ARCHAEOLOGICAL RESOURCES

IN

WRANGELL-ST. ELIAS
NATIONAL PARK and PRESERVE, ALASKA

An OVERVIEW and ASSESSMENT

Resources Report NPS/ARRCR/CRR-98/32

Front cover: "Start from Alaganik" illustration from Allen 1887.
Athapaskans in traditional canoes; traditional dwellings in the background.

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An Overview and Assessment

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February 1998

U.S. Department of the Interior
National Park Service, Alaska Region
Alaska Support Office, Cultural Resources Team
2525 Gambell St., Anchorage, Alaska 99503-2892

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Errata for *Archaeological Resources in Wrangell-St. Elias National Park and Preserve, Alaska, An Overview and Assessment,* February 1998

P. iv, under the subheading "Appendix," "A1.1 Native traditional places and late prehistoric sites in the WRST area, (page) 69" **should read** "A1.1 Traditional inland places in the vicinity of WRST, (page) 69." Also under the same subheading, "A1.2 Traditional inland places in the vicinity of WRST, (page) 72" **should read** "A1.2 Native traditional places and late prehistoric sites in the WRST area, (page) 77."

P. 8, the next to the last paragraph: ". . . and birch (*Betula*) Young, Vegetation of Land-Bridge Buringia." **should read** ". . . and birch (*Betula*) (Young 1982)."

P. 22, the second paragraph: " . . . where game animals appeared regularly (*Fagan, Eskimos and Aleuts).*" **should read** " . . . where game animals appeared regularly (Fagan 1987)."

APPENDIX

P. 65, the third sentence in the last paragraph: "Table A1.1" **should read** " Table A1.2."

P. 66, the first sentence in the first paragraph: ". . . listings . . . Tables A1.1 and A1.2 are not . . . " **should read** " . . . listings . . . Table A1.1 are not . . . "

P. 66, the first sentence in the second paragraph: "Tables A1.2 and A1.3" **should read** "Tables A1.1 and A1.3."

Pages 69-71: The table title "Table A1.1" **should read** "Table A1.2" and becomes pages 77 - 79.

Pages 72-79: The table title "Table A1.2" **should read** "Table A1.1" and becomes pages 69 - 76.

P. 87, Figure A1.2 caption: Add the following information: Sites 174 through 231 are a continuation of the site number sequence from Figure A1.1, designating important sites in the vicinity of the WRST boundaries. The information presented in Figure A1.2 is derived from *Handbook of North American Indians,* Vol. 7, 1990, Figure 1, p. 204. The original information does not include names for prehistoric and early historic sites that were occupied before 1987. Site numbers 12 through 41 on Figure A1.2 correspond with the HNI Vol. 7 named and numbered sites that were occupied in 1987.

BIBLIOGRAPHY

P. 100, Dumond, D., 1981 . . . **should read** "1981 Archaeology on the Alaska Peninsula: The Naknek Region, 1960 - 1975. *University of Oregon Anthropological Papers, No. 21.* Eugene."

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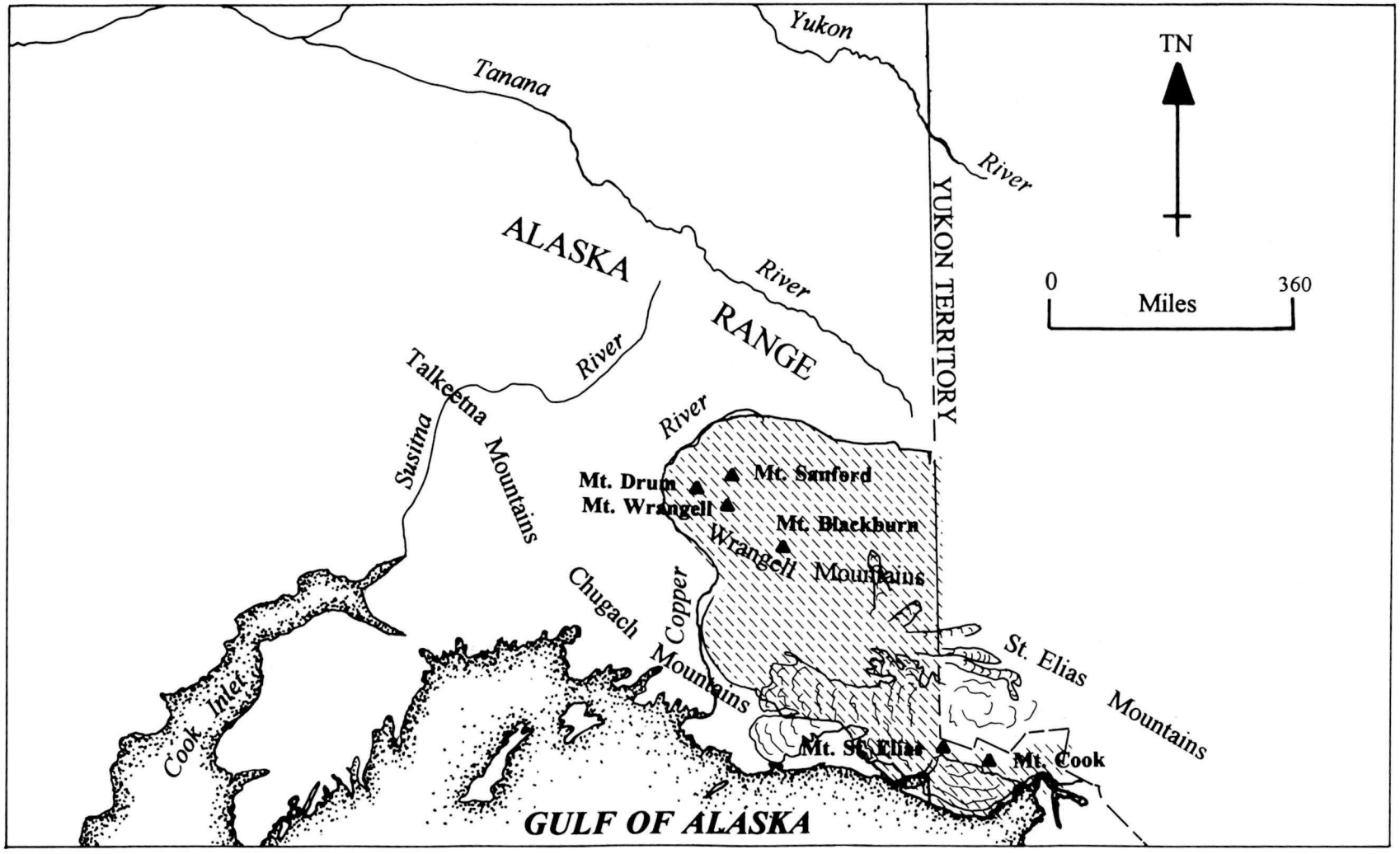
I

INTRODUCTION

Wrangell-St. Elias National Park and Preserve (WRST) is the largest unit in the national park system; and in conjunction with Canada's Kluane National Park, it comprises the largest park land area in North America (Figure 1.1). The eastern side of Wrangell-St. Elias is also the Canadian-U.S. border in this portion of Alaska. The vertical part of the boundary aligns with 141° west longitude, and the total combined boundary segments comprise approximately 260 miles of international border. The principal features found in the 13.2-million-acre area that initially inspired its consideration as an addition to the national park system are those of the natural environment and include spectacular mountain ranges, glaciers, active volcanoes and wildlife National Park Service (NPS 1986:iii). Wrangell-St. Elias was added to the national park system on December 2, 1980. Wrangell-St. Elias, Glacier Bay National Park and Preserve and Kluane National Park were collectively designated as a World Heritage Site in December 1992 by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), based on the special values of the natural and cultural features of the area (NPS 1986:iii).

The early history of Wrangell-St. Elias reflects a focus on commercially significant mineral resources located in the area. Examples of early development related to mining are the historic Chisana townsite and the Kennicott mines, as well as other facilities and features. Because of the natural and economic resources found, the general thrust of scientific studies has been in establishing distributions of mineral deposits and in other geological investigations, and glacial studies. Studies of cultural resources in the vicinity of the park have consisted primarily of ethnographic investigations, such as those by McKennan (1959) of the Upper Tanana Indians and of the Ahtna Indians by de Laguna and McClellan (1981). Knowledge of prehistoric human use of the Wrangell-St. Elias area is based primarily on work conducted in locations outside of the park and preserve, in areas such as Healy Lake, Lake Minchumina and in the Canadian Aishihik-Kluane Lakes area (Cook 1969; Cook and McKennan 1971; Holmes 1984; Workman 1978). Nevertheless, a few archaeological studies have been done at locations within the park such as Taral and Batzulnetas, at sites related to late prehistoric Athapaskan occupations (Rainey 1939; VanStone 1955). It is clear in this respect that the understanding of the nature of human use of the park land is only in its infancy and that the bulk of the work required for even a rudimentary knowledge of prehistoric occupations lies ahead.

The purpose of this overview and assessment, therefore, is to provide a framework for management of the known prehistoric archaeological resources in the area and to identify the issues and areas where future investigations can be focused for the benefit of the public, managers and academicians. Toward this end, the approach followed will identify issues in the prehistory of the area that would form the basis for determining the significance of an archaeological site, whether or not it is presently known. Subsequently, known prehistoric and traditional Native sites will be related to the issues described; and anticipated locations of additional, unrecorded sites will be described as well. Additional products of this assessment include identifying areas containing archaeological resources that may be sensitive or vulnerable to developments in the park or other activities.



Park Boundary

Figure 1.1. The Wrangell-St. Elias area.

II

THE ENVIRONMENT

GENERAL PHYSIOGRAPHY

Plate tectonic and geological processes have produced the major physiographic features of the Wrangell-St. Elias area. The Pacific mountain system is the primary feature produced by a continental subduction zone where the ocean tectonic plates are forced under the continental plates. This process produced the volcanoes of this northern segment of the Ring of Fire that encircles the Pacific, and it provides the forces that produce the other elevated terrain of the coastal mountains. Recent eruptions (those of the past 10,000 years) include a late prehistoric eruption of Mt. Bona, dating to approximately A.D. 400, and an eruption of Mt. Wrangell in 1930 (NPS 1986:111; Workman 1979:349).

Major physiographic features in the park and preserve are the generally east-southeast to west-northwest trending mountain ranges and valleys of Southcentral Alaska. The area of the park and preserve includes a segment of the greater Pacific mountain system that includes more than one mountain range (Pewe' 1975:2). One of these, the Alaska Range, is underlain by large batholiths of granite that intrude into Paleozoic and Mesozoic volcanic and sedimentary rocks (Wahrhaftig 1965:34). Surface deposits are predominantly glacial, with other deposits originating in the glacially carved mountains. Volcanic deposits are also found in the vicinity of the Wrangell Mountains (Pewe' 1975:Fig. 1).

Near the Gulf of Alaska coast, the relatively low-lying Robinson Mountains form a crescent-shaped rim between Cape Suckling and Icy Bay; a portion of this range lies within the park to the northwest of Icy Bay. A segment of the much more substantial Chugach Mountain range lies immediately to the north. The highest peak of this range that lies within the park land, Divide Peak, attains an elevation of 10,000 feet; and another prominent peak, Spirit Mountain, rises to an elevation of 7,287 feet.

The course of the Chitina River, located on the northern side of the Chugach Range, lies in a cleft between the Chugach Range on the southern side and the Wrangell and St. Elias Mountains immediately north of the river. The Chitina River carries runoff from the Tana Glacier in the Chugach Mountains and the Ogilvie, Logan, Walsh, Chitina, Barnard and Hawkins glaciers in the St. Elias Mountains. Runoff from the Kennicott and Root Glaciers in the Wrangell Mountains flows into the Chitina River as well; from this area, the Chitina flows westward to its confluence with the Copper River. The main channel of the Copper River flows generally north-south, and portions of this stream form the Wrangell-St.Elias boundary on the western side of the park and preserve.

As noted above, the Wrangell and St. Elias Mountains run parallel to the Chitina River on its northern side; the St. Elias range also includes the elevated terrain east and southeast of the Chitina River headwaters. The prominent peaks of these mountains are the highest in Wrangell-St. Elias National Park and Preserve. In the southeast portion of the St. Elias Mountains, the highest peak is Mt. St. Elias attaining an elevation of 18,008 feet; Mt. Bona rises to 16,421 feet. In the Wrangell Mountains, Mt. Sanford is the highest at 16,237 ft. To the north, the terrain is carved by the streams of the Copper River headwaters and it drops in elevation to the lower peaks of the Nuzotin Mountains. In these northeasternmost mountains of the preserve, Mt. Allen rises to an elevation of 9,480 feet and Wiki Peak to an elevation of 7,655 feet.

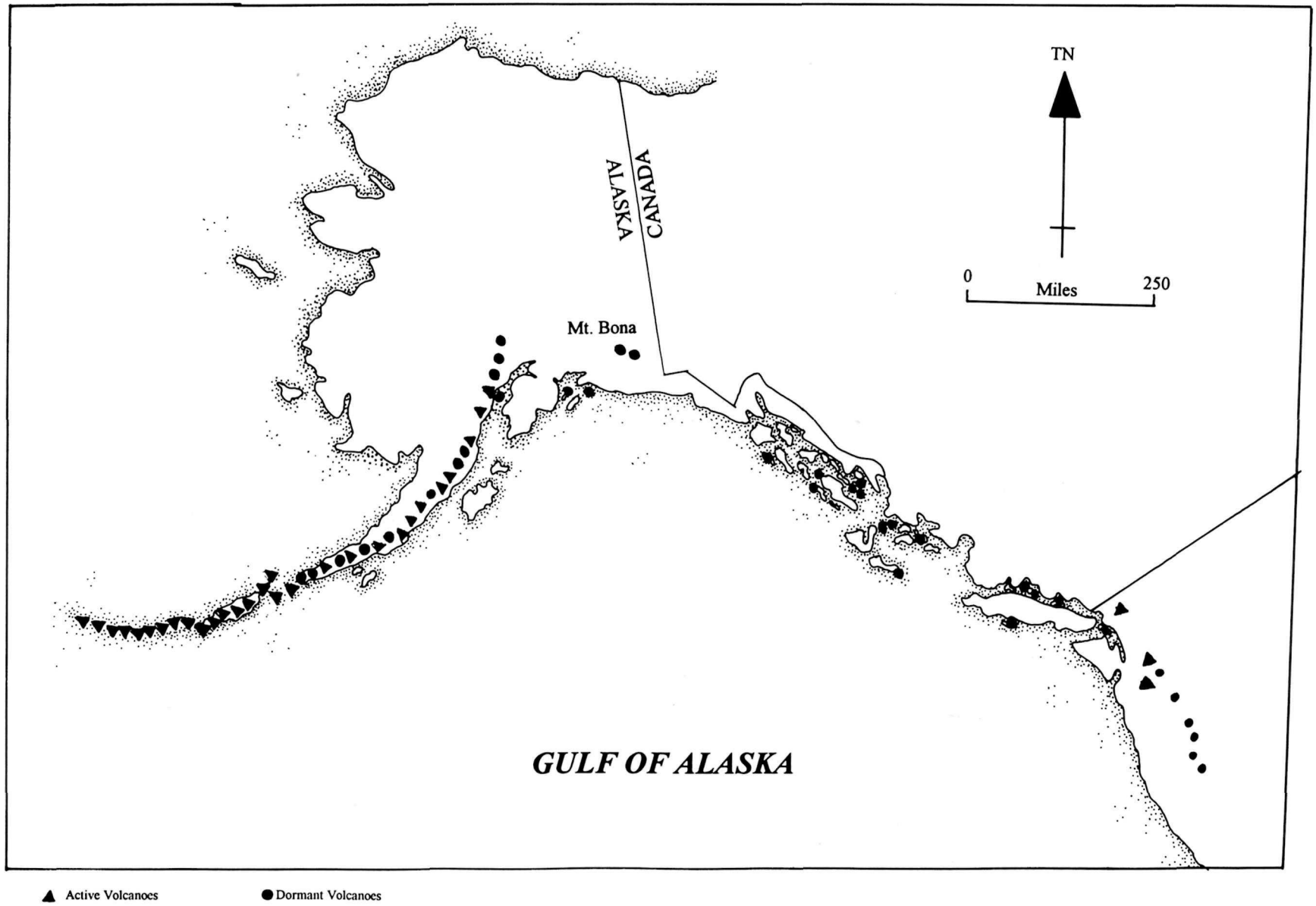


Figure 2.1. The North Pacific portion of the Ring of Fire.

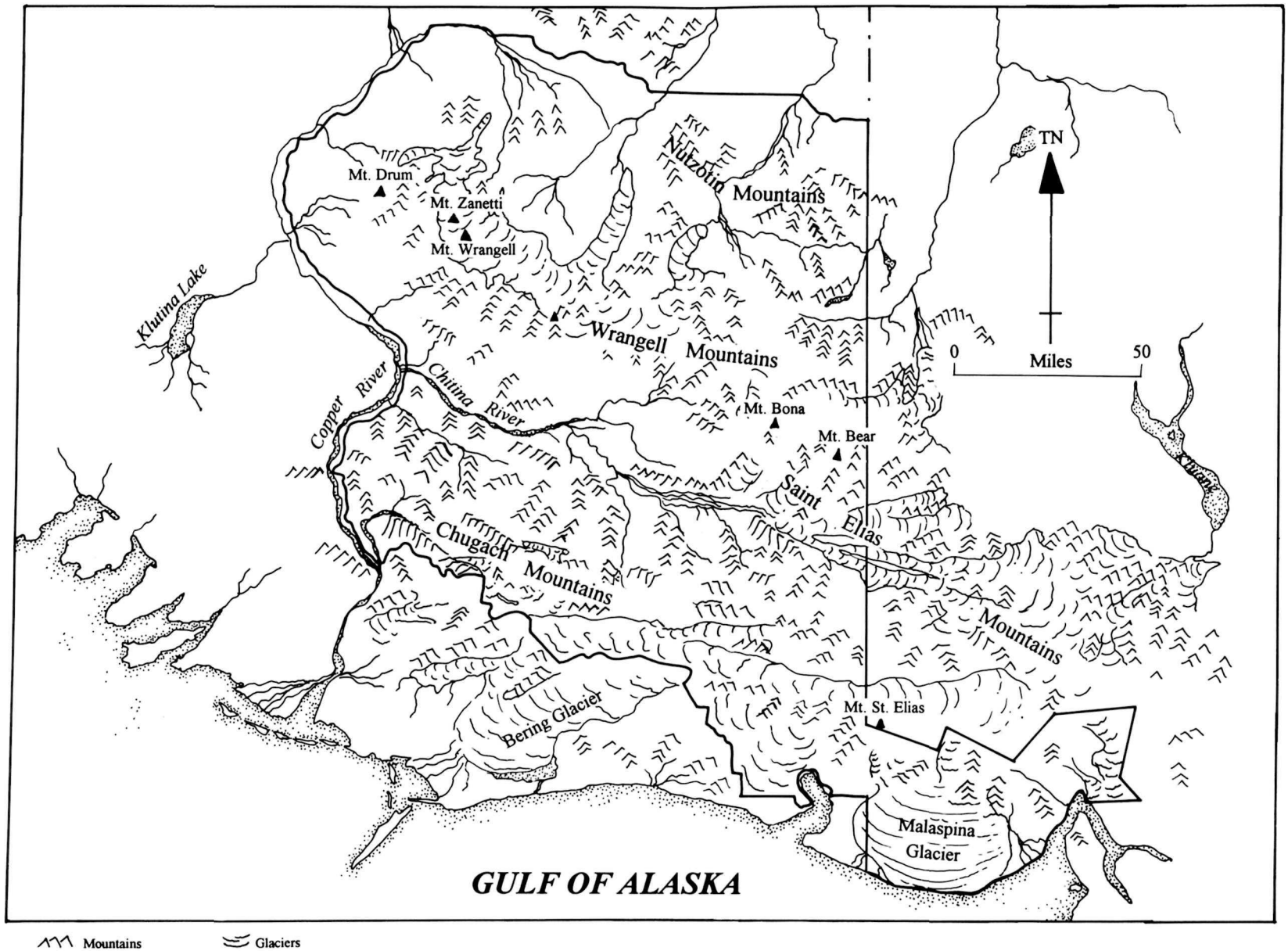


Figure 2.2. Major physiographic features in the Wrangell-St.Elias area.

PLEISTOCENE ENVIRONMENTS

Glaciers

Glaciations in Alaska were most extensive in areas adjacent to the North Pacific Rim and correspond with the Pacific mountain system of this area. More limited glaciations did occur, however, in northern Alaska in the vicinity of the Brooks Range, and to an even more limited extent on the Seward Peninsula (Figure 2.3). Glacial cycles are related to worldwide climatic variations, such as global warming and cooling in the different periods of earth's history and the effects these have on the elevations of snowlines. Other factors related to glacial cycles are characteristics of terrain and effects these may have on precipitation. In Southcentral Alaska, the bulk of annual precipitation falls on the southern slopes of the individual mountain ranges, a reflection of a tendency of air masses to move generally northward from the North Pacific (Pewe' 1975:15; compare with Mann and Hamilton 1993:12-18).

The glaciations of the Southcentral Alaska portion of the Pacific mountain system can generally be described as being most extensive during the early Quaternary period, beginning around 1.8 million years, and diminishing in areal extent to the present (Pewe' 1975:15, Fig. 6; Figure 2.3). Although glaciations occurred during earlier periods, physical traces such as glacial drift left by these features are few, and the evidence minimal (Pewe' 1975:15-19). In southern Alaska, pre-Illinoisan glaciers exceeded the areal extent of the Wisconsin glaciations shown in Figure 2.3. Traces of these features, such as drift and tillite, may still be found in some areas such as near the headwaters of the Kuskokwim River, just east of Lake Minchumina. The slightly less extensive glaciers of Illinoisan times date roughly from 175,000 years to sometime prior to 38,000 years ago (Pewe' 1975:19). The drift distributions representing the extent of the Illinoisan glaciers are similar to those of earlier deposits of the same type, but they reflect maximum distributions of glacial ice that were nearer to the Southcentral mountains (Figure 2.3). The snowline during Illinoisan times is estimated to have been approximately 170 m lower than in succeeding Wisconsin times (Pewe' 1975:15).

The last main advance of the Wisconsin glacial cycle began by around 24,000 years ago followed by small readvances that continued until approximately 9,000 years ago (cf. Hadleigh-West 1996:330; Pewe' 1975:25). It is important to note that glacial margin habitats notwithstanding, even as recently as 8,000 years ago most of the park land was glaciated; and, presumably, most areas were not suitable for human habitation before then (compare with Mann and Hamilton 1993:18). A major glacial feature in the area of the Copper River during the late Pleistocene and early Holocene was an extensive proglacial lake formed as a result of ice advances damming segments of the Copper River basin (Ferrians et al. 1983:137). Strandlines representing the ancient shores of the lake have been observed at elevations as high as 2,650 feet above sea level, with strand deposits below that elevation marking the lowering lake level up to the end of the Wisconsin glaciation. The lake drained as the glacial ice retreated; and by 9,000 years ago, the water in the basin had been reduced to the course of the Copper River and the lower ends of its tributaries in this area (Ferrians et al. 1983:Fig. 78). By approximately 6,000 years ago, the glacial ice had receded nearly to present-day limits, and modern plant and animal communities had begun to colonize the areas newly exposed by the retreating ice.

Paleoecology

The substantial glaciers that covered most of southern Alaska up to approximately 8,000 years ago precluded development of diverse plant communities in the Wrangell-St. Elias area. Possible exceptions are small areas of the southern Tetlin Lowlands and small enclaves in the Malaspina Forelands. In the Tetlin Lowlands, relatively small areas of Pleistocene dunes are believed to have formed in unglaciated lands near the margins of glaciers (Hopkins 1982:16-17; Pewe' 1975:Fig. 6).

The ecology of areas near glaciers -- termed `periglacial' -- is one in which outwash plain

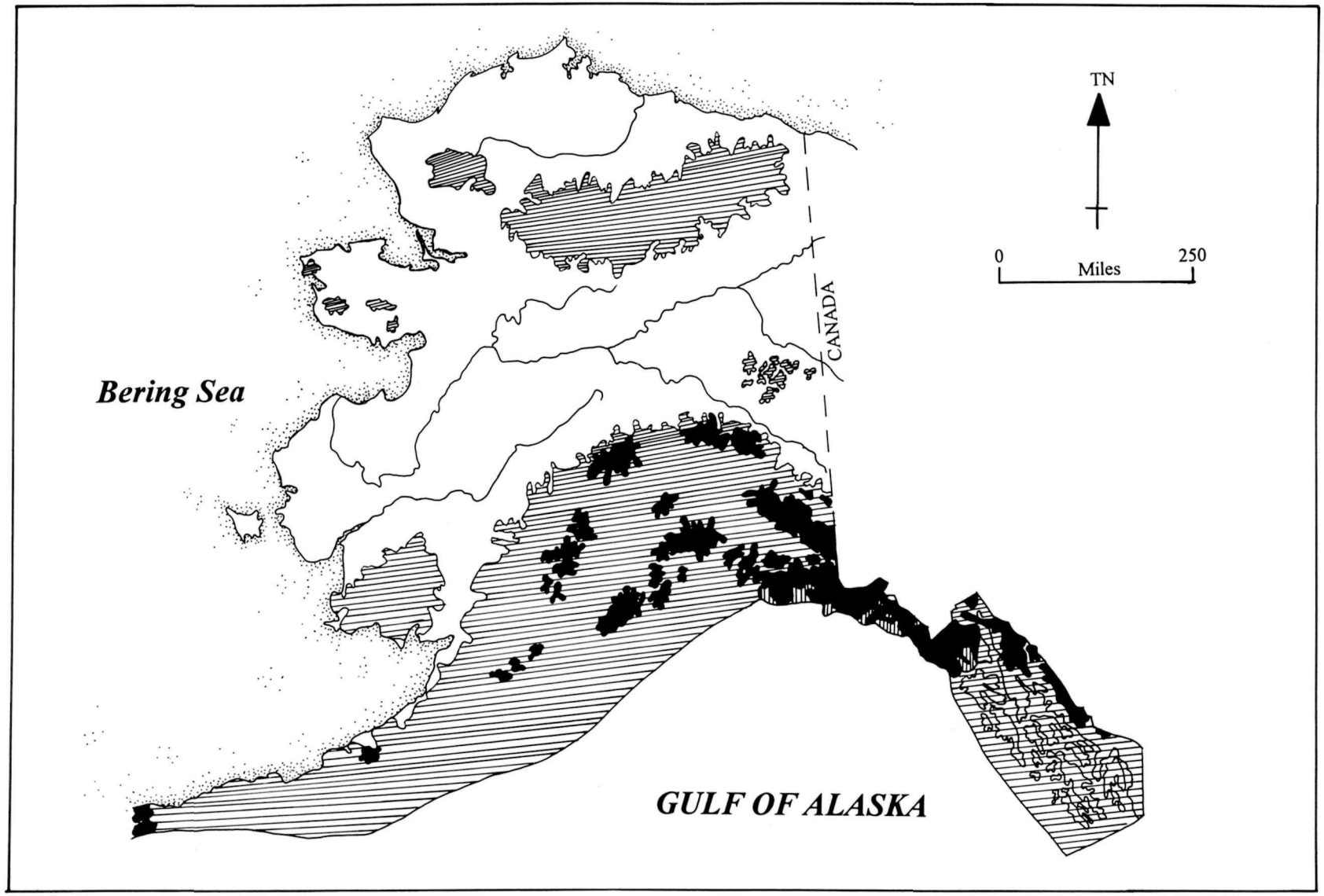


Figure 2.3. Quaternary glaciations in Alaska (after Pewe' 1975:Fig. 6).

deposits were continuously deposited and redeposited by floods and katabatic glacial winds. Modern analogues of Pleistocene periglacial plant communities may provide accurate models of the actual prehistoric communities (Young 1982:186). Vegetation in these areas may have been similar to that observed today where the predominant plants are grasses, dwarf fireweed (i.e., *Epilobium latifolium*), sagebrush such as *Artemesia frigida* and extensive willow (*Salix spp.*) thickets (Young 1982:189). A greater amount of precipitation during glacial periods produced substantially larger runoffs that carved the glacial outwash loess deposits into gullies over large areas (Matthews 1982:145). Deposits of fine, alkaline glacial loess are believed to have furnished substantial nourishment that supported abundant growth of herbaceous plants (Guthrie 1982:318). The net result of the erosion was a type of terrain that produced "fine-grained diversity" of plant assemblages that in turn provided rich resources for late Pleistocene ungulates (Matthews 1982:145; compare with Young 1982:190). Areas in which the earliest, pre-Illinois an examples of this ecology developed include the vicinity of the Tanana River; areas such as this were adjacent to the glaciers themselves, but also included deltas and other active alluvial and eolian deposits produced by glacial processes (Young 1982:Fig. 1, and text).

The early to middle Pleistocene Beringian climate for interior areas is described as being a dry, continental type that was colder than that of today. This type of climatic regime is attributed to the presence of the exposed Bering land bridge, an addition to the present-day extent of the land that amplified the effects of the continental land-mass on the interior climate (Hibbert 1982:154; Gal-Chen 1982:213-216).

Throughout the Wisconsin glacial cycle, the eastern portion of Beringia is believed to have been a favorable environment for vegetation and fauna (Schweger 1982:109-110). Abundant growths of vegetation, including some trees that could be found along river valleys, ungulates and other fauna undoubtedly were present in these areas (compare Schweger 1982:109-110 and Pielou 1991:150-153). Areas near the continental ice sheets probably had warmer and drier summers than those in central Beringia (Gal-Chen 1982:216).

Plants that occurred in this type of ecology in the mid-to-late Pleistocene, such as mosses and lichen ground cover, herbs, *Gramineae, Betula, Carex, Ericads and Artemesia spp.* gave way to more xeric, or dryer, ecology plant types as the end of the Pleistocene approached (Guthrie 1982:315-325; Pielou 1991:208-210). By 12,000 to 9,000 years ago, the herb constituent of the plant assemblage had diminished. Bog and sedge flat ecologies probably began to develop around the end of the Wisconsin glacial cycle, and the formation of these types of zones may correlate with a florescence of dwarf birch (*Betula*) at sometime around 10,000 years ago (compare Guthrie 1982:324-325 and Young 1982:191). In turn, change occurred in these same zones with the arrival of spruce (*Picea spp.*) from areas south of the ice sheets and increasing numbers of evergreens -- especially spruce (*picea spp.*) -- as well as poplar (*Populus*) and birch (*Betula*) Young, Vegetation of Land-Bridge Buringia. The increase in the numbers of evergreens and decrease in the abundance of herbaceous plants is believed to be related to a change to cooler spring temperatures that allowed winter snows to remain on the ground longer, a climate that shortened the growing season for herbaceous plants (Guthrie 1982:324-325). At the same time, the climate favored the growth of xeric plants, including evergreens, and these in turn further reduced the steppe tundra herbaceous plant numbers because of their better adaptation to the developing environment (Guthrie, Mammals). By 6,500 years ago plant communities underwent the alterations that resulted in the modern plant assemblages that are found in different elevational and ecological zones (Ritchie and Cwynar 1982:Fig. 6 and text).

Although most of the North Pacific shoreline in the area of Wrangell-St. Elias is covered by glacial ice, a few small enclaves along the coast appear to have escaped direct impacts of glacial advances. The Beringian ecology of this segment of coast includes a stage during which the Gulf of Alaska westward and south of Kayak Island was buried beneath Wisconsin glacial ice. Small, unglaciated pockets of shoreline occurred just north of Kayak Island, and to the east as far as Icy Point, to the northern end of the sheet of Wisconsin glacial ice that extended over most of southeast Alaska (Pewe' 1975). Disjunctures between the vegetation found in such pockets and that of surrounding areas

have been interpreted as cases where ancient vegetation communities have persisted into the present; in such cases the community of any single enclave may be a depauperate version of the ancestral vegetation (Pielou 1991:30-38, 75-87, 130-137; Young 1982:183). Enclaves of this type of vegetation are found in coastal areas of the park, such as in the vicinity of the Malaspina Forelands, therefore they may reflect unusual conditions related to a long-term, relative stability of the ecology. Another type of unusual vegetation found in the Malaspina Forelands is represented by growths of fully developed forests located on relict Pleistocene glacial ice. Situations such as this may be long-term if the glacial drift, or unfrozen soil on the ice, provides sufficient insulation to protect the ice from melting in the present-day warmth (Pielou 1991:175-178).

PLEISTOCENE AND HOLOCENE FAUNA; MIGRATIONS AND CHANGES

The development of the modern faunal array of Southcentral Alaska is a result of changes that occurred primarily during late Pleistocene and early Holocene times. The processes that produced the modern array relate directly with the ways in which prehistoric humans may have exploited the animals that were present. In some cases humans may have begun to use new areas, while in others, they withdrew as game animals disappeared.

Paleontological studies of the prehistoric mammalian fauna of Europe, Asia and North America normally relate each species to the glacial cycle during which they lived. It is important to point out in this respect that the glaciations of Eurasia and North America are essentially equivalent, with some area-specific variations (compare Kurtén and Anderson 1980:37; Repenning 1967:Tab. 9 and West 1996:Fig 1). A second problem complicates attempts to evaluate and interpret relationships of fossil animals, both between species and in the stages of development and change within a single species, or even on the level of the family. This is the difficulty of establishing contemporaneity of different animals, based on the dating techniques presently available, including potassium-argon (*K-Ar*) and radiometric techniques (^{14}C) (see, Repenning 1967:289-290).

