valley. Since 1930, the ranch has been used by Parks Canada to breed, train, and overwinter horses used by the Warden Service of the western Canadian National Parks for backcountry patrol, and it remains the only federally operated horse ranch in Canada. The Scalp and Bighorn Creeks are the principal, perennial, tributary streams within the valley and, along with the Red Deer River, they have formed two broad valley terraces upon which most of the 60 known prehistoric sites recorded inside the boundaries of the ranch are located.

The archaeological sites along the lower valley terrace on the northeast side of Scalp Creek became a source of concern when it was realized that erosion along the landform involved catastrophic events rather than a steady incremental process. Seasonal high water flow cuts into soft, friable late Jurassic sediments along the base of the river terrace causing large, localized areas of slumpage along the top of the landform. With sufficient undercutting and slumpage, whole columns of sediment measuring up to 15 metres in height collapse unpredictably into the valley floor. The eroding landform is approximately 2.5 km long upon which a dozen prehistoric sites are in immediate danger of partial or complete removal. In 1993, these endangered archaeological resources were placed on Parks Canada's National Threatened Sites List.

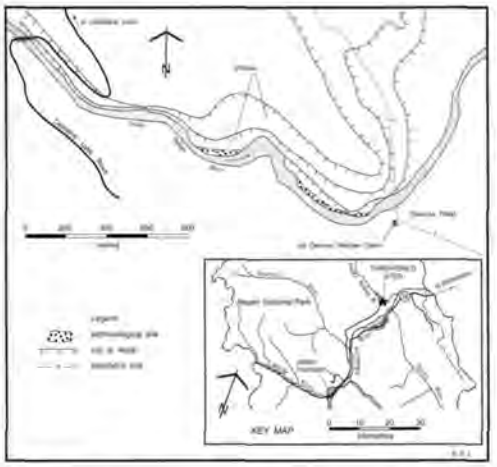
Archaeological sites along the edge of the landform are recognized by lithic artefacts and animal bones eroding out of the topmost metre of the exposed face of the terrace. Following initial archaeological resource impact assessments in 1992, the Scalp Creek Threatened Sites project was designed as a three-year mitigative strategy that was carried out over a 16-week period during the late springs and early summers of 1993, 1994, and 1996. Approximately 50 percent of test units placed at 10-metre intervals along the entire length of the landform produced stratified cultural materials. Seven localities received spatially extensive excavation over the course of the field work.

A common feature of all subsurface investigations is the presence of a well-defined layer of ash that appears as a discrete stratum within the excavation units and along much of the erosion face of the terrace. This is Mazama tephra, dated at 6850 BP, an ash layer serving as a horizon marker that can separate Early Prehistoric from Middle Prehistoric cultural material. Radiocarbon dates derived from below the tephra all pre-date 6850 BP, whilst assays derived from above the ash post-date that temporal marker.

From the most extensively excavated locality, the Gate Site, provisional interpretation of the evidence indicates at least four major components. The earliest occupation at this site is below the tephra layer with a single assay on bone collagen of 9,330±70 (CAMS-19738), within the Early Prehistoric time range of either early classic Plains Alberta/Cody or late Agate Basin/Hell Gap, although no clearly "diagnostic" artefacts were recovered. The overlying ash layer is pocketed in a silty matrix although artefacts and bone are situated only in the silt and not within the pockets of tephra. This second occupation is provisionally assigned an Early Middle Prehistoric date on the basis of a single AMS date on collagen of 7,110±60 (CAMS-12911). Additional radiocarbon determinations are forthcoming.

The third cultural layer overlies the ash layer and includes incomplete projectile points similar to a complete specimen recovered from a similar stratigraphic context farther along the landform.

View of erosion face of river terrace above Scalp Creek, Ya-Ha-Tinda Ranch. The Gate Site is situated at the top of the terrace.



Location of Snake Indian River Threatened Sites Project.

These projectile points are provisionally identified as Salmon River Side-Notched, associated with the Mummy Cave Complex and, thus, of Early Middle Prehistoric date. The fourth and stratigraphically most recent cultural layer at the Gate Site is an association of lithic artefacts with an extensive bone bed consisting of highly processed bison bones. The temporal contexts of these components await forthcoming radiocarbon determinations.

Similar patterns of multi-component cultural and stratigraphic evidence were found at four of the six other sites investigated during the course of the three-year project. At three of the multi-component sites, including the Gate Site, there is material evidence for three additional minor components. Thus, there may be as many as seven occupational episodes within the study area (i.e., four major and perhaps three minor periods of activity). The early occupations along Scalp Creek appear to relate to a continuous cultural tradition with people exploiting the area in a similar manner over a long period of time. A different pattern of site usage is evident in the later occupations, possibly reflective of increased bison hunting.

The ongoing research of Parks Canada archaeologists at the Ya-Ha-Tinda Ranch coupled with the research of the Archaeological Survey of Alberta in the nearby James Pass Meadow (an isolated extension of the Ya-Ha-Tinda grasslands) are bringing into sharper resolution the nature and extent of the earliest human occupations within the Eastern Slopes region of the Canadian Rockies in central Alberta. With substantive evidence dating back 10,000 years, such research has a bearing upon the compelling archaeological question about the early peopling of North America.

View of eroding face river terrace and archaeological site above Snake Indian River, Jasper National Park with test excavation in progress.

The Snake Indian River Threatened Sites Project, Jasper National Park

The Federal Archaeology Office in Ottawa provided funding in 1995-96 for an ongoing threatened sites project in Jasper National Park. Located on the north side of the Snake Indian River, two known prehistoric sites or multiple activity loci are positioned at each end of a 1.25 km-long, bench-like landform, although cultural material is eroding out of several exposures along much of the terrace edge. Marked deflation through wind erosion and hill wash along the edge of the landform is exposing large numbers of lithic artefacts and bone which are being removed from their stratigraphic context.

On the basis of previous subsurface testing and more systematic excavation, there appeared to be several spatially discrete archaeological components within deeply stratified aeolian deposits. Poorly defined and thin stratigraphic conditions predominate the physical context of most known prehistoric archaeological sites in Jasper National Park. Thus, the opportunity of spatial and temporal control over prehistoric archaeological data underscored the urgency of rescuing that information before its irretrievable loss.

Systematic surface collection of artefacts, several subsurface (50 cm by 50 cm) tests, and 12 one metre by one metre excavation units (averaging between 1-1.5 m in depth below surface) were completed at one locality in 1995. Three stratigraphically discrete components or occupations were discernable, the lowest of which appears below an ash horizon identified provisionally as Mazama tephra.

With the completion of four years of archaeological field work at Fort Edmonton, the University of Alberta was in search of a new venue for their archaeological field training credit course for the summer of 1996. Facilitated by staff from the Parks Canada Archaeological Services Unit in Calgary, a partnership was created whereby Jasper National Park would host a field school to be taught by the University's Department of Anthropology in cooperation with Parks Canada archaeologists.

The goal of the field school is to provide a wide range of archaeological field training as well as classroom and laboratory instruction while operating within the Parks Canada policies of ecosystem and cultural resource management. From July 15 to August 21, 12 undergraduate students were introduced to the basic methods of archaeological reconnaissance, surveying, mapping, excavation, and laboratory analyses through practical training at a variety of prehistoric and

historic sites within Jasper National Park. Given the productive results of the 1995 field work, it was decided that the primary focus of training activities would be continuing the excavations begun by the Snake Indian River Threatened Sites Project, focusing on the aforementioned stratified prehistoric campsite (Francis and Hudecek-Cuffe 1996). The physical context of the study area is excellent for teaching the principles of stratigraphic excavation; 15 one by one metre units were excavated, with each student being responsible for their own unit.

Conclusions concerning the number of discrete occupations and their component assemblages await more detailed lithic analysis and correlation with the radiocarbon-dated stratigraphy of the site. Toward that end, one of the graduate student teaching assistants attached to the field school has agreed to utilize the data from this project to serve as the basis for graduate thesis research. This collaborative effort between Parks Canada and the University of Alberta is planned to continue over the next two years. The field school project has provided many benefits to all those involved with this partnership. The field school participants contribute directly to the acquisition of new archaeological information and problem solving which can be applied to the management of archaeological resources. In addition to serving as a vehicle for academic undergraduate degree training and advanced degree research, the field school project is proving to be an effective means to meet the Parks Canada mandate of protecting threatened historically significant heritage resources within Jasper National Park.

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Sharon Thomson

Life on the Edge

The Cultural Value of Disappearing Sites

The name Parks Canada has long been synonymous with an extensive system of National Parks well known for their natural beauty and diversity of wildlife. Less publicized, however, is Parks Canada's role as custodian of cultural resources, both within Canada's National Parks and National Historic Sites. Since the organization's inception over 100 years ago, a variety of policies has been developed to provide guidelines for the management of those cultural resources. These guidelines have traditionally been discipline-specific, depending on the training of the people who produced them. Thus, cultural resources have been managed in accordance with archaeological, curatorial and built heritage guidelines. It wasn't until the early 1990s that the development of an official Cultural Resource Management Policy provided the first agency-wide guidelines for all cultural resources on lands administered by Parks Canada.

These new guidelines provide Parks staff with a means to ensure the protection and presentation of Canada's cultural resources. It also provides a kind of framework to help managers define where the importance of those cultural resources lies and forces them to evaluate proposed actions which would have an impact upon those values. As the CRM policy becomes a part of daily operational decisions, managers are re-examining actions which once would have been taken as a matter of course. In the process, some interesting situations with broader implications have come to light.

One such example involves a small property in rural Saskatchewan, where rapid erosion by the North Saskatchewan River has been exposing cultural resources at the site of a former fur trade post for decades. In 1995, Parks Canada archaeologists were asked to visit the site for the purposes of salvaging any resources in immediate danger and assessing the extent of the resources remaining. In the process, it was discovered that the fort itself has been completely lost to erosion, and that only minimal evidence of historic activity remains. This raises the interesting question of whether a site that has effectively lost its physical cultural resources continues to have cultural value.

Historical Background

Sturgeon Fort, also known as "Peter Pond National Historic Site," is located on the north bank of the North Saskatchewan River west of Prince Albert, Saskatchewan. A cobblestone cairn at the location of the fort commemorates Peter Pond, a Connecticut native who travelled north early in his career and became a notorious figure in the North American fur trade. Built in 1776, this was the first of the posts established by Pond and was occupied by a number of independent traders until its destruction in 1780. The fort occupies a unique place in fur trade history, as it was established at a time when the rivalry for furs between independent traders and the Hudson's Bay Company was intensifying. The first trading post to be constructed on the North Saskatchewan River, it was on the edge of fur trade expansion northwest into an unknown country whose resources were largely untapped.

