CHAPTER 1

# Prehistory of the Northwest Coast

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In the beginning there was ice. . . in the end there were approximately 100,000 Indian people living along the Pacific coast from southeast Alaska to the mouth of the Columbia River in Oregon. . . in between is the prehistoric period, the time span of the unknown, between the retreat of the last continental glacier and the arrival of the first Europeans with their notebooks and artist's sketches who ushered in the period of written history. The prehistoric period here lasted from perhaps 12,000 years ago to the late 1700's when Cook, Vancouver, Mackenzie and others began writing about the area and its inhabitants. Glacial geology suggests that the coast was ice free by 12,000 years ago, but there remains the possibility of even earlier movements of peoples whose traces were wiped out by the last glacial advance. The beginning date is not actually important; what is important is that there was such a date and we can conceive of it as during or just after the last period of deglaciation.

Imagine yourself on the coast north of the Strait of Juan de Fuca some 15,000 years ago when what are now forested shores and snow capped mountains were hidden under a cover of glacial ice many thousands of feet thick. Neither man nor other land animal was present to break the icy stillness. By 13,000 years ago this massive blanket of ice had begun to melt, and as this melting continued, a barren land, free of vegetation, free of animal life, and free of human culture emerged. This freedom of the land was shortlived. Even as the ice turned to water, and rushed downstream to the sea, first alder, birch, and pine, and later fir and cedar and other trees and plants spread onto the land from adjacent unglaciated regions. The mantle of white was now replaced by one of green. As the infusion of ice water caused the level of the sea to rise, the land also rose, freed from the weight of glacial ice. Sub-arctic and then temperate fauna spread into this new found land. Man was part of this fauna; he preyed on the other animals for food and used their hides for clothing. He arrived by different routes, and brought with him different cultural traditions. By 10,000 years ago ice only existed in the mountain top remnants we still see today.

The Northwest Coast *(Fig. 1:1)* is a ribbon of green, wet forested land which hugs the Pacific coast of North America from the mouth of the Copper River in Alaska to just below the mouth of the Klamath River in northwest California. It was part of the "Salmon Area" of early ethnographers and its cultures were clearly different from those of the California acorn area, the agricultural Southwest and East, and the buffalo-hunting Plains. The Northwest Coast was less clearly differentiated, however, from its immediate hinterland, the Columbia-Fraser Plateau, where the rivers also ran with salmon. South of the Columbia River, little in the way of graphic or plastic art was produced by the aboriginal Indian peoples. From the Columbia River northward however, there was considerable art in materials which preserve archaeologically. It is to this portion of the Northwest Coast, the part from the lower Columbia River northward, that is emphasized in this chapter.

Whereas the historic Indian cultures encountered by the explorers and colonists were truly spectacular with their potlatches, totem poles, masks and huge dugout canoes, the most obvious surface evidences of the prehistoric cultures are uninspiring middens of clam shells, the discarded remains of food-gathering enterprises. Nowhere were there spectacular stone ruins as, for example, in the Southwest which stimulated early intensive archaeological work. Difficulty of access to this remote, wet land also

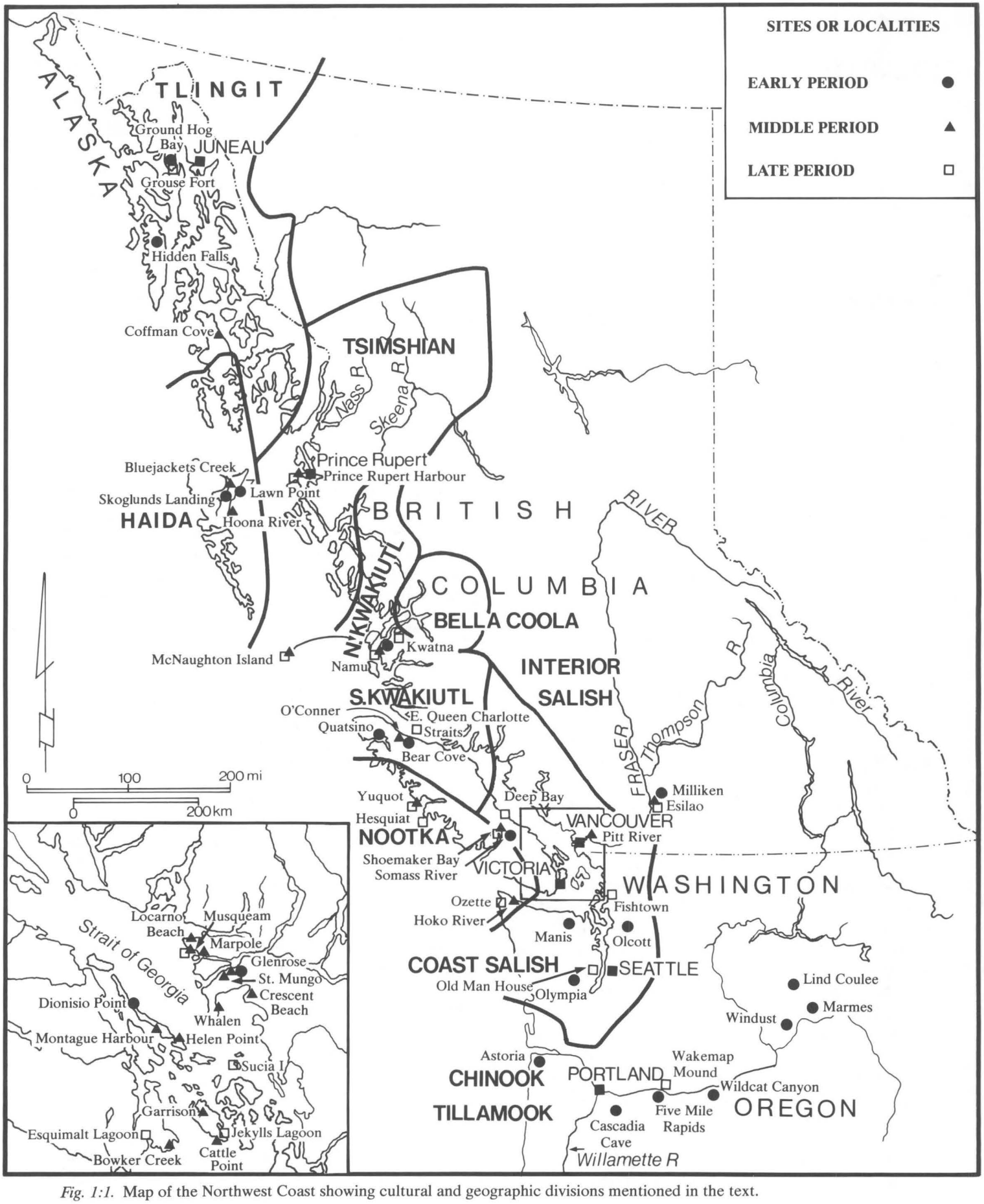



*Fig. 1:1.* Map of the Northwest Coast showing cultural and geographic divisions mentioned in the text.

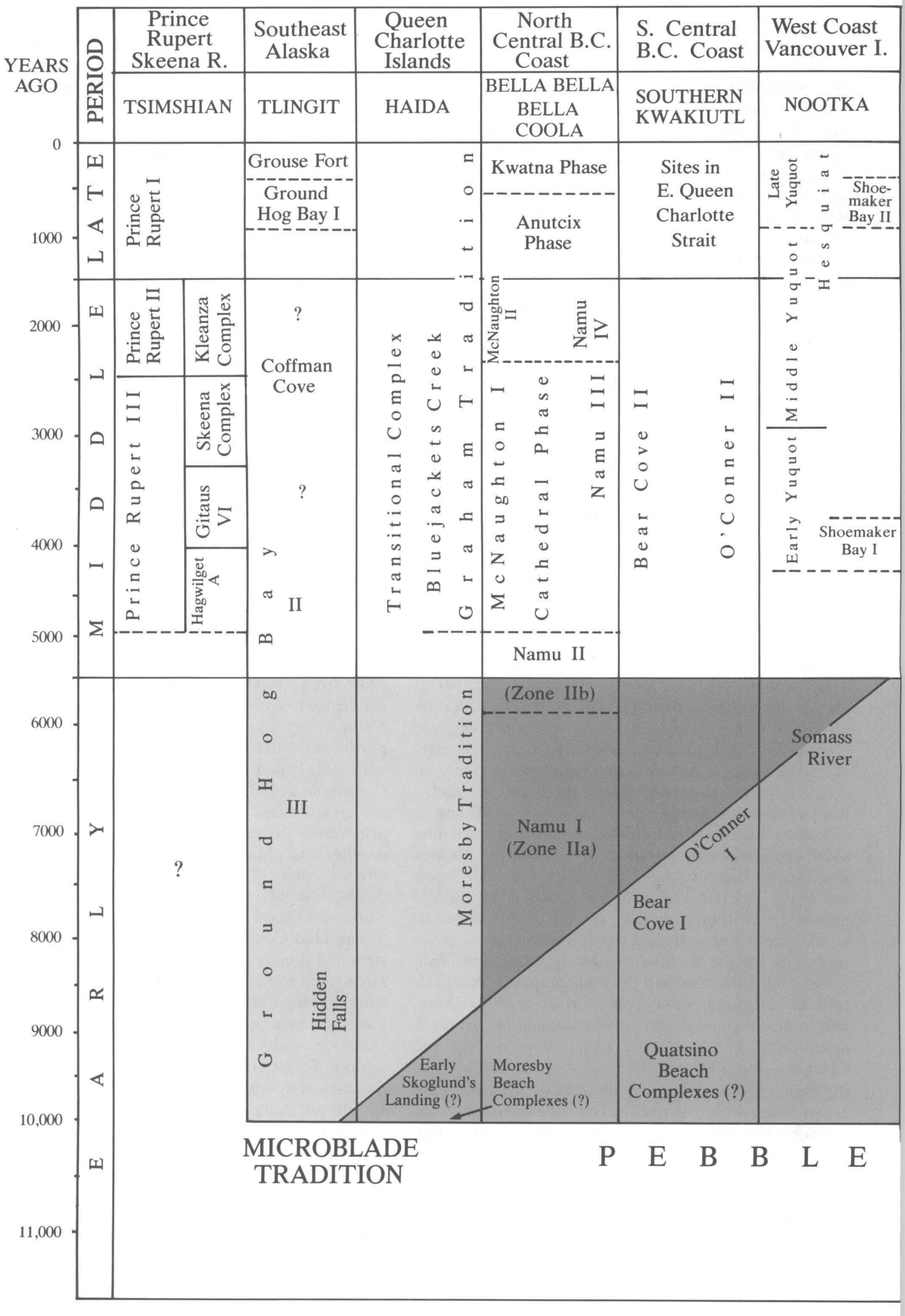
contributed to the slow pace of archaeological research. Thirty years ago the only chronology of prehistoric cultures for the whole of the Northwest Coast was limited to the last 2500 years, and was applicable only to the southern end of the Strait of Georgia. By twenty years ago, the situation had changed to the extent that two 9000 to 10,000 year long sequences had been discovered, one at Five Mile Rapids on the lower Columbia River (Cressman et al 1960), and a second at the mouth of the Fraser Canyon (Borden 1960). Today, after some twenty years of research by a great many archaeologists, the prehistoric period is less mysterious than it used to be, but is still far from being a "squeezed lemon" suffering from archaeological exhaustion. The decline in mystery is the result of the archaeological research of the 1970's, a decade which witnessed about ten times more archaeological research and publication than in all previous decades combined. New discoveries provided a chronological framework for most regions of the coast, and new interpretations can now lay to rest some of the older ideas of the events of that unknown prehistoric period. It is now possible to look at the past in terms of a framework of Early, Middle and Late periods *(Fig. 1:2)*, and to glimpse both culture content and change that took place during these segments of prehistoric time.

