U.S. Department of the Interior
Bureau of Land Management

BLM-Alaska Open File Report 57
BLM/AK/ST/95/009+8111+070
July 1995

Alaska State Office
222 W. Seventh Avenue, #13
Anchorage, Alaska 99513

Cultural Resource Inventory In the Bendeleben and Darby Mountains, Seward Peninsula, Alaska

By Howard L. Smith and Janet Vreeman

Cultural Resource Inventory in the Bendeleben and Darby Mountains, Seward Peninsula, Alaska

Howard L. Smith and Janet Vreeman

U. S. Department of the Interior
Bureau of Land Management
Anchorage, Alaska

Table of Contents

Abstract 1
Location and Setting 3
Topography and Hydrography 3
Vegetation 3
Wildlife 4
Prehistory 4
History 5
Ethnography 7
Previous Work 7
Description of Inventory 8
Inventory Design 8
Inventory Methods 9
Locations Surveyed 9
Inventory Results 9
Conclusions and Recommendations 11
Site Evaluations 11
Recommendations for Further Work 11
References Cited 13

Appendix

Appendix 1. Site Descriptions 15

Tables

Table 1. Sites discovered during 1991 inventory and classification of stone structures at prehistoric sites 10

Figures

Figure 1. Area Map 1
Figure 2. Fish River and Tubutulik River drainages 2
Figure 3. A cultural chronology for the Seward Pennsula 3

Cover Photo: Stone tent ring at site BEN-074, upper Boston Creek, Alaska by Janet Vreeman

Table of Contents

Abstract 1
Location and Setting 3
Topography and Hydrography 3
Vegetation 3
Wildlife 4
Prehistory 4
History 5
Ethnography 7
Previous Work 7
Description of Inventory 8
Inventory Design 8
Inventory Methods 9
Locations Surveyed 9
Inventory Results 9
Conclusions and Recommendations 11
Site Evaluations 11
Recommendations for Further Work 11
References Cited 13

Appendix

Appendix 1. Site Descriptions 15

Tables

Table 1. Sites discovered during 1991 inventory and classification of stone structures at prehistoric sites 10

Figures

Figure 1. Area Map 1
Figure 2. Fish River and Tubutulik River drainages 2
Figure 3. A cultural chronology for the Seward Pennsula 3

Cover Photo: Stone tent ring at site BEN-074, upper Boston Creek, Alaska by Janet Vreeman

ABSTRACT

This report documents archaeological inventory conducted by the Bureau of Land Management's Kobuk District on the Seward Peninsula in 1991. The inventory was conducted in a large contiguous block of BLM land comprising parts of the Fish River and Tubutulik River drainages, and was part of an on-going program of base-line inventory for cultural resources. A total of 13 sites was recorded as a result of the inventory, representing prehistoric, historic, and recent periods. Most sites apparently dated to prehistoric times and typically consisted of one or more stone features such as caches or tent rings. These sites most likely represent late prehistoric hunting camps or possibly infrequently used campsites associated with travel from the coast to the interior of the peninsula.

Inventory work conducted in 1991 was part of a continuing effort by the district to assess cultural resources located on public lands. Since the early to mid-1980s, when large tracts of land passed out of BLM management, the district has suffered from a near-total lack of information on the nature and extent of cultural resources for which it is responsible. Responding to this lack, the district developed a set of priorities for carrying out base-line inventory on BLM-managed lands within the district. These priorities were established in the Northwest Management Framework Plan in 1985 and were expanded in the district's Cultural Resource Inventory Plan in 1991. Work done in 1991 represents a continuation of the district's long-range plans to acquire cultural resource base data.

The Bureau strategy for cultural resource management involves an approach based on classifying sites for their most appropriate uses. The Bureau system provides that all cultural resources should be allocated to one or more of the following use categories:

- Scientific Use – This category applies to sites suitable for scientific or historical study using current research techniques. Sites in this category would not be conserved, provided an ap-

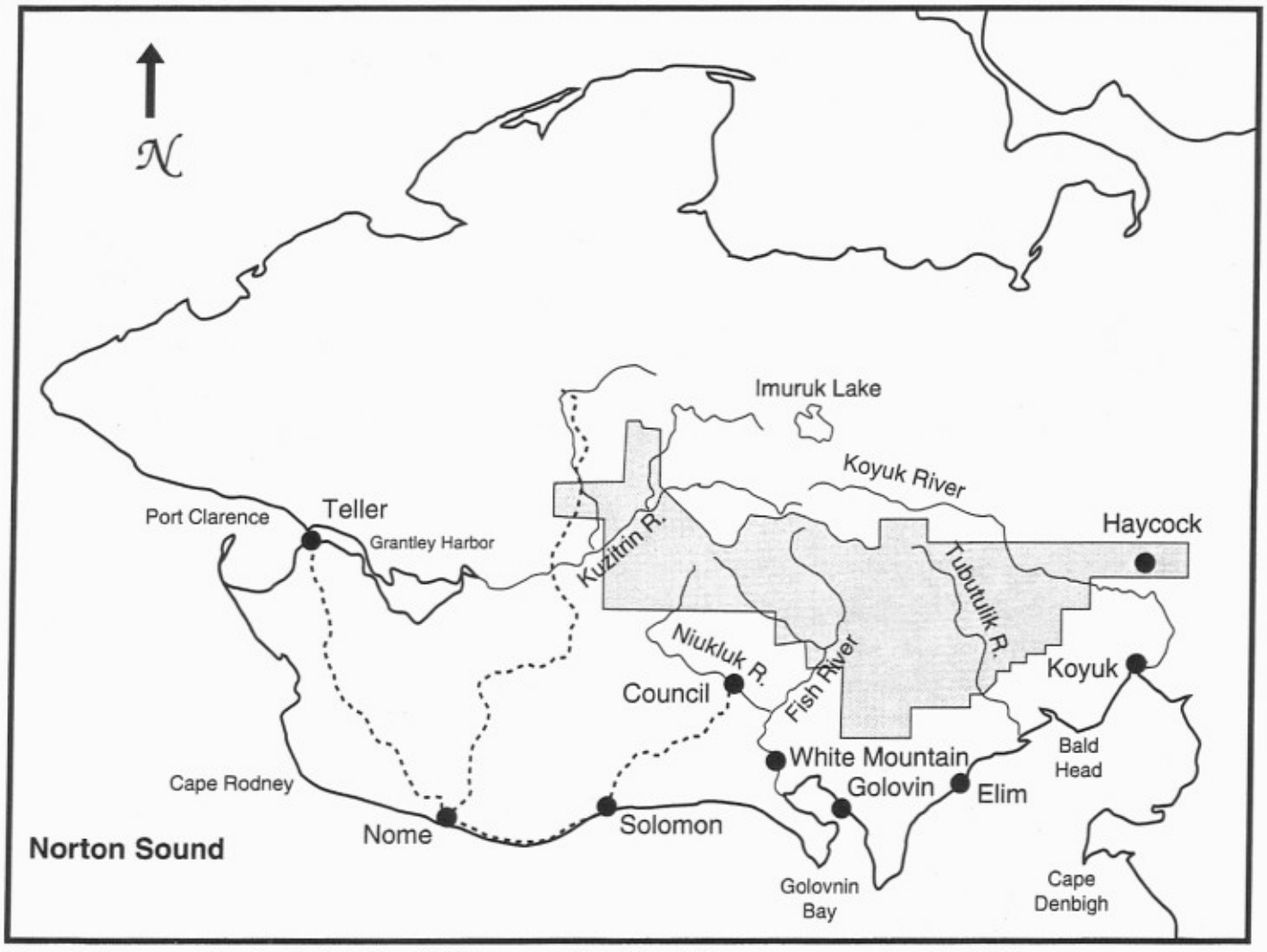

Figure 1. Area map showing the location of BLM-managed lands in which survey was conducted in 1991.

propriate research or data recovery proposal were developed for their use.