Local interest in Sturgeon Fort has been high since the fort came to public attention in the 1940s. Several excavations have taken place, the most extensive in 1966 under the direction of Norman Barka. Barka successfully located the subsurface remains of several of the fort's buildings and a rich variety of artifacts related to its occupation, despite its short occupation and the damage which has occurred since its abandonment. Although housed at the College of William and Mary in Virginia since their excavation, these artifacts have recently been repatriated. Their re-analysis, after 30 years, has provided considerable additional insight into Sturgeon Fort's place in the early fur trade history of the northwest.

Excavation units along the North Saskatchewan River at Peter Pond NHS.

The property which is the subject of this discussion did not come under federal jurisdiction by virtue of being the location of a fur trade post. Rather, in 1951 the Historic Sites and Monuments Board of Canada recommended that Peter Pond be commemorated as a nationally significant person. At that time, the board also advised that a monument to Pond be erected at the site of Sturgeon Fort, his first trading post. This recommendation has resulted, over the years, in a significant misunderstanding regarding the focus of the commemoration and the status of the property on which the HSMBC cairn and the remains of the fort are located. Sturgeon Fort itself is not the focus of the ministerial designation, and the property on which it sits has never been designated a National Historic Site. However, soon after its purchase, Parks Canada administrators and HSMBC officials alike began referring to the property in correspondence as a national historic site. This was the perhaps predictable outcome of Parks Canada's traditional concern with real property management and its responsibilities with regard to this particular parcel of land, which included cairn upkeep and grounds maintenance. Thus, as early as 1953, "the Peter Pond cairn" rapidly became "Peter Pond National Historic Site," and the implicit belief in the property's national historic significance was entrenched.

The "National Historic Site" misnomer has, in recent years, had significant implications with regard to Parks Canada's responsibility for the extant cultural resources on this property. Parks Canada's CRM Policy stipulates that steps will be taken to achieve the commemorative integrity of National Historic Sites by both protecting them and ensuring that the reasons for their national significance are communicated to the public. In the process of reviewing the commemorative intent of a number of Saskatchewan sites, the mistaken belief, perpetuated over four decades, that the land surrounding the Peter Pond commemorative cairn was a National Historic Site was revealed. Clarification of the property's status helps to define site administrators' responsibilities with regard to presentation of its extant cultural resources, but leaves the issue of how to deal with the site's impending destruction by the North Saskatchewan River unresolved.

Over the years, longstanding management issues have developed surrounding Sturgeon Fort.

The property on which the commemorative cairn and the remains of the fort are located was bought by the federal government in 1953 for the sum of $50. At the time of its acquisition, the property was 78.8 m deep along its western boundary and 36.4 m deep along its east. Located on a sharp bend in the North Saskatchewan River, the site has been legally surveyed three times since 1951. These surveys indicate that, between 1954 and 1995, 34 m of shoreline were lost, primarily along the western half of the property where erosion is proceeding most rapidly. This rapid shift in the river's position led Norman Barka to speculate that Sturgeon Fort originally stood several hundred feet north of the North Saskatchewan River, and that the remains excavated in 1962 represented only a remnant of the original, which he considered largely destroyed.

Adding to the damage caused by nature, the human damage to Sturgeon Fort has also been significant. Situated just 6 km from a sizeable urban centre, it has proved to be an attractive location for visitors in search of alternative forms of recreation. There is no custodial presence on the site, as it is administered from Batoche National Historic Site, more than an hour's drive away. Consequently, a site caretaker must be retained to clean up large accumulations of garbage (mostly beer bottles) on a regular basis, and repair vandalized fences, gates and signs. The property has also suffered at the hands of local artifact collectors, who cheerfully admit to many enjoyable afternoons at the site with a shovel and, sometimes, a metal detector.

Continuing erosion over the past three decades has resulted in the destruction of even the limited remains which survived in 1962. Systematic testing of the property at 5 m intervals and full-scale excavation along the top of the eroding river bank in 1995 uncovered little evidence of cultural material related to the fort's occupation, yielding only 10 fragments of Native ceramic, a wrought nail, a piece of lead shot, an iron projectile point and 375 small pieces of highly fragmented animal bone. No features, structural or otherwise, were identified, and attempts to locate the palisade at the rear of the fort were unfruitful. Based on the limited cultural remains found, it appears that Sturgeon Fort itself has been entirely destroyed by erosion and that the remaining resources represent a limited activity area outside the fort proper.

The Intangible Qualities of Historic Places

In view of the destruction of Sturgeon Fort and the inevitable loss of the remaining property, one might begin to wonder whether the site has any value remaining as a cultural resource. It is in addressing such questions that Parks Canada's Cultural Resource Management policy prompts us to consider whether the property on which the cairn now sits has "value" quite apart from simply being the location of a cairn commemorating a famous individual. If so, where does the value lie? Not, presumably, in any physical resources present on the site; as has been noted, any structures belonging to Sturgeon Fort proper have been completely destroyed. The handful of bone fragments remaining can hardly be considered representative of the former site or add any more to our understanding of the post than is already known. However, most visitors to our historic sites will acknowledge that many of these places have intangible qualities as well—a kind of spirit of place that helps people identify with the place and appreciate the reasons for its significance. At Sturgeon Fort, one can easily look out over the high banks of the North Saskatchewan River and imagine canoes laden with trade goods rowing into sight after their long and arduous journey from the distribution depots on the Great Lakes. Could this same spirit of place be evoked in another, similar location? Or does the knowledge that the viewer is looking along the same sight lines at the same landscape seen by Peter Pond and his colleagues over 200 years ago add an additional component to the visitor experience? Sensitivity to such considerations is vital in the responsible management of cultural resources, and requires a certain level of knowledge regarding an object or a place's history. In the case of special places, we must be aware of their connections, past or present, to the larger society, rather than viewing them simply as administrative or operational entities.

Sturgeon Fort played a brief but important role in the early North American fur trade. The destruction of the fort by natural processes has raised important questions regarding the intrinsic value of the remaining property. Regardless of peoples' individual responses to these questions, the fact that they are being asked at all is a major step forward in our understanding and treatment of cultural resources. A decade ago, management decisions regarding this property would likely have been based upon little more than the presence or absence of the actual fort remains. With the trend toward a broader, more holistic consideration of what constitutes value, we see that the answers to these questions are not as self-evident as they might once have appeared. By applying this holistic approach on a daily basis to any decisions regarding the cultural resources in our care, we ensure their continuing protection. And by identifying the intangible values of a place as well as the tangible, we are able to provide the public with a more realistic, evocative experience and a greater understanding of its significance.

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Daryl Fedje

Early Holocene Archaeology and Paleoecology on the Northern Northwest Coast

Recent investigations in southern Haida Gwaii (Queen Charlotte Islands) on the northern northwest coast provide evidence of coastal occupation extending to over 9,000 BP (before present) and a model for applying geological evidence to early Holocene site location. This work is part of the multidisciplinary Gwaii Haanas Archaeological Project with archaeology carried out by a team of Parks Canada, Haida and consulting archaeologists; and marine geology and paleoecology carried out by the author and marine geologists from the Geological Survey of Canada. The study area encompassed by this research includes Gwaii Haanas, an archipelago jointly managed by Parks Canada and the Haida Nation, and adjacent areas of Hecate Strait (see map, p. 46). The following is a brief synopsis of the substantive results to date. This draws from unpublished and published sources as well as work in progress. Paleoecology is key to understanding the Early Period (pre-5,000 BP) archaeological record on the Northwest Coast. Quaternary sea levels and environment have been subject to substantial change with significant repercussions to adaptation and site location.

At present, the sea level record for Haida Gwaii is the most detailed available for the outer coast of the archipelago. Recent marine and terrestrial geological and paleoecological investigations in this area show that the character of the area changes significantly during early post-glacial times. From before 13,000 until 10,500 BP the archipelago comprised a large land mass (ca. 3,000 km^2) dominated by broad plains with wide shorelines. Sea level rose rapidly between 10,500 and 9,000 BP resulting in the much smaller archipelago we see today (ca. 1,500 km^2). Modern Haida Gwaii is characterized by a rugged and narrow steep shoreline where the mountains slope directly to the ocean.

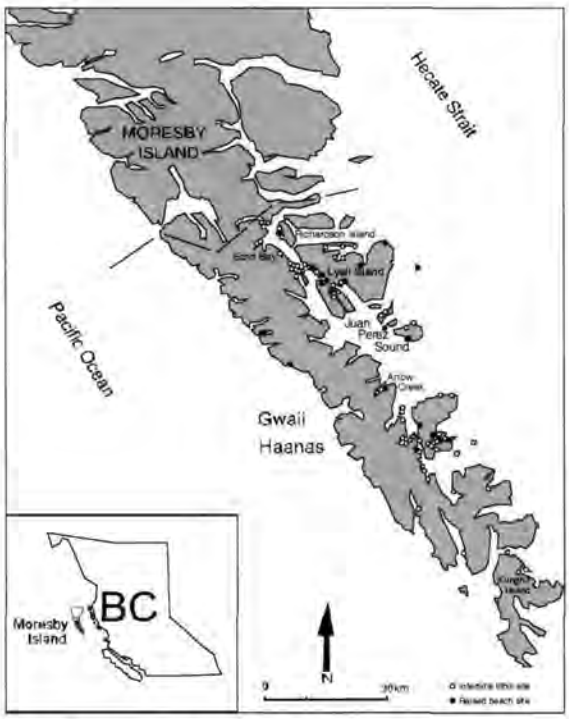
Paleobotanical investigations across Haida Gwaii show that lowland glaciation was over by 14 to 15 BP. Cold tundra-like conditions appear to have ensued from before 14,000 BP until ca. 12,000 BP when conifers began to re-establish. At this time, and until the rapid sea level rise after 10,500 BP, Haida Gwaii climate would have been much more Continental in nature.

The Gwaii Haanas archaeology inventory program included coastal and raised beach survey, preliminary surface collection, and excavation at early Holocene sites. Coastal survey located both early Holocene "paleo-intertidal" lithic sites and many post 2,000 BP site types. Approximately 100 of the ca. 550 archaeological sites now recorded for the coastal zone have been assigned to the Early Period (pre-5,000 BP). Assignation is based on diagnostic artifacts and assemblages and/or dating of associated deposits.