## Early Period 12,000 - 5500 Years Ago

The Early Period is the period of initial settlement of the Northwest Coast. Everyone knows that the ancestors of coastal Indians and all other New World aborigines crossed Bering Strait and eventually reached all parts of North and South America. Although there is no reasonable alternative to Bering Strait, there are alternative routes south. Once this side of the strait, according to one older model, man followed the Pleistocene fauna south down an ice free corridor just east of the Rockies and rapidly became dispersed throughout both North and South America. Following extinction of the Ice Age animals, man then gradually spread from interior to coastal areas and settled in to exploit local subsistence resources. For the Northwest Coast the latter meant fish. Kroeber (1939) considered the ethnographic coastal culture as ". . . originally a river or river mouth culture, later a beach culture, and only finally and in part a sea going one." The hinterland to this coastal strip, the Columbia-Fraser Plateau, was conceived as a survival of the earlier riverine stage of cultural development influenced both by ideas spreading from the coast and from interior North America, and by a late intrusion or Athabascan speaking peoples from Asia. This model was based on almost no real archaeological data, and when examined in the light of the results of archaeological research of the 1970's requires considerable modification. The maritime coastal cultures were not the result of a simple evolutionary development from interior hunters to riverine fishermen to coastal exploiters of fish and sea mammals. The evidence suggests that at least some of the peoples arrived in the area already with a maritime adaptation, that migration routes were coastal as well as interior, and that the subsistence system based on salmon spread up the river from the coast rather than the reverse. These points are not as precisely documented as one would prefer, and must be viewed as hypotheses, but together they do form a consistent picture of events during the Early Period. Within the Pacific Northwest there is archaeological evidence for at least four early basal cultures or cultural traditions by 10,000 years ago: the Pebble Tool Tradition; the Microblade Tradition; the Fluted Point Tradition; and the Lind Coulee or Stemmed Point Tradition. Each of these cultures is characterized by a slightly different tool kit *(Fig. 1:3)* and a slightly different way of life.

The Fluted Point Tradition is well known archaeologically. Fluted points, which are its hallmark, extend from this side of Bering Strait south through Alberta and on into the continental United States, Mexico and South America. Where dated the earlier part of this tradition (Clovis) is about 11,500 years old and usually associated with mammoth remains, and the younger part (Folsom) about 10,000 years old and usually associated with extinct species of bison. Dating of this tradition is not sufficiently reliable to demonstrate whether it originated and spread south from Alaska (there are no fluted points in Siberia) via the ice free corridor, or north to Alaska from interior North America as the Pleistocene fauna and their glaciopluvial environment retreated with the waning of the last ice sheet. Fluted points are very rare on the Northwest Coast, and are only known from surface finds south of the area covered by the glaciers. One point was found just west of Olympia, Washington (Osborne 1956), and another west of the Cascades in the Willamette drainage, Oregon (Allely 1975). This tradition seems to have contributed nothing to later cultural development on the Northwest Coast.

The Lind Coulee Tradition is characterized by large stemmed projectile points, chipped stone crescents, and large steep scrapers. Rice (1972) has shown that it is an early hunting tradition, exploiting bison, pronghorn, elk and smaller mammals. Its dates range from 8500 to 13,000 years ago with most dates in the 8500 to 10,000 year period. This tradition centers in the Columbia-Snake drainage of interior Washington and Oregon, and around the pluvial lake areas of Oregon and Nevada to the south, but did reach the coast at the mouth of the Columbia. It is present in interior British Columbia in the Kootenai and south Thompson, upper Columbia areas, and possibly on the upper Fraser, but the evidence is meagre and consists of undated surface finds of projectile points similar to those from dated contexts further south. The


YEARS AGO
PERIOD
Prince Rupert Skeena R.
Southeast Alaska
Queen Charlotte Islands
North Central B.C. Coast
S. Central B.C. Coast
West Coast Vancouver I.
TSIMSHIAN
TLINGIT
HAIDA
BELLA BELLA
BELLA COOLA
SOUTHERN KWAKIUTL
NOOTKA
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10,000
11,000
LATE
MIDDLE
EARLY
Prince Rupert I
Grouse Fort
Ground Hog Bay I
Kwatna Phase
Anutcix Phase
Sites in E. Queen Charlotte Strait
Late Yuquot
Shoemaker Bay II
Hesquiat
Middle Yuquot
Early Yuquot
Shoemaker Bay I
Prince Rupert II
Kleanza Complex
Prince Rupert III
Skeena Complex
Gitaus VI
Hagwilget A
Coffman Cove
?
Bay II
Transitional Complex
Bluejackets Creek
Graham Tradition
McNaughton II
Namu IV
McNaughton I
Cathedral Phase
Namu III
Namu II
Bear Cove II
O'Conner II
Groundhog
III
Hidden Falls
Moresby Tradition
(Zone IIb)
Namu I (Zone IIa)
Somass River
O'Conner I
Bear Cove I
Early Skoglund's Landing (?)
Moresby Beach Complexes (?)
Quatsino Beach Complexes (?)
MICROBLADE TRADITION
PEBBLE

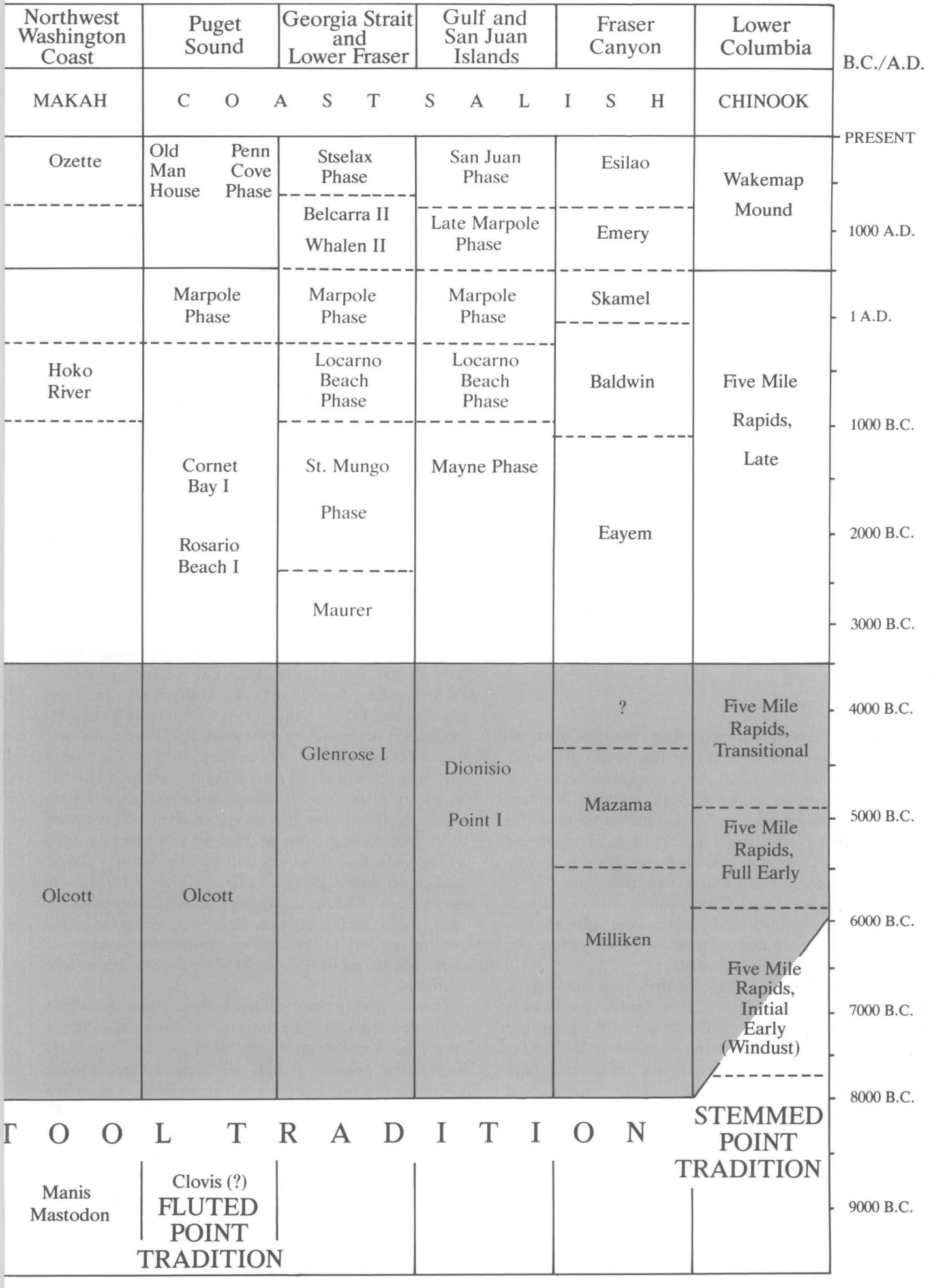

Northwest Washington Coast
Puget Sound
Georgia Strait and Lower Fraser
Gulf and San Juan Islands
Fraser Canyon
Lower Columbia
B.C./A.D.
MAKAH
C O A S T S A L I S H
CHINOOK
PRESENT
Ozette
Old Man House
Penn Cove Phase
Stselax Phase
San Juan Phase
Esilao
Wakemap Mound
Belcarra II
Whalen II
Late Marpole Phase
Emery
1000 A.D.
Marpole Phase
Marpole Phase
Marpole Phase
Skamel
1 A.D.
Hoko River
Locarno Beach Phase
Locarno Beach Phase
Baldwin
Five Mile Rapids, Late
1000 B.C.
Cornet Bay I
St. Mungo Phase
Mayne Phase
Eayem
Rosario Beach I
2000 B.C.
Maurer
3000 B.C.
?
Five Mile Rapids, Transitional
4000 B.C.
Glenrose I
Dionisio Point I
Mazama
5000 B.C.
Five Mile Rapids, Full Early
Olcott
Olcott
Milliken
6000 B.C.
Five Mile Rapids, Initial Early (Windust)
7000 B.C.
8000 B.C.
T O O L T R A D I T I O N
STEMMED POINT TRADITION
Manis Mastodon
Clovis (?)
FLUTED POINT TRADITION
9000 B.C.