Continuity and changes in faunal assemblages within a geographic zone are normally interpreted using the appearance of prominent index fossils -- including perhaps the appearance of new species -- in areas where they were previously absent (Kurtén and Anderson 1980:5). For North American Pleistocene times, the assemblages, or land mammal ages, are designated "Irvingtonian" and "Rancholabrean," and attempts have been made to correlate the appearances of species with glacial cycles and paleoenvironmental information (Kurtén and Anderson 1980:Fig. 1.1, and text; Repenning 1967:288-289). It is important to point out that environment/species correlations are not considered to be especially strong by some researchers, especially with respect to mammalian fauna whose adaptive flexibility may render environmental correlates inaccurate in many cases (compare, Flerow 1967:271-272 and Repenning 1967:309-310).

A limiting factor in considering the paleoecology of the Wrangell-St. Elias area is that environments that have evolved in Southcentral Alaska are quite limited in comparison with those that have been less affected by a broad range of glacial advances and retreats, or areas that have never been covered by glacial ice. Much of the constancy of the environment of the area is related to the persistence of glaciers over most of the area up to present-day. As described above, most of the area of Wrangell-St. Elias was covered by Wisconsin glacial ice to 12,000 years ago, with the present-day distribution of ice being attained perhaps as late as 6,000 years ago (Pewe' 1975).

The following descriptions of the migrations and changes that occurred in the faunal assemblages of the area are presented with these caveats in mind. This discussion will be limited to faunal assemblages of the Pleistocene and Holocene, with emphasis on important species that are often the larger mammals and species that were important to the prehistoric and historic aboriginal inhabitants of the southern Yukon and Southcentral Alaska coast. The fauna of the Irvingtonian mammal age is presented as a basic array of forms at the outset of the Rancholabrean age, as a means of generally illustrating the changes.

Irvingtonian Fauna

The beginning of this land mammal age corresponds with the advent of the Pleistocene, a temporal position that has been placed by different researchers at various points between 1.9 and 1.6 million years BP; that age lasted until approximately 0.4 million years BP (Kurtén and Anderson 1980:5, Tab. 5.2). Prominent mammals that appeared in Beringia at the outset of the Irvingtonian age included mammoth (*Mammuthus*), cervids including deer and elk-like grazers (*cervus*) and caribou (*Rangifer*) an ancestor of the modern rabbit (*Lepus*), muskrat (*Ondatra*), a wolverine ancestor (*Gulo*) and the wolf (*Canis lupus*) (Kurtén and Anderson 1980:5, 22-23, 95). Initial occurrences in North America of an ancestral lemming (*Predicrostonyx*) are documented in western Alaska at that time as well (Kurtén and Anderson, Pleistocene Mammals). Mastodons lived in Alaska, as well, but may have been restricted to warmer periods, such as the interglacials that occurred from ~2.3 to 1.5 and 1.2 to .8 million years ago (R.D. Guthrie and M.L. Guthrie 1986:63; Kurtén and Anderson 1980:Fig. 1.1). Extinctions of animals that occurred by the end of the Irvingtonian age are described in detail by Kurtén and Anderson (1980:361-365, Tab. 19.4, Tab. 19.6).

Rancholabrean Fauna

This type of fauna in northern North America is dominated by grazers composed primarily of grass-eating species (Kurtén and Anderson 1980:41). Animals representative of the relationship between the fauna and habitats that existed during this age, from approximately 0.4 million years ago to the end of the Pleistocene -- around 10,000 years ago -- include *Bison*, *Equus* and *Alces* (Kurtén and Anderson 1980:41, 96). It is important to note that some Irvingtonian animals persisted into Rancholabrean times, including *Mammuthus*, *Equus* and *Rangifer*, among others. The persistence of these fauna indicates that the boundary between the two land mammal ages is not clear-cut (Kurtén and Anderson 1980:37-39).

Bison. The beginning of the Rancholabrean age is defined by the appearance of *Bison*, an immigrant from Eurasia, in local faunal assemblages by 0.4 million years BP (Kurtén and Anderson 1980:Fig. 1.1, 37). The genus *Bison* is a good example of some of the changes that occurred in both habitats and fauna in the late Pleistocene and early Holocene.

Bison priscus (k.g. M.L. Guthrie 1988, plate on p. 29) is believed to have appeared below the continental ice sheets by the time of the Yarmouth Interglacial -- ca. 0.75 million years ago -- and evolved into perhaps three variants in the vicinity of the Great Plains, *B. antiquus* and *B. latifrons* (Pielou 1991:159-160). The early Asian immigrant species (*B. priscus* or *B. crassicornis*) was a form that could be regarded as transitional in some respects, insofar as the horns were larger than those of the ancestral *Leptobos*, and the animal had two humps on its back. This also differed from the succeeding Beringian *B. occidentalis* form and Great Plains *B. latifrons* form (M.L. Guthrie 1988:15-16; Pielou 1991:159-160; compare with Frison 1978:277-290). *B. latifrons* is by far the most impressive of the known extinct variants; it was a giant bison with horn cores as much as two yards wide (M.L. Guthrie 1988:15). *B. priscus* or the "steppe bison" form may have persisted to as late as 35,000 years ago in the Alaska interior (M.L. Guthrie 1988).

The successor of *B. priscus* in Beringia, *B. occidentalis*, was slightly smaller than *priscus*, had only a single back hump and shorter horns (Pielou 1991:160). By approximately 12,000-10,000 years ago, the continental glacial ice had receded sufficiently for southward migrations of *occidentalis* to occur. At least some researchers believe that *B. occidentalis* and *B. antiquus* interbred at around this time, resulting in the modern form, *Bison bison* (Frison 1978:281; Pielou 1991:160). Sometime after the advent of the Holocene, *Bison bison* divided into two subspecies, one a northern version that is designated *Bison bison athabascae* presently found in northern Canada and to the south, the Great Plains version, *Bison bison bison* (Frison 1978:281; Pielou 1991:160). *B. athabascae* disappeared

from Alaska in the last 500 years, apparently as a result of changing ecological conditions (Dixon 1993:Tab. 3.7; Guthrie 1990; Miquelle 1985:3-4).

Equus was another animal well represented in the Rancholabrean faunal assemblage (Kurtén and Anderson 1980:41). Although horses were present in some areas of the North American Arctic and Subarctic, such as southern Alberta, during Irvingtonian times, they were apparently absent in other areas to the north, such as the Kotzebue Sound vicinity in western Alaska (Kurtén and Anderson 1980:23-25). By 40,000-11,000 years ago, *Equus* appeared in the Fairbanks area, an apparent northward spread of this animal (Kurtén and Anderson). Kurtén and Anderson (1980:282-283) note that the present taxonomy for the Pleistocene expressions of the *Equus* family is confused on the level of species definitions as a result of premature naming of remains by early researchers. As a result, many paleontological collections include remains of different sizes of horses, including small, medium and large; and they may be comprised of the fossil remains of asses, and zebras and transitional forms that combine attributes of gazelles and horses (Kurtén and Anderson, Pleistocene Mammals). The horse form was among those animals that disappeared from the western hemisphere at the end of the Pleistocene.

Alces. The initial development of the moose form (*alces*) was probably in Eurasia, and it was one of the holarctic *cervidae* forms to survive the end of the Pleistocene (Kurtén and Anderson 1980:315-317, 357-365). Animals living during the Wisconsin glacial cycle were distributed in the unglaciated areas of the North American *Beringia Refuge*. *Alces* forms present in Alaska during the Wisconsin included *A. latifrons* and *A. cervalces*; both of these forms had attributes in common with the modern species, but both were substantially larger than *Alces alces* and differed in the forms of their antlers (Kurtén and Anderson 1980:315-317). The possibility that *A. cervalces* may be subsumed as a *A. latifrons* form is not yet discounted, and it is likely that the modern form developed out of *latifron* (Kurtén and Anderson, Pleistocene Mammals). It is not likely that the larger Pleistocene forms persisted into Holocene times.

Some moose passed into areas south of the ice sheets during those times when the corridors were open, especially during those intervals of the Wisconsin glacial cycle, between ca. 37,000-8,000 years ago (Kurtén and Anderson 1980; compare with Pielou 1991:111). Examples of *Alces* dating to the late Pleistocene or early Holocene are found as far south as Kentucky and South Carolina.

Fauna that were important to the early human inhabitants of the area include the several species of salmon (*Salmonidae*) that migrate into the Copper River and its tributaries during the summer months. The primary factor regulating the distribution of the fish during Pleistocene times was the presence of glacial ice in the river basins (Pielou 1991:245-247). Prior to the opening of streams that had been locked by glacial ice, it is likely that the Columbia River basin provided an ice-free summer habitat for many species *(Pielou, After Ice Age)*. In the case of the Copper River drainage, major factors to consider are the proglacial lake, described above, that was produced by glacial ice damming the stream (Ferrians, et al. 1983). Although salmon probably had entered the Copper River during the time the lake existed, ca. 9,000 years ago, the damming of the stream undoubtedly presented obstacles that prevented the fish from penetrating very far into the interior. However, by 6,000 years ago, the glacial ice had receded to approximately its present-day distribution, and the newly opened tributaries were undoubtedly soon discovered by the fish (Pielou 1991:245).

PLEISTOCENE EXTINCTIONS

The *Alces latifrons* (moose) form along with some of the other late Pleistocene fauna disappeared from the western hemisphere at the advent of the Holocene. Kurtén and Anderson (1980:357-365) note that a total of 108 species disappeared at around the end of the Pleistocene, and a total of 229 have survived to modern times. The causes of the extinctions are not well understood and a primary, unanswered question related to the process is why certain species such as *Mammoth* disappeared, while others, such as *Rangifer* and *Bison*, persist to present-day (Guthrie 1982:324-325;

Pielou 1991:251-266). In more specific cases, a species within a family may disappear while other members of the family survive, as appears to have been the case with *Alces latifrons*, a Pleistocene mega-moose form, and *Alces alces*, the modern moose. Explanations for the wave of extinctions that occurred at the end of the Pleistocene fall into two basic schools of thought described in the following.

Guthrie (1982:324-325) describes a general climatic shift to a cooler climate that resulted from a recession of Wisconsin glacial ice; this in turn produced a southward shift in herbaceous plant distributions. This change in environment had the effect of shifting ungulate distributions southward, and reducing body size of ungulates that remained in northern areas due to a decreasing abundance and restricted distributions of herbaceous plants. Guthrie (1982:324) notes that a general trend in the transition from Pleistocene to Holocene faunal forms is an overall reduction in the body size of ungulates, and a corresponding reduction in the size of their antlers. It is worth noting as Guthrie does (1982:325) that ungulates presently found in northern regions are particularly well-adapted to their environments and to foraging for plant foods in deep snow or in other types of northern conditions, an advantage that early faunal forms living in the region during Pleistocene times may not have possessed (compare with Pielou 1991:261-266).

Table 2.1
A partial list of North American Pleistocene fauna that became extinct
(from Kurtén and Anderson 1980:Tab. 19.6).

Common Name	Species	Last Occurrence Date BP	Faunal Collection
Ground sloth	*Nothrotheriops shastensi*	9,900±400	Rampart
Short-faced bear	*Arctodus simus*	12,770±900	Natural Trap
Dire wolf	*Canis dirus*	7,000-8,000	Devil's Den
Sabertooth	*Smilodon fatalis*	9,410±155	First American Bank Site
American lion	*Panthera leo atrox*	10,370±160	Lost Chicken Creek
Western camel	*Camelops hesternu*	9,940±160	Smith Creek
Stag moose	*Cervalces scotti*	10,230±150	Carter
Mountain goat	*Oreamnos harrington*	10,050	Rampart
Woodland muskox	*Symbos cavifrons*	10,370±160	Lost Chicken Creek
Steppe bison	*Bison priscus*	10,370±160	Lost Chicken Creek
Bison;latifrons	*B. latifrons*	21,000-30,000	Rainbow Beach
Horse	*Equus spp.*	17,200±600 - 11,300±1,200	Various
Tapir	*Tapirus veroensis*	9,880±270	Hornsby Springs
Mastodon	*Mammut americanum*	7,000-8,000	Devil's Den
Mammoth	*Mammuthus primigenius*	11,160±500	Domebo

The correspondence between the widespread appearance of humans in North America at the end Pleistocene and the disappearance of larger fauna that occurred at around the same time forms the basis for an alternative, prehistoric overkill explanation of the episode developed by Martin (1982, 1984), who notes that most of the extinctions of Pleistocene herbivores occurred during the period 12,000-10,000 years ago, or immediately following man's entry into the New World (i.e., Martin 1982:400). The basic tenets of this hypothesis can be summarized as follow: Humans living in Siberia in mid-to-late Pleistocene times rapidly developed an efficient means of hunting large mammals, including reindeer, giant deer, woolly rhinoceros and woolly mammoth. Early man entered the New World via the Bering Land platform and eventually reached areas south of the ice sheets by sometime around 12,000 years ago. Pleistocene megafauna in midcontinental North America were unaccustomed to human predation and became easy prey. The population of human hunters increased and advanced along a front, southward and eastward into the Americas and may have emigrated as far south as

Table 2.2
A partial inventory of modern fauna in the Wrangell-St. Elias area

Ecological Province	Common Name	Taxonomic Name
	MAMMALS	
Steep Slopes/Exposed Ridges	Mountain goat	*Oreamnos americanus*
	Marmot	*Marmota monax,M.caligata*
	Dall sheep	*Ovis dalli*
Alpine Tundra	Barren ground caribou	*Rangifer tarandus groenlandicus*
Open Forest	Singing vole	*Microtus gegalis*
	Grizzly bear	*Ursus arctos*
	Black bear	*Ursus americanus*
	Gray wolf	*Canis lupus*
	Wolverine	*Gulo gulo*
	Lynx	*Lynx canadensis*
	Marten	*Martes americana*
	Beaver	*Castor canadensis*
	Muskrat	*Ondatra zibethicus*
	Porcupine	*Orethizon dorsatum*
	Snowshoe hare	*Lepus americanus*
Shrub Thickets	Moose	*Alces alces*
	Coyote	*Canis latrans*
	Red fox	*Vulpes vulpes*
Wetlands	Tundra vole	*Microtus oeconomus*
	Ermine	*Mustela erminea*
	Least weasel	*Mustela nivalis*
Riverine	River otter	*Lutra canadensis*
Coastal/Marine	Beluga	*Delphinapterus leucus*
	Northern fur seal	*Callorhinus ursinus*
	Harbor seal	*Phoca vitulina*
	Sea otter	*Enhydra lutris*
	FISH	
Riverine/Lacustrine	Dolly varden	*Salvelinus malma*
	Lake trout	*Salvelinus namaycush*
	Sockeye salmon	*Oncorynchus nerka*
	Coho salmon	*Oncorynchus kisutch*
	Chum salmon	*Oncorynchus keta*
	Chinook	*Oncorynchus tshawytscha*
	Arctic grayling	*Thymallus arcticus*
	Burbot	*Lota lota*
	Steelhead trout	*Salmo gairdneri*
	BIRDS	
Coast and Interior	Common loon	*Gavia immer*
	Red-necked grebe	*Podiceps grisegena*
	Trumpeter swan	*Cygnus columbianus*
	Canada goose	*Branta canadensis*
	Snow goose	*Chen caerulescens*
	Mallard	*Anas platyrhynchus*
	Bald eagle	*Haliaeetus leucocephalus*
	Ptarmigan	*Lagopus mutus, L. Lagopus*

Table 2.2 (continued)

Ecological Province	Common Name	Taxonomic Name
	Greater yellowlegs	*Tringa melanoleuca*
	Red-necked phalarope	*Phalaropus lobatus*
	Black-billed magpie	*Pica pica*
	Common raven	*Corvus corax*
	Great horned owl	*Bubo virinianus*
Interior	Mew gull	*Larus canus*
	Long-tailed jaeger	*Stercorarius longicaudus*
	Northern hawk-owl	*Surnia ulula*
	Boreal owl	*Aegolius funereus*
	Gray jay	*Perisoreus canadensis*
Coast	Tufted puffin	*Fratercula cirrhata*

Tierra del Fuego by ca. 10,500 years ago (cf. Fagan 1987:192). The net result of this migration, according to Martin's hypothesis, was extinction of large Pleistocene herbivores from overly efficient hunting by humans during their expansion into the Americas. Although this explanation for the disappearance of some large herbivores that also happened to be human prey appears to correspond well with archaeological and paleontological data that are available, the model is by no means widely accepted. Examples of criticisms are that the Pleistocene overkill hypothesis cannot be tested due to a lack of parameters for the prehistoric sizes of human and animal populations, as well as the lack of rigorous controls for the effects of human predation on the animals themselves (cf. Pielou 1991:257-261).

It can, therefore, be seen that the modern faunal assemblages found in Southcentral Alaska are a present-day iteration of both ecological changes affecting the distributions of the different species and evolutionary changes in the animals themselves. The adaptive flexibility of many species provides for their occupation of a variety of habitats within a range of suitability. The appearance of human predators on the scene in early Holocene times, however, was an unprecedented addition to the biological makeup of the region.

MODERN CLIMATE

The climate in the interior areas of Southcentral Alaska can generally be classified as "cold snow forest," a category that is also designated as "continental" (Gardner 1981:9; NPS 1986:35). The basic characteristics of this type of zone include ranges in mean temperature from more than 50° Fahrenheit in summer months to less than 26° Fahrenheit in winter months; the net range may be as much as 90° from winter to summer. Average annual precipitation in interior areas is less than 18 inches (Gardner 1981:9).

The climate in areas near the coast of Wrangell-St. Elias deviates from this basic characterization due to maritime influences. Designations for these climates are the "maritime" and the "transitional" (NPS 1986). The transitional climate is produced by mountain ranges creating a barrier between the moist air masses of the North Pacific and the cold winter or hot summer air masses of the interior. The primary effect of the meeting of the continental and maritime air masses is precipitation from the more humid air mass. In coastal areas with maritime climates precipitation is very high, with annual sea level precipitation of as much as 130 inches; at higher elevations, snowfall may be as much as 600 inches annually (NPS 1986). Precipitation on the northern slopes of the mountains drops substantially, representing a rain-shadow with as little as 8 inches per year (NPS 1986:108).

MODERN PLANT COMMUNITIES

As with the other aspects of the Wrangell-St. Elias environment, this review comprises only a general description of the plant communities that may be found in the area. Although this will serve present purposes of this overview, it should be understood that research designs and resulting interpretations of the prehistoric occupations of the area must include in-depth assessments of the specific site environments where investigations are conducted. Examples of future work that includes investigation of plant communities are presented in Chapter VI of this overview.

Because the area of the park land includes portions of five mountain ranges, much of the surface terrain is composed of steep rocky slopes, talus and ice. Loamy soils occur on lower slopes, but in many cases these are poorly drained and boggy, or are well drained and gravelly (NPS 1986:33-34). Well-developed, loamy, alluvial soils occur along stream courses or in valleys (loc. cit.). With the exception of the coast, permafrost is pervasive throughout the area. Although plant communities at a given location usually reflect aspects of slope, soil type and relative amounts of moisture, the different community types are somewhat arbitrary in some instances insofar as they designate differences in the relative frequencies of important species rather than their presence or absence from one community to the next.

The descriptions of the vegetation zones presented below follow the general classifications of Viereck and Little (1986) for trees and shrubs, augmented in some cases by Viereck, et al. (1992). Although the more recent classification system is more precise with respect to percentages of ground cover and significant species found in each type, it is important to point out that many species are not limited to a single class in the Viereck, et al. (1992) classification.

Coastal Spruce-Hemlock Forest

This type of vegetation is present along the shoreline from sea-level up to the tree line. The environment in these areas has a high rainfall and correspondingly high humidity that support profuse growths of mosses and dense undergrowth that include devilsclub (*Oplopanax horridus*), willows (*Salix spp.*) and various berries (*Ribes spp. and Vaccinium spp.*). The more prominent plants in this zone include Sitka spruce (*Picea sitchensis*), black cottonwood (*Populus trichocarpa*), western hemlock (*Tsuga heterophylla*) and Sitka alder (*Alnus sinciata*).

Closed Spruce-Hardwood Forest

This general vegetation type can be subdivided to reflect particular species predominating in various types of settings (Viereck and Little 1986:15-18). Settings in this case include: the white spruce (*Picea glauca*) type found primarily on south-facing, warm and dry hillsides; recent burns with shrubby types of vegetation predominating, such as Labrador tea (*Ledum spp.*), willows (*Salix spp.*) and various berries (i.e., *Arctostaphylos spp., Empetrum nigrum, Vaccinium spp.*). Black spruce (*Picea mariana*) forests are distinguished by the relative frequency of this species and are found primarily on flat or gently rolling terrain with permafrost soils.

Alpine Tundra

Most of this type of vegetation zone is comprised of bare rock and rubble, but areas with low herbaceous and shrubby plants occur as well. Species that occur in this type of community include: white mountain-avens (*Dryas octopetala*, and *D. integrifolia*); moss-campion (*Silene acaulis*); Aleutian mountain-heaths (*Phyllodoce aleutica*); mountain heather (*Cassiope spp.*); arctic willow (*Salix arctica*), dwarf blueberry (*Vaccinium caespitosum*) and mountain cranberry (*Vaccinium vitis-idaea*).

Wet or Moist Tundra

This type of zone may be found on low inland slopes, but it primarily occurs in low coastal marshes (compare NPS 1986:37 with Viereck and Little 1986:22). In the driest portions of this zone, dwarf arctic birch (*Betula nana*) and diamondleaf willow (*Salix bebbiana spp.*) may occur. Other plants include sedge, cottongrass, bog cranberry and bog blueberry (*Vaccinium oxycoccos and Vaccinium uliginosum*) (Viereck and Little 1986:22).

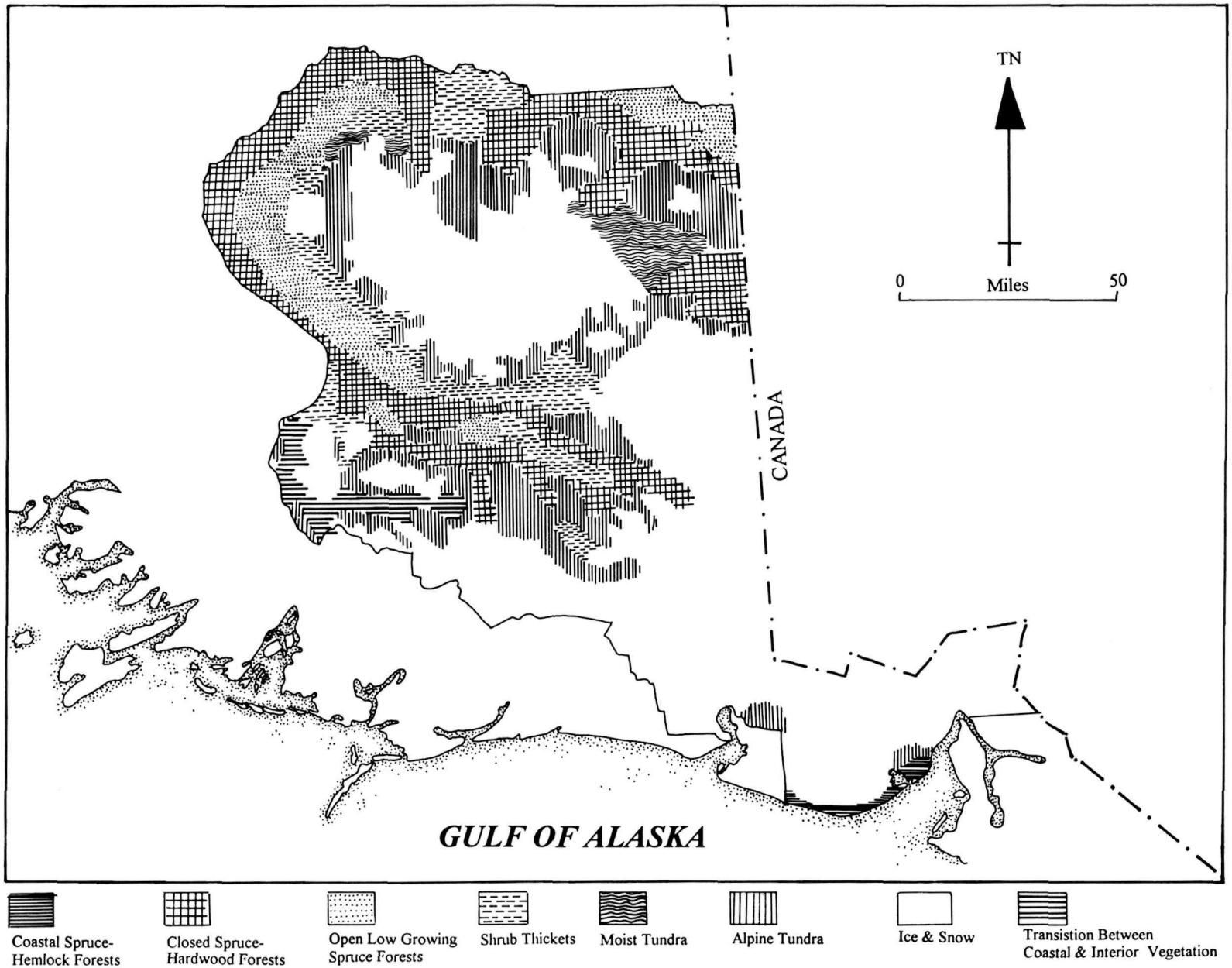


Figure 2.4. Vegetation zones in the Wrangell-St. Elias area.

III

THE PREHISTORY OF THE WESTERN SUBARCTIC AND NORTHERN NORTHWEST COAST

The brief descriptions of prehistoric traditions that follow are derived from the recent report by Clark (1991) augmented by basic studies by Cook (1969, 1975), Holmes (1984), Workman (1978) and others done in various areas of Southcentral coastal and Interior Alaska and the western Canadian Subarctic. In reviewing the broad prehistoric cultural traditions that have been recorded for Southcentral Alaska, it is important to consider that the initial definitions of the traditions are based on remains found at a very few sites that were often prominent in the settings in which they are found. Although the traditions appear to be dispersed over large portions of the American North, a large potential exists for inaccurately characterizing the prehistoric cultures of the region because they are known by only a very small sample of their objects and remains. This circumstance is especially true for the area of Wrangell-St. Elias, where the recorded prehistoric and ethnographic sites numbered only 16 prehistoric sites and 65 historic/protohistoric/late prehistoric sites at the time this review was prepared (Appendix) that serve as representatives of prehistoric and traditional use for an area of some 13.2 million acres of park land. Because of the lack of basic work done within the WRST area, the prehistoric cultures whose remains may eventually be found in the area are characterized on the basis of work done in some nearby areas of Alaska and Canada that includes information obtained from sites several hundred miles distant from Wrangell-St. Elias.

THE PREHISTORIC CULTURAL SEQUENCE

Early remains found in interior areas of Alaska represent occupations by more than one ancient culture for the period of 15,000-8,000 years ago. It is not yet clear which ancestral group began the lineage that led to the historic Athapaskan and north Pacific coast inhabitants, but it is nevertheless likely that a variety of early cultural developments both in the region as well as outside, contributed to the historic cultural expressions. There is little doubt that influences from one culture to another occurred, cross-cutting different tribes of prehistoric humans, spreading across the landscape and persisting from ancient times into the historic.

THE EARLIEST EVIDENCE

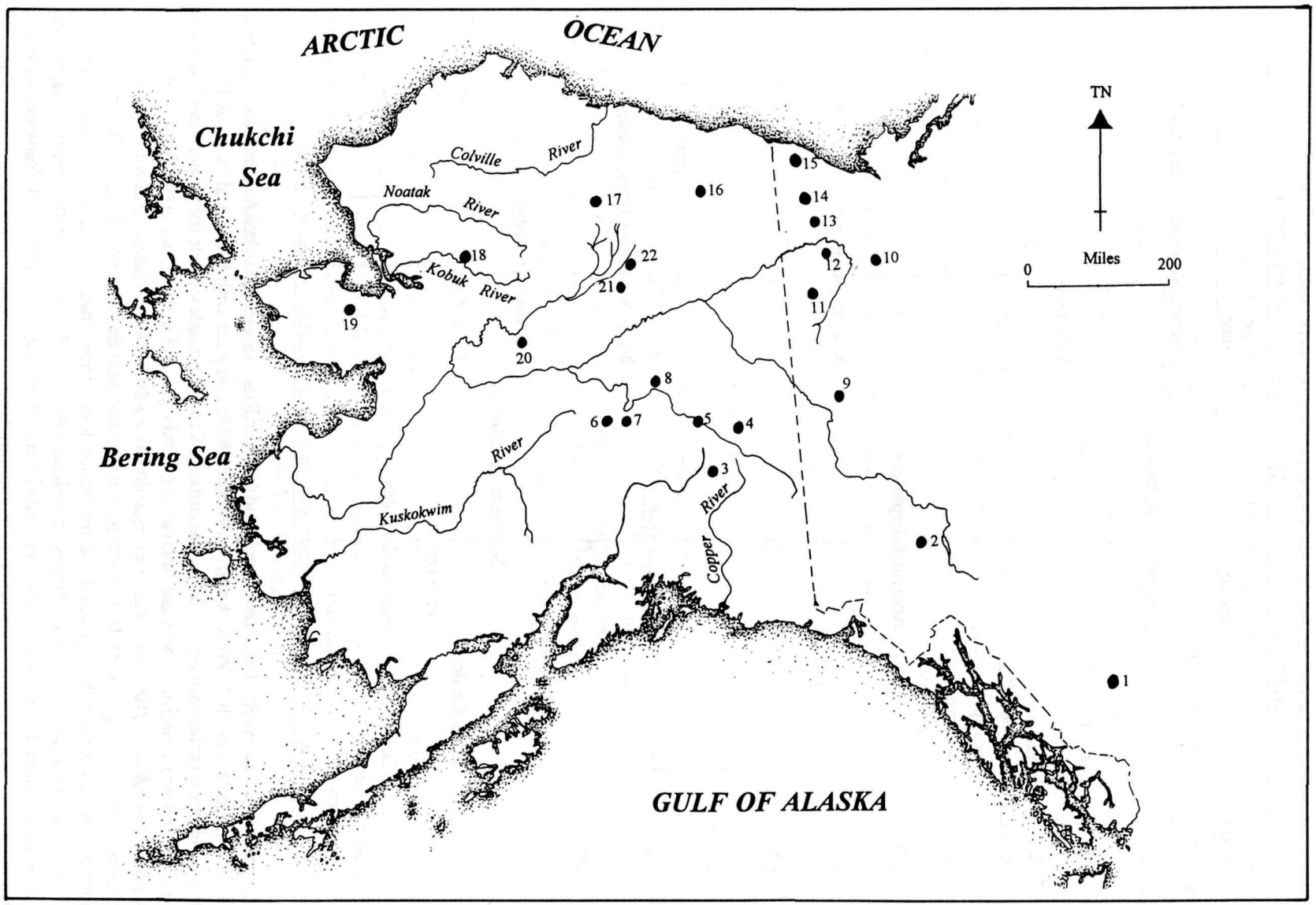
The time of the arrival of humans in North America remains a matter of debate. A recently discovered very early site in the Western Hemisphere is Monte Verde, Chile, dated to ca. 33,000 years BP (Dillahay 1984; Fagan 1987:174-175). Remains in the lowest deposits at this site include a split pebble, a unifacially flaked core and modified wood fragments and stones. More substantial remains were found in the upper levels, including dwellings with interior hearths; these range from approximately 14,000-12,000 years. As Fagan (1987:175) suggests, it is possible that early man had arrived in the New World before the end of the Pleistocene, as early as 30,000 years ago, but demonstration that this event occurred awaits the discovery of indisputable evidence (also, Cinq-Mars 1994; Meltzer 1994). Archaeologists agree that clear evidence of humans in the Western Hemisphere are remains 15,000-12,000 years old (Clark 1991:25, 28-29; Fagan 1987:176).

The latest evaluations of early remains in the western hemisphere, such as those at the Monte Verde site and Meadowcroft Rockshelter in Pennsylvania, have led some researchers to suggest that the Clovis tradition developed in North America, rather than in Asia or the Beringian Land Platform during the late Pleistocene (Frison 1978; Meltzer 1994; compare with West 1981). The apparent absence of fluted points -- a critical element in Clovis assemblages -- in Siberia (Dixon 1993:118) supports this interpretation. The predecessor to Clovis in the Americas may have possessed technologies such as the

Table 3.1.
Cultural sequences for the Alaska Interior and northern Northwest Coast.