Raised beach site survey employed digital elevation models (d.e.m.) produced from air photography in selection of high potential landforms along paleo-shorelines. The d.e.m. was used to reconfigure the paleo-shoreline and intertidal zone for the ca. 9,000 and 5,000 BP 15 metre marine transgression. The models are accurate to better than 10 m horizontal and 0.5 m vertical. Detailed contour maps plotted at 1:5000 or larger scale from these databases allow very accurate definition of local topography. In order to maximize site recovery, areas selected for modeling were in proximity to concentrations of paleo-intertidal archaeological sites.

Our methods included surface reconnaissance as well as shovel testing to mitigate problems of visibility and preservation with increasing antiquity. In the field (and some impressive terrain) crews proceeded to d.e.m. mapped target areas and used field generated maps, GPS and digital altimeters (accurate to one metre) to locate suitable landforms and keep within the 14 m to 18 m targeted elevation range. Seventeen archaeological sites were located using this method. Four have been radiocarbon dated. At one site stone tools underlay material dated to 3,700 BP. The other three contain one or more components dating between 6,600 to 8,300 BP. Four sites show evidence of microblade technology.

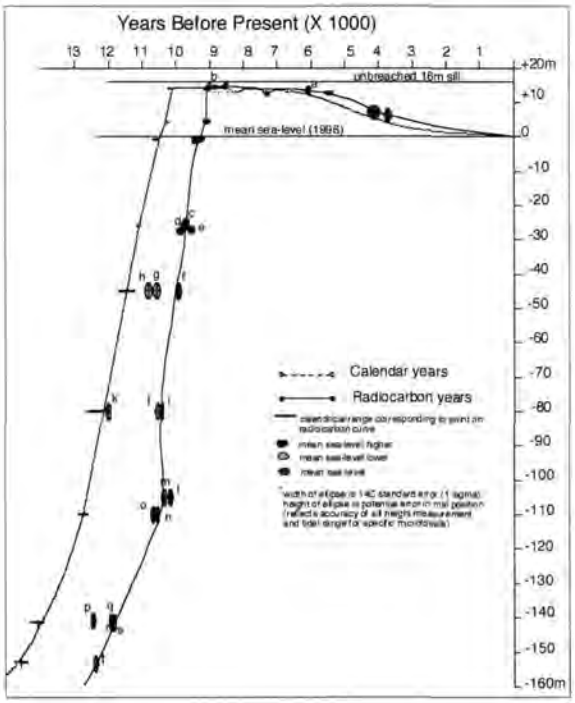
More detailed assessment has been carried out at six sites: Arrow Creek 1 and 2, Echo Bay,



Gwaii Haanas Early Period sites.

Lyell Bay 1 and 2, and Richardson Island. The Arrow Creek sites include an early Holocene estuarine deposit near the modern tidal limit (Arrow Creek 1)and a raised beach locality (Arrow Creek 2).

At Arrow Creek 1, artifacts and organic samples were collected from an exposed section and from two 1 m x 2 m excavations on the immediately adjacent two-metre terrace (Fedje et al 1996a). Artifacts were limited to stone tools and were not very abundant (n<100). Several tools had barnacles attached. Dates of 9,100 and 9,200 BP on these barnacles demonstrate occupation at a time when the ocean was transgressing the present-day tidal limit.



Gwaii Haanas relative sea level curve.

At Arrow Creek 2, a large site of ca. two hectares, tests were excavated on the 15-metre raised beach, producing about 1,000 artifacts, including a large number of microblades and microblade cores. Dating supports occupation from ca. 8,200 to 5,600 BP.

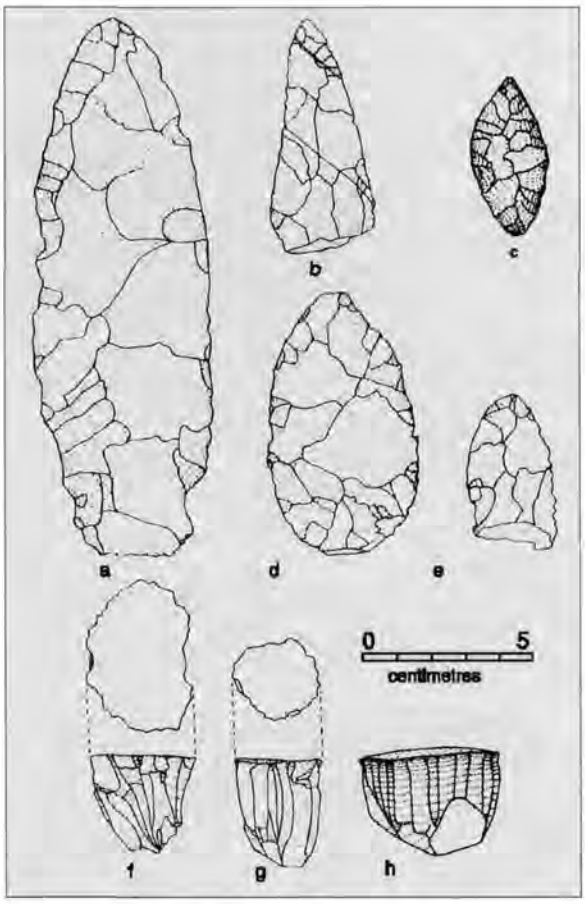
The Echo Bay site appears to be a single component campsite (Fedje et al., 1996b,c). At this site culturally modified sea mammal bone obtained in close association with dense concentrations of stone tools was dated to 9,270 BP. A large number of stone tools including several bifaces, two microblade cores and two microblades were recovered from excavations and systematic surface collections in the intertidal zone. A small faunal assemblage recovered from the excavations includes sea otter, bear and unidentified mammal.

At Lyell Bay, shovel testing and preliminary excavations have been carried out at two sites, each with large numbers of microblades, a few microblade cores and other materials. A date of 7,540 BP was obtained at site 1354T and dates of 6,630 and 8,110 BP for 1355T.

The Richardson Island site includes a deeply stratified campsite on a 15-metre raised beach and a surface scatter (likely largely a secondary deposit) in the modern intertidal zone. The systematic surface collection produced a large lithic assemblage, characterized by large stone tools and microblade cores, most waterworn. Excavation in the intertidal zone produced both waterworn and pristine artifacts, some with shellfish or crustaceans attached which date from 8,500 to 8,800 BP. These data suggest deposition in the subtidal zone during the rapid early Holocene marine transgression (sea level rise). Faunal remains were limited to a whale skull dating to 8,500 BP, a bear tooth and unidentified sea mammal bone.

At the 15-metre raised beach component of the site lithic artifacts were abundant. Cultural horizons date from 9,100 BP at the base of the four-metre deep cultural deposits to 8,500 BP near the top. The artifact assemblage (n>3000) is characterized by abundant microblades and occasional bifaces in the upper levels and a large number of bifaces together with an absence of microblades in the lower levels. Organic remains recovered were limited to charcoal and a few grams of calcined bone, including fish, bird and large mammal.

Preliminary work at these sites enables us to make a strong argument for occupation of Haida Gwaii by 9,300 BP, a time when sea level was rising rapidly towards the Holocene maximum. Our understanding lithic technology for the Early Period record in Gwaii Haanas is incomplete as much is based on field observations and formal



Early Period artifacts from Gwaii Haanas (a, b, c, d, e: bifaces; f, g, h: microblade cores).

analyses are still underway, however, there is tantalizing evidence for a significant change in technology just after ca. 9,000 BP as has been observed elsewhere on the coast).

In concert with the results of a marine geological research, these data suggest the possibility of a much longer record, now drowned, on earlier shorelines. The palynological and geological records show that much of the continental shelf along the Northwest Coast, including the environs of Haida Gwaii was suitable for human occupation by ca. 14,000 BP. The clear survival of archaeological deposits through marine transgression and regression in Gwaii Haanas suggests the possibility of preservation of significantly older coastal occupation sites at depth in western Hecate Strait and terrestrially along the eastern margins of the strait (i.e., the west coast shores of British Columbia) where early post-glacial shorelines are now raised as much as 200 m above the present shore. Elsewhere, Heaton and others have recently discovered a faunal record for nearby Prince of Wales Archipelago of Alaska which spans the last glacial maximum and human remains dating to over 9,700 BP. Knut Fladmark's hypothesis for late Wisconsinan movement of early peoples between Beringia and southern North America via coastal route gains further credence with these data.

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C.J. Taylor

Ninstints Pole Conservation Project

Archaeologists Daryl Fedje and Tina Christianson excavate base of pole. Rolf Bettner photograph.

In September 1995 a joint Parks Canada/Haida team carried out urgent conservation on four standing poles at Ninstints (also known as Ninstints National Historic Site and Anthony Island World Heritage Site) in Gwaii Haanas National Park/Haida Heritage Site in the Queen Charlotte Islands. This involved excavating three mortuary poles and one memorial pole that were in danger of falling over. The three mortuary poles were moved to a vertical position while the memorial pole was supported in its leaning position with log braces.

It is usual to assume that native and institutional approaches to conservation of aboriginal heritage—sites and artifacts—would differ. In the case of Ninstints there was a surprising degree of unanimity about the approach to be taken. Indeed, there was more debate among the Parks Canada side than with the Haida. Some thought that the poles should be left alone to die gracefully. Others wondered about taking a more interventionist approach, replicating the poles for instance. But the Haida seemed wedded to a middle approach: carrying out unobtrusive mediation to keep the place "looking nice."

Part of the reason for this consensus was that a single approach to the conservation of the site had been in effect for the previous 20 years. The site had been a provincial park from 1957 until transferred to the federal government in 1988 and from the late 1970s the provincial museum had carried out a program of site conservation. This program was based on the principle that there should be as little direct intervention to the poles as possible. It was assumed that the poles could not be preserved forever, but that their life could be extended if their environment was changed to keep them dry and unencroached by roots growing into their wood. Consequently, in the 1980s the trees in the village site were removed or pruned. Salal and tree roots that were destroying the poles were removed and the ground around them was drained to keep water away from the base of the poles. Ultraviolet light from increased sunlight destroyed many of the mosses and lichens which grew on the poles, and the bleached exteriors became a hostile environment for further deterioration. As part of its conservation program, the museum began compiling data on the condition of the poles: noting the degree of soundness and taking periodic readings of their lean or inclination.

The conservation program engaged the participation of a number of Haida people from the Skidegate Reserve and elicited widespread support. Haida interested in the conservation of the site such as Captain Gold (Dick Wilson) learned about the principles behind the conservation work from close association with the museum's chief of conservation Richard Renshaw-Beauchamp. Captain Gold remained as the site watchman through the provincial park phase and into the present, continuing to carry out the work initiated by the museum: keeping the long grass away from the poles and clipping tree and salal seedlings. Meanwhile, the larger Haida community came to accept as "natural" the altered landscape of Ninstints.