*Fig. 1:2.* Regional Chronology of the Northwest Coast. This chart summarizes the current state of knowledge concerning the temporal and spatial extent of prehistoric cultures of the Northwest Coast. Some of the names used are for well defined and well dated cultural phases such as the Marpole phase, whereas others refer to single sites such as Maurer or to different components at the same site such as McNaughton I and II where the geographic extent of the cultures or phases of which these components were a part is either unknown or poorly defined. The validity of the assigned time placement of such components varies from *well dated* such as for Glenrose I, Namu and Milliken with solid $C^{14}$ dates, to *estimated* such as for Somass River, the various beach complexes, and the single Clovis point from near Olympia whose chronological positions are suggested by geology or typology. Other names, the Graham Tradition for example, refer to temporal continuities of culture based on data from a number of sites. The largest data gaps are for the Early Period in the Tsimshian and Nootkan regions, and the Middle Period in S.E. Alaska and Puget Sound. In spite of these and smaller gaps throughout the sequence, the overall picture is of settlement during the Early Period by bearers of the Mircroblade Tradition, the Pebble Tool Tradition, and the Stemmed Point (Lind Coulee) Tradition followed by biological continuity with cultural change brought about by inter-regional trade and acculturation, adaptation to the environment, and diffusion of cultural complexes from other parts of the world. There is so far no evidence that the fourth early culture, the poorly represented Fluted Point Tradition, contributed anything to subsequent developments on the Northwest Coast.

distribution of this tradition correlates with the distribution of the northern segment of the Macro-Penutian language phylum which includes Chinook and Sahaptin and other Oregon languages. If this correlation is meaningful, then some traces are expectable at or near the present distribution of the Tsimshian languages on the Skeena River, as Tsimshian has been considered (although not demonstrated) to be a Macro-Penutian outlier (Voegelin and Voeglin 1966). Otherwise, this early cultural tradition was more affected by the coastal cultures than it was effective in influencing them. It existed before the spread of salmon up the Columbia.

The Pebble Tool Tradition centres in southwestern B.C. It is an early coastal and river tradition with sites both at the major rapids on the Fraser in B.C. and the Columbia in Oregon, and on the sea coast in B.C. as far north as Namu. Its hallmarks are the unifacial pebble tool and leaf-shaped biface. The earliest unequivocal dates are between 10,000 and 8000 years ago. The pebble tools are thought to be partly indicative of wood working, an adaptation to the post glacial forest environment. Site locations at the main fisheries on the Columbia and the Fraser indicate salmon utilization, and other site locations along the rugged B.C. coast indicate knowledge and use of marine resources. In 1977 a property owner near Sequim, Washington uncovered mastodon bones in a bog when he started to excavate a duck pond. Archaeologists from Washington State University (Gustafson *et al* 1979) were called, and excavated these remains. The most exciting find was the tip of a bone point embedded in one of the mastodon's rib bones. X-rays showed that healing had taken place around the wound, and indicated that the animal had not died of this injury. Two radiocarbon dates of 12,000 ± 310 B.P. and 11,850 ± 60 B.P. were obtained from samples of vegetal remains preserved in the wet deposit. The skull was badly crushed, and bones from the right side were broken and scattered and bore cut marks and scratches suggestive of butchering. The only associated stone artifact was a crudely flaked cobble spall (a leaf-shaped point was found in more recent layers at the site). This site is the only evidence so far which suggests earlier dates for the bearers of the Pebble Tool Tradition and that they were originally elephant hunters rather than fishermen. Perhaps the fact that this elephant got away at least once and didn't succumb until he had reached a ripe old age, tells us something of the hunting abilities of these earliest people. At other sites the subsistence base of Pebble Tool Tradition peoples seems to have been fish, although some of the evidence for this activity is indirect, and these sites are 2000 to 4000 years younger than the Manis Mastodon.

Excavated sites on the Northwest Coast which have Early Period components of the Pebble Tool Tradition are few and far between: 1) the Milliken site near the mouth of the Fraser Canyon two miles above Yale with occupation beginning by 9000 years ago (Borden 1968a); 2) the Glenrose Cannery site on the lower Fraser in Surrey with earliest dates about 8000 B.P. (Matson 1976); and 3) the site of Bear Cove at the entrance to Hardy Bay on the northeastern end of Vancouver Island (C. Carlson 1979). The earliest strata at all three of these sites have pebble tools, foliate bifaces and various casually flaked stone tools, and lack types of tools known from more recent sites. In addition, all are situated in locations for taking fish or marine animals. Bone tools and bone faunal remains are rare in these early components because of acidic conditions of the soil. Mollusc shells are also rare to absent.

Two other sites have yielded early components which are best conceptualized as interfaces between the Pebble Tool Tradition and other early basal cultures. The Early Stage at the Five Mile Rapids site on the Columbia River in Oregon (Cressman *et al* 1960) represents an interface with the Lind Coulee Tradition, and the Namu site (R. Carlson 1979) at the mouth of Burke Channel on the central coast of British Columbia, an interface with the Microblade Tradition. Both sites are clearly oriented toward fishing. Five Mile Rapids is at the main Indian fishery on the Columbia during ethnographic times, and

no one could have reached Namu on the rugged central coast without a good knowledge of watercraft and a marine adaptation. The occupation begins at both Namu and Five Mile Rapids by 9700 years ago on the basis of $C^{14}$ dates. No bone was preserved in the acidic soil of Namu before 6000 years ago, but at Five Mile Rapids thousands of salmon bones and a number of bone tools were preserved through the fortuitous formation of a layer of opality.

A number of types of bone or antler tools preserved at Five Mile Rapids may be added to the list of flaked stone tools typical of the Pebble Tool Tradition: antler flakers and cylindrical hammers for making stone tools, antler wedges usable in woodworking and in fleshing hides, bone awls for basket making or sewing, hooks which were part of the spear thrower used in sea or land hunting, notched elk teeth for use as pendants, a small curved unilaterally barbed point which is probably part of a fish spear, a numerous unfinished and broken fragments.

At Glenrose (Matson 1976) the lower levels did contain some clam and mussel shell whose alkaline content helped in the preservation of bone. Antler wedges and punches, a tooth pendant from an unidentified animal and a strange barbed bone point were recovered. Bones of seal, beaver, deer and elk indicate hunting. Salmon, sturgeon, eulachon and bones of a few other fish were also found. Small girdled stones used as either bolas or net weights occur at both Five Mile Rapids and Namu and further up the Columbia in sites of the Stemmed Point Tradition. The lowermost two components at the Milliken site which Borden (1968a) calls the Milliken and Mazama phases have no bones preserved, but the site location in the steep canyon would only have been useful if salmon were being taken. These components are dated between 9000 and 7000 years ago, and underlie a layer of volcanic ash spewed from the eruption of Mt. Mazama in Oregon some 6700 years ago. Red ochre is in these components, and obsidian traded from Oregon. Charred choke cherry pits suggest use of the site in late summer when this fruit ripens which is also the time of major salmon runs.

At Bear Cove (C. Carlson 1979) initial occupation occurred by 8000 years ago. The artifactual assemblage is typical of the Pebble Tool Tradition with pebble choppers, leaf-shaped points and retouched flakes which may have served as cutting and scraping implements. No shell was present in the early deposit and bones were found only in the upper part of the early stratum. Some fish bones were recovered there and consisted mostly of rockfish with smaller amounts of salmon, cod, sculpin, greenling, dogfish and ratfish. Most of the mammal bones were from sea mammals: porpoise and dolphin, northern fur seal, sea lion, sea otter and harbour seal. Although the sample is small, this assemblage of bones and the site location certainly indicate a primary marine adaptation.

At Namu, the early component lies in a layer devoid of shell in which the soil is so acidic that no bone has been preserved, below a three metre deep shell midden accumulation. Artifacts are typical of the Pebble Tool Tradition, but in addition there are microblades which are not present in sites to the south until more recent times. The bottom of the Namu site is dated by radiocarbon to 9720 ± 140 B.P.

Other than the Manis Mastodon site, Pebble Tool Tradition sites are rather clearly associated with marine or riverine subsistence patterns, although certainly deer and elk were not ignored. Cascadia Cave (Newman 1966), for example, may well represent a hunting camp of this culture. However, the history of this basal culture seems to be tied in mostly with the history of salmon. In the aftermath of glaciation as the rivers warmed and lost their loads of ice, and up-river habitats become suitable for spawning, the lake-spawning species of salmon spread further and further up the rivers. It seems likely that peoples followed this spread up the Fraser, Columbia and smaller rivers where they may well have met other peoples expanding from other areas. The distribution of the Pebble Tool Tradition suggests that it is ancestral to the Salish and Wakashan speaking peoples.

Where the Pebble Tool Tradition came from originally is unknown. Possibly the bearers of this culture were already adapted to coastal and river areas south of the glaciers along the coasts and river valleys of southwest Washington, western Oregon and northern California, and spread north following the retreat of the glaciers. Alternatively, these peoples may have arrived coastwise in the immediate post-glacial from Asia or Beringia. Hopkins (1978:17) who has studied the glacial and sea level changes notes that the relevant Asian and North America coasts were deglaciated early, and that peoples with the requisite technology and coastal adaptation could have reached Puget Sound from Beringia as early as 12,000 years ago. At the Ushki Lake sites in Kamchatka in Layer VI salmon bones have been found as well as artifacts similar to those of the Pebble Tool Tradition dating between 10,000 and 11,000 years ago (Dikov 1979:289). The Aleutian Islands are an obvious route for marine oriented peoples between the two continents. Unfortunately, most of the evidence necessary to support either of these hypotheses regarding origins has either been washed away by rising sea levels or if still present is submerged on the narrow continental shelf.