Age x1,000	Interior	Coast
		Historic Northwest Coast Culture
.5	Late Prehist. Athapaskan	
1.0		Late phase
1.5		
2.0		
2.5	Ancient Athapaskan	
3.0		Middle phase
3.5	?	
4.0		
4.5	Northern Archaic	
		Early Northwest Coast phase
5.0	?	
		Transitional phase
	Northern Cordilleran	
10	Paleo-Arctic	Paleo-Marine
	Paleo-Indian	
	Nenana Complex	
15		

Nenana complex implements from Dry Creek and Walker Road in Central Alaska dating from 11,800 - 10,500 years ago (Figure 3.2: Powers and Hoffecker 1989; compare with Kunz and Reanier 1994). Another possibility is that some pre-Clovis variants of Nenana complex point forms persisted slightly later than the Clovis point in some areas such as the northwestern Great Plains in the form of Agate Basin points dating to 10,400 years ago and regarded as a variant Paleo-Indian culture (Frison 1978:22-40, 156-168, Fig. 5.6,c). It is worth noting that not only do elements of Agate Basin assemblages include points that appear to be unfluted Clovis forms; but rough parallel-sided blades, a crucial element of Paleo-Arctic assemblages as well as some later Northern Archaic assemblages, are present in some Agate Basin assemblages as well (Frison 1978:Fig. 5.10, and text). Implement forms ascribed to the Nenana complex include small triangular points and larger point forms with outlines


ARCTIC OCEAN
Chukchi Sea
Bering Sea
GULF OF ALASKA
Colville River
Noatak River
Kobuk River
Kuskokwim River
Copper River
TN
0
Miles
200
1
2
3
4
5
6
7
8
9
10
11
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21
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Figure 3.1 Ancient Sites in Alaska and Western Canada (after Clark 1991:Map 4). Sites are designated by the following numbers : 1. Charlie Lake Cave (PI); 2. Canyon Creek (NC); 3. Tangle Lakes (PA); 4. Healy Lakes (NC,PA); 5. Broken Mammoth (PA, NC); 6. Walker Road (PI); 7. Dry Creek (PA); 8. Campus (PA); 9. Dawson Placer mines (PI); 10. Rock River (NC); 11. Bluefish Caves (PI,PA); 12. Old Crow Flats (PI); 13. Dog Creek (PI); 14. Kikavichik Ridge (PI); 15. Engigstiack (NC); 16. Putu (PI); 17. Mesa (PI); 18. Onion Portage (PA); 19. Trail Creek Caves (PA); 20. Batza Tena (PI, Obs); 21. Island (PI, PA); 22. Girls Hill (PI).

PI: Paleoindian; **PA**: Paleoarctic; **NC**: Northern Cordilleran group

that roughly approximate those of the later Clovis form; other implements include retouched blade-like flakes, perforators, large bifacial scrapers and endscrapers. Nenana complex sites are all located on stream-cut terraces adjacent to side-valley ravines; the site settings suggest that the occupations were short-term and probably functioned as large game observation stations during hunting excursions (Powers and Hoffecker 1989:283). Recent discoveries of Nenana complex remains at the Broken Mammoth site on the Tanana River reflect use of a wide variety of fauna, not restricted to large game. Fauna represented at Broken Mammoth include bison, caribou, beaver, hare and ground squirrel; bird remains recovered include cranes, ducks, swans and geese (Dixon 1993:84).

THE NORTHERN PALEO-INDIAN TRADITION

This designation refers to the archaeological entity, first discovered in Clovis, New Mexico, that represents the earliest generally accepted, fully developed culture on the North American continent (Dixon 1993:15-18, 118-119; Fagan 1987:177-188). The so-called Clovis culture may have developed in North America in settings such as those produced by late Pleistocene conditions on the eastern side of the Rocky Mountains (cf. Dixon 1993:119; Fagan 1987:177-178; Frison 1978:27-40; Meltzer 1994). In these areas most of the annual precipitation fell during spring and early summer, but moisture was retained below the ground surface and supported substantial growths of grasses through the summer and into the late fall. This type of ecology is believed to have provided the food resources necessary to support large late Pleistocene ungulates such as bison and mammoths (Fagan 1987:177-178). Early Clovis remains found south of the late Pleistocene ice sheets indicate that Clovis people comprised small, scattered groups that may have frequented springs and other types of water holes where game animals appeared regularly *(Fagan, Eskimos and Aleuts)*. Clovis people seem to have had a preference for mammoth insofar as mammoth bones are found at sites where bone is present; but other game such as bison, horses, camels, tapirs, bears and rabbits were present, as well as smaller game and food plants. Remains found in rock shelters are interpreted as those of winter encampments (Fagan 1987).

By 10,000 years ago Clovis, or Northern Paleo-Indian, people appeared in Alaska north of the Pleistocene ice, apparently having migrated through an ice-free corridor located along the western Canadian Cordillera (Figure 3.4; Dixon 1993:119). Clovis remains in Alaska and western Canada have been tentatively identified in interior areas such as Bluefish Caves and Old Crow Flats and more conclusively established at Charlie Lake Cave and Walker Road (Clark 1992:32-35). The occurrences of Clovis remains in the Northwest Coast culture area are restricted to a total of four locations with poor contexts for dating the objects, such as surface finds near Olympia and Chehalis and the stratified Manis site on the northeastern Olympic Peninsula that has produced a pointed bone fragment embedded in a mastodon rib, but no diagnostic stone implements (Carlson 1990:60-61).

The large mammoths and mastodons had become extinct by around 10,000 years ago, but it is thought that the Northern Paleo-Indian hunters had begun to focus on other types of game, including bison, by this time (Clark 1992:33). Effective techniques for hunting bison, such as driving the animals over cliffs or `jumps,' were most likely developed on the Great Plains before Clovis people arrived in the northern Subarctic (Clark 1992). Northern Paleo-Indian people in the Subarctic appear to have lived in much the same fashion as Clovis groups to the south, insofar as they were comprised of small groups focused on hunting big game. With very few exceptions, Paleo-Indian sites in the Subarctic are hunting stations situated on elevated terrain that undoubtedly served as game observation posts.

The primary characteristic of Northern Paleo-Indian -- or Clovis -- artifact assemblages are fluted projectile points with at least one flute, or a large flake scar on a broad face of the point, that extends from the base to approximately one-half to two-thirds of the length. The points may have only one flute, but many have opposing flutes, one on each broad face. Other stone implements include bifacially flaked stone scrapers or knives, bone wedges and possible spear foreshafts.

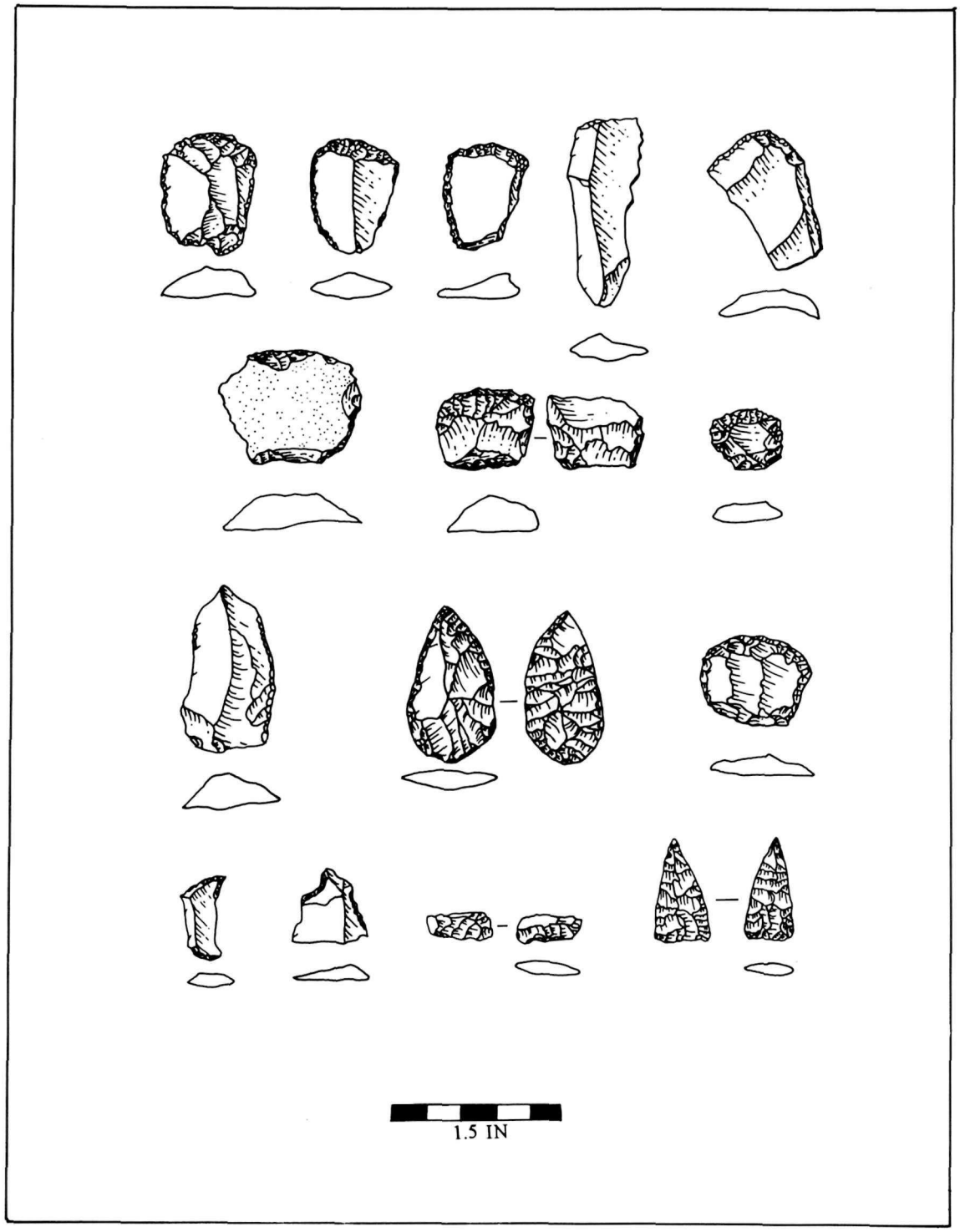

Figure 3.2. Lithic tools of the Nenana Complex (after Dixon 1993: Fig. 7.2).

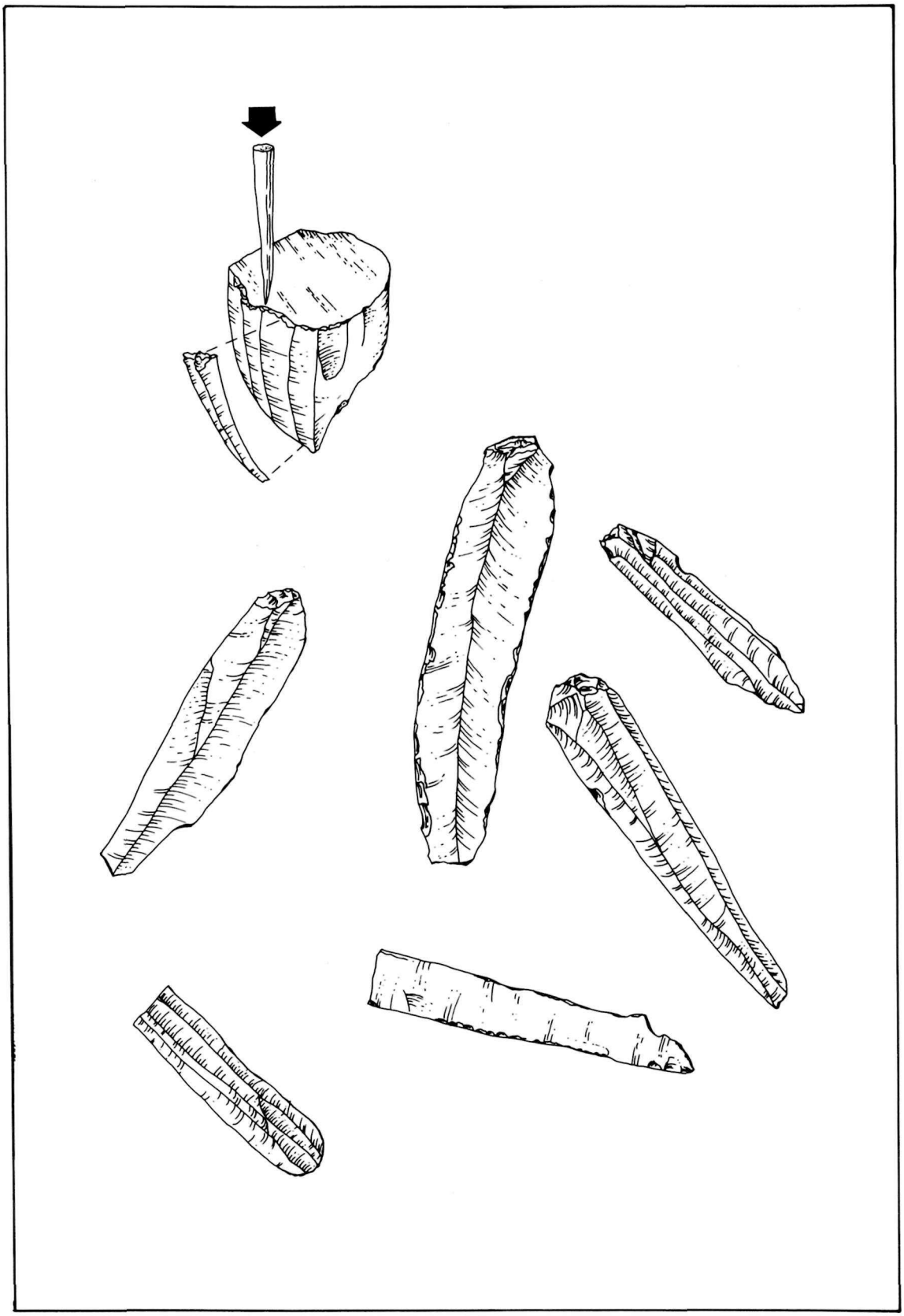

Figure 3.3. The blade core and blade manufacturing technique (after Clark 1991:Plt. 10).

THE NORTHERN CORDILLERAN GROUP

By 10,400 - 10,000 years ago, the climate and environments that had supported large Pleistocene fauna had changed to conditions close to those of modern times; this process was accompanied by general changes in the human occupations of northern areas. Occupations of areas once formerly glaciated began by 10,000 years ago and a process of developing increasingly specialized adaptation to local environments may have begun by this time as well (Clark 1991:33-36; see also, Gotthardt 1990:42-47). Clark (1991) groups some of the assemblages of this period under the designation "Northern Cordilleran group," a category that includes remains from locations such as Engigstiack, Healy Lake, the Mesa site and a later component at the Broken Mammoth site (Figure 3.4). Technologies associated with the Northern Cordilleran inhabitants of the Subarctic dating from 10,000 to ca. 7,000 years ago include various artifact assemblages that share the trait of having bifacially flaked, lanceolate projectile points -- sometimes referred to as `Plano' -- but without the characteristic fluted Clovis projectile points. As Clark notes (1991:33-35), it is equally possible that these loosely grouped assemblages are derived from either the Nenana complex technology or are an evolved Northern Paleo-Indian technology. Later Northern Cordilleran people began to occupy areas with developing ecologies that were newly exposed by the retreat of Pleistocene ice sheets in western Canada.

THE AMERICAN PALEO-ARCTIC TRADITION

Paleo-Arctic occupations of Alaska cluster around 10,000 years ago (8,000 BC), a time when similar technologies were present in northeast Asia and Siberia (Anderson 1970, 1984:80; Dikov 1988; Dumond 1987a:43-45; Gotthardt 1990:48). The most striking example of technology shared by American Paleo-Arctic people and their contemporaries in Siberia at sites such as Diuktai Caves is the production of prismatic blades from small, wedge-shaped cores (Anderson 1970; Dumond 1987a; Dikov 1988; Müller-Beck 1967). The artifact assemblage of the American Paleo-Arctic tradition can be characterized by describing a few of the diagnostic Akmak tools from the type site of Onion Portage (Dumond 1987a:38; Anderson 1984:81; 1988). Included among these are: the previously mentioned wedge-shaped cores, large polyhedral cores, microblades, large blade-like flakes, large bifaces that served as both heavy chopping tools and cores for large blade-like flakes, flake burins, ellipsoidal bifaces, large flakes unifacially or bifacially retouched and side-slotted bone or antler points into which the blade-like flakes were mounted (Anderson 1984; 1988; Dumond 1987a:36-42).

Although clear association of Clovis points with critical elements of the Paleo-Arctic assemblage, such as wedge-shaped cores and burins, has not yet been encountered in Alaska, some signs of an association have been found to the south, such as at the Blackwater Draw site in New Mexico (Anderson 1984:81; Dumond 1987a:41; West 1981). It is important to note, as well, that at two northern sites, Bluefish Caves and the Island site, elements of both Paleo-Indian and Paleo-Arctic technologies have been found, although direct associations between the two remain questionable (Figure 3.4; Clark 1991). Chipped point forms, such as the Chindadn point from Healy Lake, are believed by some to be elements of a variant Paleo-Arctic assemblage (Dumond 1987:41).

Reconstructing lifeways of Paleo-Arctic people is problematic insofar as known Alaskan sites are almost exclusively remains of ephemeral hunting camps (Anderson 1970). A possible exception is the Onion Portage site, which has been interpreted as a dwelling site (Anderson 1984:82; 1988). Subsistence for these people is generally interpreted as being focused on late Pleistocene and early Holocene big game, such as caribou (Dumond 1981a; Giddings 1967). However, sites located on rivers and in coastal settings indicate the Paleo-Arctic use of boats and riverine and ocean resources (Dikov 1988; Fladmark 1979; Laughlin 1980). Unlike Northern Paleo-Indian distributions that are presently known only from inland locations, Paleo-Arctic remains have been found both in inland locations such as Dry Creek in central Interior Alaska and Otter Falls and Canyon Lake in the Aishihik Lake vicinity

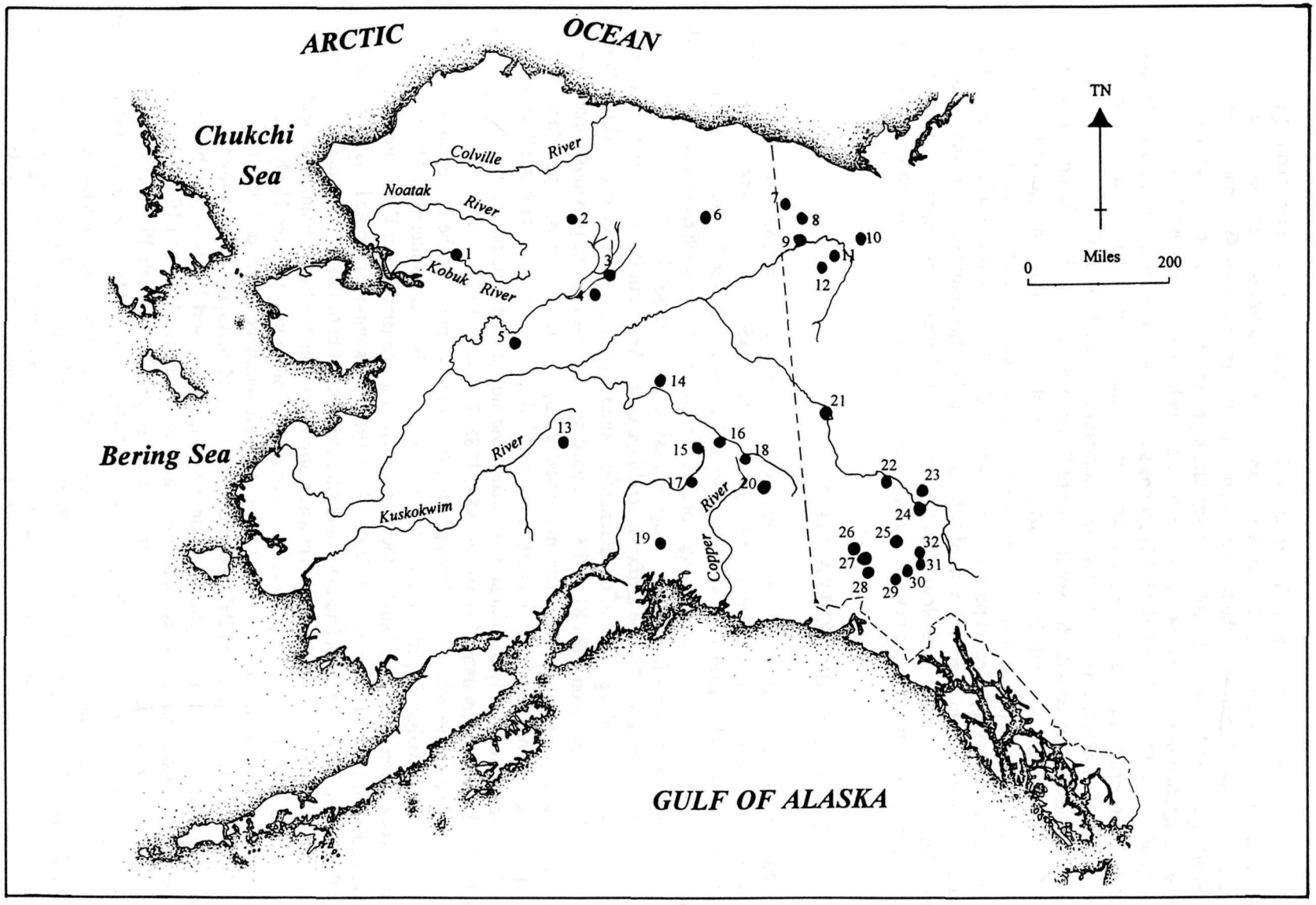
ARCTIC OCEAN
Chukchi Sea
Colville River
Noatak River
Kobuk River
Bering Sea
Kuskokwim River
Copper River
GULF OF ALASKA
TN
0
Miles
200
1
2
3
4
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Figure 3.4. Later sites in the Wrangell-St. Elias area (after Clark 1991:Map 5). Sites[1] are designated by the following numbers: 1, Island (NA); 2. Girls Hill (M,NA); 3. Batza Tena (NA, Obs); 4. Campus (M, NA); 5. Healy Lakes (M, NA,LP); 6. Cathedral Hill (unique); 7. Anaktuvuk Pass (NA,PE,LP); 8. Old John Lake (M,NA); 9. Trout Lake (PE); 10. Rock River (NA); 11. Rat Indian Creek (NA,LP); 12. Old Chief Creek (NA,LP); 13. Donnelly Ridge (M); 14. Campus (M or NA); 15. Nutzotin Mountains (Obs); 16. Dixthada (NA or M, LP); 17. Susitna River sites (various periods); 18. Paleoeskimo sites; 19. Gul-077, Ms 23-0 (LP); 20. unnamed site[2]; 21. Moosehide (M,NA,LP); 22. Pelly Farm (NA); 23. KbTx-2 (M); 24. Tatleman lake (LP); 25. Chimi (M, NA); 26. Little Arm (M); 27. Gladstone (NA); 28. Airdrop Lake, Hoodoo Mountain (Obs); 29. Canyon Creek (M, NA); 30. Champagne (?)[3]; 31. Taye Lake (NA); 32. Otter Falls (M).

NA: Northern Archaic and/or hybrid; **M**: Microblade (late Paleoarctic); **PE**: Paleoeskimo; **LP**: Late Prehistoric; **Obs**: Obsidian source.

[1]Onion Portage (NA, PE, LP) is listed in Clarks (1991:Map 5) caption, but not located on his map; Minchumina Lake (NA, LP) is incorrectly located north of the Yukon River on Clarks (1991:Map 5) illustration.

[2] Unnamed site; designated on Clark's (1991:Map 5) illustration as number "50," the designation is not listed in Clark's caption.

[3] Presumably a site containing components of Northern Archaic or later cultural affiliations; no components are listed by Clark (1991:Map 5).

of western Canada and in coastal locations at sites such as Ground Hog Bay on Icy Strait. Paleo-Arctic, or Paleo-Marine, remains are also found in the northern portion of the Northwest Coast culture area, at sites including Hidden Falls on Baranof Island and Chuck Lake on Heceta Island (S. Davis 1989a:197-198; 1990; Fladmark 1979). It is also important to note a coastal occurrence of these remains to the west of WRST shores, at Beluga Point in Cook Inlet (Reger 1981). Defining characteristics of Paleo-Arctic/Paleo-Marine technology are listed as microblades and wedge-shaped cores, relatively few bifacial implements in the assemblage, and an economic focus on marine resources (S. Davis 1989; Reger 1981).

Microblade technology, a hallmark of the Paleo-Arctic tradition, persisted nearly as long in coastal areas as inland, with some occurrences dating to perhaps as late as 2,200 years ago on the northern Northwest Coast (Clark 1992:81; S. Davis 1990:199; Fladmark 1979), with microblades and related implement forms persisting in nearby inland areas until as late as 2,000 years ago. Examples of coastal occurrences of microblade technology dating to ca. 2,290 - 2,240 years ago are reflected by remains at Point Couverden, near the southern tip of the Chilkat Peninsula and Irish Creek on the western side of Kupreanof Island (S. Davis 1990). After 5,000 years ago, microblade technology was also sustained in some areas, such as the southwest Mackenzie River in western Canada, to as late as 2,000 years ago and even later in some areas (Clark 1991:55). This phenomenon, sometimes designated as the Northwest Microblade tradition, is represented by artifact assemblages in which elements of Paleo-Arctic technology appear to be combined with those of Great Plains Archaic and Northern Archaic and are expressed as assemblages that include both microblades and lanceolate and side-notched points (cf. Clark 1981:111; 1991:53-55; Gotthardt 1990:49-50).

THE NORTHERN ARCHAIC TRADITION

Remains representing this tradition were discovered by Giddings at the Palisades site adjacent to Cape Krusenstern in 1958 (Giddings 1967). Later documentation at Onion Portage and additional radiocarbon assays resulted in dating this tradition to approximately 6,000 years ago (or 4,000 BC) (Giddings and Anderson 1986:306-310). Northern Archaic in the Yukon area of Northwest Canada persisted as late as 2,000 years ago (Clark 1991:50; Gotthardt 1990:50-52). Giddings and Anderson (1986:306-308) consider Palisades Northern Archaic to be a coastal extension of what is essentially an interior cultural tradition, a result of expansion of the northern boreal forests related to a climatic warming trend, and concomitant territorial expansion by Northern Archaic peoples (Anderson 1968; Giddings and Anderson 1986:306-308).

A recent synthesis of Northern Archaic portrays the entity simply as a technology that spread with varying degrees of acceptance through late Northern Cordilleran groups to western and northern Alaska (Clark 1992:95). In an example of this scenario, the characteristic notched points may have been adopted by some groups, while others continued to use their existing implement forms through Northern Archaic times. In all interpretations, it appears that the transmission of the technology cross-cut different cultural groups and, presumably, different language groups as well.

Implements (Figure 3.5) that characterize Northern Archaic culture include asymmetrical projectile points with deep, wide side notches and slightly convex bases; large unifacially flaked knives; and unifacially flaked endscrapers (Dumond 1987a:47-52; Giddings and Anderson 1986:308-310). Chert was the favored material for tools (op. cit.). Some change is apparent in tool forms by around 4,600 years ago, at which time the deeply notched points evolved into a stemmed projectile point form in some areas (Dumond 1987a:47-50). This type of tool form evolution is also documented in other parts of Alaska, such as the Naknek region on the Alaska Peninsula (Dumond 1981a).

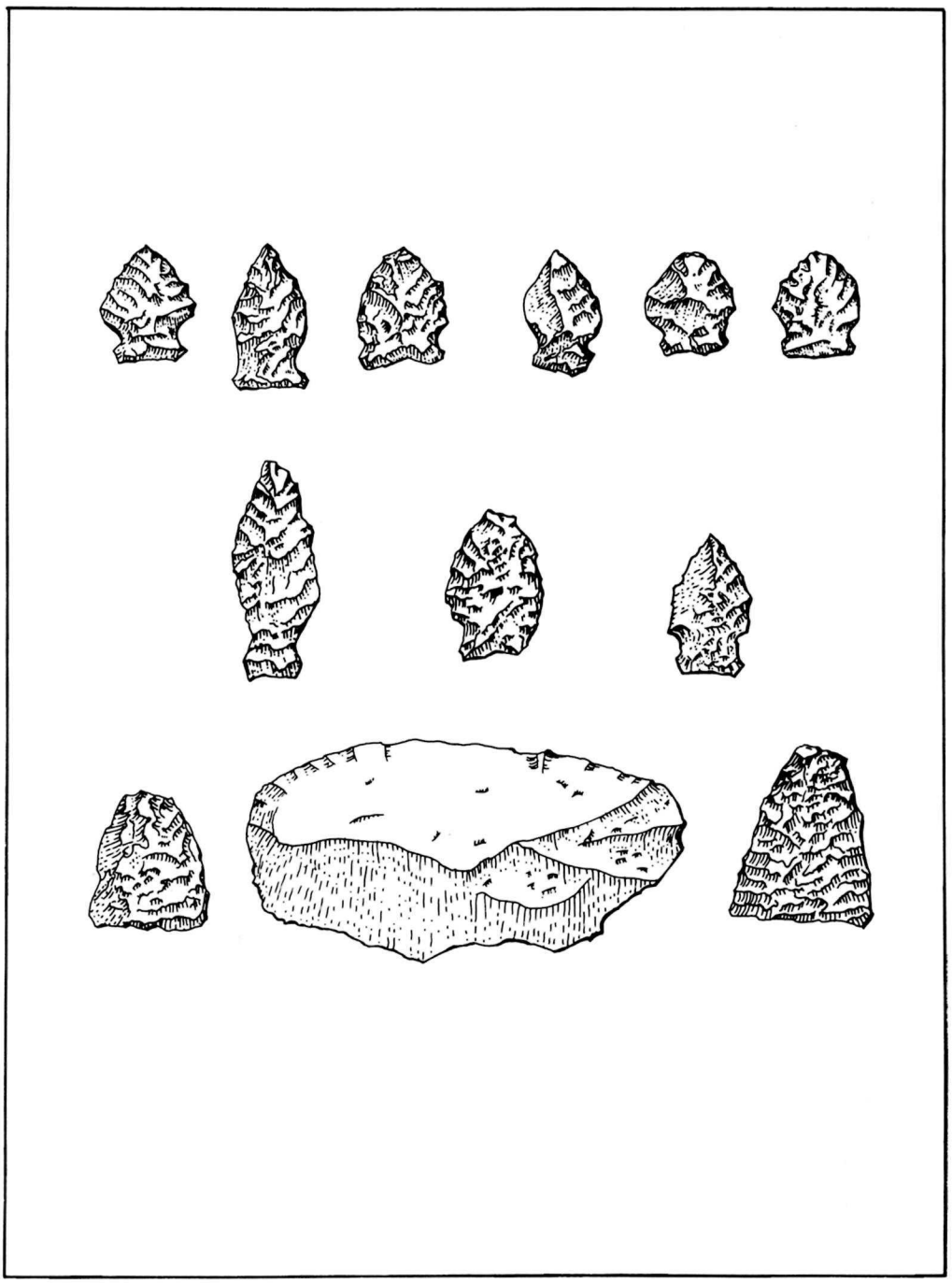

Figure 3.5. An example of a Northern Archaic tool assemblage (Dumond 1983:Fig. 3.4).

THE DEVELOPMENT OF NORTHERN ATHAPASKAN CULTURES

The period from approximately 2,000 years ago to the time of European contact in southern Alaska was a time when ancestors of the historic Athapaskan groups inhabited the region and made the final developments of their traditional cultures. Some researchers have suggested that Athapaskan culture originated in the later Northwest Microblade tradition in the southern Yukon area, while others have argued for a Northern Archaic or Northern Cordilleran ancestry (Ives 1990:34-38; also, Clark 1991:48-49).

Although the specific arguments for each line of descent are not reviewed here, one approach is presented. This approach suggests that a Northern Archaic/Northern Cordilleran origin for Athapaskan culture is most likely primarily due to the parsimony (or *economy*) of explaining Athapaskan descent from a Northern Archaic ancestry. Based on the general patterns reflected in Northern Archaic sites in Alaska, it is apparent that, as with historic Athapaskan groups, Northern Archaic people preferred living inland, focused on hunting large fauna and augmented these resources with small game, fish and plant products. The technology used by the Northern Archaic/Northern Cordilleran groups was also comparable with the historic Athapaskan technology, with a concentration on a relatively basic approach to stone-chipping as the primary manufacturing technique, as compared with the substantially different manufacturing techniques used in microblade technology. And finally, microblade technology disappeared from the area by 2,000 years ago, while chipped stone technology persisted to historic contact times. A direct line, or closely related, descent of technological traditions is suggested by this persistence of technology for Athapaskan ancestors, beginning after the appearance of the microblade technique as early as 6,000 years ago in Northern Archaic culture (Cook and McKennan 1971; Ives 1990; Workman 1974:719, 1978:414,429). Chronologies for the southwest Yukon Territory and the Healy Lake area describe a continuity in the general trends of cultures in Interior Alaska through time, from the Northern Archaic tradition, as early as 6,000 years ago, up to historic Athapaskan culture.

This discussion will review only one example of these sequences from an area adjacent to WRST. This example is Workman's (1978) cultural sequence for the Aishihik-Kluane area in southwest Yukon Territory, which is based on results of the National Museum of Man testing and excavation project conducted at Aishihik Lake and a synthesis of earlier work in the area, primarily that of MacNeish (1964). The sequence is divided into four cultural phases (Workman 1974:pt. 2):

The *Little Arm phase* is the earliest phase, approximately 8,000-4,500 years of age, and the single representative of the Paleo-Arctic tradition. The *Little Arm* assemblage is equivalent to the Paleo-Arctic tradition identified in other areas in many respects, sharing many technological elements such as microblades with those assemblages. Workman (1978:418-419) suggests that the presence of these elements and the consistency of others with Paleo-Indian technology to the north and south represent a hybrid, Southwest Yukon, early man assemblage. The hunting focus of Little Arm people appears to have been bison.