It was Captain Gold who, in the summer of 1994, alerted Gwaii Haanas to the fact that four of the standing poles were gradually increasing their lean and were in danger of falling over. Once down, the poles would deteriorate much more quickly than if they remained standing.

The final decision to straighten the poles was taken in the summer of 1995 following consultation with the Haida hereditary chiefs. The project was scheduled for two weeks in September. In planning the procedures necessary to straighten the poles, we formed smaller task groups. Richard Renshaw-Beauchamp, now a private consultant, was engaged to provide overall direction for the conservation of the poles. Tucker Brown, a Haida on the Gwaii Haanas staff, took charge of the engineering. Daryl Fedje, Parks Canada coast archaeologist, directed the archaeology preparation. It was Richard's experience that persuaded us that the poles could be manipulated without disintegrating, everyone's worst nightmare. Tucker Brown designed a cage—12' square—to provide a supporting structure for the poles while they were being excavated and to act as a base for our pulley systems that would lift the poles to vertical. Daryl Fedje pondered the unknown—no Haida pole had ever been fully excavated—and fussed over the possibilities of finding human remains, massive boulders or ground water.

The issue of human remains was worrisome because it had caused excavation projects in the past to get stuck on the horns of institutional policy and Haida sensitivity about having their ancestors' bones dug up. In the end this caused scarcely a ripple, even though we were certain of finding some human bones. Because it was undertaken as a joint project, the Haida did not seem overly concerned that their heritage was being trampled by an alien invader. Everyone was curious to see the bottom of the poles and everyone seemed assured that excavated human remains would be treated with reverence. In this regard we were fortunate that Daryl Fedje had earned the respect of the Haida over the previous six years for the seriousness with which he approached Haida culture. When he addressed a gathering of Haida elders the month before the project was due to begin and explained that he expected to find human remains and sought their guidance, the hereditary chiefs expressed their confidence that Daryl would know what to do.

Not knowing the depth of the pole or the size of the boulders placed around its base also caused Daryl concern because he needed to predict the diameter of the hole in order to guide the design of Tucker's cage. The size of the hole would, in turn, affect the digging time. If it was too big, too much earth would have to be screened. Not big enough meant that there would be not enough room to get at the boulders, an operation made more difficult by the lack of machinery on this remote site. In the end Daryl figured on an excavation four feet by four feet.

Daryl estimated that it would take a week for a team of archaeologists to excavate each pole which meant that it would take four weeks to do the four poles. In order to reduce the amount of time in the field we agreed that it would be more efficient to have two archaeology teams working simultaneously. Three Parks Canada archaeologists plus one consulting archaeologist were brought in along with three Haida assistants. Others from the conservation and engineering teams would pitch in when needed.

The earth around the first two poles began to be dug on September 13, 1995. Each pole was supported by Tucker Brown's steel scaffolding. Tripods were set up on the beach to hold the screening boxes with 1/4" wire mesh. Earth and other small material was excavated by trowel and then screened for artifacts using water pumped from the bay by a portable pump. The poles were excavated to their base, about 5' below grade.

The poles were found to have a u-shaped foundation of heavy beach rocks indicating that the poles would have been dragged base forward up from the beach and then slotted into the prepared cavity before being pushed and pulled upright. Smaller rocks and beach gravel would then have been thrown around the rest of the base. Items that were found reflected 19th-century village life: trade goods such as beads, thimbles, cooking pots, chisels and flintlock pistols as well as shells, fish and animal bones. One large stone was in the shape of a wedge, indicating that it may have been a canoe ballast before being placed at the bottom of the pole. Human remains that were encountered, or bones that were likely to be human (assessed on-site by the collective team's experience—we had no comparative collection immediately available) were placed in cedar boxes with soil and offerings, and re-buried at the base of the poles, accompanied by a solemn ceremony.

On average it took about five days to excavate each pole. The three mortuary poles were straightened according to plan. The large memorial pole was left to the last. It was judged to be the most difficult because of its size and the extent to which the base had deteriorated. The digging went extremely well despite the dense midden material on one side of the base. But when the archaeologists exposed the whole base of the pole, it was found to be less sound than we had hoped. The pole could not be raised without risking it collapsing on itself. Instead, we braced it with 20-foot poles cut from beach logs.

All in all, the Ninstints pole straightening project was a remarkable success. We accomplished the immediate objective of conserving the four poles judged to be in danger of falling over. We devised a unique method of handling the poles. The archaeologists uncovered interesting insights into 19th-century Kunghit Haida culture and we achieved an amicable working relationship between Parks Canada and the Haida people in the experiment of co-management on Gwaii Haanas.

C.J. Taylor, a Parks Canada historian based in Calgary, was project co-ordinator for the Ninstints Pole Conservation Project.

Raising the poles at Ninstints. Tucker Brown, left, Richard Renshaw-Beauchamp, centre, and Tom Greene jr., right. Rolf Bettner photograph.

Suzanne Richards and David Hems

Environmental Assessment

A Tool of Cultural Resource Management

Horizontal boring machine in action at Motherwell Homestead.

The most effective means to protect heritage resources is through legislation. In the absence of specific legislation to protect cultural resources *in situ*, the *Canadian Environmental Assessment Act* can be used as a tool towards achieving this goal. This is possible due to two main concepts within the Act. The first is the definition of environmental effects in the Act, which includes a consideration of impacts to cultural heritage. Secondly, the Act requires that environmental effects be considered as early as possible within the planning stages of a project.

The recognition of these factors within the context of a piece of legislation gives added strength in the application of Parks Canada's Cultural Resource Management policy. This is particularly true when applying section 2.3 of the policy "Consideration of Historic Value in Actions Affecting Cultural Resources" and section 3.2 "Planning" as they also now constitute a legal obligation under the *Canadian Environmental Assessment Act*.

The result, when the process is applied correctly, has led to project proposals using alternative technology for implementation, often with the added benefit of reducing project costs. As an example, a horizontal boring machine was used at Motherwell National Historic Site to install water utility lines rather than by trenching. The complex associations and relationships of the varied buried historic components of this site were left undisturbed since the sub-surface boring allowed for installation of the water-utility line underneath the cultural deposits.

The Act has also provided added impetus for incorporating cultural resource specialists into the design phase of projects, often contributing to change in project design to ensure the protection of cultural resources. Archaeological data was gathered specifically to supply information to the landscape architect for the Fort Walsh National Historic Site landscaping project. This was done to ensure that the drainage plan which was to contribute to the protection of historic extant buildings did not impact on the buried 1875–83 foundations of the original Fort Walsh. A similar approach was incorporated into the St. Andrews Rectory landscaping projects, where archaeological and historical data were used to re-design the project to prevent or minimize impacts to resources from an 1843 farm occupation.

Of even greater importance, particularly in a period of fiscal restraint, is how environmental assessment can contribute to an integration of both natural and cultural resource considerations. By looking at cultural and natural resources in a comprehensive fashion, it is often easier to find simpler mitigation measures, that provide protection to all resources, rather than attempting to find separate solutions. At Motherwell National Historic Site, the use of a horizontal boring machine not only minimized impacts to buried cultural resources, but also reduced impacts to soils and vegetation. Similarly, the installation of an irrigation system at the Forks National Historic Site with a special plow allowed for the insertion of the hose to the required depth with minimal disturbances.

An additional benefit of cultural resource protection through the *Canadian Environmental Assessment Act* is the public accountability requirement. *The Federal Environmental Assessment Index*, available in public libraries and on the Internet, provides a convenient mechanism for the general public and/or stakeholders to audit Parks Canada's performance with respect to cultural resource protection at all phases of project work, from planning through to implementation.

Suzanne Richards is Environmental Assessment and Science Officer, and David Hems is Environmental Assessment Archaeologist, Professional and Technical Services, Parks Canada, Winnipeg.

Martin Magne

Co-operative Management of Archaeological Resources
A New Opportunity

One of the burning issues in Canadian archaeology is the multi-facetted relationships that exist among First Nations, archaeological resource management, and environmental assessment. I would like to briefly outine some issues regarding archaeological resources on non-Treaty lands managed by the Federal Government to complement the paper elsewhere in this issue by Ellen Lee concerning archaeology in the context of land claims. Until passage of the *Canadian Environmental Assessment Act* (CEAA) in 1992, Canada did not have legislation protecting archaeological resources on federal lands, other than mention of four specific kinds of sites in the Indian Act. In many ways, Canada still does not have protective legislation in the strict sense. While CEAA legislation can call for assessment of potential impacts to archaeological, palaeontological, and traditional sites in the absence of a CEAA application, intentional damage to an archaeological site on federal land is not a recognized offence.

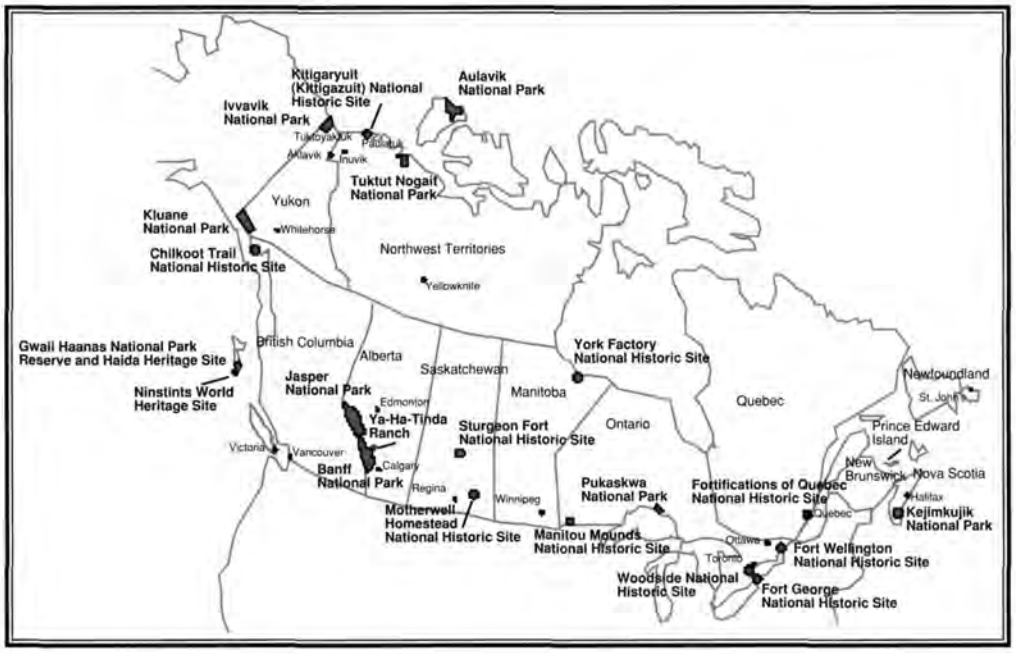
Six years ago, an "Archaeological Heritage Protection Act" for Canada was drafted by the Department of Communications and was very near completion. The draft bill was circulated across the country, and while it had some flaws, it was widely and strongly supported by the professional community. Many archaeologists had lobbied for over two decades to obtain such legislation. The Minister of Communications met with members of the Canadian Archaeological Association, sent a delegate to the national archaeological meetings, and distributed literature nationally announcing the impending completion of the Act.