The last early basal culture is the Microblade Tradition. Microblade technology is a different system of making cutting and piercing tools than that employed by the bearers of the other early cultures. In Microblade technology, small nodules of stone called micro-cores are carefully prepared so that a number of sharp-edged, parallel-sided flakes called microblades can be struck or pressed from these nodules. These microblades were then presumably inset into a wooden or bone point to produce

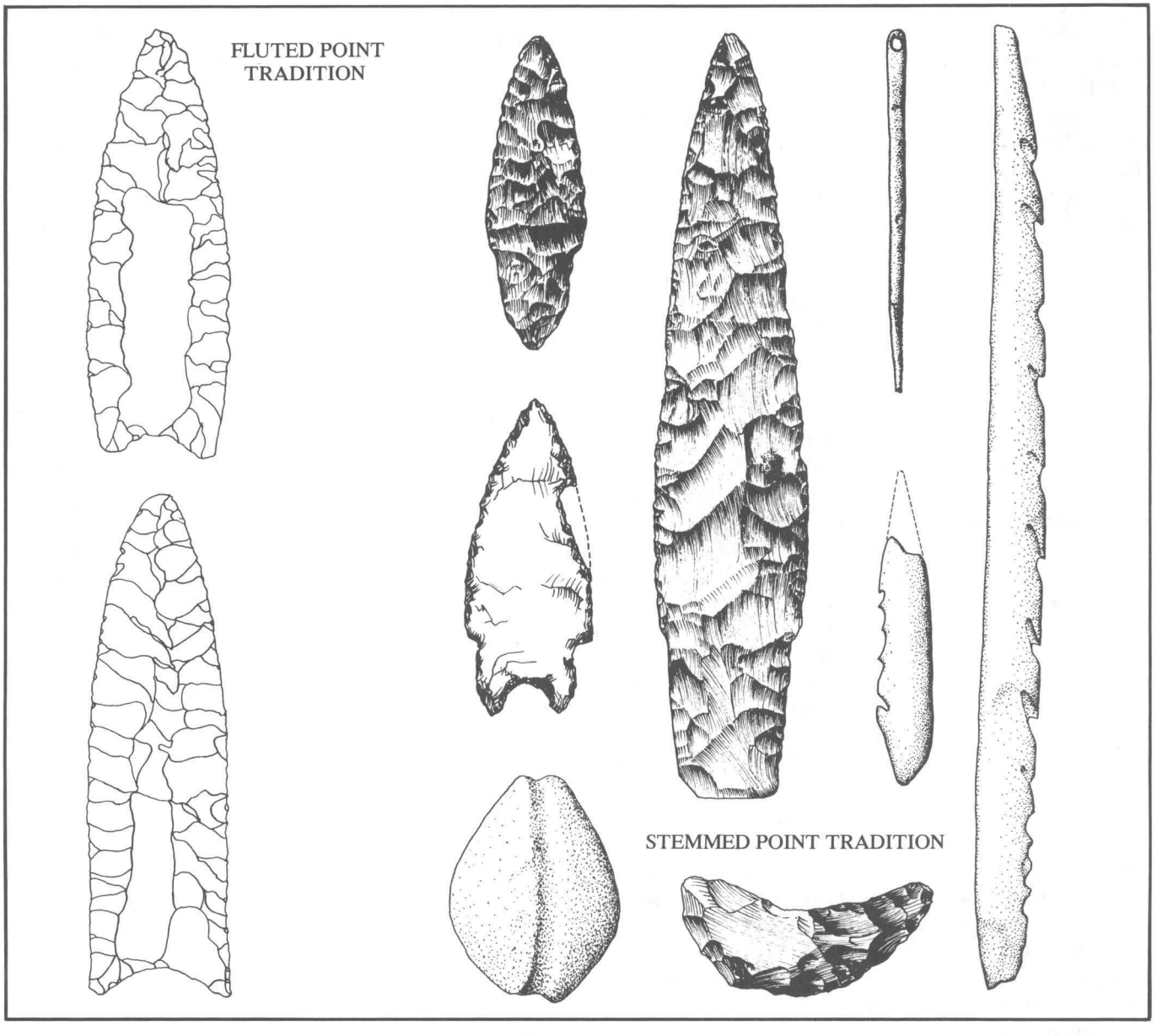



*Fig. 1:3.* Artifacts Typical of the cultural Traditions of the Early Period between 9000 and 11,000 years ago. FLUTED POINT TRADITION: Fluted points from the Willamette drainage (upper), and southern Puget Sound (lower). STEMMED POINT TRADITION: Chipped stone points and crescent, grooved bolas or sinker, bone needle and barbed harpoon and point from the Lind Coulee, Marmes, and Wildcat Canyon sites in eastern Washington and Oregon.

sharp cutting edges on this piercing implement, or into a handle to form a knife. In the other cultural traditions bifaces performed much the same function. Microblade technology begins in North China or Siberia about 30,000 years ago and is found in younger sites in the far north. Microblades appear in Alaska by 11,000 years ago, and on the Northwest Coast between 10,000 and 9000 years ago. Early components of this basal culture are present at the Ground Hog Bay Site near Juneau, Alaska (Ackerman *et al* 1979) the Hidden Falls Site in the Alexander Archipelago (Davis 1979), at Kasta and Lawn Point in the Queen Charlotte Islands (Fladmark 1979) and at Namu where there is an interface with the Pebble Tool Tradition. Little else is known about this culture other than what can be gleaned from site geography. Site locations on islands and steep fjords clearly indicate a marine subsistence pattern with watercraft and those tools necessary for survival in coastal waters. Site distribution suggests that this tradition is ancestral to the Tlingit, Haida and Athabascan speaking peoples.

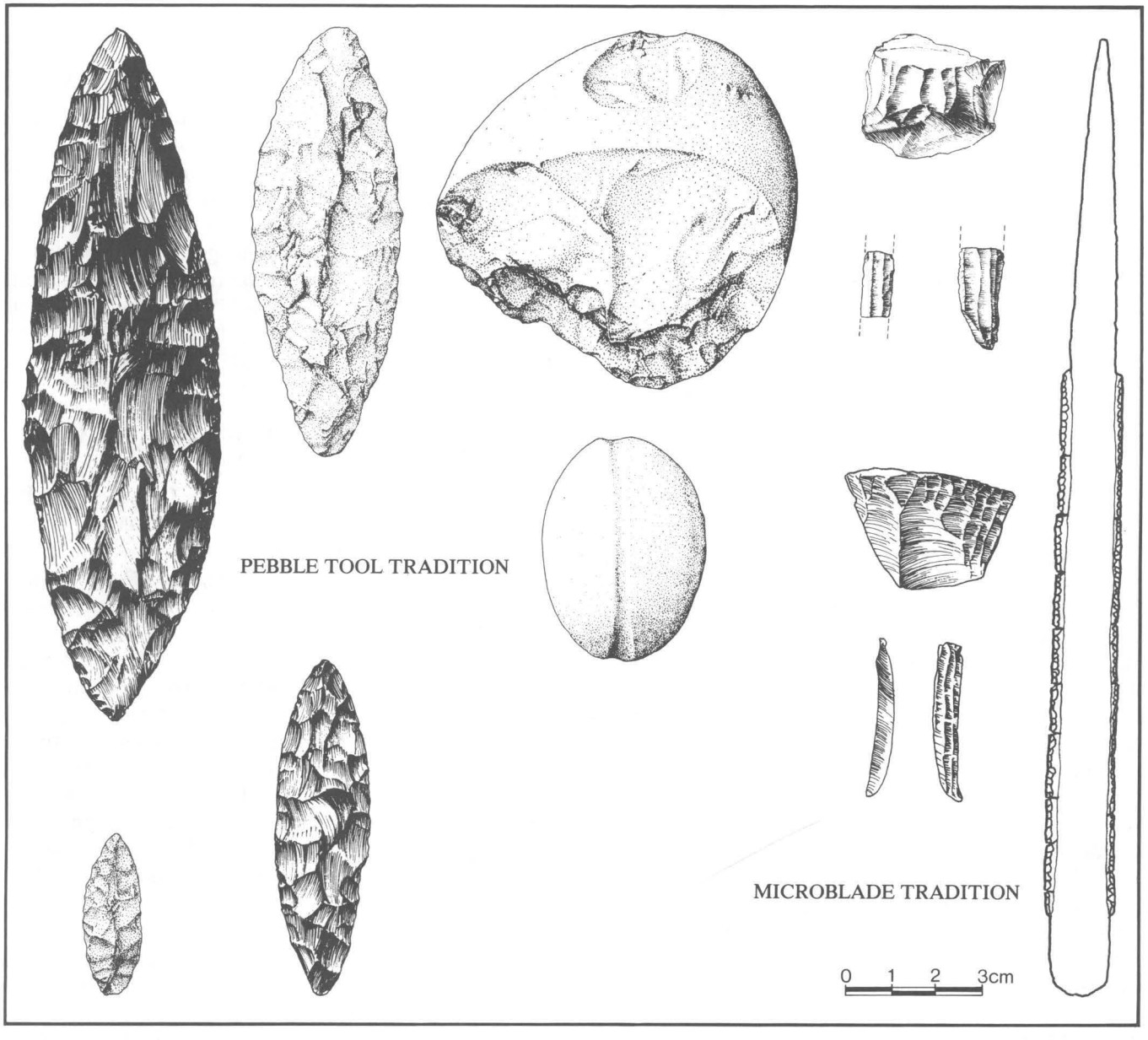



*Fig. 1:3.* PEBBLE TOOL TRADITION: Bifacial points and knives and pebble chopper from the lower levels of the Milliken and Namu sites, and grooved bolas or sinker from Namu. MICROBLADE TRADITION: Microcores and microblades from Namu (upper) and Lawn Point (lower). The drawing (at right) of the wooden point with blades inset along the edge illustrates one way microblades were probably used, although such points have not yet been found on the Northwest Coast.

The preceding summaries indicate that knowledge of the cultures of the Early Period is rather meagre and almost entirely limited to tool technology and subsistence pursuits. What of the better things in life? There certainly was a belief system, but either we haven't yet found much evidence of it, or it was not yet being expressed in art forms or other tangible objects. Red ochre suggests body painting, and the few animal teeth pendants may well have been charms with associated spirit power. It is not until the Middle Period that more definite expressions of the belief system are found.

By the close of the Early Period about 5500 years ago, the cultures of the peoples of these early traditions were already becoming less distinct, and more and more alike. Part of this phenomenon was the result of post-glacial environmental responses which saw the coastal habitat becoming more similar throughout, part the result of population growth, and part the result of interaction through trade and diffusion of ideas and technologies. The grooved bolas or net sinkers in both early traditions

on the Columbia, and a single stemmed point in the early component at Glenrose may be examples of this phenomena, as well as the microblades at Namu. By the Middle Period the early cultural traditions are no longer recognizable on the basis of the same artifactual criteria used to define them originally, and acculturation was clearly one of the mechanisms responsible for this change. Although archaeology cannot prove that acculturation was taking place, it can show that interregional exchange was occuring through the obsidian trade.