- Conservation for Future Use – This category includes sites that are not currently appropriate for scientific use. Sites in this category will be protected from all uses until specified provisions are met in the future.

- Management Use – This category consists of sites considered most useful for controlled experimental study that would result in physical alteration of the site.

- Socio-cultural Use – Sites placed in this category would be those resources felt to be important in maintaining the heritage of one or more social or cultural groups.

- Public Use – this category applies to those sites and resources that are deemed appropriate for interpretation or for use in educational or recreational purposes.

- Discharged Use – This category applies to sites that were originally deemed appropriate for one or more of the above categories, but which no longer qualify for inclusion in that or any other category. A site that has been fully excavated or one that has been destroyed by natural processes might be put in this category.

Evaluation of sites depends on a decent understanding of the types and numbers of sites present in an area. Only with a reasonable idea of what kinds of sites and how many are present can we begin to realistically evaluate appropriate uses for individual sites.

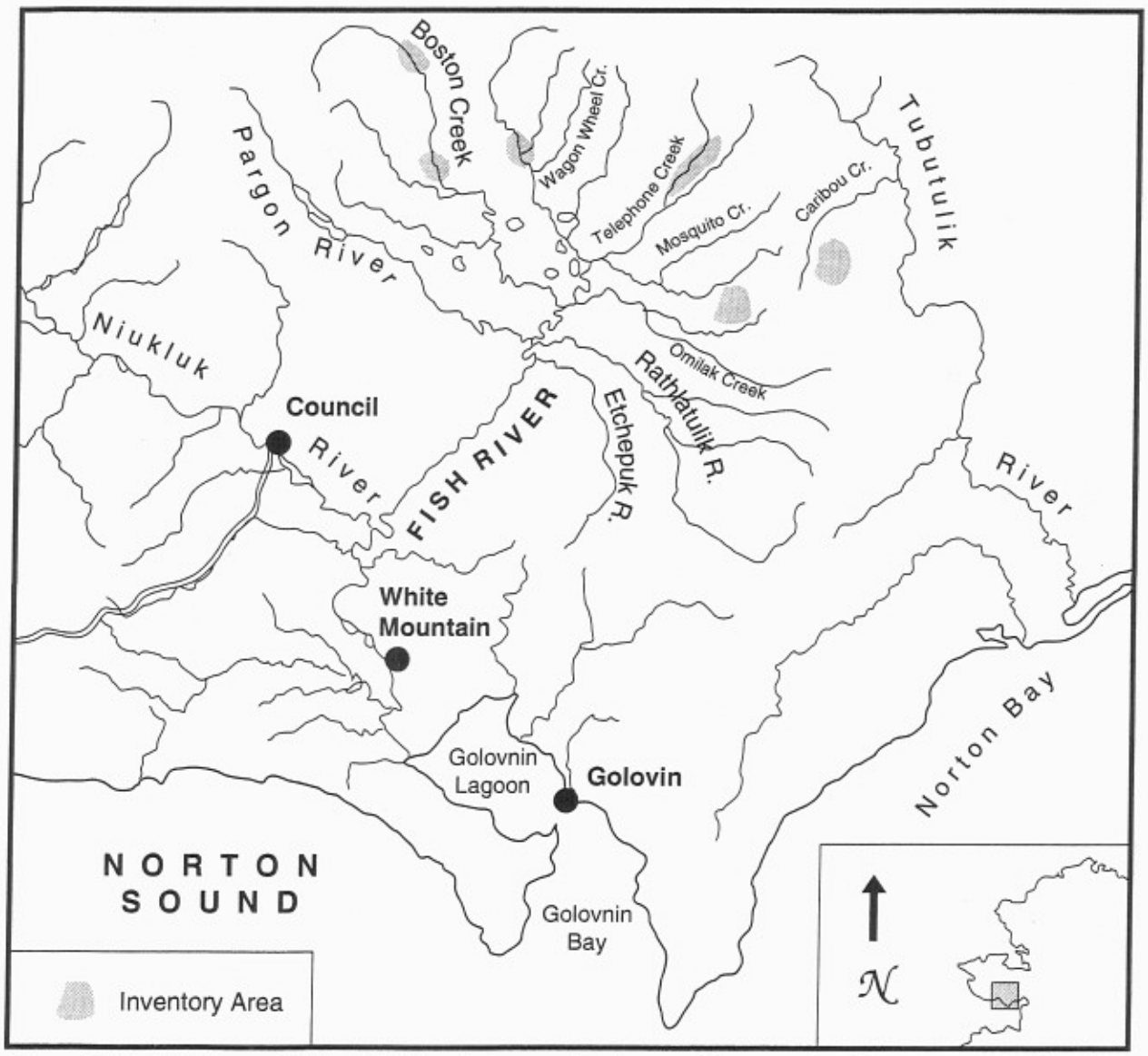

Figure 2. The Fish River and Tubutulik River drainages, showing specific areas where inventory was conducted.

LOCATION AND SETTING

The BLM land surveyed in 1991 is located in the interior of the Seward Peninsula east of the Nome-Council road and south of the continental divide. It is bounded on the north by the Bering Land Bridge National Monument and by state lands north of the Koyuk River drainage. The western boundary is just east of the Nome-Taylor Road. To the east the area extends beyond Haycock to the East Fork of the Koyuk River. It is bounded on the south by a mix of Native and state lands.

The area includes the Bendeleben and Darby Mountains, a large part of McCarthys Marsh, and portions of the Fish, Kuzitrin, Koyuk, and Tubutulik river drainages; it consists of approximately 1.5 million acres of public lands. Figure 1 shows the location of the block of public lands in which inventory was conducted in 1991.

Topography and Hydrography

The majority of the public lands in the eastern portion of the Seward Peninsula are composed of McCarthys Marsh, the Bendeleben Mountains to the north of the marsh, and the Darby Mountains to the east of it. McCarthys Marsh is a low-lying area with little topographic relief and elevations between about 30 and 140 meters. The marsh is characterized by numerous lakes and ponds, and by low-energy streams that meander across the flats.