Any notions of a celebration were short-lived when it became clear that the proposed Act was not in step with contemporary views concerning First Nations[1] heritage, in particular, ownership of their own heritage. At the same time that the United States was preparing and passing the *Native American Grave Protection and Repatriation Act* (NAGPRA), Canada was apparently not ceding ownership to Canadian Native peoples, or at least wanted to consider the broader public benefits and public trust before conceding. The Assembly of First Nations reacted strongly, commissioning studies and circulating a discussion paper entitled *My Grandfather is Not an Artifact*. The Canadian act was never brought to the House.

NAGPRA is one result of Native peoples in the Americas working together to gain increased respect and protection for their culture. Focussing on human remains stored in museums, but extending to grave goods and other items of spiritual significance, NAGPRA requires federally funded institutions to catalogue these collections and notify appropriate Native groups of their existence. The museum and the appropriate Native community then negotiate terms for repatriation of items, reburial of human remains, and ongoing access to items for study.

To some archaeologists, the invasion of cultural perspectives was seen as an

Location of sites discussed in this issue of CRM.



infringement of their intellectual freedom to practice a science. Others wondered where it would all end: would First Nations end up claiming ownership of Beringia? For some, Native Peoples, awareness developed of the kinds of arguments that archaeologists put forward in developing knowledge of "prehistory," an awareness that the scientific world did not always jive with their practical or spiritual worlds. For some a common outcry was that they could not ever admit to having originated genetically in northeast Asia. They were not "Chinese" and will never be. Many were also concerned that the dynamic nature of their culture was not appreciated—Native cultures are not frozen in ethnographic time.

At the present time there remains turmoil, but there are signs of resolution. The proceedings and expectations resulting from ongoing application of NAGPRA in the USA have spilled over the border to Canada. Some First Nations believe that mutually acceptable compromises are best negotiated on a case by case basis, rather than in the polarized atmosphere that can result from national legislation, such as NAGPRA. In Canada, resolution of ownership issues is being dealt with productively despite the lack of legislation. Scientists and First Nations are resolving issues over mishandling of human remains and burial goods; good quality medical history information is being obtained from skeletal material that has benefits for modern populations; many burials are being reburied; spiritual awareness has grown immensely in laboratories and field camps; commercial developers recognize gains in developing trust.

The national scene overall in Canada is encouraging. The Canadian Museums Association has recognized the need for better communication, established very successful working groups and conferences, culminating in the Task Force on Museums and First Nations. It is now the case that every major museum, and a number of smaller ones, have established Native advisory groups that not only consult on collections of sacred objects, but that are also involved in basic museum management and profoundly influence research directions.

For some time now, Parks Canada has been a leader in establishing co-operative management agreements with First Nations. In each of these, archaeological knowledge, collections and training have played an important role. Archaeology often provides a link to traditional cultures, and I believe there are good reasons for this: Native peoples relate immediately to their past, as do all cultures. Archaeology provides more than this obvious linkage, however; its multi-disciplinary nature involves other sciences and humanities. It is labour intensive and encourages team work: it can serve as a training ground for youth and help grant an extended voice to Elders.

CEAA explicitly recognizes the need to have impact assessments undertaken when archaeological sites or Aboriginal traditional use areas are at risk from development. The Department of Canadian Heritage is uniquely placed in government to lend its experience to assisting with appropriate liaisons between First Nations and government agencies in all kinds of national lands: National Parks, Department of National Defence establishments, Department of Transport lands, and so forth.

Many applications of CEAA will require that First Nations be directly involved in managing archaeological resources that are directly related to them. Recent environmental cases in Alberta have witnessed significant interventions by Native people with respect to potential impacts to archaeological and spiritual sites. As a result of an Alberta-Canada harmonization agreement for environmental assessment, the Pine Coulee Reservoir project in southern Alberta required a joint provincial-federal panel to investigate environmental effects of the proposed reservoir. Among its observations and recommendations were several pointed at the demand for greater involvement of Native peoples, at an earlier stage in project planning, even if these kinds of projects are proposed for off-reserve lands.

There are many complicating factors in developing mutually agreed upon policies and practices for protecting and understanding Native cultures of the past and present, and for promoting democratic and humanitarian solutions. To date, most efforts have been a rewarding learning experience for all parties. Archaeological initiatives have both profited from joint efforts and assisted with developing innovative solutions. Future challenges face us indeed. Parks Canada is, with its experience, profile, and mandates of conservation and public appreciation, assisting the nation with proper management of First Nations' cultural heritage.

Note

[1] I use the terms "First Nations," "Aboriginal" and "Native" interchangeably. The Assembly of First Nations is the proper term for the largest political group representing most Native people in Canada. Some groups prefer the term "Native," others are more comfortable with "Aboriginal."

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Ellen Lee

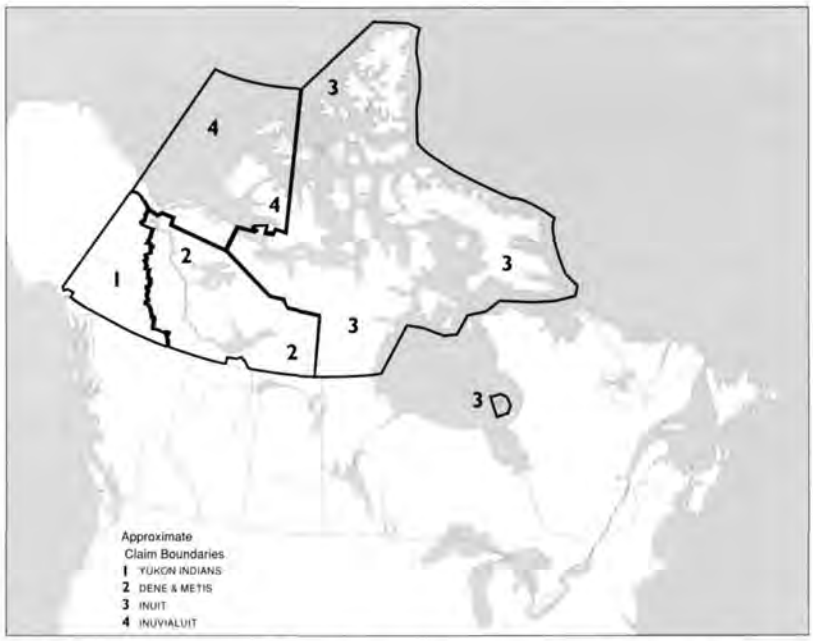
Aboriginal Land Claims and Cultural Resource Management

Comprehensive land claims in Canada are an attempt to conclude agreements with Aboriginal groups so as to resolve the legal ambiguities associated with the common law concept of Aboriginal rights. Based on traditional land use and occupancy by Aboriginal peoples who did not sign treaties and were not displaced from their lands, comprehensive agreements give Aboriginal groups jurisdiction over portions of their traditional settlement areas.

Land claim agreements establish certainty of ownership, stimulate economic development and ensure that Aboriginal groups share in the benefits of development. They encourage Aboriginal People to participate in government, and recognize Aboriginal interests in renewable resource management and environmental protection. Settlements can include financial compensation, rights to surface and sub-surface land, wildlife harvesting, representation on land and water management, and environmental protection boards, and the right to share in revenues derived from natural resources. Land claim agreements define the rights and benefits to which members of a particular group are entitled. In exchange, the beneficiaries agree not to assert Aboriginal rights beyond those specified.

Land claim agreements are negotiated by three parties—a specific Inuit or First Nations group, a provincial or territorial government, and Canada, with the Department of Indian Affairs and Northern Development as the lead federal department. Other federal departments—such as the Department of Canadian Heritage—become involved in land claim negotiations when their mandates are affected. Parks Canada, with a mandate to protect and present areas of cultural and natural significance to all Canadians, has established new national parks and historic sites within settlement areas in co-operation with Aboriginal groups.

Each land claim agreement is individual, although agreements do build on one another in some ways. The 1975 James Bay Agreement with Quebec's Cree, Inuit and Naskapi Peoples was the first negotiated in Canada since the 1920s. Many issues were discussed during negotiations, and the final agreement did not include provisions to recognize and protect heritage resources on settlement lands. The Inuvialuit Final Agreement following in 1984 also did not include cultural and heritage resource management provisions. More recent agreements all have sections dealing with heritage, culture and archaeology, including three that will be discussed in this paper: the Council for Yukon Indians (CYI, 1993), the Sahtu (1993) and the Tungavik Federation of Nunavut (TFN, 1993). The Inuvialuit Final Agreement (IFA) allows for the creation of one new national park on Inuvialuit Settlement Land, and we will consider CRM issues as outlined in the separate agreement to establish Aulavik National Park on Banks Island under terms in the IFA in 1992. There are widely varying solutions being reached with respect to cultural heritage management.



Approximate claim boundaries.

By the time this child joins the seal hunt as a full participant, he already will have developed many of the necessary skills by practicing in stone canoes under the experienced eyes of his community's hunters. Arviat Historical Society photo.

Aboriginal Interests in their Heritage

Although the 1984 IFA has no heritage chapter, the agreement does imply interest in heritage in the statement of land selection criteria that includes "historic Inuvialuit sites or burial grounds." The CYI, Sahtu and TFN agreements strongly and specifically state the importance to the people of their heritage. One objective of the CYI's Heritage Chapter is "to recognize the interest of Yukon Indian People in the interpretation of aboriginal Place Names and Heritage Resources directly related to the culture of Yukon Indian People." The Sahtu Agreement states the matter similarly: "Sahtu heritage resources provide a record of participants use and occupancy of the settlement area through time and are of spiritual, cultural, religious or educational significance to the participants." The TFN Agreement asserts that:

> *The archaeological record of the Inuit of the Nunavut Settlement Area is a record of Inuit use and occupancy of lands and resources through time. The evidence ... represents a cultural, historical and ethnographic heritage of Inuit society and, as such, Government recognizes that Inuit have a special relationship with such evidence which shall be expressed in terms of special rights and responsibilities.*

Role in Decision Making

Generally, decisions about heritage resources on settlement lands are made by management boards with Aboriginal representation that is either equal to government representation or weighted in favour of Aboriginal People. Park-specific boards, such as the Kluane Park Management Board, regional boards, such as the Yukon's Renewable Resources Council, and Territorial boards such as the Inuit Heritage Trust, have been established.