Obsidian is a naturally occurring volcanic glass highly valued for its cutting qualities. It only occurs naturally in a limited number of locations in the pacific Northwest. Peoples remote from obsidian sources had to receive it by trade or by trips to the quarries. The widespread distributions of some types indicates trade as the most probable distributive mechanism. There are four main source areas for obsidian in the pacific Northwest, and many more flows within these source areas: Mount Edziza near the Stikine in northwestern British Columbia; the Rainbow and Ilgachuz Mountains including Anahim Peak high in the coast range near the divide between the Fraser and Bella Coola drainages; a source near the northeastern end of Vancouver Island or the adjacent mainland whose exact location is unknown, but may be the Tsable River; and a great many sources in interior Oregon east of the Cascades. Obsidian from each source has a slightly different chemical composition called a "fingerprint". Obsidian artifacts found in archaeological sites can be fingerprinted using a technique called X-ray fluorescence, and the resulting fingerprint matched with with fingerprints of obsidian from the quarries. The map in Figure 1:4 illustrates the widespread trade in obsidian in the period 4000 to 6000 years ago, the time of transition between the Early and Middle Period. Obsidian from eastern Oregon reached not only Puget Sound, the Gulf Islands, and the Fraser delta, but is found as far north as Namu on the central coast of British Columbia. Obsidian from Anahim Peak reached the Fraser to the east, and the coast to the west. Obsidian from Mt. Edziza went as far north as the headwaters of the Yukon, west to Ground Hog Bay in Alaska, and south to Burke channel in British Columbia. If we had more archaeological knowledge of sites of this time period, the obsidian trade would, I am sure, prove to be even more extensive. The available evidence does demonstrate trade over wide areas and with trade undoubtedly went other ideas.

The Early Period is the most important period in Northwest Coast prehistory as it is probably the time when the ancestors of most of the ethnographic Indian populations reached the coastal regions. The natural events of the Early Period were overwhelming in their consequences for human settlement. The whole episode of glacial retreat which opened up new migration routes and new places to live, the shifting land and sea levels, and the changed ecology seem to have stabilized about 5500 years ago. There were also volcanic eruptions of which the most significant was that of Mt. Mazama. About 6700 years ago this volcano in southern Oregon erupted and spewed volcanic ash at least as far north as the Fraser Canyon where it overlies cultural remains of the Early Period. Some sea level changes continued to occur in younger periods also, but their magnitude was considerably less, and the effect on human settlement, greatly reduced. About 5500 years ago there occurred a worldwide change in sea levels. This change affects the archaeological record of coastal areas and roughly coincides with a change in technology of coastal cultures. How much the two are interrelated remains to be determined, but the date does provide a convenient boundary between Early and Middle periods.

## Middle Period 5500 to 1500 Years Ago

In the Middle Period evidence for cultures which are more easily recognizable as ancestral to those of the ethnographic period starts to accumulate. Culture patterns based on wealth and craft specialization are evident, and indications of inter-regional exchange of ideas and innovations are clearly there. Changes from the Early Period are probably not the result of the arrival of new peoples on the coast, but instead the product of more extensive collections of materials partly because of better preservation of remains, partly because of great numbers of people who would leave larger quantities of archaeological refuse behind, and partly because of socio-culture factors such as population growth, food surpluses, inter-regional trade and the continued diffusion of ideas and technologies from both Asia and America. Most of our present knowledge comes from the second half of this period (3500-1500 years ago), and the generalizations presented here are best supported by data from that period.

Similarities in wealth, prosperity and luxury goods indicative of a stable food supply, leisure time and a social system involving status and wealth are found throughout the coast, although some regional divergence in types and styles of tools can be recognized. By 2500 years ago knowledge of the normally perishable items of technology which have survived by waterlogging are known: fish nets, plaited and twined baskets, bentwood fish hooks, wooden bowls and wooden splitting wedges. Regional centres of cultural elaboration which shared many of the same characteristics came into being; the best known are the LOWER FRASER and GULF OF GEORGIA, the WEST COAST of Vancouver Island, the PRINCE RUPERT HARBOUR area and the CENTRAL COAST of British Columbia, but there is evidence for habitation and some cultural build-up in all coastal regions. Less is known about Puget Sound, the Pacific coasts of Washington and Oregon and the Alaska Panhandle. Human occupation continued from the Early Period at Five Mile Rapids on the Columbia River near The Dalles, but types and styles of tools suggest greater

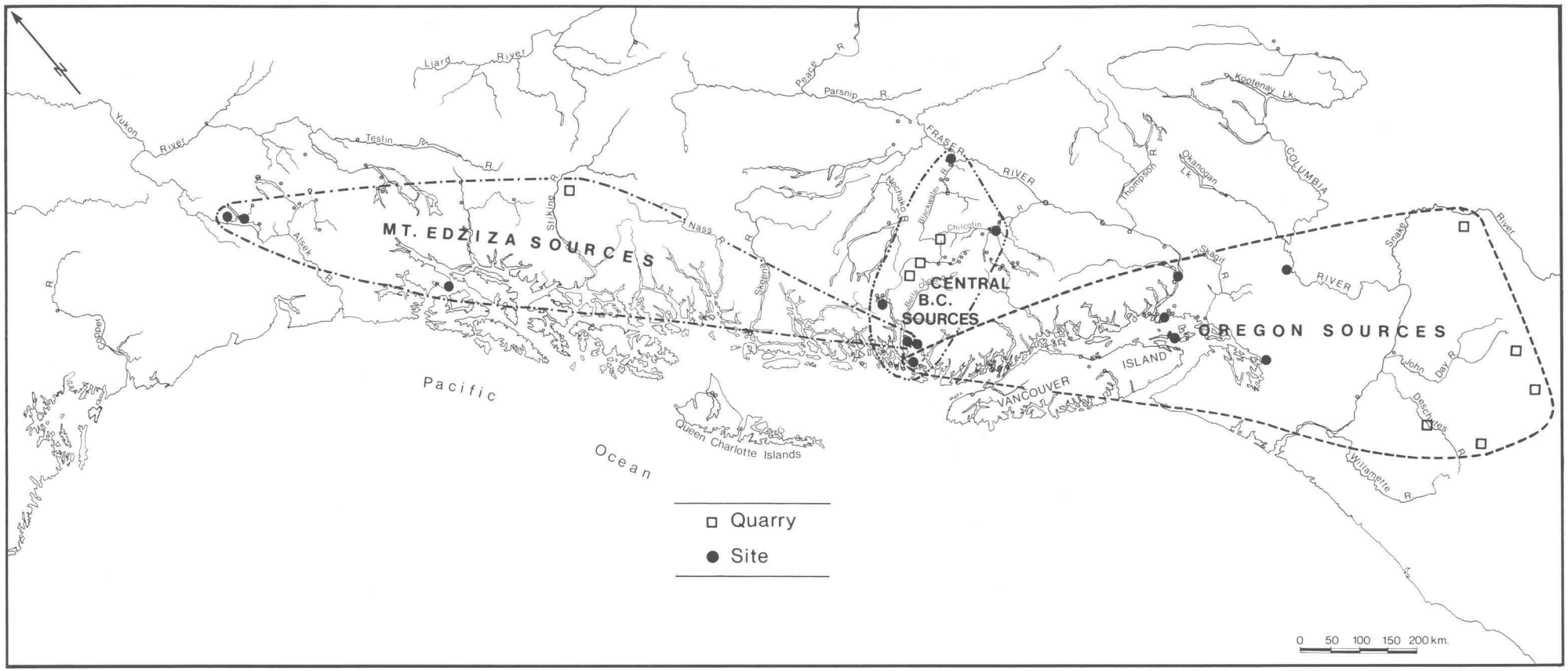



*Fig. 1:4.* The Obsidian Trade 4000-6000 years ago at the time of transition between the Early and Middle Periods.