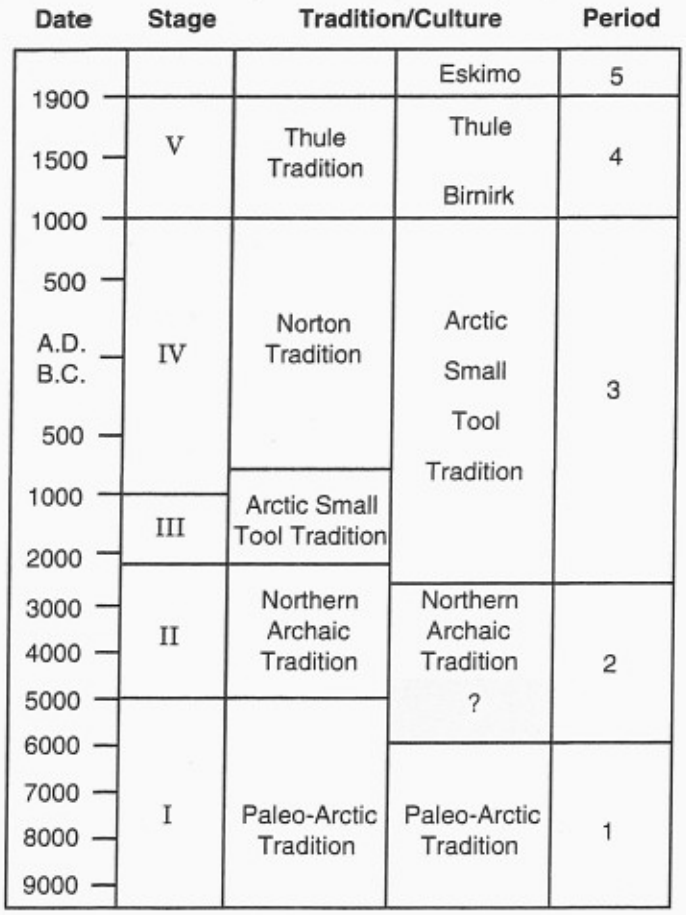

Figure 3. A cultural chronology for the eastern Seward Peninsula. Adapted from Dumond (1984)

The area is drained by the Fish River, which runs in an essentially north-south path from the Bendeleben Mountains on the north. On the southern edge of the marsh, the Fish River passes through a fairly narrow canyon before reaching its confluence with the Niukluk River, which flows south and east, past the village of White Mountain and into Golovnin Lagoon. Major tributaries of the Fish River in the McCarthys Marsh area are the Etchepuk, Rathlatulik, and Pargon rivers, and Boston Creek (Fig. 2). The Etchepuk and Rathlatulik drain the west slope of the Darby Mountains, while the Pargon River and Boston Creek drain from the Bendeleben Mountains.

The Bendeleben Mountains lie on the northern edge of McCarthys Marsh, and run from east to west for a distance of about 110 kilometers. They form the divide between the Kuzitrin and Koyuk river drainages to the north and the Fish River drainage to the south. Elevations in the Bendeleben Mountains range from 125 to nearly 1,220 meters, with most peaks in the range from 600 to 900 meters. The valleys of Boston Creek and the Pargon River form relatively broad, open passes through the Bendelebens to the Kuzitrin drainage to the north and west of McCarthys Marsh. The valleys of Telephone Creek, and to some extent the Fish River, provide passages through the eastern end of the Bendelebens to the Koyuk and Tubutulik drainages on the north and east.

The Darby Mountains are located on the eastern edge of McCarthys Marsh, forming the divide between the Tubutulik River on the east and the Fish River on the west. A relatively small range, the Darbys run north-south for a distance of about 50 kilometers, with elevations ranging from 120 to a little over 975 meters. Most peaks are in the range between 600 and 750 meters.

Vegetation

Vegetation in the area is generally characterized by open tundra, with scattered thickets of shrubs, including dwarf birch (*Betula nana*), willows (*Salix* spp.) and alders (*Alnus crispa*). Forest growth occurs primarily along the larger streams. White spruce (*Picea glauca*), black spruce (*Picea mariana*), and balsam poplar (*Populus balsamifera*) make up this riparian forest growth, along with willows and alders (Jandt and Morkill 1994:1). Other species noted during the course of the archaeological survey included *Dryas* spp., crowberry (*Empetrum nigrum*), blueberry (*Vaccinium* sp.), shrubby cinquefoil (*Potentilla fruiticosa*), and *Arctostaphylos* sp.

Wildlife

Wildlife species known to inhabit the general area include moose, muskrat, otter, grizzly bear, porcupine, and hares. Webb (1986:4) observed a large number of grizzly bears in a short period of time on the Etchepuk River. A number of species of waterfowl have been recorded in the McCarthys Marsh area, which has one of the higher densities of waterfowl breeding pairs recorded in the state (Jandt and Morkill 1994:4).

Moose are a recent addition to the wildlife of the area, and were presumably not a significant subsistence resource in prehistoric times. Although not present in the Bendeleben/McCarthys Marsh area today, caribou were an important subsistence species in prehistory, and were hunted by peoples throughout the Seward peninsula in the nineteenth century (Ray 1964:62).

Webb (1986:2) reports fourteen species of fish within the Fish River system, including four species of salmon, Dolly Varden, arctic grayling, northern pike, and whitefish. He observed spawning pink and chum salmon in late July on the Fish River as far upstream as just below Wagon Wheel Creek, and on most of the major tributaries of the Fish River. More salmon were seen at this time on Boston Creek than in any other location (Webb 1986:7).

Prehistory

For the past twenty to twenty-five years a general cultural chronology has been widely accepted for northern and northwest Alaska. Although there are some unique aspects to the prehistory of the Seward Peninsula, this chronology can nonetheless provide a framework for understanding the archaeology of the area. Anderson (1984) and Dumond (1984) present similar formulations of this sequence, the former for northern Alaska and the latter for the Bering Sea area. Because the boundary between the two areas falls roughly at Nome, both schemes apply to the Seward Peninsula. A composite of the two chronologies is shown in Figure 3. The following discussion applies the organization of Figure 3 to what is presently known of the prehistory of the Seward Peninsula.

Early Periods. All of the early parts of the chronology can be lumped together for the simple reason that they are almost entirely absent from the Seward Peninsula at present. With one exception, sites from Dumond's Stages I and II and Anderson's Periods 1 and 2 are simply not known to occur on the peninsula. The single exception is Trail Creek Caves, where animal bones have been dated to nearly 16,000 years ago. Some archaeologists have interpreted these bones as having been modified by man, but the lack of any associations with unambiguous artifacts has created some doubt about this interpretation. Later levels at Trail Creek contain artifacts that were included in Anderson's original definition of the Paleo-Arctic.

Arctic Small Tool Tradition/Denbigh Flint Complex. For all practical purposes, given the current state of knowledge of the area, the prehistory of the Seward Peninsula begins with the Denbigh Flint Complex, a widespread archaeological assemblage that is the earliest complex of the Arctic Small Tool tradition in Anderson's formulation. Anderson puts Denbigh and the subsequent Choris, Norton, and Ipiutak cultures into the same tradition, while Dumond distinguishes between the Arctic Small Tool tradition and a subsequent Norton tradition. In Dumond's formulation, Denbigh is essentially congruent with the Arctic Small Tool tradition.

The Arctic Small Tool tradition first appears about 2,000 B.C., is widespread in Arctic and subarctic North America, and represents the first extensive occupation of Arctic regions in the New World (Dumond 1984:74).

The Denbigh Flint Complex was first defined from excavations at Cape Denbigh (Giddings 1964), just south and east of the Seward Peninsula, and has also been discovered at the Cape Nome site (Bockstoce 1979:29), Cape Espenberg (Giddings and Anderson 1986:6), and from the Choris type site, just north of the Seward Peninsula (ibid.: 289). Schaaf (1988:72) reports locating a Denbigh site near Kuzitrin Lake in the interior of the Seward Peninsula. At present, this site is all but unique. Certain levels at Trail Creek Caves may also be Denbigh (Anderson 1984:84) but no other such sites are known from the interior of the Seward Peninsula. This is in marked contrast to most of Arctic Alaska, where Denbigh sites are not uncommon in the interior.