The *Taye Lake phase* designates the advent of the Northern Archaic tradition in the area, with an age range of approximately 4,500-1,600 years. Workman (1974:pt.1:abstract, 1974 pt.2:747-749) suggests that the technological continuity that began with the appearance of Northern Archaic technology persisted in some aspects to the time of historic contact. The Northern Archaic occupants of the area are assigned to the Na Dene' language phylum, based on the consistency of their technology with those of the succeeding occupants, and by this reasoning are regarded as ancestral Athapaskans (loc. cit.). Their primary subsistence focus was on caribou, moose and bison, supplemented by smaller animals, birds and fish (Workman 1974, pt. 2:605). Some of the sites representing this phase are relatively large camps that may reflect repeated use over a number of years (loc. cit.).

The *Aishihik phase*, dating from 1,600 to ca. 150 years in age, designates late prehistoric culture before the introduction of European goods. Although the early temporal limit of the Aishihik

phase is defined by the eruption of Mt. Bona and the resulting deposition of White River volcanic ash sometime around 1,250 years ago, a strong continuity is postulated between the occupants of the area before the eruption (Taye Lake phase people) and those who resided in the same area following the ashfall (Workman 1974 pt. 2:564, 1979:349). Implements that persist from the antecedent Taye Lake phase include a geometric point form, a notched point type, multi-barbed bone points, stone wedges, boulder spalls, two types of endscrapers, flake blade cores and blunted discoids (Workman 1974, pt. 2:562-563). Continuity from the Aishihik phase into the succeeding Bennett Lake phase is seen in the persistence of some tool forms including abraded cobbles, multibarbed bone points, Kavik points and tabular bifaces (Workman 1974, pt. 2:553, 562-563). The archaeological attributes unique to Aishihik phase culture are implements made of native copper, including rolled sheets, points with incipient stems, bipoints, pointed implement tips, rolled tubes and other unidentified sections and fragments of various forms (Workman 1974, pt. 2:562-602,Plts. 9-15). Although faunal remains in Aishihik phase sites are meager, it is presumed that large ungulates were the primary subsistence focus during this time; the known sites representing this phase are limited to ephemeral camps (Workman 1974, pt. 2:563-564).

The *Bennett Lake phase* dates from the nineteenth century to the early twentieth century and designates protohistoric Native Athapaskan culture with both traditional implements and European objects. Workman's definition is derived from MacNeish's (1964) and is applied to the Aishihik-Kluane area with some reservations about the poor representation of actual European goods (only a single glass bead) in the Bennett Lake phase remains he encountered (Workman 1974, pt. 2:552-553). Postulated new implements that would appear in larger Bennett Lake samples may include European metal cutting tools such as axes and knives that replace Aishihik Lake assemblage stone and copper forms; the appearance of metal containers and a decrease in occurrences of boiling stones; an increase in axe-split bones, and an increase in the relative amounts of remains of fur-bearing species in the faunal assemblage -- this would reflect the advent of the fur trade with Europeans in the area (loc. cit.). Log cabin villages appeared during this phase, and were apparently sometimes located at what had been seasonal camps before the arrival of Europeans (Workman 1974:pt. 2:553).

The major trends identified in the Aishihik-Kluane sequence (Workman 1974) therefore, are the long, ca. 3,500-year, persistence of the Little Arm phase in the area that is abruptly replaced by the appearance of Taye Lake phase technology. In spite of a strong probability that the technological ancestry of northern Athapaskan groups lies in the Archaic and Northern Cordilleran cultures described above, there is no firm basis for suggesting that occupants prior to the Aishihik phase are direct antecedents nor, perhaps, are they even in the direct cultural lineage of the historic Native inhabitants. This type of scientific conservatism has been described succinctly by Clark (1991:56):

> *The anonymity of prehistory can never be dispelled. Yet we must try to identify the peoples who "wrote" the successive chapters of Subarctic prehistory. That amounts to tracing the development of cultures back to their roots. For late-prehistoric material, this is usually done by attributing remains to the ancestors of the first-reported historical inhabitants of the region involved. There is a risk of error in this practice, because even indirect contact with Europeans in eastern North America resulted in some tribes being displaced westward...*
>
> *... Prehistorians are reluctant to identify specific tribes of earlier times, but they try to correlate archaeological material from all but the remotest periods with language families that form a cluster of tribes, the Athapaskans for instance. The Northern Archaic people .... who lived in the southern Yukon, have been identified as early Athapaskan speakers. Athapaskan speech is thought to have diverged about 4,000 years ago from ancestral stock in the same area, including adjacent parts of Alaska and British Columbia. This does not mean, though, that all the Athapaskan Indians now distributed from northwestern Alaska south to Mexico necessarily arose from that source.*

It is important to stress that Clark's statement should not be construed to mean that the Northern Archaic people who inhabited the southern Yukon spoke the same dialects as the historic Athapaskan inhabitants of the area (Krauss and Golla 1981:67-69; see also, Workman 1974, pt. 2:747-748); nor is it definite that they are the same biological population groups as the modern Native inhabitants. In fact, a number of considerations presented below suggest that tribal territories and ethnic groups in the Southcentral Alaskan interior and coastal areas and the southwest Yukon tended to shift and change through time. Therefore, while it is reasonable to suggest that the ancestral northern Athapaskan culture may have been present in the region as early as 5,000 years ago, it cannot be said with any degree of confidence that the prehistoric Archaic groups of the vicinity were ancestral Ahtna and Tanana people, of the same biological lineages as those ethnic groups residing in the area in early historic and modern times (Clark 1991:64).

An example of the problem in reconstructing the ethnicity of the prehistoric people of the area is the question about the effects that the Mt. Bona eruption may have had on the Na Dene' inhabitants. Workman has postulated that the deposition of tephra (White River ash) from Mt. Bona approximately 1,250 years ago may have resulted in a migration of Na Dene' groups located east of the volcano to southern regions (Figure 6.1; Workman 1974, pt. 2: 749-750, 1979:348-352). This scenario is offered as an explanation of the appearance of Athapaskan dialects in the American Southwest as ancestral Navajo and Apache groups arrived who were the cultural progenitors of the historic groups of the region. Nevertheless, Workman (1979:352) stresses that the groups who reoccupied the areas of the Southwest Yukon affected by the ashfall possessed virtually the same material culture as the prior occupants, thereby indicating that the net result of the eruption had little effect on the cultural continuum of the northern Athapaskan groups of the region. This continuity is reflected as the persistence of some elements of the tool assemblage from the Taye Lake to the Aishihik Lake phases, described briefly above.

Based on the preceding discussion, it can be seen that the prehistoric ancestors of the historic Ahtna and Upper Tanana occupants of the Wrangell-St. Elias area can be traced to the protohistoric Bennett Lake phase occupations of the area with considerable confidence and the degree of confidence diminishes for the period of the Aishihik phase, becoming uncertain for the period preceding the Mt. Bona eruption during the Taye Lake phase. The most that can be suggested for the ethnicity of the Taye Lake occupants of the area is that they are clearly ancestral Athapaskans, as reflected in their technology and subsistence lifeways, who probably spoke a language of the Na Dene' language phylum.

THE DEVELOPMENT OF NORTHERN NORTHWEST COAST CULTURE

This discussion of Northwest Coast cultural development will be restricted to the northern portion of the culture area, which was historically the territories of the Eyak and Tlingit people. It is important to consider that the cultural-historical aspects of the Eyak and Tlingit cultures are more closely related to Athapaskan groups than some of the other tribes of the Northwest Coast culture area, an assessment that is based primarily on characteristics of the Eyak and Tlingit languages (Leer 1994; Thompson and Kinkade 1990:30-31, Tab. 1). In turn, although some evidence suggests that the Eyak and Haida languages were closely related in prehistoric times, the linguistic data do not demonstrate a genetic relationship. Possibilities therefore exist for convergent developments of not only the Tlingit and Haida languages, but Tlingit and Eyak-Athapaskan, as well (compare Leer 1994 and Thompson and Kinkade 1990:44-45, Tab. 4). In the cases of these three cultures, the geographic contiguity of their tribal territories may be the basis for the development of the shared characteristics of the three languages (loc. cit.).

It has recently been proposed that the development of the general northern Northwest Coast culture form consists of four stages that comprise a total of at least three cultural traditions, including the Paleo-Marine, early assemblages with ground and polished implements and the late prehistoric

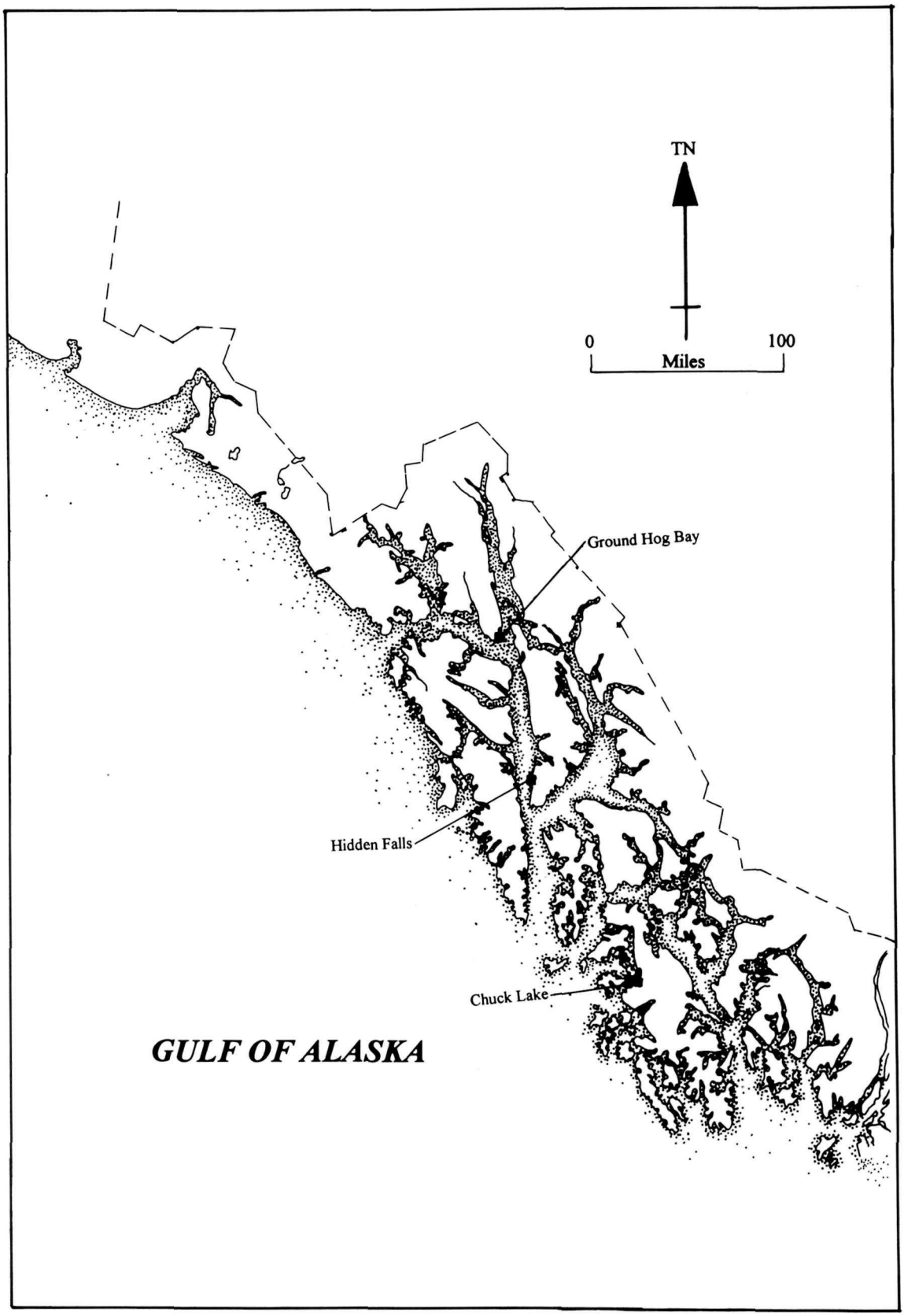

Figure 3.6. Early sites in the northern Northwest Coast area.

artifact assemblages that include metal implements (S. Davis 1990). A substantial shift in lifeways occurred after the Paleo-Marine (or Paleo-Arctic) microblade-using cultures ceased operating in the northern Northwest Coast. Paleo-Marine people were the earliest inhabitants of the mainland shores and islands of the northern Northwest Coast, and those cultures that followed immediately after brought with them the largest magnitude of change in the cultural sequence in the area (Carlson 1990:68-69). Some of the later traditions appear to intergrade through time, reflecting a process of gradual change that renders attempts to develop precise distinctions between them somewhat arbitrary, insofar as they are only stages in a continuum. Such distinctions do serve a useful purpose, however, in describing changes of smaller magnitude, such as the appearance of some new technologies and tool forms, and stages in development of the historic lifeways of the Native inhabitants of the region.

A Transition from Paleo-Marine to Later Cultures.

The period from approximately 6,500-5,000 years ago was one during which the technological developments occurred that formed the basis for early Northwest Coast culture (i.e., S. Davis 1990:198-199). During this period, Davis (S. Davis 1990) suggests, stone grinding technology developed in the northern Northwest Coast and became the predominant manufacture technique over microblade production by 5,000 years ago. The evidence for this postulated change is weak, insofar as the three sites used as examples contain only materials representing blade and core and microblade technology. These sites, at Lake Eva on northeastern Baranof Island, Point Couverden near the southern tip of the Chilkat Peninsula and Irish Creek on the western side of Kupreanof Island nevertheless are placed in the Transitional period, based on radiometric dates or attributes of their respective artifact assemblages (S. Davis 1990). It is important to note that radiometric ages for Point Couverden and Irish Creek remains are 2,240 and 2,290 years, respectively (S. Davis 1990:199), an age range that makes these coastal occurrences contemporaneous with occurrences of the same technological elements in nearby Interior locations such as the Aishihik-Kluane Lakes area designated as the Little Arm and Taye Lake phases (Workman 1978).

In the absence of substantiation for the existence of a transitional stage, such as increasing proportions of ground stone in assemblages through time, alternative explanations for the appearance of stone grinding in the area must be given equal credence. One such alternative is the possible migration of new groups into the area, who brought the new technology with them. Evidence that suggests immigration of new groups bearing ground-stone technology into the northern Northwest Coast area is an early occurrence of an assemblage with a fully developed array of ground implements in Component II at Hidden Falls, that is described below (*contra* S. Davis 1990). It is important to note that objects that are diagnostic of a blade and core technology are absent from this assemblage (S. Davis 1990).

The Early Phase

Davis (1990) places the advent of developing Northwest Coast culture at 4,600 years ago, as represented by the Component II materials at Hidden Falls, located on the eastern side of Baranof Island. This is the initial appearance of grinding or polishing as a manufacturing technique, reflected in the appearance of ground implements such as stone points, small planing adzes, abraders and unilaterally-barbed bone points; labrets and beads are also present (Lightfoot 1989; Davis 1990:199). Other sites with early phase components that resemble the Hidden Falls assemblage include Rosie's Rockshelter on Heceta Island, Coffman Cove on Prince of Wales Island and Traders Island, located just south of Chicagof Island (Davis 1990:199-200). Processes related to the appearance of the new technology include an increasing focus on intertidal resources such as mollusks, as reflected in the development of shell middens, and the initial appearance of large winter settlements near shores and specialized camps for subsistence activities (Davis 1990). Ames (1985:171) concurs with this general

assessment, suggesting that an increasing focus on coastal resources, concentrated on fishing and shellfish collecting, occurred during this period, but with no apparent accompanying intensification in exploitation of land mammals. However, fauna recovered from the Early phase Component II at Hidden Falls include the terrestrial species of dog and deer, as well as sea mammals, salmon and marine fish (S. Davis 1990:199; Moss 1989:Tab. 8). Shellfish remains include heart cockle, butter clam, horse clam, littleneck clam and bay mussel (Davis 1990:200).

The Middle Phase

This phase is defined by Davis primarily on the basis of the Component III assemblage at Hidden Falls; the temporal span of these remains, 3,000-1,300 years ago, roughly defines the period for the northern Northwest Coast (Davis 1989b; 1990:200). The suggestion by S. Davis (1989b:343) that Falls was abandoned at the end of the Component II occupation and then reoccuppied by Component III people seems consistent with the differences that are apparent in the assemblages of the two components. The grinding and polishing technique of tool manufacture continued from the Early phase through the Middle phase as did some of the implement forms, but with apparent increased production of unilaterally barbed ground-bone points; ground stone knives; and heavy hand mauls (loc. cit.). New implements that appeared at this time include ground burins of bone and nephrite (loc. cit.). An alternative explanation for the increased frequency of organic artifacts may lie in the more complete decay of older examples, a process that would effectively increase the apparent frequency of the younger forms such as the ground bone points or, in the case of the bone burins, give the appearance of their absence in cases where they may have actually been present. Although use of coastal areas continued and apparently intensified, a large proportion of coastal sites appear to have been related to seasonal resource procurement (S. Davis 1990:200). Fauna that are prominent in Middle phase sites are generally consistent with that of the Early phase. Those from Hidden Falls include deer, sea otter, harbor seal and bird remains. Fish identified to species include Pacific gray cod, salmon, rockfish, herring and halibut; shellfish are generally consistent with those of the Early phase (S. Davis 1990:200).

The Late Phase

The principal changes that occurred during the period from 1,300 years ago up to contact are those related to the development of larger structures and the introduction of native copper tools; other new implements include stone bowls and lamps, new harpoon forms, increased use of obsidian for tools and the appearance of iron used in tool manufacture (S. Davis 1990:200). Faunal remains found in Late phase sites reflect a continued importance of shell fish, including bay mussel, smooth Washington clam and Pacific littleneck clam. Also represented are both terrestrial and marine species, including harbor seal, porpoise, whale, sea otter, mountain goat, black bear, beaver, marmot, muskrat and dog (S. Davis 1990:200). Sites assigned to this phase are the Starrigavan site on the western side of Baranof Island, Russian Cove located on the mainland shore just northeast of Kupreanof Island, Bear Shell Midden located on the northeastern side of Chicagof Island, Component I at the Ground Hog Bay site and Old Town on Knight Island (S. Davis 1990:200, Fig. 1).

Close parallels with the historic groups of the northern Northwest Coast are apparent in many aspects of late phase remains. Among these are stone lamps and harpoon arrows corresponding with an apparent absence of labrets that are usually found in Late phase sites; this type of assemblage is very consistent with the historic Eyak, who occupied the coast to the west of Icy Bay (S. Davis 1990:202). The distribution of Eyak people before historic contact may have included areas farther to the south and east. The early historic Eyak territory probably reflects a withdrawal from some former Eyak areas as a result of Tlingit expansion. Recently developed linguistic evidence suggests that the Eyak and Haida languages share attributes that indicate that interactions occurred between these two groups

perhaps as early as 2,000 years ago (Leer 1994). In this scenario, the temporal depth of the relationship between Tlingit and Haida is very shallow, perhaps as little as 500-1,500 years (loc. cit.). Based on Leer's (1994) recent assessment then, it can be suggested that Haida and Eyak ancestors occupied adjacent territories before the arrival of the Tlingit. This hypothesized Tlingit cultural wedge would then have formed a buffer between the Eyak and Haida, and the newly-arrived Tlingit would undoubtedly have been influenced by both of these coastal groups.

The evolution of the coastal subsistence focus and aspects of the social organization in Northwest Coast cultures appears to correlate with differences in each group's access to important, stable resources -- such as streams with abundant salmon during summer migrations -- that were located in the territories of some local groups. In contrast, other local groups may have been relatively poor in this respect, and therefore did not attain as much property, influence or the population size of their richer neighbors (Donald and Mitchell 1975; compare with Ames 1981; Maschner 1992).

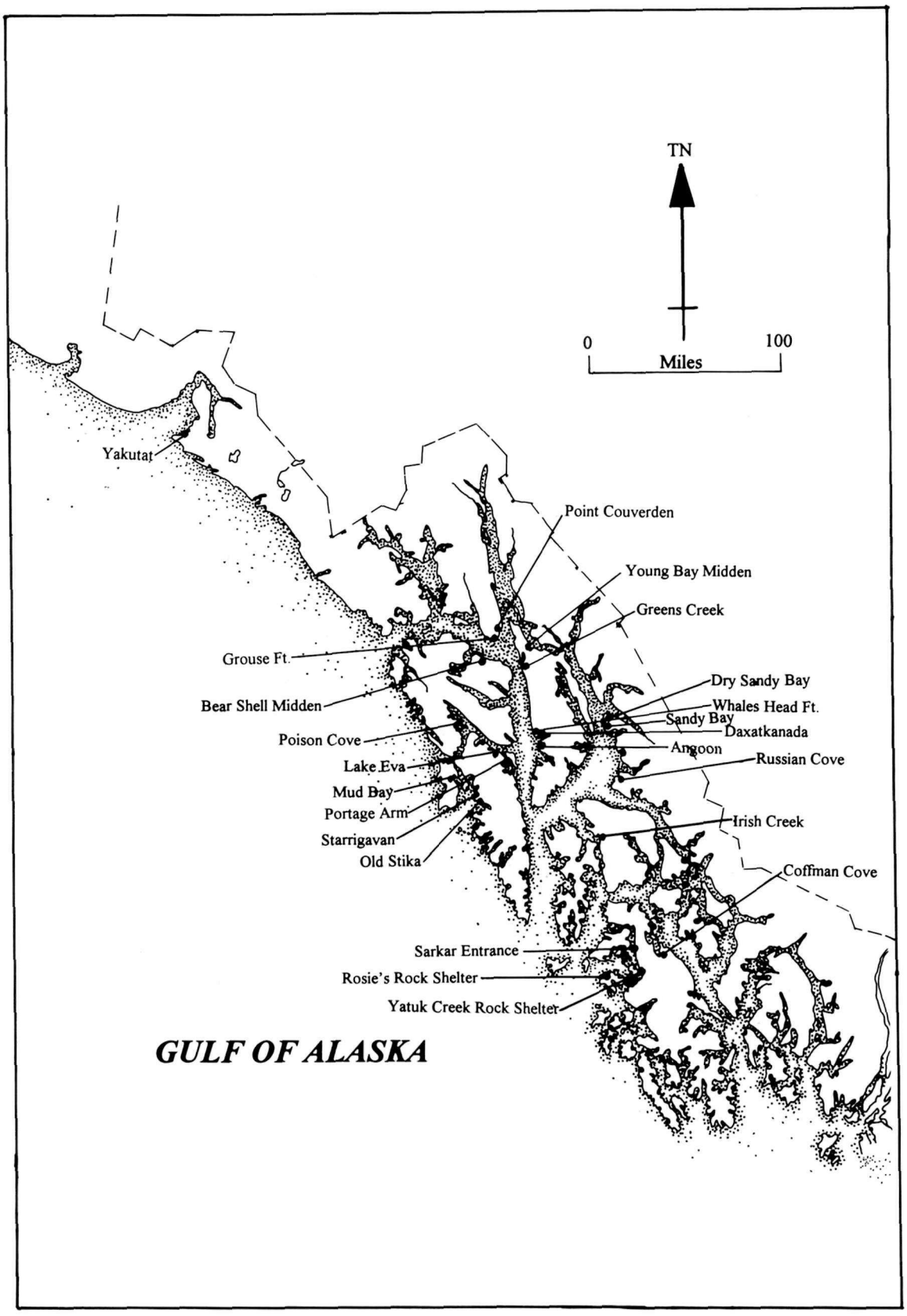

Figure 3.7. Later sites in the northern Northwest Coast area (after Davis 1990:Fig 1.).

IV

ETHNOGRAPHY IN INLAND SOUTHCENTRAL ALASKA, THE SOUTHWEST YUKON AND NORTHERN NORTHWEST COAST

Although a full review of the Native ethnohistories for the area lies outside the scope of an archaeological overview and assessment, it is nevertheless useful to characterize the traditional ways Native people made their living from the land in order to better understand the prehistoric occupants' lifeways prior to the arrival of European technology and other influences. Summary descriptions of prominent, general cultural divisions are presented first and then more-specific, traditional Ahtna, Upper Tanana, Eyak and Tlingit cultures of the Southcentral Alaska coast and Interior are briefly discussed.

It is useful to make two broad distinctions in considering the cultures of the Native groups who historically occupied the area of Wrangell-St. Elias National Park and Preserve. One, the Northwest coast culture, shares attributes with historic Native groups as far south as the Oregon coast and northward and westward around the Gulf of Alaska to the location of the modern town of Cordova. The other, the Northern Athapaskan culture, is widely distributed in the North American Subarctic, extending eastward to the western shore of Hudson Bay, southward to approximately 50° latitude in southern Alberta and to the west, nearly to Norton Sound on the Bering Sea (Krauss and Golla 1981:67). Athapaskan culture has greater time depth in the vicinity of Southcentral Alaska and in some instances may have provided the base for the development of early Northwest Coast cultures.

THE BASIC ELEMENTS OF ATHAPASKAN CULTURE

The archaeological record has revealed various prehistoric cultural "strands" that produced historic Northern Athapaskan culture as it is expressed in a mosaic of regional variations (Clark 1981:118-119,129). The range in variation of historic Athapaskan material culture is reflected in variety of stemmed, side-notched and lanceolate chipped stone point forms, ground stone implements such as adze blades and mauls, copper implements such as points and knives, and in the case of the Ingalik of the Western Alaska Interior, pottery vessels; ground slate points also occur in rare instances (Clark 1981, 1991:104-116; Snow 1981).

The distinctive languages spoken by the historic Native inhabitants of the western Subarctic are the primary elements that distinguish Athapaskan culture from the Eskimo and Northwest Coast cultures. Rather than appearing as an expression of distinctive artifact forms or technology, northern Athapaskan culture is an adaptive pattern closely related to the boreal forest environment, a correlate that is the most prominent characteristic of the culture (Clark 1981; Krauss and Golla 1981:68-69; VanStone 1974:8, 31-32). The principal adaptive aspects of the culture are:

a.) An intimate and extensive knowledge of game animals and other resources within a territory was crucial in the western Subarctic. Most large animals were scattered in their distributions,and exploiting them required a high degree of mobility. Although Athapaskans as a whole exploited a wide variety of resources in their subsistence practices, in some cases specific aspects of resource exploitation were emphasized, such as salmon fishing in Upper Tanana groups and seal hunting by the Dena'ina living on the shores of Cook Inlet (VanStone 1974: 28-33). In this regard annual subsistence cycles and migration patterns varied considerably from one local band to the next (loc. cit.).

b.) A flexible social organization that was based primarily on the nuclear family as the basic unit, but with social mechanisms for organizing collaborative subsistence efforts such as communal caribou hunts. This organizational mechanism was expressed in the emergence of leadership that cross-cut family groups and provided a means for coordinating various tasks during times when family groups formed aggregates for harvesting caribou and other resources (Riches 1982:101-102; VanStone 1974:122). Leadership on all levels was closely tied with subsistence pursuits. In cases where group

efforts were not required, collaborations were conducted as partnerships between the people involved (VanStone 1974:122). In the same vein, close social relationships were restricted to the nuclear family, and individuals' rights were "...emphasized at the expense of group ceremonies.." (loc. cit.).

c.) Several different types of groups may have emerged from the social matrix of the tribe over the course of a year, as a result of economic requirements and social necessity (Helm 1968; Riches 1982; VanStone 1974). The largest of these is designated with terms that approximate the "regional band" as described by Helm (1968); this designation is more or less equivalent with the entities defined as societies, cultural bands and dialectical tribes in Eskimo areas (cf. Burch 1980; Ray 1983; Riches 1982:109). The *regional band* may have had as many as 100 married couples, and collectively, they exploited the entire territory as it was defined by tradition and continuing use (VanStone 1974:45-46). The *local band* was a grouping of kinsmen with a smaller corresponding territory that they traditionally exploited; the composition of the local band may consist of several nuclear families and other dependents (VanStone 1974:46). *Task groups* emerged in specific seasons for harvesting or exploiting specific resources, such as the communal caribou drives, mentioned above. The size of a task group may have been as large as the regional band, or as small as the local band, depending on the requirements of the task at hand; the grouping lasted only for the duration of the activity (VanStone 1974:46).

d.) A layer of social organization based on kinship affiliations operated in all Athapaskan groups. Matrilineal descent was an important organizing focus for Athapaskans in the WRST area; this characteristic may have developed out of an early bilateral descent or some other generalized form that provided the ethnogenic latitude for development of the array of bilateral, patrilineal and matrilineal descent found in various Athapaskan groups in Alaska (cf. Ives 1990). Matrilineal descent in WRST area Athapaskans provided a basis for reckoning the *clan* membership for each individual; this in turn formed the basis for determining acceptable marriage partners for each person (i.e., de Laguna and McClellan 1981:653; VanStone 1974:51). The individual was required to find a spouse outside of the matrilineage, a custom that is often designated as an *exogamous* marriage pattern.

e.) The movements of the northern Athapaskan inhabitants of a territory can be generally classed as the "restricted wandering" or "central-based wandering" types (Beardsley et al. 1956; VanStone 1974:37-42). Definitions of these terms are as follow (op. cit.):

> *Restricted Wandering*. Communities that wander about within a territory that they define as theirs and defend against trespass, or on which they have exclusive rights to food resources of certain kinds. Movement within the territory may be erratic or may follow a seasonal round, depending on the kind of wild food resources utilized.
>
> *Central-Based Wandering*. A community that spends part of each year wandering and the rest at a settlement or "central base," to which it may or may not consistently return in subsequent years.

The different types of sites related to settlement patterns include both settlements with dwellings constructed to house the occupants through the extreme cold of subarctic winters and ephemeral shelters such as lean-to's and tents that were usually associated with warm-season occupations of various resource procurement locations (VanStone 1974:32-37).

Villages may have been occupied by some segment of the local group through the entire year, or winter villages may have been abandoned during the warmer seasons. In any case, populations were generally more dispersed during the summer, and groupings in any given location were smaller during this time of the year (VanStone 1974:41-42).

Ahtna

The Ahtna occupied an inland territory that extended from the headwaters of the Susitna and Matanuska Rivers eastward to the present-day Alaska-Canada border (Figure 4.1). Initial European contact sometime around 1763 came as a result of Russian exploration of the Copper River area for the

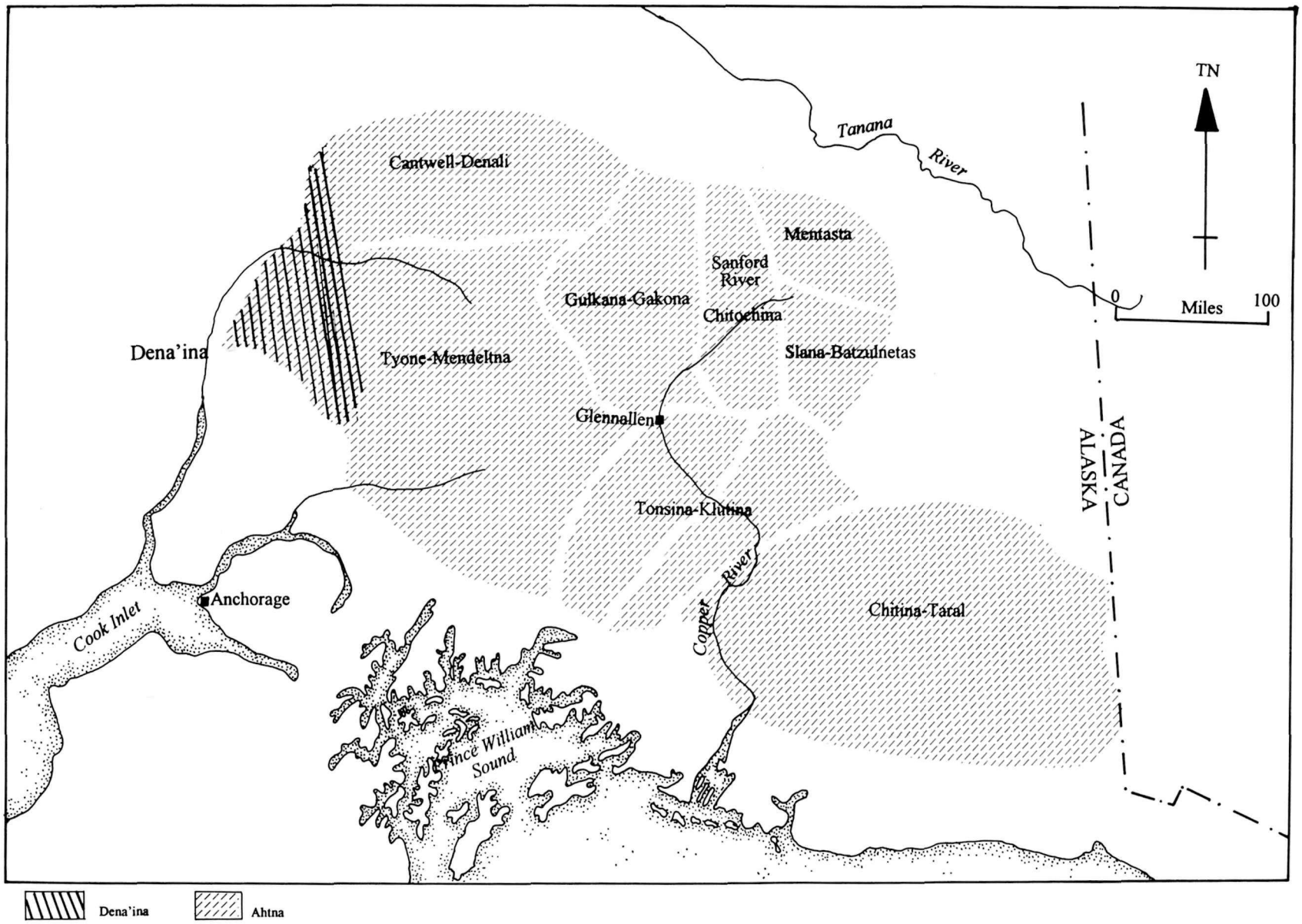

Figure 4.1. The Ahtna culture area; regional bands and local bands.

purpose of opening up new areas for the fur trade; by 1850, the Russians had explored much of the Copper River area (de Laguna and McClellan 1981:643; VanStone 1974:94; Wrangell 1970). It is reasonable to assume that the number of Ahtna before the arrival of Russians was at least somewhat larger than those recorded for the years following contact because of drastic population declines resulting from the introduction of European diseases. As an example, the number of Lower Ahtna people recorded by Petroff (1884) in the 1880 census -- approximately 120 years after initial contact -- is listed as 567 for the band; in subsequent enumerations, the Lower Ahtna were reduced to as few as 75 by 1899 (de Laguna and McClellan 1981:Tab. 1). Equally disastrous were the population decimations that occurred in all Native groups in southern Alaska during the same period, in both interior and coastal areas.