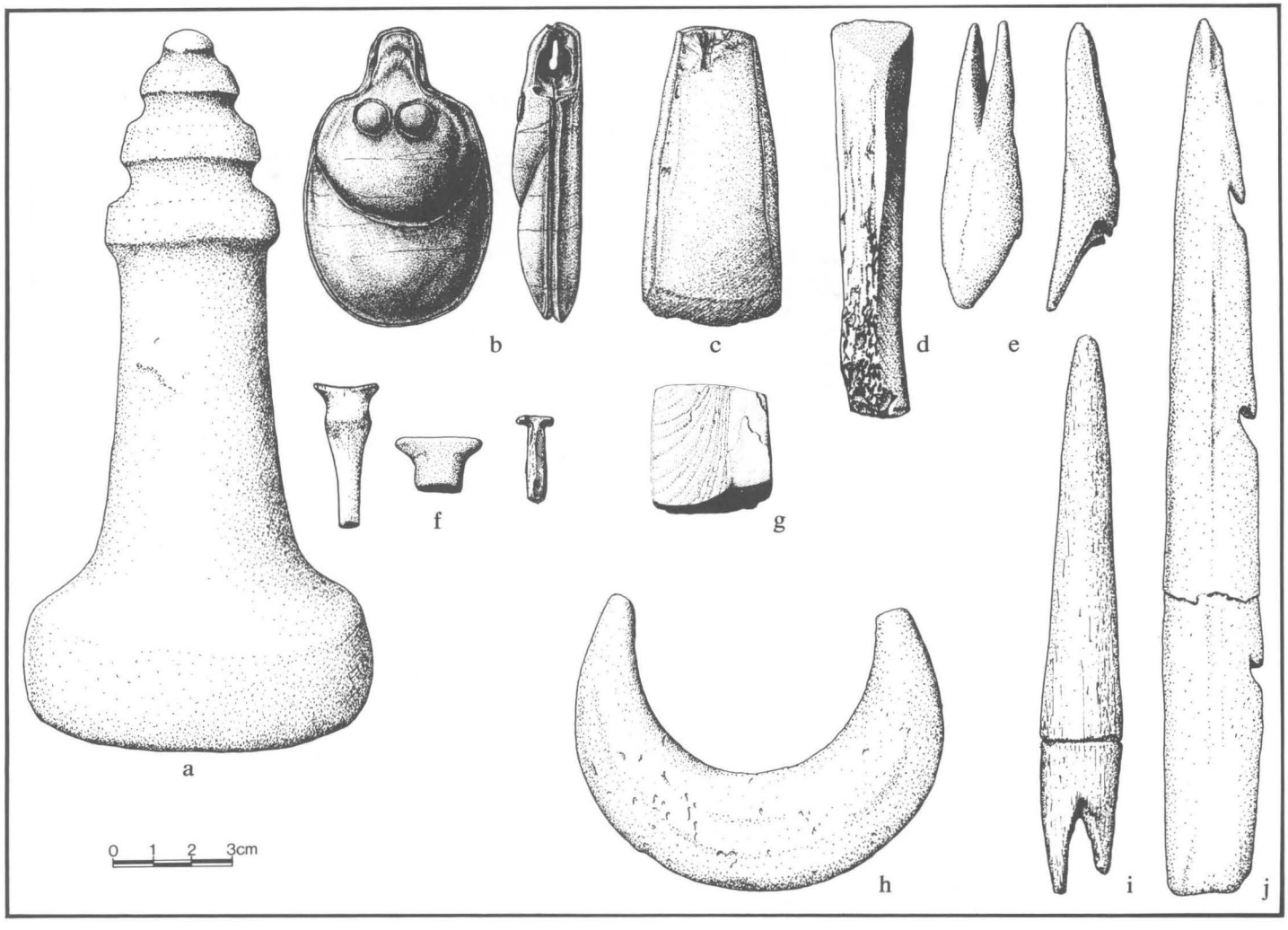
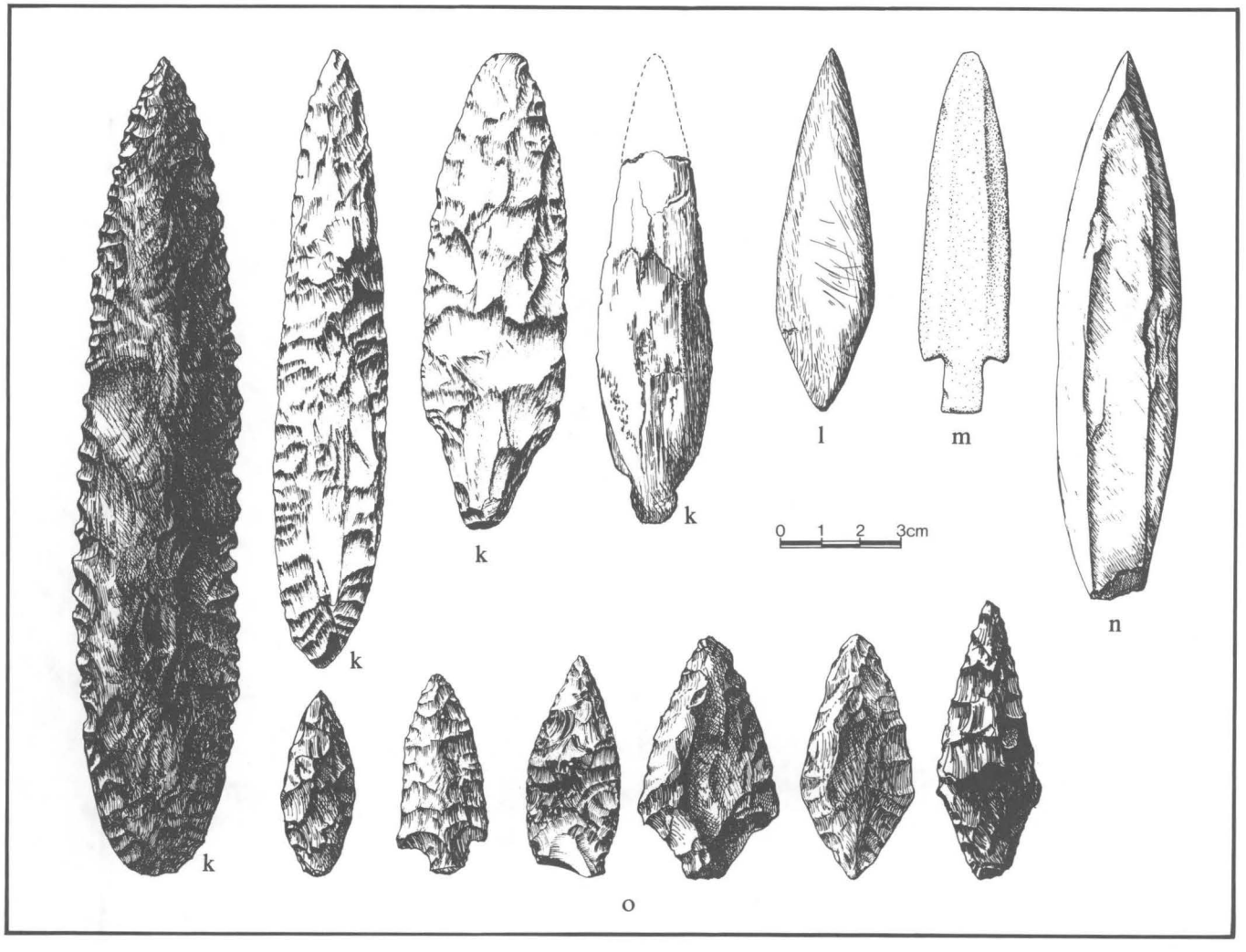



*Fig. 1:5.* Artifacts typical of the Middle Period, *a* hand maul of pecked stone; *b* lignite pendant; *c* stone adze or chisel blade; *d* bone chisel; *e* one-piece socketed harpoon head; *f* labrets (lip ornaments) of shell and stone; *g* chisel blade of mussel shell; *h* gorget of scallop shell; *i* harpoon fore-shaft; *j* barbed bone points; *k* chipped stone knives; *l* ground slate points; *m* bone point; *o* chipped stone points. For Middle Period harpoon heads, see Figure 1:6.

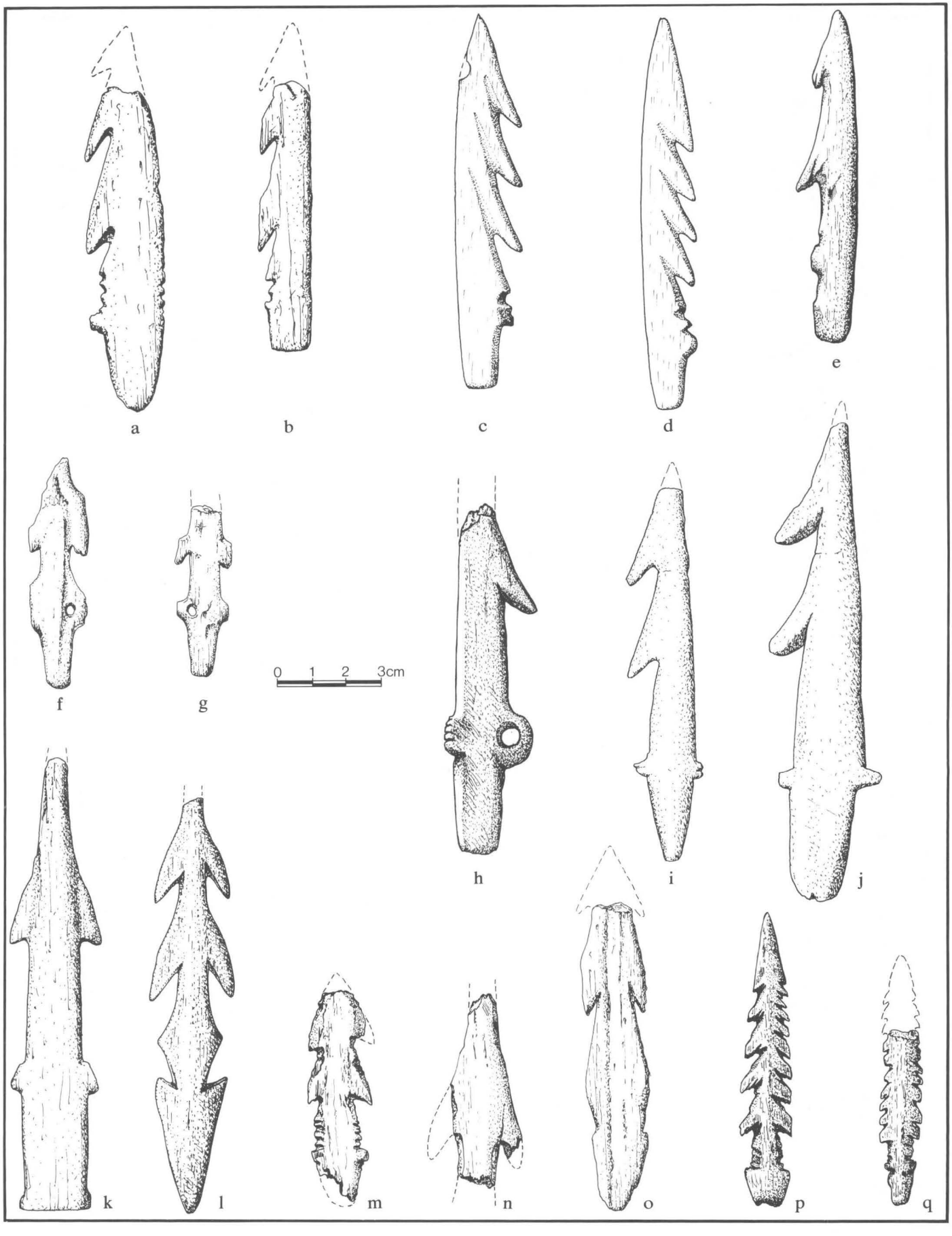
affinity with interior Plateau cultures at this time. Although the quality of data varies from region to region there is enough evidence to indicate the major culture patterns of the ethnographic period were taking shape in the main centres. These patterns are: emphasis on marine fauna, particularly salmon for subsistence; extensive wood-working for houses, canoes, tools and utensils including bark for clothing; ceremonialism and ceremonial art; and emphasis on status and wealth. The archaeological clues to the major culture patterns of the Middle period consist both of the specific locations of archaeological sites along the extended coastal shoreline and up the rivers, and the particular kinds of artifacts, features and faunal remains recovered through systematic excavation.