There is much we do not know about Denbigh Flint Complex peoples. The number of Denbigh sites that have been excavated is small, and artifact collections have mostly been limited to stone implements and detritus. Nevertheless, the locations of sites and the types of artifacts recovered indicate a people that was at home on the coast and in the interior, and who hunted marine mammals and caribou. At present, known coastal sites appear to be seasonal, probably spring hunting camps. It is presumed that Denbigh peoples spent most of the year in the interior (Giddings 1964:242; Giddings and Anderson 1986:320).

Arctic Small Tool Tradition/Norton Tradition. Following the Denbigh Flint Complex, a people whose

artifacts bear strong resemblances to those of Denbigh occupied western and northern Alaska. As mentioned above, there is disagreement as to the degree of continuity between Denbigh and the subsequent cultures. There is also a difference in the terms applied to them. South of the Seward Peninsula the term "Norton" has been applied to the entire sequence, and the archaeological remains are generally seen as more homogenous than in the north. In the north, the sequence has long been divided into three separate cultures labeled "Choris," "Norton" and "Ipiutak."

Whatever terms are applied, beginning about 1,500 to 1,000 B.C., the area was inhabited by peoples who appear to be more oriented toward the coast and marine resources than were the Denbigh peoples. Large coastal villages have been discovered at Cape Nome and near Unalakleet, and smaller winter settlements are also known from the Choris Peninsula. Smaller sites from these cultures are also known from the northern and northwestern coasts of the Seward Peninsula, but with the exception of one site at Glacial Lake, no sites of Choris, Norton, or Ipiutak affiliations have yet been located in the interior of the peninsula.

We know much more about the peoples of this period than we do about those from the earlier Denbigh/Arctic Small Tool tradition period. Not only have several houses been excavated, but the archaeological record for these peoples is richer and more extensive. They are represented not only by stone implements and their by-products, but also by a range of organic tools and faunal remains, which allow a fuller picture of the lives of the people who made them.

During this period we see the first large winter coastal settlements, and faunal remains and artifact types document the importance of marine resources. This period also sees the first evidence of fishing as an important subsistence activity, although it may become much less important during the later part of the period. Peoples of this period made pottery, and carved implements of bone, antler, ivory and wood. Houses were of several different forms, but were all semi-subterranean pit houses similar in many respects to those known from historic Eskimo sites. Settlements seem to have been mostly in coastal areas, with short-term use of the interior, primarily for the hunting of caribou. In many respects, the peoples of this period appear very similar to modern Eskimo cultures in terms of their subsistence and settlement patterns.

Birnirk. At the end of Norton times there appears to have been a period during which no one inhabited the coastal areas of northwest Alaska, or at least not in numbers sufficient to leave any significant archaeological record. At least one author has interpreted this hiatus as the result of climatic changes that reduced or eliminated salmon runs, followed by a decline in the caribou herds (Bockstoce 1973; 1979:90). Following the break in the archaeological record, a new culture, referred to as Birnirk, appears at scattered locations in northwestern Alaska. Bockstoce interprets the distribution of Birnirk sites as an indication that Birnirk peoples specialized in the hunting of marine mammals, and suggests that improved harpoon technology, especially use of the inflatable float, gave them the ability to exploit these resources more efficiently than Norton peoples (1979:91-92).

Thule. The marine mammal hunters of Birnirk were followed by the Thule culture, clearly antecedent to modern Eskimos, and developing out of Birnirk. In the years after about 1000 AD the people of this tradition spread quickly across Arctic Alaska, Canada, and into Greenland, and also along the subarctic Bering Sea coasts of Alaska. Thule peoples continued the strong orientation toward marine resources that characterized their predecessors. Whaling was an important subsistence activity in many coastal areas, and the hunting of smaller sea mammals and caribou continued. In certain areas, notably the Kobuk River and the central Brooks Range, subsistence patterns developed which were more dependent on inland resources such as salmon and caribou on the Kobuk, and caribou in the Brooks Range.

Over time, local variations developed in groups belonging to the Thule tradition. At the Nukleet site at Cape Denbigh, Giddings excavated remains that document more or less continuous occupation from the twelfth to the eighteenth centuries, and which show a subsistence pattern involving roughly equal reliance on sea mammals, fish, and caribou (Giddings 1964:113-114). Bockstoce (1979:76) hypothesizes a similar pattern at Cape Nome, but with greater use of walrus and less of beluga and birds.

In general, then, it appears that Thule times represent the spread of mostly coastal-oriented peoples into what were largely unpopulated portions of the Arctic and subarctic, followed by adaptation to local conditions. This trend continued until the historic period when contacts with European and American culture initiated major changes in the cultures of the region.

History

The first part of the historic period in and around Norton Sound lasted from about 1778 to 1850, and was characterized by a few short visits by explorers. Captain Cook visited the area in 1778, exploring

Norton Sound, naming several geographic features, and noting a small village, probably at the mouth of the Kwik river just west of Bald Head (Ray 1975:41). Cook's party traded for food with Natives near Bald Head and Cape Denbigh, leaving the area after a stay of about ten days.

Two trips were made by explorers to the Seward Peninsula area in 1791, although neither visited the eastern part of the peninsula. Ivan Kobelev visited the Diomedes, Wales and King Island in June, and an expedition in the charge of Joseph Billings visited Cape Rodney, about 40 miles northwest of Nome, in July of 1791 (Ray 1975:47-55).

One last explorer visited the area during this earliest period of contact. In 1827 Frederick William Beechey's expedition visited Cape Rodney, Port Clarence, and Grantley Harbor. Once again, however, there appears to have been no direct contact with the eastern part of the peninsula.

Contacts involving the peoples of the eastern Seward Peninsula increased after 1850. The search for the missing party of Sir John Franklin resulted in several ships over-wintering at Port Clarence in the years between 1851 and 1854 (Ray 1975:143-148). In 1851 a party traveled overland from the *Plover* at Port Clarence to St. Michael, passing through Fish River, Golovnin Bay and Shaktoolik, and returning by way of Egavik, Shaktoolik, Golovin, White Mountain, Casedepaga, and Kauwerak (Ray 1975:146).

In the years 1865-1867 the attempt to construct a telegraph line across Alaska and the Bering Strait resulted in additional contacts. Although ultimately unsuccessful, the attempt produced the first groups of Euro-Americans to stay more than a few days in the region. Base camp for the telegraph expedition was first established in St. Michael in 1865 (Ray 1975:158). In 1866 a smaller group was established at Port Clarence (Ray 1975:157). This Port Clarence group was under the command of Daniel B. Libby (Ray 1975:164). A party associated with the telegraph expedition is credited by Brooks (1908:13) with the first significant inland exploration, and with the discovery of gold on the Niukluk River.

This initial discovery of gold produced no rush to the north, and in fact appears to have had no immediate effect whatsoever. Indeed, the first attempts to extract minerals from the Seward Peninsula were to have nothing to do with gold or the Niukluk River, although they would occur in the same general area. In 1880 reports of rich silver ores from the Omilak mine near the Fish River were published in San Francisco, and in 1881 a small mining company was formed to exploit them (Ray 1974:142-143). Over the next decade several attempts were made to develop a mine at Omilak, none of them very successful. Only a few hundred tons of ore were ever mined, and some of this never made it to market as a result of ships going astray (Ray 1974:144-145).

One employee of the Omilak silver mine was to play a role in the subsequent history of the region, however. John Dexter began prospecting on the Niukluk River in 1891 and continued in 1892. He established a trading post at Cheenik on Golovnin Bay, and supported at least one other prospecting effort into the Niukluk river (Castle 1912:8-9). Although these various expeditions are reported to have resulted in the discovery of gold, the discoveries were apparently not significant enough to justify further development. Dexter's trading post developed into something of a center for developments in the region, and a Swedish Evangelical Mission and Protestant Episcopal Mission were both established there. In 1896 reindeer herds were established at the two missions, as part of an early distribution of animals to missions by Sheldon Jackson (Stern et al. 1980:26-27).