The Ahtna tribe can be divided into at least five regional bands based on dialectical differences across the tribal territory (de Laguna and McClellan 1981:641, Figs. 1 and 2); these are further subdivided into local bands with specific designations. The regional dialectical groups are designated on the basis of their relative locations as "western," "central," "upper," and "lower;' a further distinction is made within the Upper Ahtna local group, between those of the Chistochina area and the Mentasta and Batzulneta's area (loc. cit.). The Lower Ahtna occupied the largest territory and also had the largest population.

Territories of local bands were spatially organized along stream courses, and they extended away from the stream front boundary to include smaller streams, lakes and a variety of other types of ecological zones (de Laguna and McClellan 1981:646). The typical spatial distribution of the local band appears to have had a radius of approximately 20 miles (de Laguna and McClellan 1981:644, Fig. 1). Winter settlements have included as many as nine multifamily houses, each containing as many as six nuclear families. Leadership in major settlements resided with a chief, or headman. Although Ahtna languages provide a special designation for the chief's name (the *qasqe* or *dene*), the political base remained essentially egalitarian, insofar as the premise for being a chief lay primarily in the individual's hunting and trading abilities (de Laguna and McClellan 1981:656-657). Nevertheless, a chief's social advantage was often enhanced by overbearing and manipulative behaviors (cf. Allen 1985; Bremner 1887). When the individual's abilities in hunting and trading began to decline, he was replaced by a younger, or more capable person (e.g., Bremner 1887).

Houses within a village were not always in close proximity to each other; and in some cases, the houses of a single village may have been scattered along several linear miles of a stream course (de Laguna and McClellan 1981:644-645). Winter houses were rectangular in outline with excavated floors and walls constructed of vertical poles or planks with moss or bark insulation; roofs were of gabled or hip roof construction (loc. cit.). Seasonal shelters were a type of lean-to construction made of brush and bark; chiefs' temporary shelters were sometimes covered with moose skins sewn together and decorated.

The subsistence pursuits of all Ahtna had an important focus on the salmon (i.e., *Onchorynchus nerka* and *Onchorynchus tshawytscha*) that migrate through streams such as the Susitna and Copper Rivers during the summer months. Traditional methods for taking salmon included dip nets, spears, harpoons and large funnel traps made of spruce saplings (de Laguna and McClellan 1981:646-647). Salmon were dried and folded into bales for storage in caches at fish camps; caches were also hidden along trails to prevent their raiding by outsiders (de Laguna and McClellan 1981:649). Techniques for hunting game animals included the bow and arrow, spears, snares, deadfalls and pitfalls (loc. cit.). Important animals were moose, caribou, sheep and goats (de Laguna and McClellan 1981:648; compare with Wrangell 1970:5-8).

Tanana

The traditional area of the Tanana tribe was north of the Ahtna territory, and roughly corresponded with the area of the Tanana River drainage. Tanana territory extended westward to the

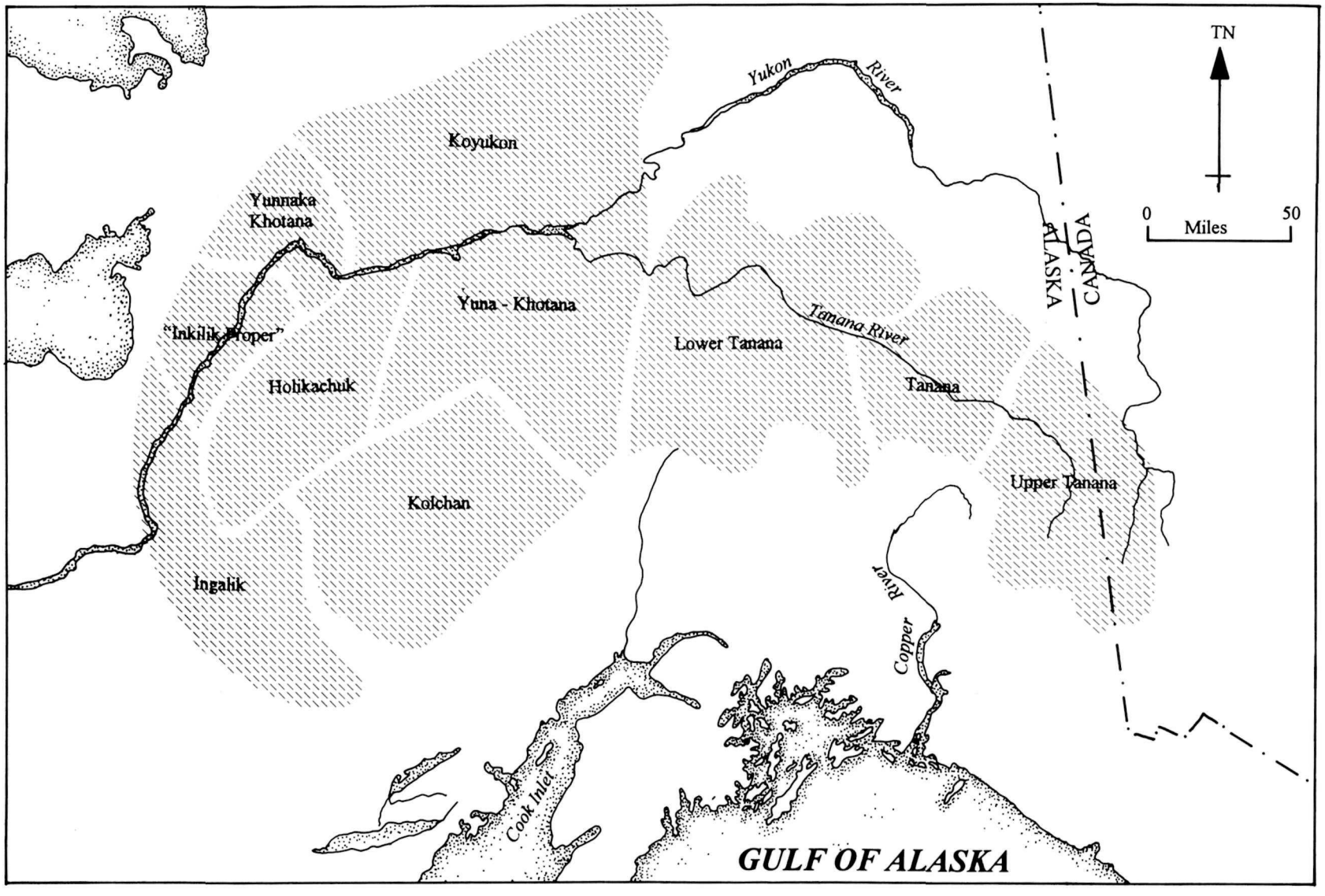

Figure 4.2. The Tanana culture area; regional bands and local bands.

confluence of the Kantishna and Tanana Rivers, north to the headwaters of the Tolovana River, and to the southeast to the northern slopes of the Wrangell Mountains. Tanana land bounded Ahtna territory to the south and Dena'ina lands to the west; its northern and eastern borders formed boundaries with Koyukon, Kutchin, Han and Tuchone territories (Figure 4.2). A total of five regional bands composed the Tanana tribe; the distribution of languages within the territory can be meaningfully grouped under the designations "Upper Tanana," "Tanacross" and "Lower Tanana;" but some of the five regional bands included more than one dialectical group (McKennan 1981:562-563). Only the southeastern end of the Tanana territory (Upper Tanana area) lies within WRST, and the dialects that were spoken in this area are those of the Tetlin-Last Tetlin band, and local bands farther up river, including the Lower Nabesna or Northway, Scottie Creek and Upper Nabesna-Upper Chisana (Allen 1887; McKennan 1981:563; Wickersham 1938).

Territories of local bands appear to have been less well defined than those of the Ahtna, but it can be presumed that a number of different types of ecological zones were included in each band territory, including locations by streams, especially stream confluences, forested areas and elevated terrain (cf. McKennan 1981). As with the Ahtna, the primary focus of summer subsistence was on several species of salmon taken with fish traps and dip nets from weirs constructed across lake outlets; whitefish were also important (McKennan 1981:566). The focus shifted in the fall to caribou migrating into the uplands away from the stream courses. Caribou fences and corrals were constructed for harvesting the animals with bows and arrows and lances (McKennan 1981:566, 569). Caribou meat was dried for consumption over the winter months spent in upland villages (loc. cit.). In addition to fish and caribou, sheep were hunted in late summer and moose were taken during times the band was in lower elevations, during the spring, summer and fall (op. cit.). Other late summer resources used included berries, roots and waterfowl.

Leadership in the local Tanana band was essentially the same as that of the Ahtna. Although Tanana houses tended to be less substantial than the Ahtna, with a skin-covered, domed lodge used in winter villages, bark-covered huts were sometimes constructed as well. Temporary structures used while traveling were lean-to's (McKennan 1981:571).

BASIC ELEMENTS OF THE NORTHERN NORTHWEST COAST CULTURE

The distinctive Northwest Coast culture area reflects shared cultural patterns rather than a uniformity of specific cultural elements. As with all complex cultures, the socio-political aspects of the ranked Northwest Coast societies are a development out of, or an elaboration of, more rudimentary forms. It is likely that the origins of Northwest Coast traditional society lay in the same type of organization seen in traditional Athapaskan culture. In this respect, stages for the development of formal territories, formal ranking within each society, and overall increasing complexity on the Northwest Coast have been the focus of cultural evolution studies for some time (see i.e., Ames 1981, 1985; Donald and Mitchell 1975; Price and Brown 1985). Some of the principal distinguishing elements of Northwest Coast culture are:

a.) Substantial permanent villages that were occupied primarily during the colder months, often surrounded by palisades for defensive purposes; permanent structures were sometimes built at seasonally used encampments as well (de Laguna 1990b:207; Suttles 1990:4).

b.) The inhabitants of larger villages were socially stratified in a formally ranked society consisting of the wealthy elite (chiefs or nobles), commoners and slaves. A general trend in ranking appears to have been for a more formalized social stratification from the vicinity of Victoria Island northward with the elite being individually ranked; to the south, the upper class resembled the Athapaskan system with chiefs that were simply heads of local groups (Suttles 1990:4). Status in the more complex areas reflected not only relative wealth, but the class one was born into as well; in this respect slavery could be inherited as well.

c.) Wealth was an important factor in the organization of society. Much has been written about ways in which wealth was accumulated by chiefs and used to obtain influence and power in the society (i.e., Barnett 1968; Benedict 1969; Codere 1966; Suttles 1968). Although this complex subject is beyond the scope of this brief review, it can be said that in essence, a chief's wealth was a reflection of his influence within his clan, a reflection of the relative wealth of the clan. It also served as an instrument to further the influence and interests of the chief and his affiliates.

More specific examples of the cultural attributes are presented in the following descriptions of the Eyak and Tlingit.

Eyak

As mentioned in the preceding chapter, it is likely that the territory of ancestral Eyak once extended an unknown distance to the southeast where it abutted ancestral Haida territory (cf. Leer 1994). Expanding-area Tlingit took over the southeastern portion of late prehistoric Eyak land, eventually resulting in the historic distributions of the two culture areas (de Laguna 1990a:189; Goldschmidt and Haas 1946). The area of the Eyak tribe, known historically from the eighteenth and nineteenth centuries, extended along the North Pacific shore from just west of Dry Bay westward to Point Whitshed near present-day Cordova (de Laguna 1990a:Fig. 1). A total of four regional groups occupied the Eyak area: the westernmost group designated the "Eyak Proper;" the next group to the east were "Eyak Chilkats," named after the village located on the Bering River (this is a different group from the Chilkat Tlingit who occupied the upper end of the Lynn Canal); next were the "Eyak Yakatags," named after the Cape Yakataga village located near the Duktoth River; and the "Eyak Tlingitized" who occupied the shoreline from the Icy Bay area and Malispina Forelands, southward to the vicinity of the Akwe River --the southeast boundary of their territory that abutted the Tlingit tribal area (Figure 4.3;de Laguna 1990a:189). The Eyak inhabitants of each village comprised local groups made up of the membership of specific clans; and the clans of the village were well represented in the clan affiliations of the village chief (de Laguna 1990a:193).

Villages were in isolated locations, and water travel between those separated by open ocean was often difficult. Each village was enclosed by a palisade or fort. Dwellings were consistent with those in other tribes of the Northwest Coast culture area: houses were rectangular with gabled roofs and walls made of vertical planks (de Laguna). Larger villages had potlatch houses belonging to each moiety (de Laguna 1990a:191). Potlatch houses were relatively larger than simple dwellings, with added features such as benches along the walls and storage lockers underneath. Tools used by the Eyak were generally consistent with those of other northern Northwest Coast groups, but with the addition of some that may be ascribed to Chugach Eskimo influences, such as the sinew-backed bow (cf. Birket-Smith and de Laguna 1938; de Laguna 1990a; Oswalt 1956, 1967:169-171). The Eyak also made extensive use of native copper in the manufacture of knives, ulus, pins, harpoon heads and scrapers (de Laguna 1990a:192).

Eyak society was ranked with respect to the social status of the individual, and the succession of leaders within a lineage. Three classes were recognized in Eyak society, including the clan chief and his family, commoners and slaves (Birket-Smith and de Laguna 1938; de Laguna 1990a:192-193). A chief owned slaves and served as the leader in hunting and warfare; the successor to the chief was usually a younger brother or maternal nephew (op. cit.). The clan was matrilineal and functioned as the most important political and legal entity in Eyak society, and although the chief served only as the leader of his own clan, chiefs of larger clans had proportionately more influence and authority (loc. cit.).

As with most Northwest Coast groups, littoral resources such as seals, shellfish, bird eggs and seaweed were important to the annual food supply, as were eulachon and salmon. Fish were taken with a variety of techniques, including traps, dip nets and spears; halibut were caught on lines with composite hooks during winter months (de Laguna 1990a:190-191; McNeary 1978). Seals were

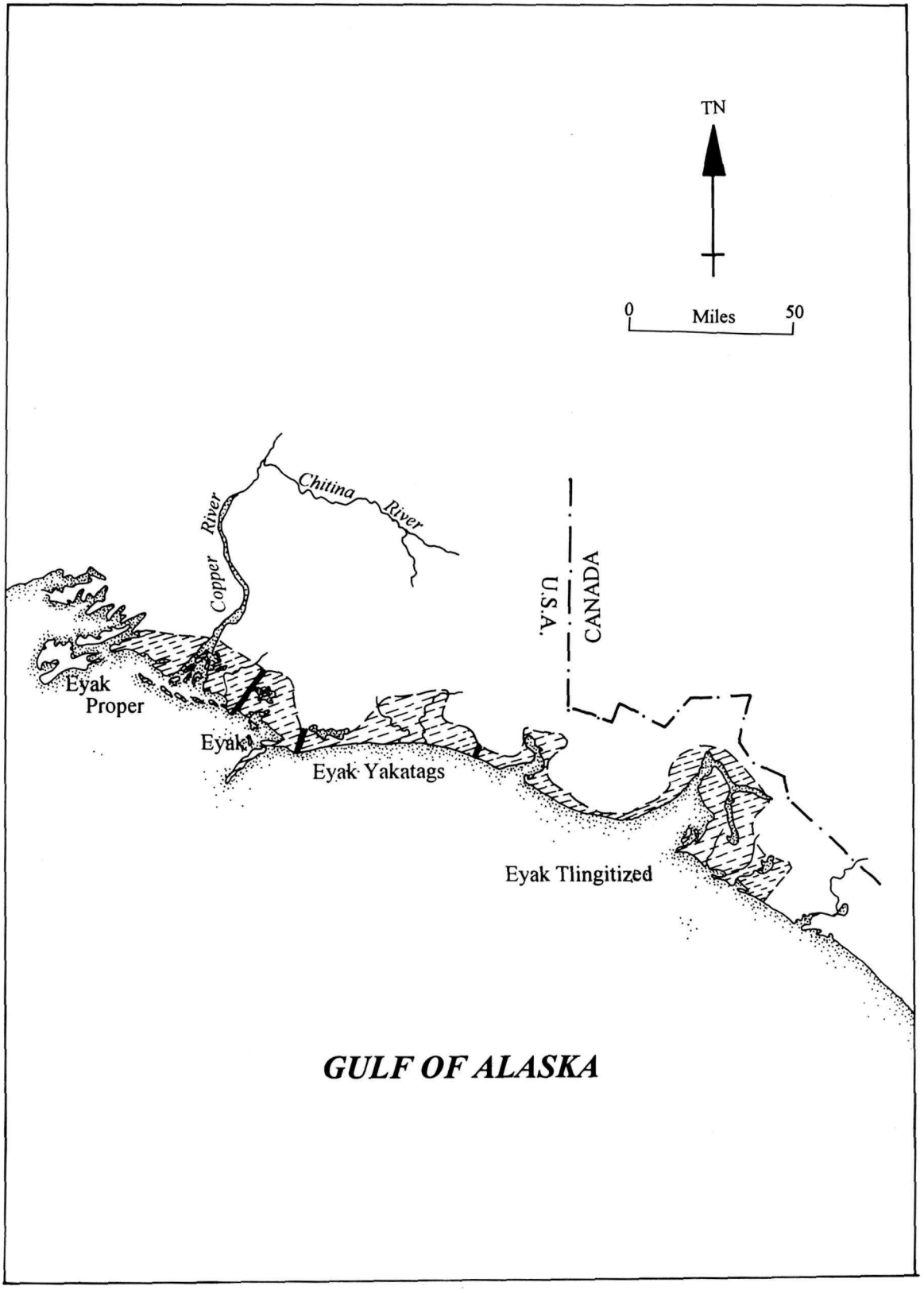

Figure 4.3. **The Eyak culture area.**

harpooned in the winter as they rested on the ice and bears and mountain goats were hunted with dogs (op. cit.). Important plants collected during summer months included a variety of berries and Kamchatka lily roots.

Tlingit

The territory of the Tlingit in Southeast Alaska was limited to the area northeast of the Queen Charlotte Islands, extending along the coastal archipelago northwest to the vicinity of Icy Bay, immediately west-northwest of Yakutat. As mentioned above, Tlingit occupation of the northwestern portion of their territory was relatively late by comparison with that of other areas, and it is apparent that Tlingit expansion displaced Eyak inhabitants from their former lands in the vicinity of Yakutat Bay. Tlingit culture is believed to have developed in the area south of the present-day Lynn Canal, possibly in the area of the mainland across from the Queen Charlotte Islands, and later spread along the coast to the north and west. There is also some evidence that some of the clans originally migrated to the coast from the inland Cordillera area along the Skeena, Nass, Stikine and Taku Rivers (de Laguna 1990b:206). Tlingit culture eventually attained its historic northern limit in the eighteenth century (de Laguna 1990a, 1990b; Goldschimdt and Haas 1946). Tlingit people also inhabited inland areas of the southern Yukon and northernmost British Columbia, but that group lies outside the scope of this review.

Broad divisions of the collective inhabitants of the Tlingit area are described as comprising three separate "groups of tribes" (or *q*^{w}*á•n*) that share a common language and customs (de Laguna 1990b:206). The use of "tribe" in this case applies to a different type of social and territorial distinctions from those that have been used in this review of the Ahtna, Tanana and Eyak. For the purpose of making comparisons, the collective Tlingit can be equated with the Ahtna tribe, for example, thereby redefining the subgroupings (i.e. groups of tribes) as *regional groups*, and subdivisions of regional groups as *local groups*. In this framework, the regional Tlingit groups are Gulf Coast, Northern Tlingit and Southern Tlingit. Local groups would include the Yakutat, Hoonah, Auk, Sitka, Kake, Henya, Stikine and Sanya, as well as some smaller divisions (Figure 4.4). It should be noted that this approach varies from some previous studies, and varies from the perception the Tlingit have of their own socio-political units; the people conceive of their larger groupings as "nations" rather than the "regional" and "local" designations sometimes used in anthropological analysis (de Laguna 1990b:203; Goldschmidt and Haas 1946:5-14; Kamenskii 1985:33; Translator's Footnote No. 29, in Kamenskii 1985:95). The remainder of this review will focus on one regional group of the northern area, the Yakutat.

The Yakutat Tlingit are also referred to as "Tlingitized Eyak" by de Laguna (1990a:Fig. 1, 1990b:Fig. 1). Their territory comprises a geographic area with two designations, those of the Eyak and the Yakutat Tlingit. Yakutat Tlingit territory extended from Yakutat Bay southeast to a boundary near Harlequin Lake (Figure 4.4), and Dry Bay Tlingit territory extended from that point southeast to a boundary near the Fairweather Glacier. The Hoonah Tlingit territory extended from the boundary with Dry Bay near Cape Fairweather southward to include Glacier Bay, Icy Strait and the northern end of Chicagof Island. The total population of the Northern Tlingit regional group at the time of Russian contact is estimated to have been 2,500; the total number for the collective Tlingit tribe is placed at 10,000.

Villages were located in sheltered bays, with views of surrounding areas; ideally the setting would include a sandy beach and be strategically located for access to a fresh water stream with salmon, hunting areas, clam beds, good timber and berry patches (de Laguna 1990b:206). Dwellings were rectangular to nearly square in outline, long as 50 feet, with gabled roofs. The floor was excavated in the center and planking placed around a central hearth (de Laguna 1972, Part 1:295). At least one wooden platform was constructed along the sides of the room; platforms were partitioned with

Figure 4.4. Tlingit culture area; regional groups.

wooden screens, mats, or piles of boxes to form compartments for individual families (de Laguna 1972, Part 1:295-302, 1990b). Houses were sufficiently large to accommodate as many as six families, a few single adults and slaves, a total of as many as 50 individuals. In late prehistoric times villages were surrounded by palisades, but by the nineteenth century, houses in a village were often arranged along the back beach area, in a line facing the water (loc. cit.). The fortification palisade become obsolete with the appearance of European cannons.

The territory of each local group included a principal village that was the primary residence of the collective group; there may have been additional settlements in the territory as a result of a division of the main village for various reasons, or a new settlement established by an immigrant group (de Laguna 1990b:206). Villages were inhabited primarily during winter months, and families spent the warmer months dispersed to fishing or hunting camps in the territory.

Local groups were comprised of clans, or sibs, based on matrilineal descent. Each clan reckoned its origins as being closely related to a particular animal or natural feature such as a whale or a mountain (de Laguna 1972, Part 1:451-452). In a sense, the clan or sib institution cross-cut Tlingit society as a whole, and provided a means whereby different regional groups and, in some cases foreigners, could interact in socially acceptable ways. A second layer of social organization lay above the clan distinction for all Tlingit, namely the moiety affiliation of each individual (de Laguna 1972, Part 1:450-451). Affiliation of an individual with one or the other of two exogamous moieties -- either the Raven or the Eagle-Wolf -- present in each local group served to ascertain acceptable marriage partners for each person; one could only marry a person from the opposite moiety. Members of the same moiety regarded each other more or less as brothers and sisters, regardless of their actual family relationships. Moieties were the basic division in social matters such as potlatches, even though wars may have occurred between clans; in the latter case peace would be negotiated between leaderships of the respective moieties (loc. cit.).

Salmon were an important resource to the Tlingit, and all five species were harvested from the streams during late spring and summer. The principal method used for taking salmon consisted of a rectangular trap made of wooden slats set in a `V'-shaped weir; the V was inverted so that the fish swimming upstream were guided through the narrow opening in the weir and in this way were collected in the trap (de Laguna 1990b:206). Gaff hooks made of bent wood were sometimes also used to pull the migrating fish from streams. Other fish such as eulachon were taken with dip nets, and halibut were caught on composite hooks made of yellow cedar and alder with bone or metal barbs (de Laguna 1972, Part 1:Figs. 44 and 45). Herring were sometime collected from open water using a rake-like implement (de Laguna 1972, Part 1:388). Shellfish that were collected included clams, mussels and cockles. Sea mammals were hunted from canoes using a toggling harpoon head; the animals taken in this way included harbor seals, fur seals, sea lions, sea otters and porpoises. The Yakutat Tlingit used a slightly different weapon for sea otters, consisting of a feathered harpoon arrow with a detachable head (de Laguna 1990b:210). Land animals that were hunted include bears, deer, mountain goats and sheep; these were taken with bows and arrows (de Laguna 1990b:209). Plant foods that were used included seaweed, blueberries, elderberries, strawberries, riceroot, ferns, hemlock bark, salmonberries and cow parsnip shoots (de Laguna 1990b:212; McNeary 1978). The Tlingit also grew a species of tobacco (*Nicotiana quadrivalvis*) before the arrival of Russian explorers in the eighteenth century (op. cit.).

V

ARCHAEOLOGICALLY DOCUMENTED PREHISTORIC AND PROTOHISTORIC SITES IN THE WRANGELL-ST. ELIAS AREA

Of a total of 95 sites within the boundaries of Wrangell-St. Elias that were known at the time this review was prepared, several are historic Native places that represent Native culture with Euro-American influences, of the type best regarded as protohistoric. Because this review is focused on traditional Native use of the area, some of these sites are included in the following discussion.

SOME CONSIDERATIONS ABOUT THE DATA

The sites are divided into two data sets, the primary distinction in this regard being sites with both late prehistoric and historic Native components and sites with only prehistoric components (Appendix). The purpose in making this distinction is to enable comparisons to be made between early historic traditional Athapaskan land-use patterns and those dating to prehistoric times. In this regard, the critical considerations in an analysis are:

1.) For ethnographic places, the identity of the group that used the location is crucial in establishing the function of the place as part of a land-use pattern. Considerations in this respect are the possible use of a location by different local groups or even different regional (tribal) groups; in the absence of an established group association, the function of a place in a subsistence system is uncertain insofar as different groups may use a location in different seasons of the year, or for different types of functions.

2.) The original inhabitants of *Dit'ann Cheeg* village subsequently established permanent villages at a succession of locations, including those of former hunting camps (cf. BIA 1993a). This is a good example of a problem related to the one described above as number 1. In one instance, a former hunting camp location became the site of a permanent village, and both were used by the same local group. This change in the function of a location presents difficulty in ascribing a function to a place, and consequently analyzing the location as part of a broader land-use pattern.

3.) A problem related to both numbers 1 and 2, preceding, is establishing the contemporaneity of the array of sites across the areas of prehistoric or undocumented protohistoric ethnographic local groups, and regional and tribal group areas. The imprecision of radiocarbon dating has been an area of investigation since the 1960s, and most attempts to correct or calibrate variations in rates of radiocarbon decay have undergone more than one revision (i.e., Taylor 1978:6-11). The principal basis for calibrating radiocarbon ages is radiometrically dating individual tree rings from bristle-cone pine trees that are independently dated by dendrochronology (Taylor 1978:7; 1987:19-24). Calibration tables and computerized programs normally attempt to reconcile radiometric ages with the actual calendar dates represented in the tree ring records. Comparisons of radiocarbon ages with radiometrically dated tree rings show that materials up to 2,000 years in age have an average variance from actual calendar ages only $\pm$1-3%; as the age of the material increases beyond 2,000 years, the error factor also increases (fluctuations in variance occur at different points through time; Taylor 1978; 1987:19-25; compare, Taylor 1978:Figs. 2.5 and 2.6). It is important to point out that even with corrections and calibrations, radiometrically-derived ages retain error factors that are expressed as age ranges, and in any given case, confidence that an absolute, correct age has been obtained remains elusive. Under this circumstance then, radiocarbon dates for two sites separated by some distance might be statistically equivalent; but their accompanying *sigmas*, or error factors, may indicate that they are potentially separated by a substantial amount of time (i.e., An age of 350$\pm$50 for one site and 355$\pm$70 for another yields a possible 115 years difference [350+50=400 and 355-70=285; 400-285=115] in the radiometric ages of the two sites.). In this example, the possible difference of at least a century is sufficient time for the function of one of the two sites to change from a hunting camp to a

winter village, as happened with the movements of the *Dit'aan Cheeg* village occupants. In interpreting a land-use pattern under this circumstance, the problem would be whether to designate a prehistoric site as a hunting camp or as a winter village for the period of time in question.

PREVIOUS FIELD WORK IN THE WRANGELL-ST. ELIAS AREA

Archaeological investigations in the Wrangell-St. Elias area have been restricted to limited surveys of interior and coastal areas including Icy Bay and the Malaspina Forelands related to ANILCA subsistence studies (McNeary 1978; Reckord 1983a, 1983b) and several archaeological compliance surveys related to construction within the WRST area. Limited survey has also been accomplished as a result of the Mining Compliance (CRMIM) evaluation effort and other miscellaneous limited efforts by NPS Alaska Support Office (formerly Alaska Regional Office) personnel and WRST staff archaeologists. The Bureau of Indian Affairs (BIA) conducted location-specific surveys and site recordings at a total of 48 locations in the WRST area between 1988 and 1993 as part of its responsibility for implementing the Alaska Native Claims Settlement Act (ANCSA) for the area. Traditional-use sites in WRST that have been investigated by the BIA are listed in Table A1.5 and Table A1.6. An Ahtna Corporation archaeologist recorded a total of six sites in the vicinity of the Copper River-Chitina River confluence. The Alaska Office of History and Archaeology conducted surveys along the McCarthy Road corridor in 1994 for planned road construction work, and discovered a total of nine new prehistoric and prehistoric/historic sites near the Copper-Chitina Rivers confluence and at other locations along the road corridor.

The Appendix presents data on all of the known sites in the vicinity of Wrangell-St. Elias and sites outside the boundaries located in environmental settings similar to those found in WRST. As noted in the Appendix, the purpose of this exercise is to develop a universe of site types and settings for the purpose of organizing future work done in WRST. In the following, brief reviews are given of the few sites in WRST where excavations or other types of extensive investigations have been done.

Taral

The history of the early European explorers' initial appearance at Taral is outlined by VanStone (1955). He notes that initial contact with Taral, located near the confluence of the Chitina and Copper Rivers, was made in 1848 by the Russian explorer Sereberinikoff who was murdered by the Ahtna along with the rest of the Russians in the party after they had left Taral. The first European to visit the village and live to report his observations was C.G. Holt, who appeared at the village in the spring of 1882 and stayed until September; Holt reported the Natives to be difficult (VanStone 1955:116). Lieutenant Henry Allen and his party traveled to Taral in 1885 as part of an exploration of the Alaska Interior (Allen 1985; VanStone 1955:117). Upon their arrival at the village, the Allen party encountered John Bremner, a prospector who had spent the winter at Taral, who appeared to be the worse for wear as a result of his experiences (Bremner 1887; Allen 1985:44). Bremner (1887) provides a brief chronicle of his adventure, and among the nearly daily accounts of the weather are some brief remarks about the change in leadership and a rough estimate of the number of "Ma Nuska" (Ahtna) inhabitants along the river (approximately 100); very little else in the way of details about the Natives is provided by Bremner. Allen described Taral as the "...metropolis of the Copper River country..." and as a "fishing rendezvous" and from all indications made out much better with the inhabitants than did Holt and Sereberinikoff (Allen 1985:44; VanStone 1955:117). The village Allen observed consisted of only a winter house and a summer house, but other families were apparently in residence in the vicinity (Allen 1889; VanStone 1955:115). Among the structures present at the time of Allen's arrival on April 10, 1885, were remains of an *odinatschka*, or dwelling for a Russian trader, and a part of a large Greek Catholic cross (Allen 1985:45). An important inhabitant of Taral, Nicolai, described as the "proprietor" by Allen (1985:45) was not present in the village at the time of Allen's visit. But it can be

presumed that the permanent winter house was his residence, based on habitation and social status patterns that were common among the Ahtna. Allen's first objective after leaving Taral was to find Nicolai whom he felt could assist them in obtaining provisions for a part of their journey; Nicolai was eventually found camped on the headwaters of the Chitistone River, where he was engaged in moose hunting (Allen 1985:46-47).

Taral's function as a fishing camp is supported by various descriptions of the number of inhabitants; most indicate larger numbers during the summer months, perhaps as many as 60 individuals, as well as at least one mention that by the end of September, most of the summer inhabitants "... had moved off into the interior for the winter" (VanStone 1955:118,119). Taral village was occupied until 1911, when the last occupants moved to the town of Chitina (VanStone 1955:120).