Large shell middens are common along the coast and along the banks of the larger rivers, although not all sites contain shellfish remains. Most site locations indicate skill with watercraft, and a marine or riverine food supply which is probably a carry-over from the Early Period. Fishnets have been found only at Musqueam on the lower Fraser, and bentwood fish hooks only at the Hoko River where there is exceptional preservation of normally perishable material (Croes 1976). Small bone barbs which are also parts of fish hooks are common in the Nootkan and Kwakiutl areas, but seem only weakly represented in the Gulf of Georgia and Lower Fraser where netting may have been the more typical method of obtaining fish. Sea hunting is indicated in most areas by the presence of various types of harpoon heads, and the spear thrower was probably in use throughout the area. Small bone hooks which were part of the spear thrower are known from both the Gulf of Georgia and the Central Coast regions, and one wooden spear thrower from a waterlogged site at the mouth of the Skagit River may belong in this




period. The actual remains of fish and sea mammals are plentiful in sites, and there is some evidence suggesting increasing use of fish during the course of the Middle Period. Wooden arrow shafts have been recovered from waterlogged deposits in the Prince Rupert Harbour area and were probably armed with small wedge-based bone points. Chipped stone points of sizes more appropriate for spear than arrows are found in many regions, and are probably indicators of hunting land mammals. The bones of elk, deer, bear and other contemporary land fauna occur in most sites as do bones of many smaller mammals. Land hunting was certainly present in all regions, and important except possibly on the West Coast of Vancouver Island. Specialized tools for transforming wood into houses, dugout canoes, tools and utensils become increasingly common during the course of the Middle Period. The crude pebble tools of the Early Period gradually give way to beautifully made chisel and adze blades beginning about 3500 years ago. The simple hammerstone was supplemented by the pecked and polished hand maul toward the end of the Middle Period. The cedar bark industry so important to the ethnographic peoples is indicated earliest by a shredder of whalebone at the bottom of Zone II deposits at Yuquot dated about 3000 years ago (Dewhirst 1980:339). Stone bark shredders occur in Middle Period deposits in the Prince Rupert Harbour region (MacDonald 1970). Good examples of houses are still lacking, but large post holes have been found at Marpole on the Fraser Delta, and structural features suggestive of a house are known from the Central Coast during this period. Basketry containers are known from several sites, and a small figurine from Locarno Beach is wearing a conical hat similar in shape to basketry specimens of historic times.

Ceremonialism is indicated by an increasing number of art objects found in Middle Period components. Many of these objects are described in detail in the chapters which follow, and are clues to the belief systems basic to ceremonial phenomena. Several related belief systems were present on the Northwest Coast in ethnographic times; all were based on a belief in spirits. The first salmon ceremony in which the first salmon of the season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is honoured is a widespread and very old practice related to first fruit ceremonies all over the world. Archaeological evidence for this system would be impossible to come by, although it has been suggested that some of the rock art at the mouths of salmon streams is related to this practice. Guardian Spirit power, found principally in the Salish area of the coast, is another belief system. Artifacts ranging from simple tooth pendants to various tools bearing bio-morphic motifs could conceivably represent spirit power of their owners and be related to efficiency in the tasks they were designed to accomplish.

Shamanism is another system related to Guardian Spirits, but differs in that shamanic spirits enabled their possessor to cure the sick, and a shaman usually obtained multiple spirits. Pendants and small incised "worms" found in Middle Period sites may be part of shamanic paraphernalia, as may be tubular pipes for smoking and seated human figurine bowls for grinding tobacco. Some petroglyphs could be the results of shamanic or other spirit quests, but dating them to the Middle Period is not yet possible.

Wealth and status were interrelated aspects of ethnographic Northwest Coast culture. Wealthy men were the leaders and wealth as well as high rank were required to lead. Wealth was ostentatiously displayed as a sign of rank and one of the mechanisms for this display was the potlatch; another was the art system which portrayed hereditary family perogatives and rights to certain crest symbols. This system likely rose in prehistoric times in response to food surpluses and the need to concentrate the surplus in the hands of a leader so that it could be redistributed to a wider population. From there it became extended to incorporeal property, and both concentrating the surplus and giving it away became mutually reinforcing aspects of leadership. No one has ever dug up a prehistoric potlatch, nor is it conceivable that anyone would ever be able to do so, so it is not possible to determine whether the above process took place during the Middle Period. However, there are some evidences for wealth and status differentiation at this time: some burials at Namu, Prince Rupert Harbour and Marpole have different amounts of grave goods which may be

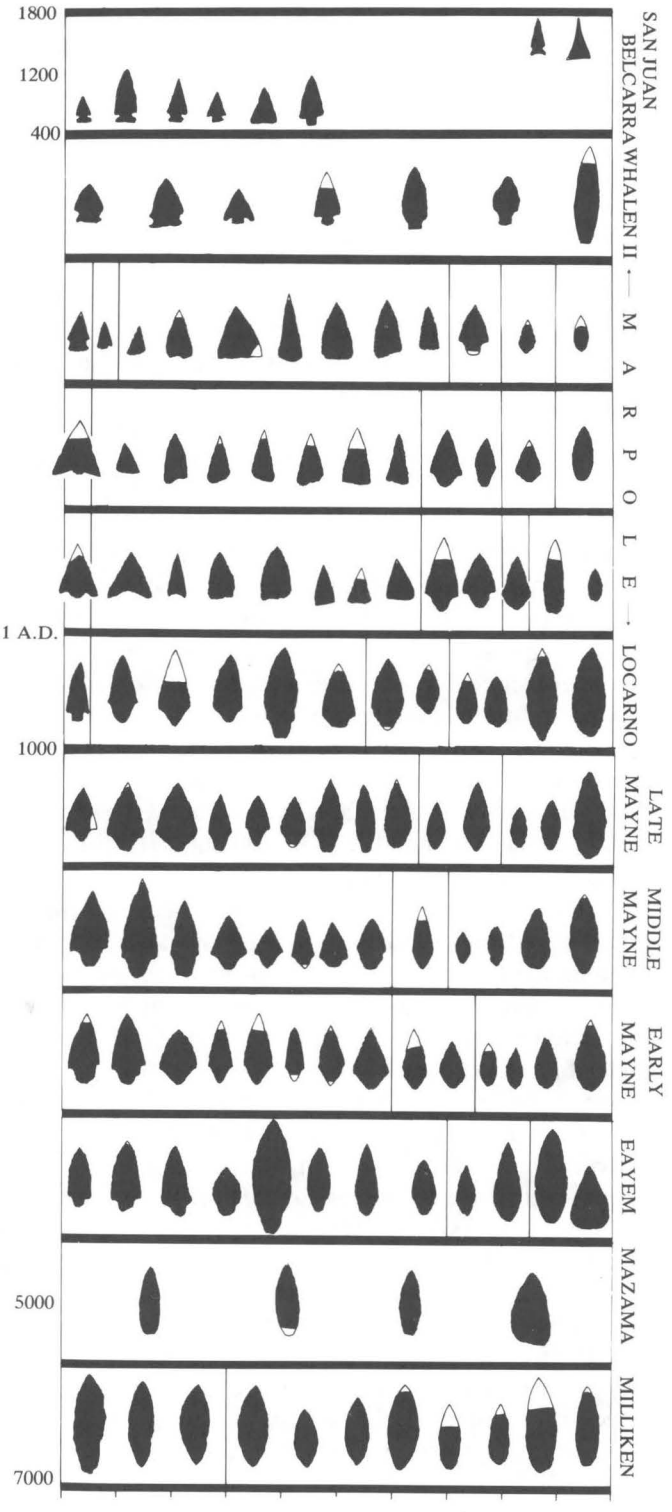



*Fig. 1:6.* Styles of Middle Period harpoon heads. *a, b, f, g, o,* Prince Rupert harbour sites; *c, d, e, l* Namu site on central B.C. coast; *e, h, i, j, k, m, n, p, q,* sites in the Gulf and San Juan Islands.

*Fig. 1:7.* The chipped stone point sequence for the lower Fraser region and Gulf Islands based on data from the following sites: Milliken (Milliken, Mazama, Eayem phases); Helen Point (Mayne, Locarno, and Marpole phases); Whalen (Whalen II phase); Belcarra (Belcarra phase); Cattle Point (San Juan phase). Data from other sites where the Locarno Beach phase is better represented indicate a higher percentage of narrow stemmed points than shown by this sample. Leaf-shaped and single shoulder points (or knives) typify the Early period. Contracting stem points appear at the beginning of the Middle Period (3500 B.C.) and small side-notched points toward the beginning of the Late Period (500 A.D.)

indicative of differences in rank, but in view of the perishable nature of many grave objects this interpretation is far from secure; artificial head flattening appears in Marpole at this time and may be an indicator of high rank; labrets occur throughout the coast in the Middle Period and were probably high status items; wealth in the forms of small disc beads laboriously ground from stone or shell is found in the major centres at this time; beautifully flaked stone knives similar (but not as large) to those displayed as wealth objects by historic California Indians are found; and the presence of a sophisticated art style which in itself suggests full time artisans and commissioned art. Crests are suggested by various animal motifs carved on spoons and bowls of this period. There is no reason to believe that the concentration of wealth extended beyond the familial (lineage or extended family) level, or there would be evidence of the rise of a ruling class of either a religious or secular nature. No palaces and no temples appear in the archaeological record, only the remains of a hunting-fishing-gathering society adapting to a settled existence and abundant food supply. There is some evidence for warfare in the Middle Period. A number of the skeletons from Prince Rupert Harbour show parry fractures of the bones, a type of injury attributed to hand to hand combat. Some evidence of the taking of heads as war trophies as was practised historically has been found in the Middle Period but no fortified sites can be demonstrated to date this early.

Although trade, rather clearly indicated by obsidian distributions and probably also present in other scarce commodities such as eulachon oil, was serving to level cultural differences and keep development apace from region to region, some differences are apparent. Some of these differences are rooted in divergent culture history of the various regions, and others in the variant ecology. The Nootkan region comprising the west coast of Vancouver Island and the mouth of the Strait of Juan de Fuca is distinctive in the absence of chipped stone points and other bifaces in the Middle Period. This situation is in sharp contrast to the Salish Area of the Gulf of Georgia and Lower Fraser where these types of artifacts are very abundant. The Central and Northern Coasts probably belong with the Nootkan area in this respect, as although chipped stone is not absent there, it is certainly rare. Bone points for projectile heads, and small bone barbs for fish hooks are typical of the Central and Northern coasts. Differences in basic technology may be indicated with nets as the common fishing method in the Gulf of Georgia, and hook and line in the other regions to the west and north.

Another indicator of regionalism is the clustering of different styles of harpoon heads in the different regions *(Fig 1:6)*. Male harpoon heads, which fit into a socket in the harpoon foreshaft, are found in all three major regions, but on the Northern Coast they typically have a hole for line attachment; on both Kwakiutl and Nootkan portions of the Central Coast they typically have a line shoulder; and on the Lower Fraser and Gulf of Georgia the typical harpoon head has line guards. These differences may be purely stylistic, at least there is no evidence that any type is more effective than the others.