The discovery of gold which led to the establishment of Council and the beginnings of the rush to the Seward Peninsula, happened in 1898. After 30 years away from Alaska, Daniel Libby returned to the area in 1897, intent on relocating the streams where he had seen gold during his days with the telegraph expedition (Cole 1984:4). With his three partners, Louis Melsing, H. L. Blake, and A. P. Mordaunt, he arrived at Dexter's trading post in the fall of 1897. By spring of the following year, the Libby party had discovered gold on Melsing and Ophir creeks, and with N. O. Hultberg, a missionary from Cheenik; P. H. Andersen, a mission teacher; and Dr. A. N. Kittlesen, assistant superintendent of the reindeer station at Port Clarence, had formed a mining district and staked out the townsite of Council City (Cole 1984:19).

Later in 1898 a group of three men who had met at Council traveled west to the Snake River, where they staked claims that would begin the great rush to Nome. Although there is confusion about who may have first discovered gold in the Nome area, there is no disputing the fact that the first claims to be staked were laid out by the three "lucky Swedes" Jafet Lindeberg, John Brynteson, and Eric Lindblom. These three subsequently enlisted the aid of Dr. Kittlesen and G. W. Price and established the Cape Nome mining district in October 1898. Price, who had been working for Charles D. Lane, a successful California miner and millionaire, had been part of the abortive rush to Kotzebue Sound in 1898, staying behind after Lane returned home, and traveling to Council after hearing of the strike there. He arrived just in time to encounter the three locators from Anvil Creek and to become an active participant in the establish-

ment of the new mining district.

Price informed his employer of the discoveries on Anvil Creek, and the following year Lane arrived and began taking a central role in the development of the Seward Peninsula. His company, the Wild Goose Mining and Trading Company, became one of the major sources of capital for new projects in the region, and the Lane family was involved in several of the mining districts on the peninsula (Smith 1992:6-7). Lane purchased several claims on Anvil Creek (Trezona 1900:17), and in 1900 the Wild Goose Company built the first railroad on the Seward Peninsula, connecting Nome and Anvil Creek.

The Wild Goose Company became a major operator in the Council area also, purchasing claims on Ophir Creek as early as 1901 (Nome Nugget 1901b). By 1903 the company had apparently owned a large block of claims for some time, although there was some uncertainty regarding the legal status of the ownership (Nome News 1903), and by 1905 the company controlled almost all of the property on Ophir Creek (Nome News 1905). The company was responsible for several major developments in the Council area, constructing a wagon road from Council to Ophir Creek and surveying a ditch line as early as 1901 (Nome Nugget 1901a). In 1902 the Wild Goose Company built a short railroad from Council to Ophir Creek (Webb n.d.:64) and constructed and operated most of the ditches in the area (Nome Nugget 1906a). In 1910 the company installed a dredge on Ophir Creek (Nome Nugget 1910) and continued to operate this equipment until at least 1920 (Brooks 1922:63).

Ethnography

Ray (1984:286) identifies the Fish River Eskimo as one of 22 autonomous local groups or "tribes" occupying the Seward Peninsula during the nineteenth century. They were somewhat unique, being one of only two groups whose major winter settlement was not located on the coast. The Fish River group is estimated to have been about 50 people by Ray (1984:295) and about 100 by Koutsky (1981:16). The principal settlement of the group was located near the mouth of the Niukluk River (Koutsky 1981:32), and other year-round settlements are reported to have been located near the confluence of the Niukluk and Casedepaga Rivers, on the Fish River above the confluence with the Niukluk, and on Telephone Creek (Koutsky 1981:34).

The subsistence activities of the Fish River Eskimos were oriented around the harvest of fish, caribou and small sea mammals. Inasmuch as they were an inland group, fish and caribou may have been of particular importance (Koutsky 1981:32), but families did move to the coast in the spring to hunt seals (Koutsky 1981:35; Ray 1984:287). A general annual round for these peoples probably involved fall and winter residence at larger year-round settlements, from which caribou and small animals were hunted and fish were taken through the ice; then movement of at least portions of the group to the coast in the spring for seal hunting; and dispersal throughout the region in small camps during the summer when fishing was the primary activity.

There is very little information specific to the hunting and fishing techniques and technology of the Fish River people, but there is no reason to assume that subsistence practices were radically different from those reported for other groups in northwest Alaska. Fish were taken with a variety of techniques, including sinew nets, fish spears, traps, and hand lines. Species harvested included grayling, Dolly Varden trout, ling cod, whitefish, pike, and salmon (Koutsky 1981:32-37). Small animals such as hares, ptarmigan, and squirrels were snared or shot with bow and arrow, and caribou were intercepted during their migrations or driven into corrals or lakes, where they were shot or speared. Seals were likely taken with harpoons used for hunting around breathing holes and leads in the ice, and nets which were strung below the ice.

PREVIOUS WORK

Archaeological and ethnographic work has been carried out on the Seward Peninsula since the late 1800s, when Nelson (1899) made extensive ethnological collections and documented the material culture and lifeways of the region. In 1926 Hrdlicka briefly investigated archaeological sites near Safety Sound and on Golovnin Bay (Hrdlicka 1943:87; 133), and in 1949 and 1950 Larsen excavated the Trail Creek Caves in the interior of the peninsula. As noted above, there are some questions about the earliest levels from this excavation, but other material is less problematic and has been assigned to Arctic Small Tool tradition, Thule, and late prehistoric Eskimo periods by Larsen (1962:287-289).

Major excavations were conducted by Giddings at Cape Denbigh from 1948 to 1952 (Giddings 1964) and by Bockstoce at Cape Nome in the 1970s (Bockstoce 1979). Giddings' work at Denbigh defined the Denbigh Flint Complex, and also recovered materials of Norton and late prehistoric Eskimo origins. The Cape Nome excavations revealed Denbigh materials overlain by a large Norton settlement. Bockstoce defined two periods of Norton settlement, and concluded that the absence of net sinkers during the later

period may well indicate a period of climatic cooling during which salmon were not available in sufficient numbers to be a major subsistence resource (Bockstoce 1979:88-89). The Bureau of Land Management carried out small-scale excavations at the Nuk site near Safety Sound in 1977, excavating portions of two structures in what remained of a nineteenth century settlement that had been seriously impacted by coastal storms (Smith 1985).

Several survey projects have also been undertaken in the area of McCarthys Marsh and the Bendeleben Mountains. Gal recorded a number of sites along the Koyuk River in 1971 (Gal 1971) and in 1974 Powers surveyed portions of the area that was to become the Bering Land Bridge National Preserve, documenting several sites in the vicinity of Imuruk and Kuzitrin Lakes, just north of the Bendelebens. (Powers et al. 1982). Gal's sites were mostly recent camps, with historic and late prehistoric times also represented. Sites recorded by Powers et al. are predominately prehistoric and consist of tent rings, cairns, hunting blinds, caches and house pits. Among these sites were two villages, at Gosling Cone and Kuzitrin Lake (Powers 1975:30; 34).