Archaeological work done at Taral by VanStone consisted of excavation of a total of six trenches of "... varying sizes ... (placed)... to determine the depth of the cultural debris" (VanStone 1955:121). These excavations revealed that birch bark fragments and charcoal extended to depths of up to five and one-half feet in the areas of two trenches, but that most of the sparse artifact collection was found in the sod layer and in the deposit just beneath the sod (loc. cit.). Traditional artifacts recovered from the Taral excavations are relatively few, including only a cut-bone tube, eight tci thos, two whetstones, a tanged iron blade, an antler arrowhead and a few fragments of birch bark (VanStone 1955:121). VanStone (1955:122) suggests that the iron blade is a traditional type because of its resemblance to metal blades found in Eskimo and Athapaskan sites in other areas, but here it is suggested that the metal blade may be included with other materials obtained through Euro-American trade. Trade items recovered from Taral include "...approximately 300..." beads representing a wide array of types; also represented were cut steel nails, clay pipe bowls, trade dishes and cups with a variety of patterns represented, cartridge cases, cast iron stove parts and a U.S. quarter dated 1878 (VanStone 1955:122-123). It should be noted that some debate arose in the 1970s about whether or not VanStone's (1955) field study was actually at Taral, or an alternative village (W. Workman, personal communication, February 1996). Although the issue of the location of Taral village may remain indefinite pending further investigation, VanStone's efforts nevertheless have produced a sample of a protohistoric Ahtna village, and remain a substantial contribution for that reason alone.

Based on the results of VanStone's work, the village site is significant as an important, traditional Ahtna summer fishing settlement, but it also functioned as a winter settlement for at least one family group. In addition, it is an example of protohistoric Ahtna culture, in which Euro-American culture had only begun to influence traditional Native culture.

Batzulneta's

Allen visited (1985:58) this settlement, located on the Copper River some 15 miles southeast of present-day Slana, and described it as a single winter house occupied by the *Toyon* Batzulneta, and an unspecified number of spruce-bough houses where the rest of the inhabitants lived. At the time of Allen's visit, the Natives were awaiting the arrival of the first salmon of the season (Allen 1985:58-59) and, indeed, the first of the summer harvest was caught as Allen prepared to leave the camp. The similarity of Batzulneta's and Taral seems clear insofar as both comprised fishing camps with a single permanent house for the *Toyon* and less substantial habitations for the remainder of the inhabitants. The ages of the settlements are comparable, as well, based on the description of Batzulneta's clothing, which included materials and a hat of Euro-American origins (Allen 1985:58).

Rainey (1939:361-362) briefly investigated this locality in 1936. Although he records that he was able to again locate Batzulneta's house, "... less than a mile from the present village, on a low bench above an old stream bed which is now dry," it is not clear if this was actually the Batzulneta settlement visited by Allen. Indications that the caches tested by Rainey were not in fact those of the early historic Batzulneta camp were a substantial growth of moss over the pits, and a number of trees of substantial size growing in the pits themselves, and an absence of any type of material or object of

Euro-American origins. A second locality shown to Rainey may be a more likely candidate, insofar as the remains appeared to be more recent and a "... large number of glass beads..." were observed (Rainey 1939:362). Establishing the actual location of the Batzulneta camp is a problem that can only be resolved through further investigation.

Cross Creek

(Also known as "Sargent's Cabin"). Cross Creek is listed (NPS 1986:123) as an important site in the eastern side of the preserve. The location was actually designated as *Nach'etay Cheeg* in the Upper Tanana language (BIA 1993c:Fig. 1); and as a result of the 1992 Bureau of Indian Affairs field investigation, it is believed that a prehistoric component is present in the vicinity as well. The following brief description is an example of early historic Native relationships with the earliest Euro-American miners and settlers in the WRST area.

Upper Tanana people undoubtedly used the vicinity before the arrival of Europeans, but their presence intensified during the last few years of the nineteenth century when Euro-Americans involved in the Chisana River basin gold rush arrived. The impact of the gold miners included the introduction of European diseases, as well as an increased intensity in fur-trapping as a means for the Natives to obtain food, clothing and other manufactured goods through the fur trade (Moffit and Knopf 1910:15). The historic Native settlement at *Nach'etay Cheeg* was therefore related to the Chisana gold mining town, and to a large extent, with the advent of a permanent Euro-American presence in the area, the Native settlement came under the sway of American civilization. After the abandonment of Chisana by the gold miners around 1929, the *Nach'etay Cheeg* residents, who had become dependent on manufactured goods and non-Native foods, were forced to move to different areas; game in the vicinity of Chisana had been virtually wiped out as a result of the gold rush (BIA 1993c:7).

Remains that are still visible at the location include five cabin foundations, four doghouses and a cemetery containing 19 graves (BIA 1993c:iv). Also documented is a lithic scatter. Prehistoric house depressions and a prehistoric cemetery have been reported for the *Nach'etay Cheeg* area, but are not yet documented (BIA 1993c).

Tlaxayik-Teqwedi Camp

This site (YAK 013) is located on the northwestern side of Yakutat Bay on elevated terrain near Bancas Point (de Laguna, et al. 1964:23). It is likely that this is the same site named by the Tlingit as *Gel'c`aki''an*, or `Village on Top of the Cliff,' a name that designated Bancas Point as well (de Laguna 1972, Part 1:60). Although previously there has been some uncertainty regarding the ethnic affiliation of this location (i.e., Davis, et al. 1981), it is clear that it played some role in the historic Tlingit occupation of the area, based on the existence of the Tlingit name. And, although the specific function is not identified by de Laguna (1964:23; 1972, Part 1:60), it is reasonable to assume that the site functioned as a hunting camp for the area. Animals identified in this area of Yakutat Bay include bears, wolves, foxes, mountain goats and partridges (loc. cit.); and it is likely that Tlingit living in Yakutat Bay at villages such as Old Town on Knight Island used temporary encampments on the northwestern side of the bay during hunting excursions. De Laguna (1972, Part 1:59) notes that the northwestern side of the bay was exposed and that there were no settlements there.

Ptarmigan Lake

As a result of a land exchange survey conducted in 1985 by NPS archaeologists Dean Pittenger and David Staley, subsurface cultural remains were found eroding out of an old lake terrace, adjacent to the planned location of a landing strip on the northern shore of the northwestern arm of Ptarmigan Lake (Pittenger and Staley 1985). This location is designated in the Alaska Heritage

Resource Survey archives as XMC-038 and lies within the boundaries of a land exchange with a private party. The property was conveyed into private ownership in September 1985.

Artifacts in the area are restricted to lithics, specifically, many obsidian, basalt and cryptocrystalline flakes, perhaps numbering in the thousands, and distributed over an area of approximately 30x160 meters. A single, side-notched basalt projectile point of the form strongly associated with Northern Archaic culture was also found exposed by erosion in the artifact scatter. Two shovel tests located within the scatter revealed the presence of intact, stratified, subsurface cultural deposits, and yielded a total of 378 flakes of the materials mentioned, and appear to represent the primary, secondary and fine retouch stages of tool manufacture. Also identified were possible micro-blades and blade-like flakes.

Although Pittenger and Staley (1985) suggest that the remains may be as old as 7,000 years, it is noted here that the well-documented Northern Archaic remains at Taye Lake have been dated to 4,500-1,600 BP by Workman (1974, pt. 1:Abstract; 1974, pt. 2:747-749). While the cultural ascription of the single point seems clear based on its distinctive diagnostic form, it is most likely younger than the age suggested by Pittenger and Staley and is most reasonably assigned to Workman's (1974) Northern Archaic age range for the area. The presence of microblades and other blade-like flakes in the scatter suggests the possibility of an earlier, Paleoarctic component, or possibly the type of technological mixing that has been documented at other Northern Archaic sites with blade and core technology (i.e., Schoenberg 1985). In this regard, until a discrete deposit of Paleoarctic remains is established at the Ptarmigan Lake site, the Workman age range remains the most reasonable for the Ptarmigan Lake locality.

VI

ISSUES AND FUTURE LINES OF INQUIRY

THE INTERIOR

Early Man and the Environment

The initial human colonization of the area was directly related to important aspects of the environment. During that time the human inhabitants, documented in nearby areas of Southcentral Alaska and the southwestern Yukon, undoubtedly had some knowledge of the resources and geography of the Wrangells area or, perhaps, knew that the ice-covered and newly exposed lands there offered little in the way of usable resources. Many researchers believe that both vegetation and fauna may have been scarce in the vicinities of the Pleistocene glaciers (cf. Matthews 1982:145).

But another possibility must also be considered, that there was actually an abundance of late Pleistocene herbaceous vegetation in periglacial environments (Guthrie 1982:318). As described in Chapter II of this review, such an environment may have actually supported concentrations of animals that would have attracted hunters. Environments such as these can be characterized as active surface deposits (primarily loess) on which colonizing plants such as grasses and herbs such as sagebrush (*Artemesia frigida*) would be most abundant (Young 1982:190).

The two alternative interpretations of the nature of periglacial environments present both difficulties and possible resolutions to the problems of a.) characterizing the vegetation and fauna that occur in near-glacier environments, and b.) the ways in which prehistoric humans related to one or the other of these environments, during late Pleistocene and Holocene times. The ways in which prehistoric humans related to the early environments is a concern that has broader implications than just as a factor in the prehistory of the WRST area; it also applies to the manner in which the southern portion of the North American continent was colonized by early man. Specifically, it may be postulated that near-glacier environments with abundant plant and animal life would support human migrations southward through an ice-free corridor; by contrast, an impoverished periglacial environment would undoubtedly present a barren and daunting obstacle to humans migrating to the east and south through an ice-free corridor out of Beringia. The relationship between early man and the paleoenvironment of the Wrangell area is, therefore, an important avenue of inquiry in determining how humans dealt with the late Pleistocene and early Holocene environments in which they lived. In particular, it may shed light on the manner in which migrations southward were accomplished at a time when glaciers were much more extensive today. Specific considerations in this respect are presented in the following, using the earliest known site in WRST as an example of the types of analyses that could be conducted to shed light on the problems presented above.

Ptarmigan Lake, XMC-038. The oldest presently known site in WRST offers unique opportunities to discover how early humans related to the unique environment of this area during middle Holocene times. Although this property has passed into private ownership, its importance is more than sufficient justification for pursuing permission from the owner to conduct further investigations at the location. XMC-038 may presently be the most important early site known within the boundaries of Wrangell-St. Elias. Important, specific considerations about the Ptarmigan Lake site are as follow:

1.) *Problem*: Although the maximum age of the artifacts observed is not yet established, some indication is nevertheless provided by the diagnostic form of a single projectile point. This point form -- with corner notches and relatively crude flaking -- is a clear representative of the Northern Archaic culture. As discussed in Chapter V, the age range for this culture in the general vicinity has been established by Workman (1974) as 4,500-1,600 years B.P. The presence of blade-like flakes and

established by Workman (1974) as 4,500-1,600 years B.P. The presence of blade-like flakes and possible microblades in the assemblage is presently problematic insofar as there have been no more diagnostic elements found. In the absence of a radiocarbon age, it is conservatively presumed that the blades are directly associated with the side-notched point, a circumstance that has been documented previously elsewhere in Alaska, at Lake Minchumina and Kurupa Lake for example (Holmes 1984:153; Schoenberg 1985).

Lines of Inquiry: Additional testing must be done at XMC-038 in order to firmly establish the ages of the remains that are present and to attempt to either establish that separate Paleoarctic and Northern Archaic components are present at this location or that some combination of the technologies is represented. Resolving this problem will enable the cultural remains to be compared with a greater degree of precision with the same types of remains from other areas of Alaska. By analogy with similar sites in other areas, Ptarmigan Lake remains will provide insights into the ways in which the prehistoric human occupants used the WRST area.

2.) *Problem*: Ptarmigan Lake is located in an area that is thought to have been glaciated in the early portion of the Holocene (Pew'e. 1975:Fig. 6). Although the archaeological materials at XMC-038 may be as young as 1,600 years, they may be as old as approximately 7,000 years, based on documentation of Paleoarctic material in the nearby Aishihik-Kluane Lakes area (Workman 1974). The relationship between the extent of the glaciations on the northern flanks of the Wrangell and St. Elias Mountains and the early occupation of Ptarmigan Lake is therefore a problem with respect to the timing of the early colonization by humans, and the retreat of glacial ice. It can be presumed, minimally, that the environment the earliest inhabitants of the area encountered was not like that of the present-day, due to nearby exposures of what, not long before, had been ice-covered terrain.

Lines of Inquiry: Basic information must be obtained about the time of the occupation(s) of XMC-038 and the retreat of ice from the area. Specific information in this respect is the same as that described under number 1, above, but in the present consideration, establishing the earliest occupation of the area becomes the most critical factor in establishing the relationships between the human-use locations and proximity of glacial ice. Geomorphological studies of surface glacial features in the vicinity will provide a means whereby the timing of the last glacial retreat can be established in an approach independent of the archaeological analysis. Results of the two avenues of inquiry can then be compared and a more precise interpretation of the glaciations of the Ptarmigan Lake area developed.

3.) *Problem*: Alternative interpretations of the type of resources available in periglacial environments present a problem in explaining the ways in which the earliest inhabitants used the Ptarmigan Lake area. If the periglacial lake environment was impoverished, having little vegetation and consequently sparse animal inhabitants, explanations of the human use of the area must necessarily present alternative explanations of resource exploitation, as well as the logistics of how such an area could be inhabited by humans. Alternatively, if the periglacial environment was actually rich in plant and animal life, then the attraction to such areas of humans is clear, namely because these are the locations where important resources are concentrated.

Lines of Inquiry: The most direct means of reconstructing paleoenvironments is that of analyzing pollen samples obtained from cores of lake bottom sediments. Through this approach, the relative frequencies of plant species can be determined for different periods in prehistory, and the appearances of new species documented. Based on this type of information, reconstructions of the local climates can be developed and specific types of plant communities postulated for the different prehistoric periods. Also through this approach, animal communities may be postulated, based on the types of environments available during a given period. Reconstruction of climatic regimes can also be partially developed on the basis of a more precise schedule of glacial advances and retreats, a commonly-used indicator of cooling or warming climates over the period in question; glacial ice cores can provide this type of information as well.

Deglaciations of Drainages, 9,000 B.P. -Present

The retreat of glacial ice from stream courses over the past 9,000 years has not been investigated in WRST with respect to the rates at which the glaciers have contracted to their present-day extents. Although glacial ice had receded substantially from the drainages by 2,000 years ago, the minimally accepted time for the advent of Athapaskan culture in the area, obtaining more precise rates of retreat and exposure of the stream courses will enable more precise interpretations of how the WRST interior was colonized by humans through time. A second consideration in this respect is the presence of the proglacial lake in the Copper River basin that effectively prohibited human habitation of the lower elevations of that area up to 9,000 years ago (cf. Ferrians, et al. 1983). Concomitant to establishing the rates of retreats is the task of developing the timing and nature of the colonization of the newly exposed areas by the different plant species and development of the modern communities. Although this problem closely parallels the investigations of early man and the environment described above, it differs with regard to being essentially a history of the relationship between those who were prehistoric Athapaskan Eyak and Tlingit predecessors and the WRST environment.

4.) *Problem*: Establish the rates of retreat from 9,000 years ago to present for glaciers in the following areas: Chitina River basin, Copper River basin, Copper Glacier and Tanada Peak and the Tebay Lakes area.

Lines of Inquiry: Geomorphological and ancillary analyses of glacial moraines and other landforms along the courses of old glaciers and present-day streams will shed light on the ages of moraines at specific points along their retreat routes. Ancillary analyses such as radiocarbon dating material associated with moraines and hydration rim analysis of glacial rock should establish more precise ages for the times at which different areas of the terrain were exposed.

5.) *Problem*: Establish the times at which areas exposed by retreating glaciers were colonized by secondary growth plants such as deciduous trees and shrubs and when modern plant communities developed.

Lines of Inquiry: Pollen analysis of cores taken from lakes in each area should produce data that will enable identification of the times specific species appeared, and characterizations of developing plant communities for each area. Pollen cores should be obtained in a systematic fashion from a selection of the many small lakes and ponds present in each area. Specific considerations include obtaining core samples from water bodies located at a succession of points along the retreat routes of the glacial ice. Core samples can then be referenced to baseline ages that represent the time of the initial formation of the water body following the exposure of the land, as these are established by the investigation described under number 1, above.

Human Colonization of New Areas

Based on the presence of Northern Archaic remains at Ptarmigan Lake, it is assumed that human occupation of the northern portion of WRST continued, minimally, from Northern Archaic times to when the historic Upper Tanana occupants encountered Russian and Euro-American explorers. This assumption can only be substantiated by future identification of archaeological remains that can be firmly dated to the time between 6,000 years ago and historic contact. Therefore, areas with high potential for early human occupations must undergo archaeological survey and testing to establish if an unbroken line of occupations did in fact occur. Determining which areas have high potential must be based on the limited information provided by the Ptarmigan Lake remains, as well as data provided by nearby areas with similar, early occupations, such as the Aishihik-Kluane Lakes area (Workman 1974). These cases provide a basis for the analysis and planning for investigation in the WRST area, and the prehistoric environmental paradigms and the types of site functions that have been established by previous work must be used as well.

In the present evaluation, the environment is again considered the primary regulating factor in the occupation of the WRST interior. In this respect, and based on comparison with the distribution of historic traditional Athapaskan sites in the area (Appendix; Figure A1.1), the focus is on establishing a history of modern environmental development in the areas where historic occupations occurred (see "Deglaciation of Drainages," problem statement number 2, above) and when occupations of these areas began. The period from 2,000 years ago to historic contact is considered, for present purposes, as the temporal span of Athapaskan prehistory in interior Southcentral Alaska (see discussion in Chapter III, "The Development of Northern Athapaskan Culture"). Investigating the arrival of Athapaskan culture in interior areas of WRST can also only be accomplished by archaeological survey and testing to establish the presence of prehistoric remains, their ages and other information related to early Athapaskan use of the area.

6.) *Problem*: Identify areas with high potential for sites dating to 6,000-2,000 years ago, based on available information.

Lines of Inquiry: Identifying areas with potential for having sites must be based on the same type of information developed for the investigation of Ptarmigan Lake Northern Archaic, as well as new information on the deglaciations of the river drainages, described above, in the northern portion of the WRST area. In this respect, the investigation will build on the data developed as a result of the inquiry described for Ptarmigan Lake, that is, tracing the retreat of glaciation from the beginning of the Holocene era, ca. 10,000 years ago to ca. 2,000 years ago.

White River Ash and Prehistoric Human Inhabitants

As described in Chapter III, the eruption of Mt. Bona around 1,250 years ago is postulated by Workman (1974, 1979) to have resulted in migrations of Na Dene' groups southward. The distribution of this ashfall has been described as lobes formed by prevailing winds transporting the airborne tephra, extending northward and eastward from the volcano (Figure 6.1). It is presumed that the primary impacts of the eruption were on the inhabitants living in these areas, but the archaeological record nevertheless shows strong continuities in the technological traditions of the inhabitants before the eruption and those who inhabited the areas following the event (Workman 1979:352). Although the evacuation of those northern and eastern areas is a reasonable assumption, it is nevertheless important to consider that areas to the south and west, such as the Chitina River drainage and the western and southern Copper River drainage may not have been affected, and that the inhabitants remained in place over the course of the eruption and ashfall. As an example of an alternative explanation, it is possible that rather than initiating a long migration of humans to the southeast, they may instead have circumscribed the ashfall by moving to the southwest, into the prevailing winds, and quickly reached areas that were not affected. In this scenario, reoccupation of tephra-affected areas could have actually been by the former inhabitants, who eventually returned to affected areas as the land and resources recovered from the ashfall; the continuity of the technological traditions from pre-ashfall to post-ashfall is explained in this way as well. This type of consideration is important in investigating the effects of the White River ashfall on the late prehistoric human inhabitants of the WRST area.

7.) *Problem*: Establish the tenure of prehistoric human occupation of the Ptarmigan Lake vicinity, and the chronological relationship of the later occupations with the White River ashfall. Ptarmigan Lake is in the direct path of the northern lobe of the tephra distribution, but it may have been affected by the eastern lobe as well (Figure 6.1).

Lines of Inquiry: The human use of Ptarmigan Lake through time can only be established by intensive survey and testing along the lakeshore and other areas with high potential in the vicinity of the lake. The particular focus of this effort would be to establish either (a.) the continuous presence of prehistoric humans in this area, or (b.) identify the gaps in the tenure of human occupation. Types of data that are applicable in addressing these problems are those contained in new sites, such as diagnostic artifact forms, and new radiometric ages obtained from charcoal and other organic samples

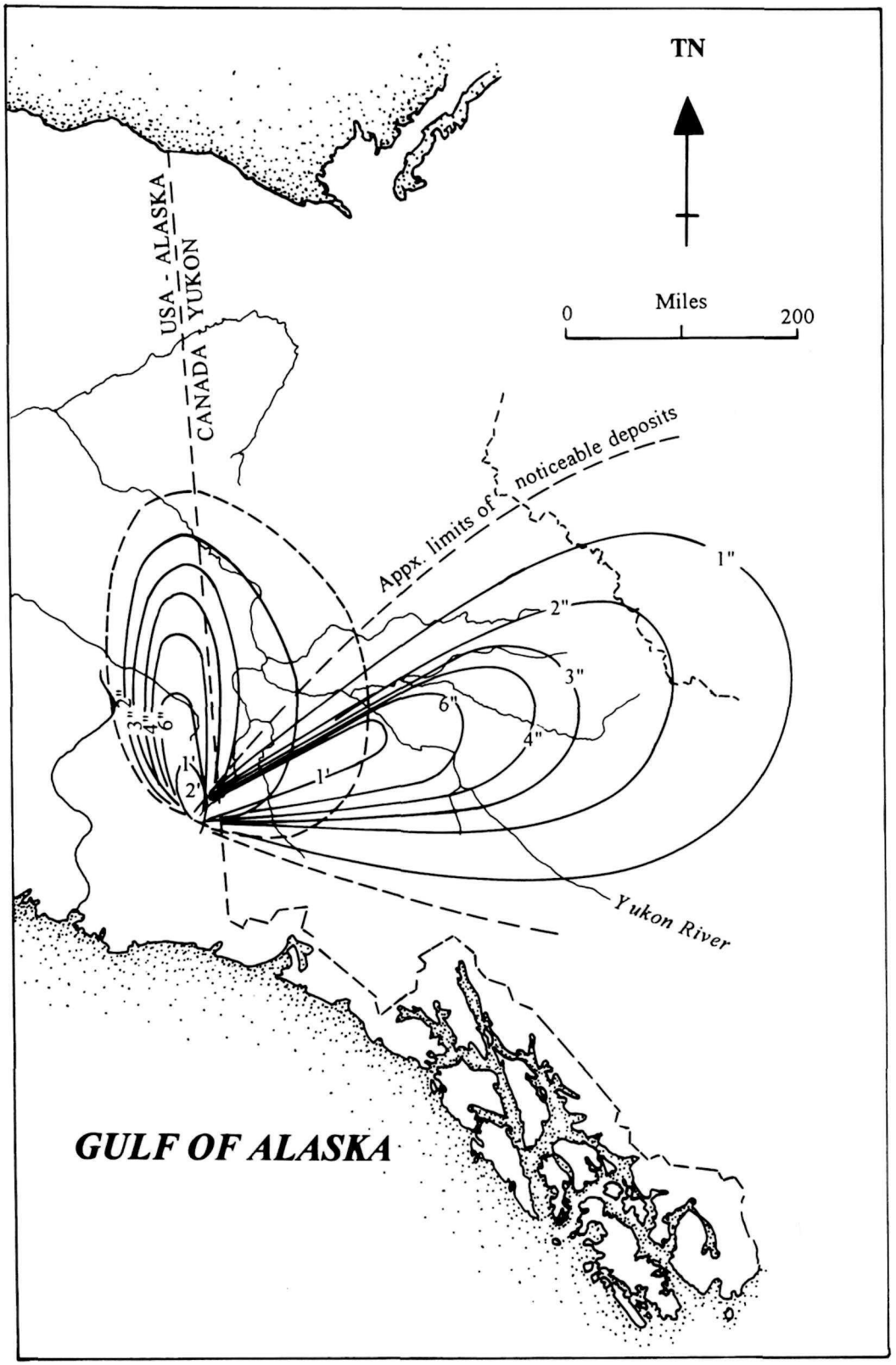

Figure 6.1. Distributions of White River Ash; northern and eastern lobes (after Workman 1979: Fig. 11.2).

from the sites in the area. The relationships between the remains of prehistoric occupations and White River Ash deposits are critical because of the importance of the tephra as a temporal marker and its significance in the human prehistory as the possible cause for temporary abandonment of the area. It is important to note here that the eruption that deposited the northern lobe occurred a few centuries before that of the eastern lobe, sometime around AD 400, or 1,500 years ago (Workman 1978); deposits of the northern lobe are up to several inches thick in the vicinity of Ptarmigan Lake. Those of the eastern lobe are significantly less, both in age and thickness (ca. A.D. 700 or 1,250 years ago; Workman 1978:45-47; Figure 6.1). Stratigraphic relationships between cultural deposits and tephra deposits are therefore of primary importance in this respect. And they are analyzed in conjunction with radiometric dating, these data should confirm the time at which the Mt. Bona eruptions occurred and the length of time during which a hiatus of human presence in the area lasted. In addition, differences in the effects of the northern lobe deposition and those of the eastern lobe should become more clearly defined as a result of this inquiry.

8.) *Problem*: Confirm that areas south and west of Mt. Bona were not affected by the White River ashfalls, and that prehistoric occupations were continuous throughout the past 1,500 years in the vicinities of the Chitina River drainage and western Copper River drainage.

Lines of Inquiry: It is expected that investigating the relationships between human distributions and developing environments in areas exposed by retreating glacial ice will indicate limitations on the human occupation of the drainages -- especially the Chitina River drainage. That information should serve to identify those portions of the drainages with high potential for containing older cultural remains. With this information in hand, the focus should then be on combining data provided by historically documented Athapaskan site-location patterns and land-use patterns, with survey and testing efforts directed at discovering prehistoric remains in the areas of high potential. Investigation of these areas must be done as survey and testing to obtain diagnostic artifacts and organic samples for radiometric dating. Subsurface testing should also confirm that ashfall did not affect these areas by establishing the absence of White River tephra in these areas. New evidence for continuous occupation of the general areas of the drainages south and west of Mt. Bona during the past 1,500 years would support the suggestion that groups occupying areas affected by the ashfalls of ca. 1,500 and 1,250 years ago, such as Ptarmigan Lake and the upper White River valley, migrated into the Chitina and Copper River drainages, rather than areas to the southeast. Conversely, evidence for intermittent occupations of areas west and south of Mt. Bona in the past 1,500 years tends to support Workman's suggestion of migration to the southeast as precipitated by one or both of the volcanic events.

THE COAST

Early Man and the Environment

The potential for the discovery of very early sites in coastal areas of WRST is limited by a number of factors. First, north Pacific shores that fall within the boundaries of the park are restricted to only the western side and the northern end of Yakutat Bay, and to the west, approximately 80 percent of the Malispina Forelands, and the northwestern end of Icy Bay (Figure 2.2). Secondly, the small segments of shoreline that lie within the WRST boundaries are further limited as potential prehistoric occupation locations by glacial ice cover on an estimated 70% of the WRST shores; glaciers along this portion of the north Pacific coast were undoubtedly more extensive in late Pleistocene and early Holocene times. Finally, based on ethnographic use patterns for this area of the coast, it is apparent that the northwestern side of Yakutat Bay was not a desirable area for permanent settlements, because of its exposure to stormy seas and inclement weather. Historically this portion of the coast was used only for hunting animals that are still found there, such as bears and mountain goats (de Laguna 1972, Part 1:59).

Nevertheless, small areas in the vicinity of the Malaspina Forelands apparently were not directly impacted by the glacial advances, as indicated by enclaves of ancient plant communities that reflect a long-term, relative stability of these small areas (see discussion in Chapter II). Although the archaeological potential of these small pockets along the WRST shores cannot be considered high because of their isolation and the fact that they were and are surrounded by areas of relatively sparse resources, they nevertheless are possible locations of early human occupation. As such, investigations should be focused on eliminating them from further consideration as locations of early sites, or in establishing the presence of early remains in these small areas.

9.) *Problem*: Determine the ages and stability of the small, relict plant enclaves in the vicinity of the Malaspina Forelands, and the relationships with the shores from the late Pleistocene to modern Holocene times.

Lines of Inquiry: Geomorphological analysis of glacial features and relevant landforms will provide insights into the relationships between the areas under investigation and changes in sea level. The presumed raising of sea level from Wisconsin to modern times suggests that areas that remained ice-free were (a.) elevated above ancient shorelines and (b.) may have served purposes other than those normally related to occupations of shores such as shellfish gathering, fishing or sea mammal hunting. Conversely, isostatic rebound may have occurred along the shore as the glacial ice retreated, thereby raising ancient site locations above elevations normally anticipated for near-shore sites. Analysis of vegetation types and relative numbers of species in the floral arrays represented in lake cores should provide indications of changes through time. Such lake cores may be obtained from near shore lakes in the vicinity of Yakutat Bay; ice cores from the glacier may provide similar types of information. Analysis of cores should focus on correlations of plant communities with (a.) their ages in relation to each other during the period under investigation and (b.) the types of environments represented, based on the types of plants represented.

10.) *Problem*: Identify early Holocene cultural remains in coastal areas of WRST. Identify the earliest use of the unglaciated areas of the WRST shores; these remains would be those of cultures later than Paleoarctic and Paleoindian.

Lines of Inquiry: Early remains can only be discovered as a result of intensive survey and testing. The scope of such an investigation will be narrowed by the environmental parameters developed as a result of the inquiries described under problem statement number 9, above. Investigation of the initial occupation of the coast can be based on patterns of historic Native occupations for earlier, prehistoric uses of the same areas. A case in point would be investigation of whether the western side of Yakutat Bay contains remains of prehistoric hunting camps of the same type that have been recorded for early historic Tlingit occupations. Survey and testing may result in evidence that historic sites were used in prehistoric times as well. The environmental parameters established as a result of inquiries conducted will also be useful for the investigation of this problem.

Ethnicity of Late Prehistoric Human Inhabitants

As outlined in Chapter IV, the expansion of the Tlingit into the historic northwestern portion of their territory during late prehistoric times apparently resulted in a 'Tlingitization' of the Eyak inhabitants of the Icy Bay - Yakutat Bay - Dry Bay area (de Laguna 1990a; Leer 1994). Processes identified for this shift in the ethnic identity of the inhabitants of this coastal segment are a combination of a drastic decline in the number of Eyak people residing in the area due to a smallpox epidemic of 1837-1838 and an increasing Tlingit presence resulting from their desires to obtain Russian goods from the Yakutat post (de Laguna 1990a:194-195). It is important to note here that Eyak elements in the late prehistoric culture of this area have only recently been identified (e.g., de Laguna 1990a); earlier literature for this area portrayed the inhabitants as Tlingit people. Eyak people in the western side of their original territory -- the Cordova-Kayak Island coastal area -- retained the original tenets of Eyak culture into historic times (Birket-Smith and de Laguna 1938). The prehistoric Eyak presence in the

vicinity of Yakutat Bay and Icy Bay has yet to be established archaeologically. The suggestion (i.e., de Laguna 1990a) that Eyak remained in the areas described and assumed Tlingit cultural characteristics is a problem that may be resolved by archaeological investigation.

11.) *Problem*: Develop a means for distinguishing Eyak archaeological remains from those of northern Tlingit.

Lines of Inquiry: Develop traits lists of traditional Eyak material culture based on known characteristics of their lifeways, technology and material culture. Develop corresponding traits lists for the northern (Hoonah and Yakutat) Tlingit. Specific examples of Eyak technology include the Eyak type of wooden box, and a relatively large frequency of cutting implements and projectile points made of copper (de Laguna 1990a:192); in contrast, Tlingit technology included bent-wood bowls and a unique type of bow that, unlike Eyak and Athapaskan bows, lacked sinew backing and string guards (de Laguna 1990b). Actual survey and testing at sites in the eastern portion of the original Eyak area may also reveal spatial separation of Eyak and Tlingit houses and stratigraphic separation of Eyak and Tlingit cultural deposits. Sets of radiocarbon dates from samples associated with the different deposits should also reveal temporal separation between the prehistoric and early historic remains.

12.) *Problem*: Identify late prehistoric Eyak remains in the Yakutat Bay-Icy Bay areas.

Lines of Inquiry: Intensive survey of shorelines can locate and identify late prehistoric remains in the coastal portion of WRST. Subsurface testing at sites will presumably result in encounters with late prehistoric Eyak artifacts, and samples of materials suitable for radiocarbon dating. Analysis of these remains, utilizing the methods described under problem statement number 10, will produce data that can be used in establishing the late prehistoric Eyak use of the areas under discussion.