By provisions of the CYI Agreement, the Kluane National Park Management Board eventually will include members from three separate Yukon First Nations who have overlapping traditional territories within the park. The CYI agreement also provides for the creation of the Yukon Heritage Resources Board to advise territorial and federal heritage ministers and to help determine ownership of certain kinds of heritage objects. Conservation and management of heritage resources in the Sahtu Settlement Area includes active involvement by the Sahtu Tribal Council. New national parks in the Sahtu region will each have a management committee to advise the Minister on all park issues. One task of the TFN-created Inuit Heritage Trust is to:

> *...assume increasing responsibilities for supporting, encouraging, and facilitating the conservation, maintenance, restoration and display of archaeological sites and specimens in the Nunavut Settlement Area.*

National Parks in the Nunavut Settlement area all will have cooperative management boards with equal representation appointed by Inuit and Government.

Ownership and Disposition of Cultural Resources

Ownership of heritage resources is discussed in terms of three main categories: artifacts (moveable heritage resources), traditional knowledge/oral histories and archival documents. The CYI has complex provisions about ownership and management of heritage resources based on whose land they are found on and whether or not they are directly related to the culture and history of Yukon Indian People:

> *Each Yukon First Nation shall own and manage Moveable Heritage Resources and non-Moveable Heritage Resources and Non-Public Records ... found on its Settlement Land....*

Furthermore,

> *... each Yukon First Nation shall own and manage ethnographic Moveable Heritage Resources and Documentary Heritage Resources that are not Public Records and that are not the private property of any Person, that are found in its respective Traditional Territory and that are directly related to the culture and history of Yukon Indian People.*

Therefore, if the traditional territory of a Yukon First Nation includes a National Park or a National Historic Site, that First Nation owns ethnographic artifacts related to its culture and history found in the park or site. However, archaeological artifacts continue to be owned by Government in this situation. The agreement provides a mechanism to determine ownership of a heritage resource claimed by more than one Yukon First Nation.

In contrast, the Sahtu Agreement avoids the issue of ownership of Sahtu cultural resources, but does suggest that they should be accessible to the people of the area. The TFN Agreement provides that government and the Inuit Heritage Trust jointly own archaeological specimens from the Nunavut Settlement Area, except those that are public records, any person's private property, or found within areas administered by Parks Canada. Provisions in the TFN concerning ethnographic objects and archival materials focus on management and loans, not on ownership.

Repatriation

Ethnographic material in Canadian museums has become subject to negotiation in land claim agreements. Most northern agreements accept conditions on the return of materials, and acknowledge that repatriation may take a long time.

The CYI Agreement commits government to assist Yukon First Nations in repatriation of artifacts and documents related to their culture and history. The Sahtu Agreement says that artifacts and records related to Sahtu heritage should be returned to the settlement area or to the Northwest Territories, provided that proper maintenance and exhibition facilities and expertise exist there and pledges mutual assistance. The TFN Agreement does not distinguish between materials related and not related to Inuit history. The Inuit Heritage Trust must be involved in decisions about the disposition of archaeological materials and must consent to any long-term alienation of specimens found in Nunavut. The IHT establishes its right to request possession of archaeological and ethnographic materials from the area, and recognizes the principles of maintaining specimens without risk, public and scientific access, including terms and requirements for research or display, and care of specimens.

Research/Archaeological Permits

The CYI, Sahtu and TFN agreements all include provisions for involving Aboriginal Peoples in any development of new legislation about granting research permits. In some cases, research reports must be translated and made available to the Aboriginal community. A Yukon Heritage Resources Board, composed of CYI and government appointed members, makes recommendations on managing artifacts and heritage sites. The Sahtu Tribal Council must be consulted when government formulates policy and legislation that will affect Sahtu heritage resources in the Mackenzie Valley. Permits will not be issued by government for work on Sahtu heritage resources without the Tribal Council's approval, and will specify procedures regarding site protection and restoration, consultation with local communities, disposition of materials extracted, and submission of technical and non-technical reports. The TFN Agreement provides that government and the Inuit Heritage Trust together will develop policy and legislation for a permit system to govern the protection, excavation and restoration, recording and reporting of archaeological sites. Active participation of Inuit in archaeological investigations in Nunavut may be a condition of permits.

Human Remains

Land claim agreements reflect concerns that human remains should be protected and treated with respect. The CYI Agreement calls for government and Yukon First Nations to each establish procedures to restrict access to burial sites and ensure that disturbance of burial sites is halted even on non-settlement lands. The Sahtu agreement provides that a "Sahtu burial site in the settlement area shall not be disturbed except after consultation with the Sahtu Tribal Council and after appropriate measures have been taken to respect the dignity of the site." Human burials are not mentioned specifically in the TFN Agreement, but according to the Aulavik Park agreement, Parks Canada will not permit disturbance of burial sites or human remains affiliated with Inuvialuit or Inuit culture without first consulting the Sachs Harbour Hunters and Trappers Committee and the Sachs Harbour Community Corporation, or without the written consent of the Inuvialuit Regional Corporation.

Archaeologists conducting a survey at the Fall Caribou Crossing, Kazan River, Nunavut, Canada. Photo by Lyle Henderson.

Environmental Assessment

Comprehensive land claim agreements have created environmental impact or development assessment boards composed of Aboriginal and government representatives. The IFA, CYI, Sahtu, and TFN Agreements contain clauses that make impact assessment a part of the process of establishing a new national park or historic site. The Aulavik National Park establishment agreement states that "all programs, procedures, plans, developments and activities proposed for Park lands are subject to the Environmental Impact Screening and Review process in ... the IFA."

Other Issues in Land Claim Agreements

Heritage resource matters do not begin and end with the tangible aspects of culture, that is, with sites, artifacts and documents. Land claim agreements reflect different cultural values by including special provisions about them.

The CYI has a "catch up, keep up" clause that attempts to redress an imbalance in heritage presentation in the Yukon:

> *As the heritage Resources of Yukon Indian People are underdeveloped relative to non-Indian Heritage Resources, priority in the allocation of Government program resources available ... for Yukon Heritage Resources development and management shall ... be given to the development and management of Heritage Resources of Yukon Indian People, until an equitable distribution of program resources is achieved.*

The possibility of returning to traditional place names for "certain lakes, rivers, mountains and other geographic features and locations in the [Sahtu] settlement area" and for "various locations, geographic features and landmarks" in the Nunavut Settlement Area is allowed for in two agreements. The TFN Agreement also safeguards the people's right to continue using archaeological sites in their settlement area as they always have, subject to policy guidelines from the Inuit Heritage Trust. The Sahtu agreement spells out that in new parks established in the settlement area people will be entitled to "continued use of participants camps, cabins and traditional travel routes for the exercise of the harvesting rights," and that Sahtu people might continue to gather flora in new national parks, for "food, medicine, cultural and other personal purposes" and trees for constructing and maintaining cabins and camps and for fuel.

The Aulavik National Park Establishment Agreement has an innovative clause that speaks to the way that Aboriginal culture is presented to the public. It stipulates that the Inuvialuit reserve the right to approve "information concerning Inuvialuit history or culture on Banks Island ... prepared ... for public distribution."

The Future of Land Claim Agreements

Negotiation of comprehensive claims in Canada is a lengthy process even when all three parties are ready. The Nisga'a Agreement in Principle in British Columbia represents that province's first comprehensive land claim, and almost 50 submissions from other Aboriginal groups have been accepted by the British Columbia Treaty Commission. Newfoundland is negotiating two comprehensive claims with the Labrador Inuit Association and the Innu Nation. Of 14 Yukon First Nations covered under the CYI Agreement, five have completed their Band Final Agreements, and more are underway. Some Yukon First Nations will have to negotiate separate settlement agreements with the province of British Columbia as well. Comprehensive claims are being negotiated in Quebec and in the Northwest Territories. Archaeologists working in Canada are following developments in land claim agreements very closely. The way archaeologists do their work, who their work is done for, and who it will be done with, will be affected by land claim agreements already negotiated and signed, and by those in the future.

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Inuvialuit-Parks Canada Partnerships in Heritage

The statutory context for Parks Canada CRM activities within the Inuvialuit Settlement Region (ISR) has been provided by Lee's article (infra.). North Yukon (now Ivvavik) National Park was the first established pursuant to an aboriginal comprehensive claim (DIAND 1984); and subsequent to the 1984 signing of the Inuvialuit Final Agreement (IFA), two national park establishment agreements have been concluded. Lee (infra.) alludes to the 1992 Aulavik National Park agreement (DoE 1992), while the agreement for Tuktut Nogait NP was signed on June 28, 1996 (DCH 1996). Section 8 of the latter speaks to cultural resources, particularly archaeological remains, in detail and based to a certain extent on precedents set by the Aulavik agreement and the Nunavut Comprehensive Claim implementation contract (DIAND 1993). It is indicative of Inuvialuit concerns that this section was one of the last to be finalized during negotiations and the agreement leaves little doubt that they are full partners in management of Tuktut Nogait NP cultural resources.

Aboriginal Heritage Recording in Western Arctic

With John Franklin's observations and illustration of an Inuit coastal settlement in 1826, we have the first European record of ancestral Inuvialuit lifeways (Coates 1979). Subsequent 19th-century observers included a series of Hudson's Bay Company employees and missionaries; the most informative being Roderick Ross MacFarlane, an HBC employee who established Fort Anderson in 1861 (Smith 1984), and the Oblate missionary Father Emile Petitot, who resided intermittently in the Mackenzie Delta and Anderson River region between 1866 and 1872 (Petitot 1983).