In 1985 and 1986 the National Park Service carried out extensive archaeological survey in the Bering Land Bridge National Preserve (Schaaf 1988). As part of this project, they revisited Kuzitrin Lake, mapping sites located by Powers and discovering several more sites. Schaaf describes sites around Kuzitrin Lake as consisting of four settlements, one flake scatter, and five stone structures. Periods represented include Denbigh, late prehistoric Eskimo, and historic (1988, Vol. I:70).

Within the block of BLM-managed lands itself, very little work had been done prior to the 1991 field effort. The Alaska Heritage Resource Survey data base listed only 31 sites for the entire block of ca. 1.5 million acres, and of those, only 18 had been located on the ground. The remaining 13 were reported on the basis of various sources of information, but their locations and the nature of remains present at these sites, if any, have never been verified. Among the different sources of reported information for the area, are sites listed in Ray (1964) and Koutsky (1981) both of which are based primarily on interviews with local informants.

With only two exceptions, the 18 sites that have been surveyed on the ground are sites for which Bering Straits Native Corporation has filed selections under the Alaska Native Claims Settlement Act as cemetery or historic sites. These sites were visited, mapped and described in detail by Park Service or Bureau of Indian Affairs survey crews as part of the conveyance process.

Cultural resource work done by the Bureau of Land Management in this block of lands prior to the 1991 survey had consisted only of a few limited site-specific inventories done to evaluate the impacts of surface disturbing activities such as placer mining or the operation of commercial guide camps.

Of the 31 sites known or reported to occur in the Bendeleben block, 24 are historic, five are prehistoric, and two may be both. Historic sites include several mining camps, roadhouses, a shelter cabin, a cabin that housed maintenance personnel for a mining-related ditch, and sites associated with reindeer herding. Prehistoric sites include several small settlements reported along the Kuzitrin and Noxapaga rivers in the extreme northwestern portion of the block, and a small village site on the south bank of Telephone Creek in the McCarthys Marsh area. Other prehistoric sites reported by Koutsky within the Bendeleben block apparently could not be located on the ground.

DESCRIPTION OF INVENTORY

During the 1991 field season BLM staff surveyed six areas on the Seward Peninsula (Fig. 2). Survey was conducted by a crew of two persons, and was carried out in three separate trips lasting ten days apiece, from July 2 to August 7.

Inventory Design

Because base-line data was the primary goal of the inventory, a detailed research design was not developed. In fact, areas surveyed were determined to a significant extent on the basis of logistical considerations. In a very real sense, the 1991 project was a survey of areas surrounding fixed-wing landing strips in the Bendeleben and Darby Mountains.

The process of choosing areas to explore began with soliciting information from pilots in the Nome area regarding the locations of small aircraft landing strips located on public lands in the general area. After reviewing this information, BLM staff flew a scouting trip to locate these airstrips and evaluate the potential for archaeological or historic sites within walking distance of the strips. Based on this overflight, six locations were selected for survey because of their topographic settings and locations in major valleys in the mountains.

The areas covered at each location were explored by the team on foot after considering likely locations for prehistoric and historic sites. The excursions from base camps were designed to cover maximum ground while being careful not to miss areas that might contain potential resources. The team looked for bare and rocky areas, terraces, bluffs, and other locations where it was possible to identify remains

of human occupation. Locations were explored in areas near water sources and with good views of the surrounding lands.

Inventory Methods

Survey by foot was carried out using a wandering transect, laid out so as to connect locations felt to have potential for site occurrence, with one exception. The one exception was the large terrace at Wagon Wheel airstrip, which was covered utilizing parallel transects spaced 15 to 20 meters apart.

When a feature was discovered, it was examined, catalogued, and located precisely on topographical maps. Field notes were kept containing areas covered, sites discovered, precise measurements, descriptive comments, impressions of the site and of the area; and field interpretations of the inventory, areas covered, and the sites discovered.

Locations Surveyed

Lower Boston Creek is located where the creek leaves the Bendeleben Mountains and flows into McCarthys Marsh. It is accessed by a 300-meter rough airstrip located on a distinct terrace east of Boston Creek. The base camp was set up at the northeast end of the strip. Areas traversed and explored included the terraces and bare rocky areas to the north, south and east of the airstrip, and on the large rocky terraced area across the valley to the west.

Upper Boston Creek is located near the headwaters of Boston Creek in the Bendeleben Mountains. The Boston Creek valley is a low pass in the Bendeleben Mountains from the Fish River drainage in the south to the Kuzitrin drainage in the north and to the upper Seward Peninsula. The area surveyed is accessed by a rough, sloping airstrip on the southeast side of Boston Creek. Base camp was set up at the southeast end of the strip. Areas traversed and explored include the terraces to the north of camp on the northeast side of Boston Creek, and both sides of the valley to the south for about a mile and a half.

Omilak airstrip is located on a west slope of the Darby Mountains, to the east of McCarthys Marsh. It is accessed by a gravel airstrip north of Omilak Creek and south of an unnamed creek on a large, flat, drained rocky area. Base camp was set up in a cabin adjacent to the airstrip. Areas traversed and explored included the valley of the unnamed creek, Omilak Mountain's silver mine and camp to the north three miles, and along Omilak Creek two miles to the southeast.

Wagon Wheel airstrip is on the Fish River about a mile northwest of the confluence of the Fish River and Wagon Wheel Creek in the Bendeleben Mountains. It was accessed by a good 750-meter hard pack rocky airstrip on a large bluff area east of the Fish River. The airstrip is well marked and there is a private cabin at the south end of the runway. The base camp was set up at the north end of the airstrip. Areas traversed and explored include bluffs and terraces on both sides of the river to the south for 2.5 kilometers, bluffs and terraces on the east side of the river to the north for 3 kilometers, the sides of an unnamed creek to the northeast, and the entire rocky airstrip area.

Otter Creek airstrip is located on a ridge between Otter Creek and Decon Creek on the eastern slopes of the Darby Mountains, overlooking Death Valley. It is accessed by a small, rough dirt airstrip. The base camp was set up at the northwest end of the airstrip. Areas traversed and explored include the bluffs and ridges to the north, west, and southwest within 2.5 kilometers of the airstrip.

Windy Creek airstrip is located on the ridge between Windy Creek and Telephone Creek. It is accessed by an open, sloping, rough airstrip. The base camp was set up at the north end of the airstrip. Areas traversed and explored include the valley of Telephone Creek to about 6.5 kilometers southwest of the airstrip, and the mountain top to the northeast of camp.

INVENTORY RESULTS

Prehistoric sites make up most of the resources identified in this survey. These sites could date from early contact periods to several thousand years old. Based on a complete absence of associated historic materials, they are assumed to date to prehistoric periods. However, given the almost complete lack of surface artifacts associated with the sites, this could be a questionable assumption.

The sites are made up of stone tent rings and associated caches and other stone structures. The stone formations were found only along the Fish River and in the upper Boston Creek areas. The stone arrangements are consistently found on bluffs, terraces, and ridges with a good view, and close to water. They are located in valleys with low passes to other major drainages.

Within the ten identified sites are approximately twenty-two stone structures, ranging from one to six per site. The sizes (.6x.9m to 3.6 x 3.9m) and shapes vary (round, oval, rectangular, "U"-shaped, and piles of stones). Stone structures have been roughly classified on the basis of shape and size. Circular, oval, or even sub-rectangular arrangements of stones measuring more than 1.8 to 2.1 meters in at least one direction were generally assumed to be tent rings. Small

circular or oval arrangements of stones measuring .9 to 1.5 meters were assumed to be caches. Larger stone features that gave the appearance of a smaller arrangement with scattered stones around them were classed as caches. Stone arrangements that appeared to be semi-circular or U-shaped were, for want of a better term, classed as blinds or windbreaks. In no case did we encounter the sort of feature described as a blind or windbreak by Schaaf. She depicts a structure of multiple courses of stone, standing perhaps 1 meter high, which she calls a hunting blind (Schaff 1988:73). No structure that we located in the Bendeleben Mountains area had more than two or three stones stacked atop one another.