Paradigms for Investigations

The rationale used in developing the preceding problem statements is based on the unique environment of the area and the constraints on human use that this type of circumstance presents. Specific examples of constraints are the ice-covered and otherwise barren terrain of the late Pleistocene and early Holocene that undoubtedly was not conducive to permanent human settlements and restricted other types of use in much of the area. Because of the importance of establishing the chronology and nature of the changing environment for the area as it relates to prehistoric human habitation, paleoenvironmental studies should be initiated as soon as possible; archaeological investigations focused on relationships between cultural remains and the environment can then be based on the results of these studies and will undoubtedly contribute additional information about the early environments of the area and shed light on the ways in which prehistoric humans inhabited and used the Wrangell-St. Elias area. It is important to note that archaeological investigations of late prehistoric occupations can be initiated at any time, because they are not directly dependent on the results of the paleoenvironmental studies; however, both lines of inquiry would be useful for developing increasingly precise interpretations as the data are developed.

VII

DISCUSSION AND CONCLUSIONS

GENERAL CONSIDERATIONS

The most pressing need for future archaeological work in the WRST area is simply completing surveys of areas not yet investigated to identify those locations containing cultural deposits that may be vulnerable to damage from present-day or future activities. This broad paradigm can be made more workable for present purposes by restricting initial survey efforts to areas that have not been investigated, where construction and other types of ground-disturbing activities are taking place or are planned.

It is important to point out that compliance surveys do not normally result in the type of data that provide insights into the ways in which prehistoric humans used a particular area. This is due, in part, to the objective of this type of survey, which is simply to determine if a project will damage archaeological remains that may be present at the location in question. Also, if cultural remains are discovered as a result of this type of investigation, analysis is usually restricted to only determining age and some degree of their significance and does not proceed to an evaluation of the artifacts in the context of a regional or area research program. It is important to note, however, that in cases where an area research program is in place, and compliance survey and testing produces data that can be applied to the larger issues, it is quite appropriate to do so. Problem-oriented research attempts to develop data that can be applied in resolving issues in the prehistory of a given area.

Basic elements in an area research program are a review of previous work done in the area, or in nearby areas, identification of issues in the area's prehistory, determining which issues the planned research will address and an explanation of how the research will develop new information that will shed light on the problems. It is the direction and focus of the research that sets this type of investigation apart from routine compliance-oriented investigations. Because of the nature of problem-oriented research, it is the means and method whereby significance of artifact forms and types are defined. It is, therefore, most appropriate to base resource management decisions on the type of evaluations produced by problem-oriented research because they provide the most accurate assessment of the relative importance of different resources within a given area. Through this approach, the resource is best understood and therefore best protected.

CONCLUSION

As stated at the outset of this overview, current knowledge of the archaeological resources present in Wrangell-St. Elias National Park and Preserve is rudimentary, primarily because of the very limited amount of work that has been done. As described in Chapter V, archaeological investigation of sites in the area that go beyond simple location and recording of site locations is limited to a very few locations where testing has been conducted. Of the five that are discussed in Chapter V, four are historic traditional-use sites, of which testing has been done at only two, *Taral* and *Batzulneta's*. It is possible and even likely that *Batzulneta's* and the remaining two, *Cross Creek* and the *Tlaxayik-Teqwedi Camp* have late prehistoric components, as well. The fifth site, *XMC-038*, is located at Ptarmigan Lake and is the single representative of early prehistoric culture(s) that is not directly related to the traditional, historic Native inhabitants of the area. Although Northern Archaic and possibly Paleoarctic cultural affiliations have been ascribed to the Ptarmigan Lake remains, the ascriptions are based solely on artifact forms, without the additional confirmation of radiocarbon dates.

The site database, presented as the Appendix of this report, is intended to represent the universe of traditional and prehistoric site types known in the Wrangell-St. Elias area. The data include

Table 7.1.
A prioritization of archaeological investigations.
(Problem statement numbers are the same as those listed in the text.)

Priority	Problem Statement	Focus of Inquiry
		Tier I[1]
I	2.	Establish a specific date for the deglaciation of the Ptarmigan Lake area; geomorphology, various dating techniques.
I	3.	Develop information on the Ptarmigan Lake environment at the time of the last glaciation (periglacial); lake bottom coring, pollen analysis.
I	11/12.	Identify locations of late prehistoric Eyak occupations of western Yakutat Bay and the northern end of Icy Bay; traits list, survey and testing. Attempt to distinguish Eyak occupations from those of Tlingit.
I/II	4.	Develop information on precise rates of retreat of glaciers from the Chitina River basin, Copper Glacier, Tanada Peak and the Tebay Lakes area; geomorphology, radiocarbon dating, hydration rim analysis.
I/II	5.	Determine the dates at which newly deglaciated areas were colonized by secondary growth plants, when modern plant communities developed; pollen analysis, lake cores.
III	9.	Analyze relict plant enclaves in WRST coastal locations for age of establishment and relative stability over time, relationships with changes in shorelines; pollen analysis, geomorphology, various dating techniques.
		Tier II
I	1.	Determine the cultural affinities of the Ptarmigan Lake (XMC-038) cultural remains; survey, testing, collections analysis, radiocarbon dating.
I/II	6.	Identify areas with high potential for containing sites dating to 6,000-2,000 years, focus on newly deglaciated areas; review of new paleoenvironmental information, prehistoric site location information, ground proof (survey and testing, collections analysis, radiocarbon dating).
I/II	7.	Determine the effects of the White River ashfall on the prehistoric inhabitants of Ptarmigan Lake, with a focus on investigating whether the area was abandoned as a result; survey and testing, radiocarbon dating.
I/II	10.	Identify early Holocene cultural remains in coastal areas of WRST, focus on utilizing paleoenvironmental data to locate areas with high potential; identify the initial occupations of the coast. Identify the earliest use of the unglaciated areas of the WRST coast, focus on historic traditional use as the methodological approach; survey and testing, radiocarbon dating; survey and testing.
III	8.	Establish that human occupations of areas south and west of the White River ashfalls were not affected by either event; this is a focus on establishing that occupations were continuous over the past 1,500 years.

[1] The tiers are treated as sets of similar investigations that can be combined as objectives of single field-data-gathering efforts or as multiple efforts. The ranking within each tier (i.e., I, II), is the suggested priority of the work described.

sites that lie outside the WRST boundaries, as well as those that are inside. In this respect, listings in Tables A1.1 and A1.6 comprise a total of 203 inland Athapaskan sites and historically known trails, of which only 95 are located in WRST. These collective data provide a broad perspective for the Athapaskan traditional places in Wrangell-St. Elias and relate them to the range and variation of site types and settings in the universe of traditional Athapaskan sites. With this database now established, further research concerning the late prehistory of the area can focus on issues related to cultural processes or change and more specific questions regarding late prehistoric and historic lifeways in the interior, rather than on simply identifying and locating additional Athapaskan sites.

A total of 59 sites, listed in Table A1.3, are mainly settlement sites that have been recorded for the Northern Tlingit and Eyak on the Gulf of Alaska coast. Exceptions for site types include a total of 13 hunting camps for seals and sea otters, fish camps or fishing stations and religious places. Sites types that are documented in the ethnographic literature that are not well represented in this small dataset include traditional places that served important functions in procuring inland or terrestrial resources such as mountain goats and sheep, bears and various fur-bearing animals, as well as plant foods such as berries (cf. Birket-Smith and de Laguna 1938; de Laguna 1972). The single recorded example of what was probably a hunting camp on the WRST coast is the *Tlaxayik-Teqwedi camp*, located near Bancas Point on the western side of Yakutat Bay. Although it is unlikely that permanent settlement sites will be found on the WRST coast, there seems little doubt that additional camp sites and other temporary-use locations will eventually be found that are related to late prehistoric Eyak and early historic Tlingit uses of this portion of the Pacific coast.

Finally, it is stressed that the early prehistoric and subsequent human occupations of the Wrangell-St. Elias area offer an opportunity to investigate the ways in which different prehistoric cultures have related to glaciated areas. In this respect, systematic investigations of the relationships between the human exploitation of near-glacier environments in early prehistoric and later cultures, from early Holocene times to historic, will provide new insights into the ways in which ancient people migrated to the areas south of the Pleistocene ice sheets to colonize the New World.

APPENDIX
SITE DATABASE FOR THE WRST VICINITY

INTRODUCTION

Presented here are listings of ethnographically documented sites located in the vicinity of Wrangell-St. Elias National Park and Preserve. Among the sites are a substantial number that are located outside NPS boundaries, that are included in order to investigate relative proportions of site types and settings that may occur in a given area of the Southcentral Alaska interior. A number of caveats accompany the site information that has been used, and most of the places have not been verified by on-the-ground surveys (i.e., de Laguna 1970). But the data nevertheless serve the useful purpose of conveying some aspect of the general Athapaskan, Eyak and northern Tlingit perceptions of significant places in the environments they have inhabited. This seems especially true in those cases where Native place names are recorded for the natural features and the locations themselves. In this respect the universe of site types and settings represented provides a provisional basis for interpreting functions for newly discovered sites. The function of a particular site can then be inferred by comparing and contrasting information from the site with that from the ethnographic universe.

Place locations were verified on U.S.G.S. quadrangle maps as a part of the process of developing the present tables. In some instances geographic features described in the ethnographies do not correspond with those shown on the U.S.G.S. maps -- the discrepancies are noted; but the site settings are treated as accurate, regardless of discrepancies between actual geographic relationships, such as possible alternative streams for those locations that are described as stream-side. A second set of data that remains problematic and cannot be resolved with the information at hand is the place function designation. In particular, the "settlement" classification cannot be precisely defined because of the variable way in which it is used in the ethnographic descriptions -- sometimes it is used to designate permanent villages with log or plank houses, and sometimes to designate any type of habitation, such as encampments related to fishing. The variability in the use of the term occurs in the accounts of the early explorers as well as those of anthropologists who recorded the information. In this respect then, listings designated as settlements should be construed as representing all types of locations with dwellings ranging from winter houses to hide tents and brush lean-to's.

Another important factor to consider relates to the permanency of winter settlements. BIA researchers report (1993a) a history of movements for a group that originally constituted the inhabitants of Dit'aan Cheeg village. Between 1901 and 1944, the group moved their settlement to Daxuhtaa' Cheeg (a former hunting camp) located across the Nabesna River from Dit'aan Cheeg, Tthiixaa' Cheeg, near the mouth of Cooper Creek; some of the original Dit'aan Cheeg inhabitants also resided at a separate location, Nach'etay Cheeg (BIA 1993a). Finally, in 1944, the village was moved to Dehsoon' Cheeg, the location of the settlement that was occupied until the early 1980s.

Other site listings with potential for errors in interpretation are the actual functions of the settlements and camps beyond their use as habitation localities for sub-groups of the area population. The best examples of this are settlements along streams that served as both winter village locations and as fish camps during the summer months. The approach used in this respect is to list the habitation site described in ethnographic and early historic records as a settlement; and if additional information is provided, to note the secondary function, such as "fish camp," as well (Table A1.1, this report). Conversely, those locations that are described only as "fish camps" are presented as such, even though there is a strong likelihood that these also were settlements, or at least temporary camps that were occupied during the summer fishing season. The relationship between "cemeteries" and settlements presents the same situation, and again, the same approach is used, with "settlement" receiving *a priori* treatment in these cases, as well.

It is important to point out that the listings of trails given in Tables A1.1 and A1.2 are not representative either of the total trail number that led to and from each settlement and encampment, or of the points of origin and final destinations. Perhaps the best example of a trail network related to a single settlement is Dit'aan Cheeg, a case where trails led to summer and winter sheep-hunting grounds, a satellite camp, Suslota Lake, Batzulneta's along the Nabesna River and into the Nutzotin Mountains (BIA 1993a:7). In this regard, it is reasonable to assume that similar trail systems were related to each of the settlements listed in the tables.

The approach in assigning the site setting designations as they are presented in Tables A1.2 and A1.3 (this report) is based primarily on the types of freshwater bodies the respective locations relate to. The principal distinctions for inland sites are "riverine," "lacustrine" and "other" with "creekside" being a somewhat more arbitrary designation that reflects relative stream size. Site locations in coastal areas are treated in a similar way, with distinctions made primarily on the basis of the proximity of the location to the nearest body of fresh water (i.e., "riverine" or "lacustrine"), and secondarily on the basis of the relationship with marine waters (i.e., "marine bay" or "marine island"); however, it is presumed that coastal settlements are all located near a source of fresh water. The cultural-spatial divisions made in the listings of coastal sites are based on primarily on de Laguna's (1990a, 1990b) interpretation of the ethnography of the northern Northwest Coast culture area, augmented with additional information from her 1972 report on the Yakutat Tlingit.

The so-called "Eyak Tlingitized" area (de Laguna 1990a, 1990b) is problematic with respect to characterizing and analyzing the proto-historic and early historic cultures inhabiting the coast from Icy Bay and Yakutat Bay to the Italio River. In the absence of a clearly-defined cultural entity that comprises some interphasic form of an Eyak-Tlingit culture combination, it is not clear which traits and characteristics truly belong to Eyak, and which are Tlingit. Examples of interpretive difficulties that are precipitated by this circumstance are settlement and catchment analyses that are predicated on traditional site use within the area of a well-defined culture group, at a well-defined time-line. One remedy for this problem would be establishing precise dates for settlements and other sites across the "Eyak Tlingitized" area, with the assumption that sites dating from late prehistoric times (i.e., the past 500 years) up to the beginning of the eighteenth century represent traditional use of the area by Eyak ancestors prior to Tlingit incursions (cf. de Laguna 1990a:189). In the absence of this type of data, it is not unreasonable to assume that before the eighteenth century, the coastal area from Cordova to Yakutat Bay was Eyak territory (loc. cit.), but again, in the absence of precise dating, site data will be restricted with respect to its use in interpreting the identity of the occupants and land-use patterns.

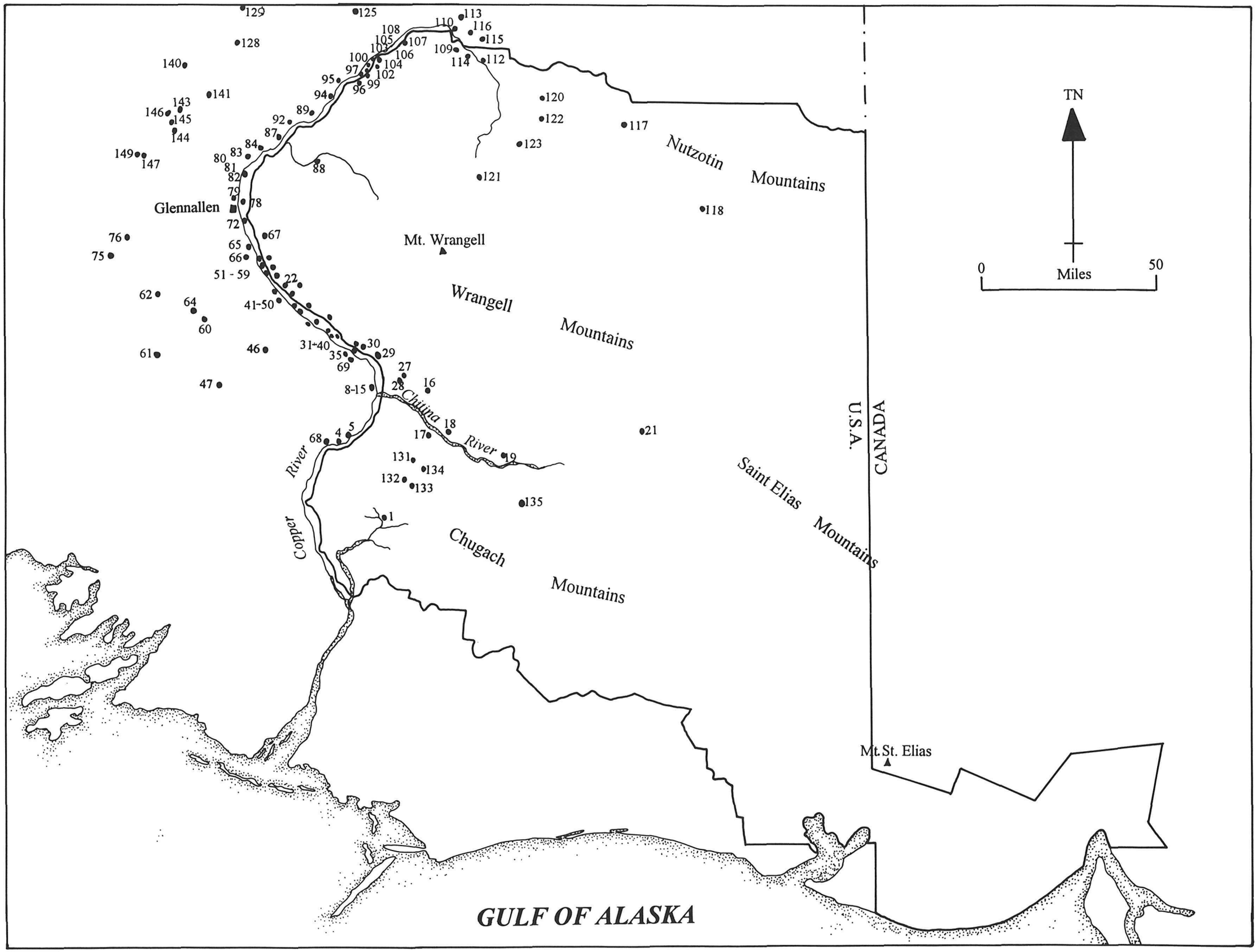

Figure A1.1. Ethnographic sites in the interior WRST area. The site numbers in this map correspond to the site/place numbers and names in the first column of Tables A1.1, A1.2 and A1.3. Some of the sites in the tables are beyond the area shown on the map.

Table A1.1

Native traditional places and late prehistoric sites in the WRST area

Fig. A1.1 ref. no./ Place name	AHRS No.	Cultural components	Type[1]	Setting[2]	Primary references
		Late Prehistoric/Historic			
70)Nage'dlis tini'aden	GUL-003	Ahtna	settlement	riverine	de Laguna 1970[3], No. 49
80)Tatcen	GUL-009	Ahtna	settlement	riverine	de Laguna 1970, No. 74
87)Tcitel ke're'	GUL-014	Ahtna	fish camp	riverine	de Laguna 1970, No. 61
74)Tsotsaina	GUL-016	Ahtna	settlement/ camp	riverine	de Laguna 1970, No. 63
90)Tsidi' ke're' (may be GUL-016)	GUL-017	Ahtna	settlement	riverine	de Laguna 1970, No. 64
96)Qatna'ayi ke're'	GUL-020	Ahtna	settlement	riverine	de Laguna 1970, No. 67
99)Colcharny house	GUL-022	Ahtna	settlement	riverine	de Laguna 1970, No. 69
102)Tci'drazi ke're'	GUL-025	Ahtna	settlement	riverine	de Laguna 1970, No. 72
104)--	GUL-027	Ahtna	settlement	riverine	de Laguna 1970, No. 74
106)Tsudra' na'	GUL-029	Ahtna	settlement	riverine	West 1974,No. 23
112)Batzelneta's Village	NAB-003	Ahtna	settlement	creekside	Allen 1887:67; Rainey 1939:361-362; de Laguna 1970, No. 80
Old Chisana[4]	NAB-007	Hist. Upper Tanana	cemetery	creekside	BIA 1993e; Orth 1971
1) Da'da'ina (Porcupine Creek)	VAL-001	Ahtna	settlement	creekside	de Laguna 1970, No. 1
7) Xantna (Nekelkeistan; (Taral fishing station)	VAL-004	Ahtna	fish camp	riverine	de Laguna 1970, No. 4
8) Taral	VAL-006	Ahtna	settlement	riverine	VanStone 1955; de Laguna 1970, No. 6
17)--	VAL-013	Ahtna	settlment	riverine	de Laguna 1970, No. 13
29) Na • re (Chief Bacile's Village)	VAL-015	Ahtna	settlement	creekside	de Laguna 1970, No. 19
32) States (Chief Billum's Home)	VAL-016	Ahtna	settlement	creekside	de Laguna 1970, No. 20
30) Tlasi ke're'	VAL-017	Ahtna	settlement	creekside	de Laguna 1970, No. 21
111)Midnoosky House	VAL-019	Ahtna	settlement	creekside	de Laguna 1970, No. 23
37) Starai	VAL-022	Ahtna	settlement	riverine	de Laguna 1970, No. 26
36) Kedlis ke're'(?); may be bisklnet)	VAL-023	Ahtna	settlement	riverine	de Laguna 1970, Nos. 25,27
41) Ts'an kulän bene (Kenny Lake)	VAL-024	Ahtna	settlement	lacustrine	de Laguna 1970, No. 28
54) Bestax	VAL-034	Ahtna	settlement	riverine	de Laguna 1970, No. 38
57) Nige'kulän (Tanana Jack's Vill)	VAL-036	Ahtna	settlement	riverine	de Laguna 1970, No. 40
59) Chief Andrew's	VAL-038	Ahtna	settlement	riverine	de Laguna 1970, No. 42
16) Stare • lna'	VAL-074	Ahtna	settlement (?)	riverine	de Laguna 1970, No. 12
9) --	VAL-236	Ahtna	settlement	riverine	Van Stone 1955:121.

Table A1.1 (continued)

Fig. A1.1 ref. no./ Place name	AHRS No.	Cultural components	Type[1]	Setting[2]	Primary references
132)Tebay Lake[5]	VAL-240	Ahtna	settlement	lacustrine	de Laguna 1970:1; West 1974, No. 10; BIA 1993b; Davis, Bane and Spude 1981: Appendix).
133)Tebay Lake Camp	VAL-100	Ahtna	settlement	riverine	Reckord 1983:98, 107
18) Dora Creek site	XMC-004	Ahtna	camp	riverine	Allen 1887:50; de Laguna 1970, No. 14
19) T'a'la'xi na' (Lakina River Vill)	XMC-005	Ahtna	settlement	riverine	Allen 1985:51; de Laguna 1970, No. 15; BIA 1993d
21) Nicolai's Cabin	XMC-006	Ahtna	camp	riverine	De Laguna 1970, No. 17
22) Nizina River Village (Nicholai's Cabin; Nicholai's Camp)	XMC-033	Ahtna	settlement	riverine	Allen 1887:53-55; de Laguna 1970, No. 37
10) Taral Creek (Starę • lna'?)	VAL-007	Ahtna	settlement	riverine	VanStone 1955:120-121; de Laguna 1970, No. 7
49) Tcedikulän (Copper Village)	VAL-028	Ahtna	settlement	river terrace	De Laguna 1970, No. 32
117)Dit'aan Cheeg[6]	--	Upper Tanana/late prehistoric	settlement, cemetery	creekside	Kari 1983:103; Reckord 1983:219; BIA 1993a, 1995
118)Nach'etay Cheeg	--	Hist. Upper Tanana	settlement	creekside	Reckord 1983:238; BIA 1993c
134)Bridge Creek Cabin	--	Ahtna/Euro-American/ prehistoric (?)	settlement	riverine	Moffit 1914:Plt. 1; BIA 1993f
135)Klu River Cabin	--	Ahtna/Euro-American	settlement	riverine	BIA 1993g
		Prehistoric			
Lakina River Crossing	XMC-009	Ahtna			Hanable and Workman 1974:39
Ptarmigan Lake Site	XMC-038	Northern Archaic	camp (?)	lacustrine	NPS compliance survey form 004.85.WRST
Tinplate Hill Site	XMC-039				NPS compliance survey form WRST.86.003
–	XMC-097				NPS compliance survey form WRST.88.013
–	XMC-098				NPS compliance survey form WRST.88.004
–	VAL-260		settlement	riverine	Ahtna Inc., Cultural Resources Case No. 92-CLR-#1
–	VAL-261		settlement	riverine	Ahtna Inc., Cultural Resources Case No. 92-CLR-#1
–	VAL-262		settlement	riverine	Ahtna Inc., Cultural Resources Case No. 92-CLR-#1
–	VAL-263		cache	riverine	Ahtna Inc., Cultural Resources Case No. 92-CLR-#1

Table A1.1 (continued)

Fig. A1.1 ref. no./ Place name	AHRS No.	Cultural components	Type[1]	Setting[2]	Primary references
–	VAL-264		cache	riverine	Ahtna Inc., Cultural Resources Case No. 92-CLR-#1
–	VAL-265		settlement	riverine	Ahtna Inc., Cultural Resources Case No. 92-CLR-#1
(field no. MCC-94-66)	--		settlement?	lacustrine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-73)	--		?	?	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-96)	--		caches	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-97)	--		settlement?	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-98)	--		settlement	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-99)	--		settlement?	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-100)	--		settlement?	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-101)	--		settlement?	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes
(field no. MCC-94-102)	--		cache?	riverine	Alaska Office of History and Archaeology, 1994 McCarthy Road field notes

[1] All listings with permanent houses are presented here under settlement; "settlement" and "village" are both used by de Laguna (1970) to designate sites with houses; although no distinction is apparent in the alternative uses of the terms, it is possible that "village" distinguishes locations with more than one house.

[2] Riverine refers to third order stream; creekside designates first or second order streams.

[3] A note on the front of this report states:"This is a preliminary working paper Xeroxed from a copy in Dr. William Workman's files ... Many of the site locations are based on hearsay and have not been verified on the ground. Before citing specific information, researchers are strongly advised to consult with the author."

[4] Not a traditional Upper Tanana place; the Upper Tanana cemetery is located within the area of Old Chisana; this Native presence was directly related to the gold rush occupation by Euro-Americans, from 1913-1929 and 1933-1946; the traditional site, Nach'etay Cheeg is located ca. 11.5km northwest of Chisana.

[5] West (1974, No. 10) describes "... a winter house and village located at Tebay Lake near Tebay River..." and this description corresponds with the site investigated by the BIA field crew in 1992 (BIA 1993b, AA-11125C), that is designated as VAL-240; Reckord (1983:98,107) has also identified the site as a hunting camp, and identifies other sites at Tebay Lake, i.e., VAL-100).

[6] Results of a 1992 BIA field 1investigation indicated that the site has been completely destroyed by erosion.

Table A1.2

Traditional[1] inland places in the vicinity of WRST[2]

Fig. A1.1 ref. no./Place	Function	Reference
1) Da'da'i'na	settlement	de Laguna 1970, No. 1 West 1974, No. 7
2) *Konsina River	settlement	Allen 1887:46; de Laguna 1970, No. 1
3) *Zéikhell (Tiekel R.)	settlement	Allen 1887:46; de Laguna 1970, No. 1 West 1974, No. 8
4) *Wultis-nildji'dji	ritual ("dancing place")	de Laguna 1970, No. 2
5) * --	settlement	de Laguna 1970, No. 3; Cashman 1900:822
6) Taral - Canyon Crk. - Summit Lake - Tebay R. - Tebay Lake	trail	de Laguna 1970:1 West 1974, No. 11
7) *Xan'tna'(?)	settlement	de Laguna 1970, No. 5; Seton-Karr 1887:206 West 1974, No. 13
8) Taral	settlement/ fish camp	Allen 1887 Vanstone 1955 West 1974, No. 14
9) -- (VAL-236)	settlement	VanStone 1955:121
10) Taral Creek	settlement	de Laguna 1970, No. 7 VanStone 1955:120-121
11) *Daka de'nin's	settlement	Shinkwin 1974, 1979 West 1974, No.15
12) * --	fish camp	de Laguna 1970, No. 8
13) *Tah klez kah	fish camp	de Laguna 1970, No. 9 West 1974, No. 17
14) *Ts'inra • x (tcunrax)	settlement	de Laguna 1970, No. 11
15) *Escaldita's	settlement	West 1974, No. 19 (may be de Laguna's 1970, No. 11)
16) Stare • lna' (Strelna)	settlement	de Laguna 1970, No. 12 West 1974, No. 20
17) --	settlement	de Laguna 1970, No. 13
18) Dora Creek site	camp	
19) T'a'la'xi • na' (Lakina R.)	salmon fishing, cache	de Laguna 1970, No. 15 West 1974, No.1
20) --	camp	Allen 1887:51; de Laguna 1970, No. 16
21) Nicolai's Cabin	settlement	de Laguna 1970, No. 17 West 1974, No.2
22) Nicolai's Camp	settlement	de Laguna 1970, No. 37
23) Nicolai's Vein	copper ore	West 1974, No. 3
24) "Skilly's"	settlement	de Laguna 1970:5
25) Nizina R.- Nicolai's - Skolai Pass - White R.	trail	West 1974, No. 5.
26) Qaya`x	settlement	de Laguna 1970:5

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
27) Naxt'in ke're'	settlement	de Laguna 1970, No. 18
28) Ni'kani'lent (Ni'kani'lendin?)	settlement	de Laguna 1970, No. 18
29) Na • re (Horse Crk.)	settlement	de Laguna 1970, No. 19 West 1974, No. 23
30) Tl'asi ke're' (Wintercourt)	settlement	de Laguna 1970:7 West 1974, No. 26
31) Horse Crk. - Upper Kotsina R. - Chitina	trail	West 1974, No. 24
32) States	settlement	de Laguna 1970:7 West 1974, No. 25
33) *Qentci'ke're' (Bes-unga; Ches-unga; Dishth-kena	settlement	de Laguna 1970, No. 22 West 1974, No. 28
34) * --	settlement	de Laguna 1970, No. 22
35) Konsi-cah-ah	fish camp	West 1974, No. 29
36) Biskinet (Bistc'ene; Dishth-kena; Liverstake; Kedlis ke're'(?))	settlement	de Laguna 1970, No. 25 West 1974, No. 31
37) Starai	settlement	de Laguna 1970, No. 26
38) Sty-de-nash-ah (Kedlis ke're'?)	settlement	de Laguna 1970, No. 27 West 1974, No. 32
39) *Ngasa (Ne-gasta)	settlement	de Laguna 1970, No. 24 West 1974, No. 30 Abercrombie 1899
40) *Q'ai'et nestande'	settlement	de Laguna 1970, No. 27
41) *Ts'an Kulän bene' (Ts`an kulä bene; Ket-leth-ah; Kenny Lake)	settlement	de Laguna 1970, No. 28 West 1974, No. 33
42) *salt lick	mountain sheep hunting	de Laguna 1970, No. 28
43) *salt lick	mountain sheep hunting	de Laguna 1970, No. 28
44) caribou fence	caribou hunting	de Laguna 1970, No. 28
45) *Dji'da'rat'q'ani (Pippin Lake Mnt.)	moose, caribou hunting trail	de Laguna 1970, No. 28
46) *Tansi'na' (Tonsina/Upper Tonsina)	settlement	de Laguna 1970, No. 29
47) *T'a l qeyay	settlement	de Laguna 1970, No. 30 West 1974, No. 36
48) *Gux tcindiadin	settlement	de Laguna 1970, No. 31,33
49) Tcedikulän (Copper Village)	settlement	de Laguna 1970, No. 32 West 1974, No. 37
50) *Rasket	settlement	de Laguna 1970, No. 34 West 1974, No. 39
51) *Ya'da'kuwi'yadin (Xat'a'quiadin)	settlement	de Laguna 1970, No. 35 West 1974, No. 40
52) *La qoldent'a	fish camp/ settlement	de Laguna 1970, No. 36 West 1974, No. 41
53) Dina' diri' esta	settlement	de Laguna 1970, No. 37 West 1974, No. 42

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
54) Best'ax	settlement	de Laguna 1970, No. 38 West 1974, No. 43
55) *Nik'e'quni adin	settlement	de Laguna 1970, No. 39; West 1974, No. 44 Allen 1887:61,62 Abercrombie 1899:444
56) *Nik'e' quni adin - Klutina Lake	trail	West 1974, No. 45
57) Ne'ge'kulän	settlement	West 1974, No. 46
58) *Da'resta' (R'a ras; Wood Camp)	settlement	de Laguna 1970, No. 41 West 1974, No. 47
59) Chief Andrew's	settlement	de Laguna 1970, No. 42 West 1974, No. 48
60) *moose fence	moose hunting	de Laguna 1970:17 West 1974, No. 51
61) *Tla'ti'na'ben (Klutina Lake)	settlement	de Laguna 1970, No., 44
62) * --	settlement	de Laguna 1970:17 West 1974, No. 52
63) *Valdez Glacier-Klutina Glacier- Klutina R.	trail from Port Valdez to Copper R.	de Laguna 1970:18 West 1974, No. 53 Abercrombie 1899:344, 408 Allen 1887:61
64) *Klutina Lake outlet	camp	de Laguna 1970:18 West 1974, No. 54
65) *Tla'ti'ke're' (Tlatina'nita'gi'lendin; Copper Center)	fish camp/ cemetery	de Laguna 1970:19
66) *Sqolta'	settlement	de Laguna 1970:19 West 1974, No. 56
67) Qolrosina' (Kalwasina')	trail to hunting country	de Laguna 1970:19
68) *Tazlina Joe's	fish camp/ cemetery	de Laguna 1970, No. 47 West 1974, No. 57
69) *K'inrax'tana	settlement	de Laguna 1970, No. 48
70) Na'ged'dlis tini'	settlement	de Laguna 1970, No. 49 West 1974, No. 59
71) *Tezlin ke're' (Es-las-ltin-ah-tah)	settlement	de Laguna 1970, No. 50
72) *Bazdlinde'	settlement	de Laguna 1970, No. 51 West 1974, No. 61
73) *So'qatle's	settlement	de Laguna 1970, No. 52 West 1974, No. 62
74) *Tsotsaina	settlement	West 1974, No. 63
75) *Mendil be'ne (bendil be'ne'; Tazlina Lake)	Socioterritory (Wdjicyu)	de Laguna 1970:21
76) *Bendildenden (Bendildene')	settlement	de Laguna 1970, No. 53 West 1974, No. 65
77) *Tazlina Lake - Glacier -	trail from Tazlina	de Laguna 1970:22