The first anthropological research was by an American who visited Herschel Island and the adjacent Yukon North Slope in 1893-94. The Frank Russell Expedition journals are held by the Smithsonian Institution. His ethnographic collections are also held by the University of Iowa, who published his account *Explorations in the Far North* (Russell 1898). Early 20th-century researchers included Stefansson, Mathiassen and Rasmussen of the Fifth Thule Expedition, and Diamond Jenness of Canada's National Museum. Nuligak was the first Inuvialuit voice to be heard in his autobiography (Metayer 1966). Linguistic contributions have been made by Petitot and most recently by Ronald Lowe of Université Laval (i.e., Lowe 1984), working for the Committee for Original Peoples Entitlement (COPE) leading up to the signing of the IFA. Lowe's Uummarmiut, Siglit and Kangiryuarmiut dictionaries and grammars are the standard Inuvialuktun reference works.

Archaeological research in the ISR of the Western Arctic began with the surveys of R.S. MacNeish of the National Museum of Canada in the 1950s (MacNeish 1956). He was followed by no less than seven archaeologists from the same institution; as well as 10 academic researchers from across southern Canada and from Germany, plus the senior heritage managers from the Yukon and the Northwest Territorial governments. Much of the most recent research was supported by the federally funded Archaeology Project of the Northern Oil and Gas Action Plan (Cinq-Mars and Pilon 1991; Pilon 1994). The majority of research within what is now Ivvavik National Park was undertaken by Canadian Museum of Civilization (formerly National Museum) staff prior to the establishment of the park. Likewise, all the acade-

Agnes White (centre) interviews Charlie and Persis Gruben at Kitigaryuit. Photo courtesy of the Inuvialuit Social Development Program.

mic research within Aulavik and Tuktut Nogait National Parks occurred pre-establishment.

The Parks Canada Program

CRM activities in Western Arctic District parks were initiated with Gary Adams' 1987 field survey along the Firth River in Ivvavik National Park. Adams focused on relocating and assessing the condition of previously recorded sites, particularly those reported by MacNeish (Adams 1989). Subsequently, Parks Canada archaeological staff have undertaken inventories along the Thomsen River of Aulavik NP in 1994/95 (Webster 1996) and the Firth River in Ivvavik during 1995; as well as initiating a multi-year multi-disciplinary Inuvialuit site documentation project along the Beaufort Sea coast of the same park.

The Inuvik office was approached first late in 1988 concerning an "Inuvialuit Cultural Study" proposal connected with the development of a management plan for Herschel Island Yukon Territorial Park. By the 1990s, a cost-shared oral history project was initiated under the auspices of the Inuvialuit Social Development Program (ISDP), involving the Yukon Heritage Branch and Parks Canada. Murielle Nagy was contracted to direct this project. While traditional knowledge focused on natural resource harvesting had been recorded by COPE as part of their IFA negotiation research, the Yukon North Slope Inuvialuit Oral History project was the first interview project to attempt wide ranging documentation on former Inuvialuit lifeways. Two seasons were spent in Inuvialuit elder interviewing, and the final synthesis was published by the Yukon Heritage Branch (Nagy 1994a). Later in 1994, Ms. Nagy was contracted by Parks Canada to initiate community consultations in Sachs Harbour relating to an oral history project, in compliance with section 5.02 of the Aulavik NP establishment agreement (Nagy 1994b).

These consultations led to a two-year contract with the ISDP for interviewing elders and archival research directed to recording Inuvialuit subsistence activities on Banks Island and traditional knowledge related to the park area in particular. A major final report and data base including taped interviews, written and photo documents will be completed by mid-1997. Parks Canada has also funded Inuvialuit elder interview projects connected with the Ivvavik coastal project (Fox 1996), with Kitigaryuit (Kittigazuit) National Historic Site (Nasogaluak and Cockney 1996, IRC 1996a,b) and with the Paulatuk Community Archaeology Project (Kirby 1995).

The first is connected with the ongoing Inuvialuit Coastal Heritage Project and was an attempt to augment the substantial Yukon North Slope Inuvialuit Oral History database for the area within Ivvavik NP. Particular emphasis was placed on information related to local place names and former site-specific subsistence activities. These elder interviews will be continued in 1997, focusing on the Inuvialuit sites from Nunaluk Spit, west to the Alaska border. Similar studies have been completed for the Alaskan coastal plain, westward past Kaktovik to the Canning River drainage (Jacobson and Wentworth 1982; Libby 1983). The final products from this documentary project will include enhanced information for the Ivvavik GIS database, a traditional resource management report and an interactive traditional knowledge computer program for school use in the ISR.

Kitigaryuit (Kittigazuit) was designated a National Historic Site in 1978, without consultation with the Inuvialuit peoples. This large former Mackenzie Inuit (Inuvialuit) community had been archaeologically investigated by R. McGhee of the National Museum in 1969 (McGhee 1974), and it was on the basis of his research that the site was recommended to the Historic Sites and Monuments Board of Canada (HSMBC) for designation. The author approached the adjacent modern community of Tuktoyaktuk concerning the site's national status in early 1995, but received a chilly reception. Subsequently, Cathy Cockney of the ISDP office in Inuvik contacted the community and developed an interview project aimed at accumulating all extant oral historical data on the former community of Kitigaryuit, in preparation for a future management plan funding submission to the HSMBC. This resulted in a combined oral history and site mapping project in 1996, involving the ISDP, Community of Tuktoyaktuk, Prince of Wales Northern Heritage Centre (PWNHC) of the Government of the Northwest Territories and Parks Canada staff and funding. Plans are underway to continue this research and documentation project to completion in 1997.

In August 1994, the Community of Sachs Harbour worked with Parks Canada to present a one-week outdoor education program in Aulavik National Park for students from Inualthatuak School. Two elder couples joined the teachers, community member facilitators, an Inuvialuit Communications Society video technician and students from Grades 3 to 9 at a camp on the Thomsen River. A series of half-day activities were guided by Parks Canada staff, including the Aulavik Chief Park Warden, Western Arctic Ecologist and Arctic Archaeologist. Martha and Frank Kudlak, and Lena and Geddes Wolki shared their experiences travelling on the land in a series of personal reminiscences. The proceedings were video-taped and later broadcast on TVNC across the Canadian Arctic. This cost-shared school heritage program was successful to the extent that

Barbara Cameron photographs Angik School students excavating a sod house site near Paulatuk. Photo courtesy of the Prince of Wales Northern Heritage Centre.

other communities approached Parks Canada to assist in developing similar field schools.

One result was the Paulatuk Community Archaeology Project funded by Parks Canada and directed by Margaret Bertulli of the PWNHC during August 1995 and 1996 (Bertulli 1995). Students from Angik School have participated in the excavation of a sod house built by Lester Asisauna in 1933, just north of the present Community of Paulatuk. Rosemary Kirby undertook interviews with Paulatuk elders and produced a report with suggestions for the inclusion of the resulting archaeological and historical information into the local school curriculum (Kirby 1995).

Section 5.06 of the Aulavik NP establishment agreement commits Parks Canada and the Inuvialuit Regional Corporation to making "best efforts to negotiate a (archaeological specimen) custody agreement within five years ..." (DoE 1992). Parks Canada contracted with the ISDP in 1996 to develop a draft agreement applicable to all national parks in the ISR. As part of the community consultation process, representatives from Aklavik, Inuvik, Tuktoyaktuk, Sachs Harbour and Holman travelled to Yellowknife and Winnipeg in February 1996 to meet archaeological collections management specialists and view Western Arctic artifacts at the Prince of Wales Northern Heritage Centre, Manitoba Museum of Man and Nature (HBC collection), and Parks Canada Professional and Technical Service Centre (IRC 1996a). This permitted all parties to fully appreciate the range of conservation and curatorial issues involved in artifact collections management on the one hand, as well as the deep desire for access to heritage information on the part of the Inuvialuit peoples, on the other. The visits proved to be educational and enjoyable for all the participants, including the heritage professionals, to the extent that one Inuvialuit community representative indicated that he would be interested in a career in archaeology were he a little younger. The museum curators were pleased to see the interest and concern shown by the Inuvialuit representatives for the care of Arctic heritage materials. This was expressed subsequently in section 8.4 of the Tuktut Nogait NP establishment agreement wherein the Alberta Museums Association *Standards Practice Handbook of Museums* is referenced in regard to minimum standards for the curation of archaeological artifacts in any future ISR repository. A draft custody agreement will be delivered to Parks Canada by the Inuvialuit Regional Corporation in Autumn 1996.

In 1996, Parks Canada joined with Inuvialuit, GNWT and other federal agencies to sponsor an Aklavik community project entitled *Retracing Inuvialuit Footprints* (IRC 1996b). Two student trips from Aklavik to Kaktovik, Alaska, were organized by Danny C. Gordon and his wife, Annie. The project objective was to familiarize the students with travel and subsistence skills on the land and introduce them to family relations in Kaktovik. Two Parks Canada Inuvialuit staff accompanied the group on the April trip by snowmobile and komatik. In July, the students arrived by boat at Tapqaq in time to witness the second bowhead whale harvested by the Inuvialuit peoples; an unexpected bonus to another successful trip.

The projects described above reflect a growing partnership between Parks Canada and the people of the ISR in the recording and presentation of Inuvialuit heritage. It is a relationship that has developed slowly due to the inter-cultural conflicts of the last century and those between our agency culture and the Inuvialuit during the 1980s (Johnston 1996). There are still differences of opinion and perspective between Parks Canada and the Inuvialuit, and among the Inuvialuit themselves in regard to heritage conservation or cultural resource management activities related to Canada's national parks. There always will be. Only continuous dialogue will ensure the good faith necessary for a quality working relationship, and Parks Canada is committed to this. The recent hiring of Inuvialuit beneficiary Gerry Kisoun will

go a long way to opening and maintaining the lines of communication with the Inuvialuit peoples. The continued hiring and training of beneficiary field staff can only strengthen our CRM regimes in all three national parks.

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Other People's History
Commemorating the Cultures of Yukon First Nations

What is the meaning of commemoration? What do we consider so valuable that we wish to pass on its meaning and even its substance to those following? What values do we wish to pass on? How do we do that? In this paper I would like to try and step outside the historian's paradigm and examine how communities consider commemoration. The issue of cultural continuity is what we are examining here. Cultures generally establish a variety of institutions to perpetuate themselves.

Among the Mennonites, my own cultural group, there is a wide range of ways of doing this. In the past, the primary elements have been place, stories and myths, church, close-knit communities and marriage rules, language and literature. More recently with the diaspora of the group a range of new methods has been added to both replace weakening old ways and to enhance the identity of the group to the larger polis. These include publications, international aid agencies, and museums; there is even a Mennonite National Historic Site in southern Manitoba. These do not entirely replace old ways but are attempts to ensure as many suitable ways as possible maintain these links through time. All these exist to ensure a continuity through time, to connect the present to the past and to provide guidance into the future. Each group will always have a full and dynamic catalogue of these methods in use.