This classification of features is arbitrary, and to some extent subjective. Nonetheless, it may provide a tentative framework for examining and comparing the sites from the 1991 inventory. The sites and their associated features are shown in Table 1. Detailed descriptions of individual sites, as well as site and feature maps are contained in the appendix.

Two of the sites noted are recent, not dating before the turn of the century, and more likely, within the last fifty years. The reindeer herder's corral (BEN-064) at lower Boston Creek dates to no earlier than the introducton of herding, and reportedly was used in the 1970s. The collapsed structure (SOL-074) along Omilak Creek is of unknown origin, but is not thought to be very old.

A thirteenth site, the Pargon ditch (BEN-083) was observed in the field, but was not mapped or documented to any degree because we had limited time to spend in the area, and because the feature is shown on current U.S.G.S. maps. Subsequently, some historic research was done on this site, and that information is presented as part of this report.

The remaining ten prehistoric sites range from those containing a single blind or wind break to one site that consisted of three tent rings and three associated smaller features. Eight of the ten prehistoric sites contained tent rings, and three had caches. All of the sites with caches also had at least one tent ring. Of the three sites with blinds or wind breaks, two were single-feature sites and one contained only a single other feature.

All prehistoric sites discovered were located either in the upper Boston Creek area or along the Fish River. No prehistoric sites were recorded from any of the other areas where survey was conducted. Five sites were recorded for each of the areas in which prehistoric sites were encountered.

Almost no artifacts were discovered on the surface of the sites or in the small test units that were excavated. The only sites where we encountered any artifacts were BEN-073, where the weathered basal portion of a bone arrowhead was collected, and BEN-082, where a piece of cut antler, possibly a tool handle of some sort, was noted. Only the arrowhead fragment was collected, as it was judged that its location on a known and currently used landing strip, indicated a fair probability that it might be destroyed or removed. The antler piece was photographed and described in the field, and left *in situ*. This is consistent with Kobuk district policy, which dictates that archaeological materials should not be collected unless there is reason to believe they will be adversely affected if left in place.

Table 1. Sites discovered during 1991 inventory and classification of stone structures at prehistoric sites.

Site	Period	Tent Ring	Cache	Windbreak	Other	Total
BEN-064	Recent					0
BEN-073	Prehistoric	1				1
BEN-074	Prehistoric	1	2			3
BEN-075	Prehistoric			1	1	2
BEN-076	Prehistoric			1		1
BEN-077	Prehistoric	2	2	1	1	6
BEN-078	Prehistoric	1	2			3
BEN-079	Prehistoric			1		1
BEN-080	Prehistoric	1				1
BEN-081	Prehistoric	2				2
BEN-082	Prehistoric	2				2
BEN-083	Historic					0
SOL-074	Recent					0
	Total:	10	6	4	2	22

CONCLUSIONS AND RECOMMENDATIONS

Given the near-absence of artifacts, it is perhaps overly ambitious to attempt to assign functions to the sites, but the information in Table 1 does suggest a tentative interpretation, based on our identification and assumed uses of the different types of stone structures. Sites with stone caches would seem to indicate hunting as a primary activity, as such structures were used to store harvested meat until it could be hauled to the village. Sites with tent rings and no caches could have resulted from travel through the area to other locations. Sites with only blinds or wind breaks could indicate short-term shelters created in response to sudden severe weather conditions, or for short-term use by a single individual traveling through the area.

The distribution of prehistoric materials discovered in 1991 may also have some significance for interpreting prehistoric human behavior. It is suggestive, at least, that sites were located only in the Fish River and upper Boston Creek areas. While the survey that was done does not lend itself to any sort of rigorous analysis of settlement patterns, the observed distribution of sites must be the result of something other than proximity to known year-round settlements. Koutsky (1981:34) reports an abandoned village on lower Telephone Creek, and archaeologists working for the National Park Service located this site in 1979. They reported over twenty depressions at the site, including eight that are identified as house pits (Bureau of Land Management n.d.a.). Despite the presence of this site, BLM survey in 1991 located no prehistoric cultural remains on the upper part of Telephone Creek, but did find sites on the Fish River and on upper Boston Creek, two locations that are at least as far removed from the village site as is upper Telephone Creek. Assuming that the village on Telephone Creek and the sites discovered by us are of similar ages, the distribution of tent ring sites would seem to indicate that people were traveling to Fish River and upper Boston Creek because these area were good hunting locations, or because these valleys provided good north-south travel routes through the Bendelebens.

Site Evaluations

The Pargon ditch appears to be eligible for the National Register of Historic Places. Its association with the development of mining on the Seward Peninsula, and with the Wild Goose Mining and Trading Company, which played an important role in the history of mining in the Council area and elsewhere on the Seward Peninsula, appears to qualify the ditch for the National Register under both criteria "a" and "b" (36 CFR 60.4). A cabin associated with this ditch has previously been judged to meet what are essentially National Register criteria when it was certified eligible to be selected by Bering Strait Native Corporation as a historic site (Bureau of Land Management n.d. b). The Pargon ditch should further be classified for scientific and socio-cultural use. Additional on-the-ground documentation, historical research, and perhaps some archaeological excavation of selected areas could contribute important information on the area's history. The fact that the regional Native corporation has selected a site associated with the ditch probably indicates a level of local interest that also justifies classifying the site for socio-cultural use.

At present, prehistoric sites do not appear to be eligible for the National Register. Given the near-total lack of artifacts from these sites, they cannot presently be reliably dated, or even assigned to a definite cultural affiliation. Based on this, they do not appear to qualify under criterion "d," and we therefore have no reason to assume they qualify under any other criteria. If we are able to learn more about these sites, we should re-evaluate their eligibility to the National Register.

All prehistoric sites discovered in 1991 should be classified for scientific use. At the present time they do not appear to be logical candidates for any of the other use categories, with the possible exception of socio-cultural use, and there is a clear need to try to learn more about these sites. These considerations argue for placing them in the scientific use category.

Recommendations for Further Work

Presently, much of the McCarthys Marsh, Bendeleben area has been selected by the State of Alaska. Should this area remain in BLM management, the following additional work should be done to build on the results of the 1991 survey.

1. Additional inventory should be carried out on Boston Creek and Fish River. The purpose of this work would be to determine if more sites are present along other portions of the streams, or are sites just distributed in and around the areas where they were located in 1991. Answering these questions might help determine what behaviors were taking place at the sites.
2. Additional inventory should be conducted along the Pargon River to determine if sites similar to those located on Boston Creek and the Fish River are also present in this area. At the same time, additional documentation of the Pargon ditch could be obtained. Knowing more about the distribution of prehistoric sites could help us try to determine what resources were being harvested from these sites.

3. Inventory should be carried out on the lower stretches of tributaries to the Fish River, such as Boston Creek and the Pargon River. These areas were not accessible to us in 1991, given the type of access we utilized. The presence of a larger village site on Telephone creek raises the possibility that similar sites may be located on the lower portions of other tributaries.
4. One or more of the sites located in 1991 should be tested to determine if information can be obtained to better date the sites and to determine cultural affiliation. Very limited testing at the time of discovery did not encounter artifacts or datable charcoal, but testing was extremely limited. More extensive testing could possibly provide the information needed to learn more about the sites, and could also reveal additional structures at the sites.