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
Tazlina River	R. to Knik Arm	Allen 1887:61, Fig. 18 West 1974, No. 66
78) *Lots'i'bisi'ke're' (La-te-gish-te-kena;Je-ne-see-karo?)	settlement	de Laguna 1970, No. 54 West 1974, No. 67
79) *(Lots'i'bisi'ke're')	settlement/ cemetery	de Laguna 1970, No. 55 West 1974, No. 68
80) *Tatc'en (Gon-ule-gul-ana)	settlement	de Laguna 1970, No. 56 West 1974, No. 70
81) *Djanyirelinde	settlement	de Laguna 1970, No. 57 West 1974, No. 71
82) *Ka-chung-a	settlement	West 1974, No. 69
83) *Gukena' (Gul-gena; Gulkana)	settlement	de Laguna 1970, No. 58 West 1974, No. 72 Rainey 1939:360 Workman 1976
84) *Gaxqɨna' (Gakona)	settlement	de Laguna 1970, No. 59 West 1974, No. 74 Rainey 1939:360
85) Gakona R. - Gakona Glacier	trail	West 1974, No. 75
86) Tazano•ta	settlement	de Laguna 1970, No. 60 West 1974, No. 76
87) Tcitel ke're' (Si-sish-sta-tanly)	settlement/ fish camp	de Laguna 1970, No. 61 West 1974, No. 77
88) Na-china	settlement/ cemetery/ moose fence	West 1974, No. 78
89) Talso ke're'	settlement	de Laguna 1970, No. 62 Allen 1885:64 West 1974, No. 81
90) Tcidi ke're' (may be Tsotsaina, No. 74, above)	settlement	West 1974, No. 63
91) --	settlement(s)	West 1974, No. 82
92) *Ved-cha-chi-chu-tin-tam	settlement	West 1974, No. 79
93) salt lick	hunting area (?)	de Laguna 1970:25
94) * --	settlement	de Laguna 1970, No. 65 West 1974, No. 83
95) * --	settlement	de Laguna 1970, No. 66 West 1974, No. 84
96) Qatna'ayi ke're'	settlement	de Laguna 1970, No. 67 West 1974, No. 85
97) Snu ke're'	settlement	de Laguna 1970, No. 68 West 1974, No. 86
98) Sinona Crk. - Sinona Lake	trail	West 1974, No. 87
99) Colcharney House	settlement	de Laguna 1970, No. 69
100) * --	settlement	de Laguna 1970, No. 70 West 1974, No. 88
101) *Qeyax	fish camp (early settlement?)	de Laguna 1970, No. 71
102) Tci'drazi ke're'	settlement	de Laguna 1970, No. 72 West 1974, No. 90
103) * --	settlement	de Laguna 1970, No. 73

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
		West 1974, No. 91
104) --	settlement	de Laguna 1970, No. 74
		West 1974, No. 92
105) *Qegidadli'na'	settlement	de Laguna 1970, No. 75
(Indian R. site)		West 1974, No. 93
		Rainey 1939:361
106) Ts'udra'na' (Ja-ca-mota)	settlement	de Laguna 1970, No. 76
		West 1974, No. 94
107) --	camp	de Laguna 1970:28
		Allen 1887:66,121
108) *caribou fence	caribou hunting	de Laguna 1970:28
		Abercrombie 1899:362
109) *Sla ke're'	settlement	de Laguna 1970, No. 77
('Alsetnei; Slana)		West 1974, No. 122
		Rainey 1939:361
110) *Kni-chit-na	meeting place	West 1974, No. 123
111) Midnoosky House	settlement	de Laguna 1970, No. 23
112) Batzulneta's	settlement	de Laguna 1970, No. 80
(Bet'sunitas; Manzanita		West 1974, No. 125
113) *Mendasta (Mentasta)	settlement/	de Laguna 1970, No. 78
	cemetery	West 1974, No. 124
114) --	fish camp	de Laguna 1970:31
115) *Sos luge	settlement	de Laguna 1970, No. 81
(Saslu'ta; Suslota)		West 1974, No. 126
		Allen 1887:68, 69
116) *Suslota	settlement	West 1974, No. 129
117) Dit'aan Cheeg	settlement/ cemetery	BIA 1993A
118) Nach'etay Cheeg	settlement/ cemetery	BIA 1993C
119) * Suslota - Copper Lake	trail	de Laguna 1970:31
		West 1974, No. 127
120) Twin Lakes? (Jack Crk.)	settlement	de Laguna 1970, No. 82
		West 1974, No. 130
121) Tc'kn̲i'bene'	socioterritory	de Laguna 1970:32
(Tc'a'n̲ei bene'; Banzanita Lake)	('Altsetnei)	
122) T̲ana' bene'	socioterritory	de Laguna 1970:32
(Tanana Lake; [Tanada L.?])	('Altsetnei)	
123) Ts'iz 'a̲ni' (Ck'iz 'a̲ni; Heart	sheep, caribou,	de Laguna 1970:32
Hill; [Tanada Peak area?])	moose hunting	
124) Tazlina R. mouth -	trail	de Laguna 1970:32
Batzulneta's		
125) * --	settlement,	de Laguna 1970, No. 83
	fish camp	West 1974, No. 95
126) *Nitcirili' bene' (Fox Lake)	settlement	de Laguna 1970:33
		West 1974, No. 80
127) *Sitely̲a ur (sp?)	trapping area	de Laguna 1970:33
(Double Lake)		
128) *X'ei tcai bene'	hunting, berry	de Laguna 1970, No. 85
(Hogan Hill Lake)	gathering camp	West 1974, No. 96
129) *Tax'ats'bene'	settlement(s),	de Laguna 1970:34

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
(Gulkana Lake; Paxson Lake)	caribou hunting	West 1974, No. 97
130) Sourdough/Paxson - Desta - Black Rapids Glacier - Tanana R. = (Des-del-ne-di-chet-la)	trail, moose hunting	West 1974, No. 98.
131) *Sosni bene' (Summit Lake)	fishing	de Laguna 1970:34
132) Tebay Lake settlement (VAL-240)	settlement	de Laguna 1970:1; West 1974, No. 10 Davis, Bane and Spude 1981: Append. BIA 1993b
133) Tebay Lake Camp (VAL-100)	Camp	Reckord 1983:98,107
134) Bridge Creek Cabin	settlement	Moffit 1914: Plt.1; BIA 1993F
135) Klue River Cabin	settlement	BIA 1993G
136) *Nitil bene' (Dickey Lake; Fish Lake)	camp, fishing	de Laguna 1970, No. 86 West 1974, No. 99
137) *Fielding Lake	caribou hunting	de Laguna 1970:35
138) *Wildhorse Creek (?)	camp	de Laguna 1970:35
139) *Kuwitl'abene'	?	De Laguna 1970:35 West 1974, No. 100
140) *K'a' bene' (Fish Lake)	hunting area	de Laguna 1970:35
141) *Tataqa'na' (Ledzi'bene'; Tla's'i bene')	settlement, fishing	de Laguna 1970, No. 87 West 1974, No. 102
142) *Ewan Lake/Fish Lake - "Long Lake" - Dickey Lake - Tangle Lakes - Maclaren R./Maclaren Glacier	trail	West 1974, No. 101
143) *Dry Crk. - Ewan Lake - Crosswind Lake	trail	West 1974, No. 103
144) *Bear Crk. - Crosswind Lake	trail	West 1974, No. 103
145) *Qestciri bene' (Karalradi bene'; Na'dinilti•de; Crosswind Lake)	hunting area; caribou fence	de Laguna 1970:36 West 1974, No. 105 (?)
146) * --	settlement	de Laguna 1970, No. 88 West 1974, No. 104
147) * --	camp	de Laguna 1970, No. 89 West 1974, No. 106
148) --	?	West 1974, No. 107
149) *Nqal bene' (Strawberry Lake; Salmon Berry Lake)	camp	de Laguna 1970, No. 90
150) * --(de Laguna 1970, No. 91?)	settlement	de Laguna 1970:37
151) *Bandildena' (Mendeltna Crk.)	settlement(?)	de Laguna 1970:37
152) *Matanuska Village	settlement	de Laguna 1970, No. 91 West 1974, No. 108 Abercrombie 1899:211-

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
		213
153) *Mendeltna Crk. - Tazlina Lake - Tazlina Glacier	trail	West 1974, No. 109
154) *Old Man Lake	camp(s)	de Laguna 1970, No. 92 West 1974, No. 110 Abercrombie 1899:211-213
155) *Old Man Lake-Copper R.	trail	de Laguna 1970, No 92 Abercrombie 1899:211-123
156) * -- (Irving site No. 9)	caribou hunting (lookout)	de Laguna 1970, No. 93 West 1974, No. 120 Irving 1957:43
157) * -- (Irving site No. 11)	hunting lookout	de Laguna 1970:37 Irving 1957:44
158) *Su-sta-ki (Irving site No. 7)	settlement	de Laguna 1970, No. 94 West 1974, No. 117 Irving 1957
159) *Tyone Lake (Irving site No. 5)	settlement	de Laguna 1970, No. 95 West 1974, No. 116? Irving 1957:42
160) *Tyone Lake (Irving site No. 6A; late precontact)	settlement	de Laguna 1970, No.95 West 1974, No. 119 Irving 1957:40, 42
161) *Tyone Lake (Irving site No. 6B)	settlement	de Laguna 1970, No. 95 Irving 1957:40,42
162) *Min-ga-ta (Min-gat-ka; Ben-got-kah; Tyone Village)	settlement/ cemetery	West 1974, No. 118 Irving 1957
163) *In-u-ind-na	fish camp/ cache	West 1974, No. 121
164) * --	settlement	West 1974, No. 134
165) *Susitna Lake (Irving site No. 4)	settlement	de Laguna 1970:38 West 1974, No. 115 Irving 1957:42
166) *Sus-nol	settlement	West 1974, No. 111
167) *Naqe'danigeden (Na'qet'denigedi'; Tus-kut-ka; Sthip-thec; Irving site Nos. 3A and 3B)	settlement	de Laguna 1970, No. 96 West 1974, No. 114 Irving 1957
168) * -- (Irving site No. 3C)	settlement	de Laguna 1970, No. 96 Irving 1957
169) * -- (Irving site Nos. 3D-3G)	settlement(s)	de Laguna 1970, No. 96 Irving 1957
170) * -- (Irving site No. 3H)	small pits (caches?)	de Laguna 1970, No. 96 Irving 1957
171) * -- (Irving site No. 2)	?	West 1974, No. 113 Irving 1957
172) * -- (Irving site No. 1)	camp(?)	West 1974, No. 112 Irving 1957
173) *Chluben Lake	caribou hunting	de Laguna 1970:39

Table A1.2 (continued)

Fig. A1.1 ref. no./Place	Function	Reference
(Tlu ben Lake; Glacier Lake)		

[1] Listings include only places for which ethnographic information indicates that they functioned as traditional use locations.

[2] Included in this table are many sites located outside WRST boundaries, to a distance of ca. 100 miles from the nearest boundary; the purpose in including these is to present a complete array and proportionate numbers of different types of places used by Athapaskan groups in the Southcentral Alaska interior.

* = Sites located outside the WRST boundaries.

Table A1.3
Inland Native traditional places; types[1] and settings[2] in the WRST vicinity

Place Name[3]	AHRS Site No.	Setting: riverine	creekside	lacustrine	other
	Settlements				
1) Da'da'ina (Porcupine Crk.)	VAL-001	X			
2) Konsina		X			
3) Zéikhell		X			
5) --		X			
7) Xan'tna'	VAL-004	X			
8) Taral	VAL-006	X			
9) --	VAL-236	X			
10) Taral Creek	VAL-007	X			
11) Daka de'nin's		X			
14) Ts'inra•x		X			
15) Escaldita's		X			
16) Stare•lna'	VAL-074		X		
17) --		X			
21) Nicolai's Cabin	XMC-006	X			
22) Nicolai's Camp	VAL-033	X			
24) Skilly's		X			
26) Qaya`x		X			
27) Naxt'in ke're'		X			
28) Ni'kani'lent		X			
29) Na•re	VAL-015	X			
30) Tl'asi ke're'	VAL-017	X			
32) States	VAL-016	X			
33) Qentci'ke're'		X			
34) --		X			
36) Biskinet		X			
37 Starai	VAL-022	X			
38) Sty-de-nash-ah		X			
39) Ngasa		X			
40) Q'ai'et nestande'		X			
41) Ts'an kulän bene'	VAL-024			X	
46) Tansi'na'				X	
47) T'a•l qeyay				X	
48) Gux tcindiadin		X			
49) Tcedikulän	VAL-028	X			
50) Raskęt		X			
51) Ya'da'kuwi'yadin		X			
53) Dina'diri ęsta		X			
54) Best'ax	VAL-034	X			
55) Nik'e quni adin		X			
57) Ni'ge'kulän	VAL-036	X			
58) Da'resta'		X			
59) Chief Andrew's	VAL-038	X			
61) Tla'ti'na'ben				X	
62) --			X		
66) Sqolta'		X			

Table A1.3 (continued)

Place Name[3]	AHRS Site No.	Setting: riverine	creekside	lacustrine	other
69) K'inrax'tana		X			
70) Na'ged'dlis tini'	GUL-003	X			
71) Tezlin ke're'		X			
72) Bazdlinde'		X			
73) So'qatle's		X			
74) Tsotsaina	GUL-016	X			
76) Bendildenden		X			
78) Lots'i'bisi'ke're'		X			
79) Lots'i'bisi'ke're' (same name, different location from No. 78)		X			
80) Tatc'en	GUL-009	X			
81) Djanyirelinde		X			
82) Ka-chung-a		X			
83) Gukena'		X			
84) Gaxqɨna'		X			
86) Tazano•ta		X			
87) Tcitel ke're'	GUL-014	X			
88) Na-china[4]		X			
89) Talso ke're'		X			
90) Tcidi ke're'		X			
91) --				X	
92) Ved-cha-chi-chu-tin-tam			X		
94) --		X			
95) --		X			
96) Qatna'ayi ke're'	GUL-020	X			
97) Snu ke're'		X			
99) Colcharney House	GUL-022	X			
100)--		X			
102) Tci'drazi ke're'	GUL-025	X			
103)--		X			
104)--		X			
105) Qegidadli'na'		X			
106) Ts'udra'na'	GUL-029	X			
109) Sla ke're'		X			
111) Midnoosky House	VAL-019		X		
112) Batzulneta's	NAB-003		X		
113) Mendasta[5]				X	
115) Sos luge				X	
116) Suslota		X			
117) Dit'aan Cheeg		X			
118) Nach'etay Cheeg		X			
120) Twin Lakes			X		
125) -- [6]		X			
126) Nitcirili'bene'			X		
129) Tax'ats'bene'				X	
132) Tebay Lake	VAL-240			X	
133) Tebay Lake Camp	VAL-100			X	
134) Bridge Creek Cabin		X			
135) Klu River Cabin		X			
141) Tataqa'na				X	

Table A1.3 (continued)

Place Name[3]	AHRS Site No.	Setting: riverine	creekside	lacustrine	other
146) --				X	
150) --				X	
151) Bandildena'			X		
152) Matanuska Village				X	
158) Su-sta-ki (Irving No. 7)				X	
159) Tyone Lake (Irving No. 5)				X	
160) Tyone Lake (Irving No. 6A)				X	
161) Tyone Lake (Irving No. 6B)				X	
162) Min-ga-ta (Tyone Village)[7]				X	
164) --		X			
165) Susitna Lake (Irving No. 4)				X	
166) Sus-nol				X	
167) Naqe'danigeden (Irving Nos. 3A,3B)				X	
168) -- (Irving No. 3C)				X	
169) -- (Irving Nos. 3D-3G)				X	
170) -- (Irving No. 3H)				X	
TOTALS:		77	8	25	0
	Fishing Stations				
12) --		X			
13) Tah klez kah				X	
19) T'a'la'xi • na'	XMC-005 (XMC-009?)	X			
35) Konsi-ca-ah		X			
52) La qoldent'a		X			
65) Tla'ti'ke're'[7]		X			
68) Tazlina Joe's[7]		X			
101) Qeyax		X			
114)--		X(?)			
131) Sosni bene'				X	
136) Nitil bene'				X	
163) In-u-ind-na		X			
TOTALS:		9	0	3	0
	Unspecified Camp				
18) Dora Creek Site		X			
20) --		X			
64) Klutina Lake outlet				X	
107) --		X			
138) Wildhorse Crk.			X		
147) --					X
149) Nqal bene'					X
154) Old Man Lake				X	
172) --; camp? (Irving No.1)				X	
TOTALS:		3	1	3	2
	Hunting Areas				
42) salt lick (mnt. sheep)					X
43) salt lick (mnt. sheep)			X		
44) fence (caribou)					X
45) Dji'da'rat'q'ani; trail (moose, caribou)				X	

Table A1.3 (continued)

Place Name[3]	AHRS Site No.	Setting: riverine	creekside	lacustrine	other
60) fence (moose)			X		
93) salt lick (unspecified)		X			
108)fence (caribou)					X
123) Ts'iz'ani' (sheep, caribou, moose)					X
128)X'ei tcai bene' (unspecified)[8]					X
137) Fielding Lake (caribou)					X
140)K'a'bene' (unspecified)					X
145) Qestciri bene'; fence (caribou)					X
156)lookout (caribou)					X
157)lookout (unspecified)					X
173) Chluben Lake					X
TOTALS:		1	2	1	11
	Trails				
6) Taral-Tebay Lake		X			
25) Nizina R.-White R.				X	
31) Horse Crk.-Chitina		X			
45) Dji'da'rat'q'ani					X
56) Nik'e'quni adin - Klutina Lake					X
63) Valdez Glacier - Klutina R.					X
67) Qolrosina'					X
77) Tazlina Lake. - Tazlina R.		X			
85) Gakona R. - Gakona Glacier		X			
98) Sinona Crk. - Sinona Lake			X		
119) Suslota - Copper Lake					X
124) Tazlina R. - Batzulneta's					X
130) Sourdough/Paxon - Tanana R.					X
142) Ewan Lake - Maclaren R.		X			
143) Dry Crk. - Crosswind Lake					X
144) Bear Crk. - Crosswind Lake					X
153) Mendeltna Crk. - Tazlina Glacier		X			
155) Old Man Lake - Copper R.					X
TOTALS:		6	1	1	10
	Other				
4) Wultis-nildji'dji; (ritual)		X			
23) Nicolai's Vein; (copper ore)					X
75) Mendil bene'; (socioterritory)				X	
110) Kni-chit-na; (meeting place)			X		
121) Tc'kni bene'; (socioterritory)					X
122) Tana'bene'; (socioterritory)					X
127) Sitelya ur; (trapping area)			X		
139) Kuwitl'a bene'; (unspecified)			X		
148) --; (unspecified)			X		
170) --; caches?				X	
171) --; unspecified				X	
TOTALS:		1	4	3	3
GRAND TOTALS		**97**	**16**	**36**	**26**

Table A1.3 (continued)

[1] All listings under "settlement" are presumed to represent locations where permanent houses were constructed, but there is uncertainty with regard to the historical and ethnographic information on which the designation is based; because many of the sites have not been located on the ground, it is not certain if "settlement" refers to encampments with temporary tents or permanent villages with log house constructions; and in some cases, settlements are also designated as fish camps (refer to Table A1., footnote no. 3).

[2] "Riverine" refers to third order streams; "creekside" designates first or second order streams.

[3] The numbers that precede the Native location name correspond with the site listings presented in Table A1.1, with their appropriate references and location information.

[4] Other functions for this location are "cemetery" and "moose hunting."

[5] This location also functioned as a cemetery.

[6] Also functioned as a fish camp.

[7] This location also functioned as a cemetery.

[8] This area was also the location of a berry-gathering camp/area.

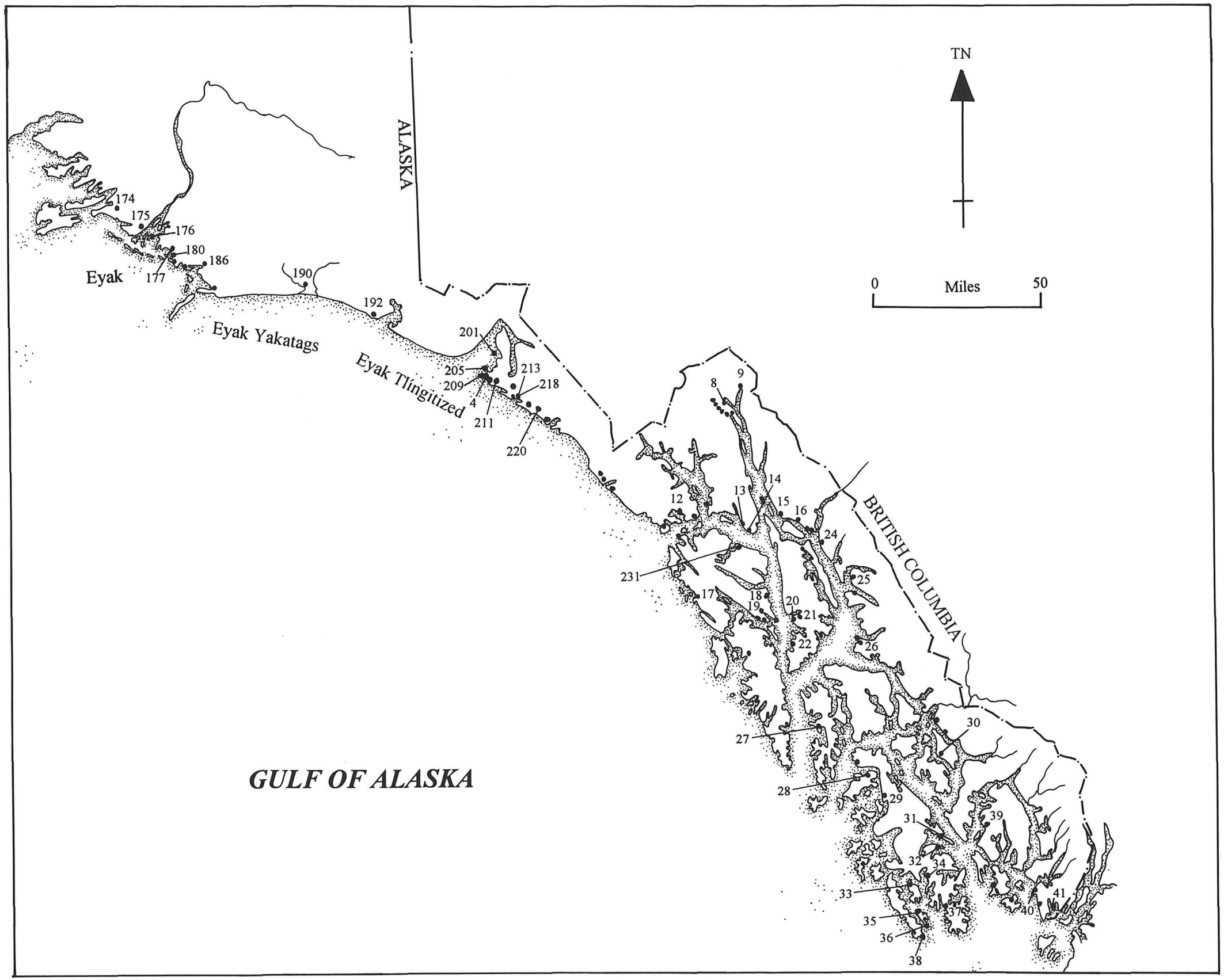

Figure A1.2. Ethnographic sites in the coastal WRST area. The site numbers in this map correspond to the site/place numbers and names in the first column of Table A1.4. Some of the sites in the table are beyond the area shown on the map.

Table A1.4

Coastal sites[1] in the Eyak and Tlingit areas

Site name	AHRS No.	Function	Setting [2]	Reference
		Eyak		
174) Eyak		settlement	riverine	de Laguna 1990a
175) Alaganik		settlement	riverine	de Laguna 1990a
176) Kokenhenik		settlement	maritime	de Laguna 1990a
177) Softuk		settlement	maritime	de Laguna 1990a
178) -- (Salmon River)		settlement	maritime	de Laguna 1972
179) -- (Cape Martin)		settlement	maritime	de Laguna 1972
180) Katalla		settlement	maritime	de Laguna 1990a
181) Strawberry Point		settlement	maritime	de Laguna 1990a
182) Bering Lake (south shore)		settlement	lacustrine	de Laguna 1972
183) -- (Wingham Island)		settlement/ fishing	island	de Laguna 1972
184) -- (Kayak Island "Spirit House")		settlement	island	de Laguna 1972
185) -- (Kayak Island "Chugach camp")		sea otter hunting camp	island	de Laguna 1972
186) Chilkat		settlement	marine bay	de Laguna 1990a
187) -- (Okalee River "Beaver House")		settlement	riverine	de Laguna 1990a de Laguna 1972
188) Yel katsis		religious place	maritime	de Laguna 1972
189) -- (Cape Suckling "Raven's House")		religious place	maritime	de Laguna 1972
190) Kaliakh		settlement	riverine	de Laguna 1972
191) Cape Yakataga		settlement	maritime	de Laguna 1990a
		"Tlingitized" Eyak		
192) Gayot Bay		settlement	marine bay	de Laguna 1990a
193) Ankaw Creek		settlement	maritime	de Laguna 1990a
194) -- (Calahonda Crk. mouth)		camp; sealing	marine bay	de Laguna 1972
195) -- (Point Latouche, Aquadulce Crk. mouth)		camp; sealing	marine bay	de Laguna 1972
196) -- (Tawah Crk.)		route from Russian Lake to Aka Lake	creekside/ marine	de Laguna 1972
197) -- (Point Latouche, Indian Camp Crk. mouth)		camp; sealing	marine bay	de Laguna 1972
198) Tlax'ata (unnamed creek mouth, southeast of Point Latouche		camp; sealing	marine bay	de Laguna 1972
199) Aka Lake Village		settlement	lacustrine	de Laguna 1990a de Laguna 1972
200) Eagle Fort (Old Situk Crk.)		settlement/fort	creekside	de Laguna 1972
201) Old Town (Knight Island)		settlement	marine bay	de Laguna 1990a
202) -- (Canoe Pass, Dolgoi ["Doggie"] Is.		camp?	marine island	de Laguna 1972

Table A1.4. (continued)

Site name	AHRS No.	Function	Setting [2]	Reference
203) -- (Canoe Pass, unnamed island at the mouth of Black Duck Bay)		camp/settlement	island	de Laguna 1972
204) Old Village (Yakutat)			marine bay	de Laguna 1990a de Laguna 1972
205) Port Mulgrave			marine bay	de Laguna 1990b
206) Diyaguna' (Lost Crk./Little Lost R. confluence)		settlement	riverine	de Laguna 1972
207) -- (Little Lost R. mouth)		fishing station	marine	de Laguna 1972
208) -- (unnamed site west-northwest of Lost R. Slough village)		settlement	riverine	de Laguna 1990b
209) Lost River Slough		settlement	riverine	de Laguna 1990b
210) Ness'udat (Lost River)			riverine	de Laguna 1990b
211) Situk			riverine	de Laguna 1990b
212) -- (Situk R. mouth)		settlement	marine	de Laguna 1972
213) Gus'ex (Akwe R.)		settlement	riverine	de Laguna 1972
214) -- (Akwe R., Ustay R. confluence)		settlement	riverine	de Laguna 1972
215) -- (Ustay R.)		fish camp	riverine/ marine	de Laguna 1972
216) -- (Northwest side Dry Bay mouth)		fish camp	marine	de Laguna 1972
		Northern (Yakutat, DryBay and Hoonah) Tlingit		
217) -- (Ahrnklin River)		fishing station	riverine	de Laguna 1972
218) Akwe River			riverine	de Laguna 1990b
219) -- (unnamed site east-southeast of Akwe River settlement)		settlement	riverine	de Laguna 1990b
220) Kakahini River Slough		settlement	pelagic slough	de Laguna 1990b
221) Tlistee		settlement	marine bay	de Laguna 1990b
222) -- (unnamed site northwest of Lituya Bay mouth)		settlement	marine	de Laguna 1990b
223) -- (unnamed site northwest side of Lituya Bay mouth		settlement	marine	de Laguna 1990b
224) -- (unnamed site southwest side of Lituya Bay mouth		settlement	marine	de Laguna 1990b
225) -- (unnamed site east-northeast of Graves Harbor		settlement	lacustrine	de Laguna 1990b
226) -- (unnamed site vicinity of Point Carolus		settlement	marine bay	de Laguna 1990b
227) -- (unnamed site vicinity of Beartrack Cove		settlement	marine bay	de Laguna 1990b
228) -- (unnamed site vicinity of Three Hill Island		settlement	island	de Laguna 1990b
229) -- (unnamed site mainland shore, east of Porpoise Island		settlement	marine bay	de Laguna 1990b
230) -- (unnamed site vicinity of cemetary, mainland shore, east of Porpoise Island		settlement	marine bay	de Laguna 1990b

Table A1.4. (continued)

Site name	AHRS No.	Function	Setting [2]	Reference
231) Hoonah		settlement	marine bay	de Laguna 1990b
232) Tlaxayik-Teqwedi camp	YAK-013	camp	hills, adjacent to marine bay	de Laguna, et al. 1964:23

[1] Settlement listings include those abandoned in the nineteenth and early twentieth centuries, as well as those that remained occupied to present-day.

[2] All settlements are located in near-shore or on open-ocean shores; distinctions are made in the specific types of settings, on the basis of the type of fresh water or prominent water body that is nearest to the settlement. The "maritime" designation refers to sites located on open-ocean shores; "marine bay" designation includes archipelago settings; "island" is a more general designation that includes archipelago settings.

Table A1.5

Traditional use sites in WRST investigated by the Bureau of Indian Affairs[1]

BLM NO.	AHRS No Ref. No.	Appendix I	Name	Site type[2]	Year investigated
AA-10714A	NAB-003	112	Batzulneta's	settlement	1992
AA-10714B		(122,123?)	Tanada Crossing	settlement	1992
		(122,123?)	Little Tanada Lake	settlement	1990
		(122,123?)	Tanada Lake Site	settlement	1990
		(122,123?)	Camp Creek (Tanada Lake)	settlement	1992
AA-10714C			Tommy Jackson's Cabin	settlement	1990
			Tanada Lake Cemetery	cemetery	1990
			Isolated Cache		1990
			Flat Cabin	settlement	1992
AA-10714D			Copper Lake Camp		1992
			Copper Lake Cemetery	cemetery	1992
			Copper Lake Village	settlement	1992
AA-10714E		(120?)	Twin Lake		1992
AA-10714F		120	Jack Creek Cabin	settlement	1992
AA-10714G			Lost Creek Crossing		1992
			Lost Creek Blowout, 1		1992
			Lost Creek Blowout, 2		1992
			Lost Creek Camp		1992
			Lost Creek Cemetery	cemetery	1992
			Lost Creek Village	settlement	1992
AA-10714H			Camp Creek Miner's Cabins	settlement	1992
AA-10714I			Nabesna Bar		1992
AA-10714J			Miner's Cabin (Virginia Lake)	settlement	1992
AA-11125A	VAL-240	132	Tebay Village	settlement	1992
AA-11125B		134	Bridge Creek Cabin	settlement	1992
AA-11123C		(132,133)	Tebay Lake		1992
AA-11125D	XMC-005	(19?)	Lakina River Village	settlement	1992
AA-11125E			Lakina River Cemetery	cemetery	1992
AA-11125F	XMC-009?		Lakina R./Fohlin Crk Cabin	settlement	1992
AA-11125G			Gilahina River Camp		1992
AA-11125H		135	Klu River Cabin	settlement	1992
AA-11125I			Kiagna River Village	settlement	1992
AA-11125J		23	Nikolai's Mine		1992
	XMC-006	21	Nikolai's Cabin/Bonanza Camp	settlement	1992
AA-11125K	VAL-033	22	Nikolai's Copper Camp (Dan Crk.)	settlement	1992
AA-11715		[3]	Chisana Graves	cemetery	1992
AA-11783A			Platinum C./Soda C. Camp		1992
AA-11783B		117	Dit'aan Cheeg	settlement	1992
		(118?)	Notch Crk. Cabin	settlement	1992
AA-11783C			"Two Cabin" Village	settlement	1992
AA-11784A		[3]	Old Chisana/Cross Crk. Village	settlement	1992
AA-11784B			Big Willow Camp		1992
AA-60711			Caribou Creek		1988
AA-60727		(87,88?)	The Sanford River Site		1988
F-22390A			Cooper Creek Village	settlement	1992
			Cooper Creek Cemetery	cemetery	1992
F-22390B			Nine Mile Cabin	settlement	1992

Table A1.5 (continued)

BLM NO.	AHRS No Ref. No.	Appendix I	Name	Site type[2]	Year investigated
			Blue Lake Camp		1992

[1] BIA site listings are based on ANCSA Native claims for traditional use locations; de Laguna's site information was developed from interviews with Native elders and other Native individuals; those with Appendix 1 reference numbers were previously recorded by de Laguna (1970).

[2] Only settlements and cemeteries are specified; "camps" and other non-specific locations may also comprise "settlements" as defined in Appendix I, this report, and other types of site functions.

[3] Not a traditional place; Old Chisana is listed on Table A1.4, but not on Table A1.1 for this reason.

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