These institutions can generally be broken into three, usually tightly integrated, groups:

- belief systems or religions to nurture and support values;
- teaching or education systems that pass on a set of living skills, reflecting these values.
- icons or stories that sustain and promote a sense of identity, based upon both the above values and sets of skills.

All these groups are firmly based in the community, or are even family-centred activities. And they cover a very broad array of responses. I would like to focus on one feature of the third group, those ways communities or groups commemorate their identity and represent it for outsiders using government institutions. That is, how have or how can Yukon First Nations (Native Americans in USA usage) use national commemoration programs for their purposes. This commemoration of identity includes the protection of signifiers of value defining identity (internal use) and the presentation of these values to others (external use).

Why does a national government institution like Parks Canada get involved in such activities? How does it do it sensitively and helpfully?

WHY—The National Program

The Historic Sites and Monuments Board of Canada (HSMBC), established by the Government of Canada in 1919, exists at a national level to ensure the appropriate commemoration of those places, people and events that make up our national identity. Made up largely of historians and other cultural professionals representing each province and territory and the national cultural institutions, the Board considers public nominations for recognition. The Board advises the Minister of Canadian Heritage of its findings, who then makes a final decision on commemoration. Parks Canada, National Historic Sites Directorate, acts as both the research and support branches of

Carcross-Tagish First Nation "Indian Days." Community planned events like this are a celebration of identity and an important internal form for preserving and passing on cultural identity. Photo by D. Neufeld.

the Board. It is also the manager for the commemoration of those recommendations accepted by the Minister.

Any member of the public, or any government or non-government agency, can and do make nominations for the Board's consideration. The Board can also actively seek nominations to commemorate themes in Canadian history that deserve national attention. Over the last two decades, the Board has striven to balance the commemoration of "under-represented themes." Themes identified under these initiatives include women, ethnic minorities, selected basic industries and First Nations. Support for these initiatives has come from the Government of Canada through the commitment of both financial and staff resources. One supported initiative is the Board's expressed interest in receiving nominations from Yukon First Nations for sites of possible national historic significance.

HOW—the Experience in the Yukon

Parks Canada has developed a two-part program to carry out the Board's initiative in the Yukon. These parts are:

- the communication of the Board's purpose and interest to the Yukon First Nations,
- support for community initiatives in cultural commemoration.

The primary requirement from the perspective of Parks Canada is the provision of information on the Board and its work. This is particularly challenging in the dynamic cross-cultural environment stemming from the negotiation and finalization of the Yukon land claims settlement, essentially a land treaty between First Nations and the federal government. Many aspects of the relationship between Yukon First Nations and both the territorial and national governments are currently being defined—the Board is just another of many government voices trying to make itself heard by the 14 Yukon First Nations.

The cross-cultural character of defining commemoration has also complicated the comprehension of the Board's purpose and intent. In the Yukon, the record of national commemoration has focussed upon the achievements of newcomers, specifically the Klondike Gold Rush and subsequent economic and social development. The First Nations, not surprisingly, perceive the Board and Parks Canada as southern institutions without much immediate relevance to their own objectives. To this point they are not convinced of the usefulness or applicability of these institutions in their cultural continuity.

To address these difficulties, common to several other under-represented groups, Parks Canada sponsored a series of national workshops. These workshops included representatives of groups as well as academics and professionals well-versed with their histories. In both the national and Yukon native history consultations the recommended course of action was clear—the initiation and direction for any commemoration must come from the communities. Academics, especially, were reluctant to take any responsibility for representing the values and identity of the First Nations. Parks Canada consequently, and I can add, reluctantly, shelved ideas for a thematic history, the usual survey of existing literature on any given topic to help focus commemoration. Instead a more diffuse community-based research approach was taken.

Parks Canada support for local initiatives in Yukon First Nation history has evolved from directed works on specific topics to the present community-based projects that explore locally directed objectives. Since 1987, Parks Canada has supported several major community-based native history projects in the Yukon. A brief description of three of these projects and their results provides an indication of the evolution of this program and an indication of the commemorative direction coming from Yukon First Nations.

Parks Canada began work on a research project with the Carcross-Tagish First Nation of the southern Yukon in 1987, as part of the commemoration of Chilkoot Trail National Historic Site. The presentation of the "Indian side of the story" appeared to offer another meaningful perspective on the gold rush passage of the thousands of stampeders travelling through this mountain pass on their way to the Klondike.

The First Nation resisted attempts to begin research work on such terms. From their perspective the gold rush was merely a big, occassionally obnoxious, but ultimately very short camping trip that bulldozed through their area. Rather than the "Indian side" of the whiteman's story, they wished to present their own story, and to serve their own needs. A community-based methodology gradually evolved as both First Nation and Parks Canada sought out common ground through the life of the project. Eventually, the research method and objectives were fit into the community structures—the project involved many community Elders, contributed to the creation of a community Elders' Council, and resulted in the publication of a First Nation account of their life in the region. The final work, built upon the new relationship between the National Historic Site and the First Nation, represents a consensus history of the community. It has become the basis for a variety of projects interpreting the community's history to outsiders. Discussions on the recognition and commemoration of this story in the existing National Historic Site continue.

Burnt Point on the Yukon River just below the abandoned community of Selwyn. Photo by Helene Dobrowolsky/Midnight Arts.

Ivvavik National Park on the Yukon North Slope is the first national park in Canada created as a part of land claim agreement. The park is, in effect, a gift or a shared place from the Inuvialuit to all of the people of Canada. After some initial negotiations a five-year oral history project was initiated in 1988. A community-based partnership between the Inuvialuit and several government agencies, including Parks Canada, it included extensive interviews in Inuvialuktun with community Elders, both onsite and in their villages. Archival research and community donations created a major photo collection of the region. Transcripts were typed and translated and the project anthropologist prepared a list of major topics. These were reviewed by the Inuvialuit Elders who provided additional guidance to clarify their meaning and direction. Finally a summary report was prepared and again subjected to review. Here the community readily took control of the project and effectively applied resources to gather information of value to them. Already used in the schools, the collected information is also presently being analyzed as an expression of Inuvialuit Traditional Knowledge, the cultural equivalent of Euro-American Scientific Knowledge. This traditional knowledge is seen as an important element in the identification and application of appropriate management techniques in the region's co-management environment. This combined management regime will help ensure the recognition and protection of the Inuvialuit cultural values.

Finally, the cultural history of the Kluane National Park Reserve (NPR) has become a part of the Champagne and Aishihik First Nation land claims final agreement. A management plan review of Kluane NPR in 1988 highlighted the need for a native history of the region. The Champagne and Aishihik First Nation, already well advanced into its land claims negotiations, was aggressively developing its own cultural research and resource management capability. They demurred at the prospect of an outside agency working with their elders and having access to their history. The control of their history and its commemoration is an important issue to the community. The First Nation is aware of the need for cultural commemoration and the value of presentation to outsiders, but they wish to control this process. Consequently, Parks Canada, also the federal agency for the fulfillment of aspects of the land claims agreement, negotiated a heritage sub-agreement supporting and describing common interests in regional First Nation commemoration. The First Nation has accepted responsibility for the commemoration of their own culture, including the potential use of Parks Canada as a vehicle for external presentation.

Although each of these three projects have divergent outcomes and operated in very different ways, there are some commonalities apparent from these examples. All three initiatives seek to commemorate Yukon First Nation history, for both internal and external audiences. Parks Canada has attempted to fulfill its mandate, but over the years there have been considerable clarification and rethinking of what that mandate actually is.

On the Chilkoot Trail, the initial focus was the preparation of an interesting, but directly linked aboriginal perspective to non-native history. Gradually, with considerable patience and indulgence by the First Nation community, there was a recognition of another history that needed telling. At present, the National Historic Site exists to represent the gold rush story. Nevertheless, there have been opportunities to work co-operatively with the Carcross-Tagish First Nation to include their history in commemorative programs. The research project was successful largely because it worked with existing community structures devoted to cultural continuity and supported them with new tools and approaches. The First Nation is currently considering whether it wishes to nominate its own history to the Board for possible national designation.

With the Inuvialuit the work has grown from a desire to simply identify and gather information on archaeological sites along the Arctic coast. The richness of the oral accounts provided a much deeper understanding of the Inuvialuit life on the coast and even challenged previous conclusions based solely upon archaeological evidence. Now Park staff and Inuvialuit Regional Corporation resource managers wrestle with the far more challenging question of incorporating the community's Traditional Knowledge, their ingrained values and ways of knowing, into the direct control and management of the resources needed to support the continuity of their culture.

In Kluane NPR, a desire to appropriately present First Nation culture to park visitors has morphed into an agreement to focus land claims settlement funds on enhancing the community's ability to research, preserve and define their own history.

Conclusion

Considering these experiences how close is Parks Canada coming to fulfilling its task for the HSMBC and the Minister of Canadian Heritage? Initial work plans focussed upon the traditional Parks Canada development of a general thematic history and then selecting suitable First Nations' sites for consideration based on this work. This strategy works on a presupposition of historical closure, or at least, the establishment of patterns of cultural expression recognizable by non-members. The Yukon First Nations rejected this approach and have responded by suggesting a more open-ended evaluation of their history. This allows them to initiate and control the commemorative agenda.

For Parks Canada, it means allowing the First Nations to set the speed of their acceptance of new commemorative methods and time to consider the implications of presentation to outside audiences. And the challenges of First Nation commemoration are unlikely to get any easier. Last spring Parks Canada supported the Tron dek Hwech'in First Nation in the organization of a Yukon River Heritage Symposium. The symposium was aimed at getting a number of Yukon FNs to consider a form of national commemoration to protect and present elements of their common riverine heritage. The Elders reflected upon the need for commemoration, stressing the importance of protecting their way of life to preserve their values. At the end of two days there was an informal consensus. Rather than focusing upon any of their fish camps or hunting areas, or even the river itself, the group recommended the permanent protection of the clean water flowing through their lands. This direct connection between commemoration and cultural continuity is a lesson for us all.

What is the goal of the Board and Parks Canada in the commemoration of Yukon First Nation culture? Is it the appropriate presentation of Indian stories or placenames to curious punters? The preparation of yet another publication describing northern ways? Is a Yukon First Nation NHS the ultimate goal? None of these are goals, they are tools available to the community to achieve cultural continuity. To me they are good tools but there are many good tools around and the decision to use them is the First Nations', not Parks Canada's. The goal of the Board and the Dept. of Canadian Heritage is the maintenance and celebration, or commemoration, of identity. And that can only come from the community.

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