REFERENCES CITED

Anderson, Douglas D.
1984 Prehistory of North Alaska. In Handbook of North American Indians, Vol. 5: Arctic, ed. by D. Damas, pp. 80-93. Smithsonian Institution, Washington.

Bockstoce, John
1973 A Prehistoric Population Change in the Bering Strait Region. Polar Record 16(105):793-803.
1979 The Archaeology of Cape Nome, Alaska. University Museum Monograph 38. The University Museum, University of Pennsylvania, Philadelphia.

Brooks, Alfred H.
1908 Development of the Mining Industry. In The Gold Placers of Parts of Seward Peninsula, Alaska by A.J. Collier, F.L. Hess, P.S. Smith and A.H. Brooks, pp. 10—39. United States Geological Survey Bulletin 328. U. S. Government Printing Office, Washington.
1922 The Alaska Mining Industry in 1920. In Mineral Resources of Alaska: Report on Progress of Investigations in 1920, by Alfred H. Brooks et al., pp. 7-67. United State Geological Survey Bulletin 722. U.S. Government Printing Office, Washington.

Bureau of Land Management
n.d. a Case File, Historic Place Selection FF022894.
n.d. b Case File, Historic Place Selection FF022889

Castle, N.H.
1912 A Short History of Council and Cheenik. The Alaska Pioneer Vol. I(1):8-14.

Cole, Terrence
1984 Nome: City of The Golden Beaches. Alaska Geographic #11. Alaska Geographics Inc., Anchorage

Dumond, Don E.
1984 Prehistory: Summary. In Handbook of North American Indians, Vol. 5: Arctic, ed. by D. Damas, pp. 72-79. Smithsonian Institution, Washington.

Gal, Robert
1971 Archeological Investigations in the Koyuk River Region, Alaska, 1971. Ms. on file, Bureau of Land Management, Fairbanks.

Giddings, J.L.
1964 The Archaeology of Cape Denbigh. Brown University Press, Providence.

Giddings, J.L. and Douglas D. Anderson
1986 Beach Ridge Archaeology of Cape Krusenstern. Publications in Archaeology 20. National Park Service, Washington.

Henshaw, Fred F.
1910 Water Supply Investigations in Seward Peninsula in 1909. In A. H. Brooks et al, Mineral Resources of Alaska: Report on Progress of Investigations in 1909, pp. 372-418. United States Geological Survey Bulletin 442. U. S. Government Printing Office, Washington.

Hrdlicka, Ales
1943 Alaska Diary. The Smithsonian Institution. Jaques Cattell Press, Lancaster.

Jandt, R.R. and A.E. Morkill
1994 Waterfowl Production on the Central Seward Peninsula, Alaska: Final Report. BLM-Alaska Open File Report 52. U.S. Department of the Interior, Bureau of Land Management, Alaska State Office, Anchorage.

Koutsky, Kathryn
1981 Early Days on Norton Sound and Bering Strait: An Overview of Historic Sites in the BSNC Region. Vol. III: The Nome, Fish River, and Golovin Areas. Occasional Paper No. 29, Anthropology and Historic Preservation, Cooperative Park Studies Unit. University of Alaska, Fairbanks.

Larsen, Helge
1962 The Trail Creek Caves on Seward Peninsula, Alaska. Proceedings of the 34th International Congress of Americanists, pp. 284-291.

Leedy, John D.
n. d. Nome's Advent as a Permanent Mining Field. Chapter VII in Seward's Land Of Gold, by L. H. French. Montrose, Clarke & Emmons, New York.

Moffit, Fred H.
1906 Gold Mining on Seward Peninsula In Alfred H. Brooks et al, Report on Progress of Investigations of Mineral Resources of Alaska in 1905, pp. 132-144. United States Geological Survey Bulletin 284. U. S. Government Printing Office, Washington.

Nelson, Edward William
1899 The Eskimo about Bering Strait. Eighteenth Annual Report, Bureau of American Ethnology. U.S. Government Printing Office, Washington.

Powers, Wm. Roger
1975 1974 Chukchi-Imuruk Archaeological Survey, Final Report. Ms., Universitv of Alaska, Fairbanks.

Powers, Wm. R., J. A. Adams, A. Godfrey, J. Ketz, D. Plaskett, and G. R. Scott
1982 The Chukchi-Imuruk Report: Archaeological Investigations in the Bering Land Bridge National Preserve, Seward Peninsula, Alaska, 1974 and 1975 Cooperative Park Studies Unit, Occasional Paper No. 31, University of Alaska, Fairbanks.

Ray, Dorothy Jean
1964 19th Century Settlement and Subsistence Patterns in Bering Strait. Arctic Anthropology 2(2):61-91.
1974 The Omilak Silver Mine. The Alaska Journal 4(3):142-148.
1975 The Eskimos of Bering Strait, 1650-1898. University of Washington Press, Seattle.
1984 Bering Strait Eskimo. In Handbook of North American Indians, Vol. 5: Arctic, ed. bv D. Damas, pp. 285-302. Smithsonian Institution, Washington.

Schaaf, Jeanne
1988 Bering Land Bridge National Preserve: An Archeological Survey. Vol. I. Research/Resources Management Report AR-14. Alaska Region, U.S. National Park Service, Anchorage.

Smith, Howard L.
1985 Excavations at the Nuk Site (SOL-O02). In Current Views on Late Prehistoric Cultures in Alaska – A Symposium. Alaska Historical Commission Studies in History No. 165. Alaska Historical Commission, Anchorage.
1992 Nome River Water Control Structures. Ms. on file, Kobuk District, Bureau of Land Management, Fairbanks.

Stern, Richard 0., Edward L. Arobio, Larry L. Naylor and Wayne C. Thomas
1980 Eskimos, Reindeer and Land. Bulletin 59, Agricultural Experiment Station, School of Agriculture and Land Resources Management. University of Alaska, Fairbanks.

The Nome Daily Gold Digger
1908 Mining Edition. The Nome Daily Gold Digger, October, 1908, Nome, Alaska.

The Nome News
1903 File Suits for $300,000. The Nome News, September 15, 1903, Nome, Alaska.
1905 Have Been Very Busy. The Nome News Mining Edition, October 13, 1905, Nome, Alaska.

The Nome Nugget
1901a News from Council. The NomeNugget, October 1, 1901.
190lb Winter Work on Ophir Creek. The Nome Nugget, November 2, 1901.
1903 New Ditch. The Nome Nugget, August 5, 1903, Nome, Alaska.
1906a Ditches of Council District. The Nome Nugget, Mining Edition, June 11, 1906, Nome, Alaska.
1906b Seward Peninsula Ditches. The Nome Nugget Mining Edition, June 11, 1906, Nome, Alaska
1910 Wild Goose Company Enters Dredging Field. The Nome Nugget Mining and Dredging Edition, October, 1910, Nome, Alaska.

Trezona, C.E.
1900 Cape Nome and the Northern Placer Mines. Denny-Coryell Co., Seattle.

Webb, Joe
1986 Fish River (Seward Peninsula) Fish Inventory. Ms. on file, Kobuk District, Bureau of Land Management, Fairbanks.

Webb, John Sydney
n.d. Scrapbook. Alfred Hulse Brooks papers, University of Alaska Archives.