Also present in some Middle Period cultural assemblages are artifacts suggesting intra-areal acculturation, and others indicating long range diffusion or other types of contact with distant regions in Asia and America. In the Early Period chipped stone points which were stemmed were typical only of the Lind Coulee Tradition, but in the Middle Period stemmed points are found throughout Puget Sound and the gulf of Georgia and north as far as Namu on the Central Coast. The idea of hafting points by stemming seems to have been spreading northward. Conversely, microblade technology which was typical of northern coastal regions in the Early Period, is commonly found in Middle Period sites in regions to the south. Heavy hexagonal gound slate points, lip plugs and the technique of stone sawing to make adze blades are found earlier in north coastal Asia and Lake Baikal, and in southern Alaska and suggest diffusion from that source. Tobacco pipes for smoking which make their appearance in the late Middle period as far north as the lower Fraser, indicate diffusion from American sources. The division between the Middle and Late Periods is partly arbitrary, and partly based on the time of changes in culture taking place on the lower Fraser and Gulf of Georgia by 500 A.D.

## The Late Period 1500 Years Ago to Contact

The ethnographies and histories are by far a better guide to the Indian cultures of the Late Period than is the archaeology, even though much of the ethnographic data concerning aboriginal patterns of culture was not obtained until the end of the 19th and beginning of the 20th century. In both Northern and Central coastal regions, the present information strongly indicates cultural continuity and continued growth of the regional traditions which came into existence earlier in the latter half of the Middle Period. On the Gulf of Georgia and Lower Fraser the situation regarding cultural continuity is not as clearcut. There is a lack of continuity of deposits within sites of the late Middle Period and Late Period which has never been satisfactorily explained. No single site shows the entire sequence and there are changes in the culture content which require explanation.

At the end of the Middle Period there existed on the southern end of Vancouver Island, in the Gulf and San Juan Islands and on the lower Fraser a culture called Marpole which dates between 400 B.C. and 400 A.D. (Burley 1980). Chipped stone tools, particularly triangular unnotched points; woodworking tools including adzes and chisels with blades of nephrite, pecked hand mauls,

antler wedges and bone chisels and gouges; elaborate art work in bone and antler and a particular style of unilaterally barbed harpoon head were typical of this culture. At the end of the Late Period there existed within the same region formerly occupied by the Marpole culture, a people collectively known as the Coast Salish. The archaeological expression of their culture is quite different from that of the earlier Marpole culture, and the problem is one of determining what took place during the period separating them. Various ideas have been expressed ranging from replacement of the Marpole population invading Salish speakers, to changes in the way of life which led to the development of the one from the other. Most data favour the latter explanation.

Coast Salish culture can be traced back archaeologically to at least A.D. 1200. Two known winter village sites have been sampled, Old Man House at Squamish in Puget Sound (Snyder 1956), and Stselax on the Fraser Delta (Borden 1970). A number of other sites more likely represent seasonal fishing stations. Throughout all sites the emphasis (with the exception of antler for wedges) is on *bone* for the manufacture of artifacts: unilaterally barbed points for arrows and duck spears; small pointed bone barbs for use on composite fish hooks; awls of various sorts; blanket pins; and bird bone tubes. Small, composite socketed, harpoon heads for salmon and larger ones for sea mammals are common as well. Flanged spool-shaped hand mauls, small triangular slate points, thin ground slate knives, and sawn and polished nephrite adze blades are the typical stone artifacts of the period *(Fig 1:8)*. Gone are the heavy ground slate points and numerous chipped stone tools of earlier periods. Gone also are the labrets and the well made stone vessels. Chipped stone became very rare, and when found it is mostly in the form of small, side-notched arrow points, a trait typical of Plateau cultures in the east. These points seem to be most common in sites along Puget Sound and the southern end of the Strait of Georgia between 400 and 1200 A.D., and possibly later.

On both sides of the mouth of the Strait of Juan de Fuca, and along most of the west coast of Vancouver Island are the Nootkan speaking peoples. Their late prehistory is known from excavations at three localities, Ozette on the Washington coast, Yuquot at Friendly Cove and Hesquiat midway up the west coast of Vancouver Island. The Yuquot site (Dewhirst 1980) exhibits a continuity of culture throughout the Late Period and for several thousand years back into the Middle Period. The emphasis throughout is on bone tools associated with fishing and sea mammal hunting. Whaling is added to the cultural inventory in the Late Period as is the small, socketed composite harpoon head for the salmon harpoons. Ozette material described in a later chapter indicates the complex art and ceremonialism of the late prehistoric period. Ozette was an entire village covered by a mud slide shortly before European contact. There are both the usual kinds of archaeological deposits at Ozette where only stone and bone tools are found, and entire houses in which complete wood and fibre artifacts have been preserved by the all encompassing mud. McKenzie's (1974) analysis of the artifacts from the non-waterlogged deposits indicates their close comparability to assemblages from other Late Period sites on both the Southern and Central coastal regions: hundreds of small bone points of many sizes and types which served as barbs for salmon, cod and halibut hooks, and as arming tips for composite harpoon heads.

Further south, on the Oregon Coast (Newman 1959) plank houses with inventories of small bone points, antler wedges, bone chisels, small composite socketed harpoon heads and small triangular chipped stone points indicate a culture much like that on the coast of Washington and British Columbia. At the very southern end of the Northwest Coast at Trinidad Bay (Heizer and Mills 1952) artifact inventories merge with those of California; this region retained some types which went out of use in the Middle Period of the Gulf of Georgia—large elk antler harpoon heads, and large chipped stone ceremonial blades.

The Central Coast of British Cclumbia provided abundant evidence of Late Period occupation. At Port Hardy Chapman (1982) has unearthed a component typified by the complex of small bone points similar to those of the southern coast. Small composite socketed harpoon heads, and triangular ground slate points are also indicative of the Late Period. Mitchell (1981) has investigated Southern Kwakiutl prehistory and the results of his work indicate a picture very much like that at Port Hardy: artifacts of bone associated with fishing and woodworking, but little in the way of ceremonial or non-utilitarian objects. Farther north on the Central Coast, excavations yielding Late Period components have been undertaken at a considerable number of sites. Sites at Kwatna and Namu (Carlson 1972; 1979; Hester and Nelson 1978; Hobler 1982) have yielded the greatest amount of information. There is abundant evidence for plank houses, ceremonial art, beaters for preparing cedar bark for weaving, spinning with spindle and whorl and a variety of pecked and ground stone implements in addition to the complement of bone fishing equipment parts also found in the Late Period elsewhere on the coast *(Fig. 1:8)*. At Kwatna, evidence of a large rectangular house with a central depression and sub-floor cache pit dates to A.D. 1280.

At Axeti at Kwatna an inter-tidal site produced wooden and basketry artifacts: twined basketry hats, twilled and plaited cedar bark baskets and mats, rope and twine, U-shaped bentwood fish hooks, wooden spoons, composite fish hooks with wooden shanks and bone barbs and bentwood box fragments. These items date toward the end of the prehistoric period, but there is every reason to believe that the technological traditions of which they

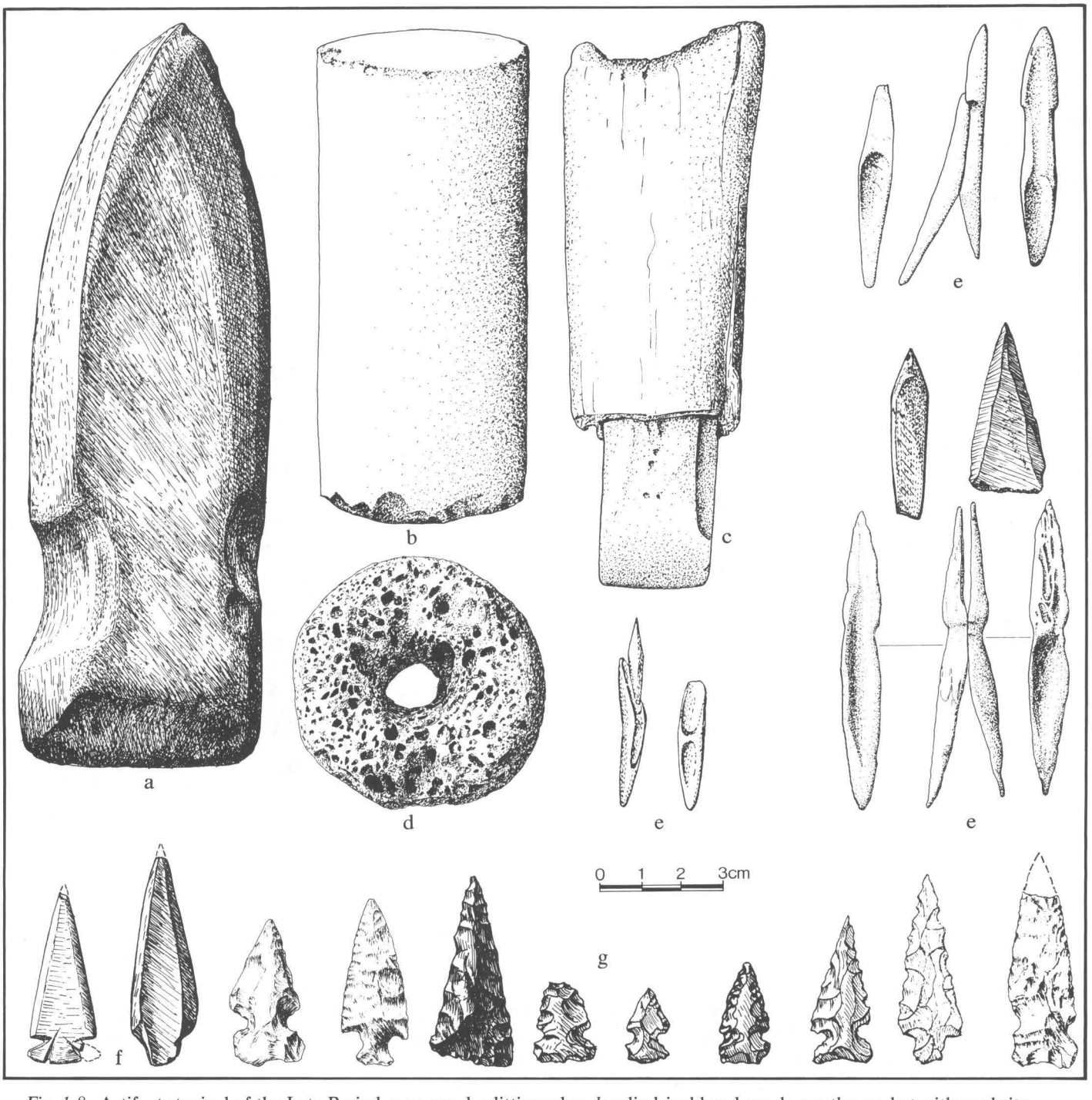
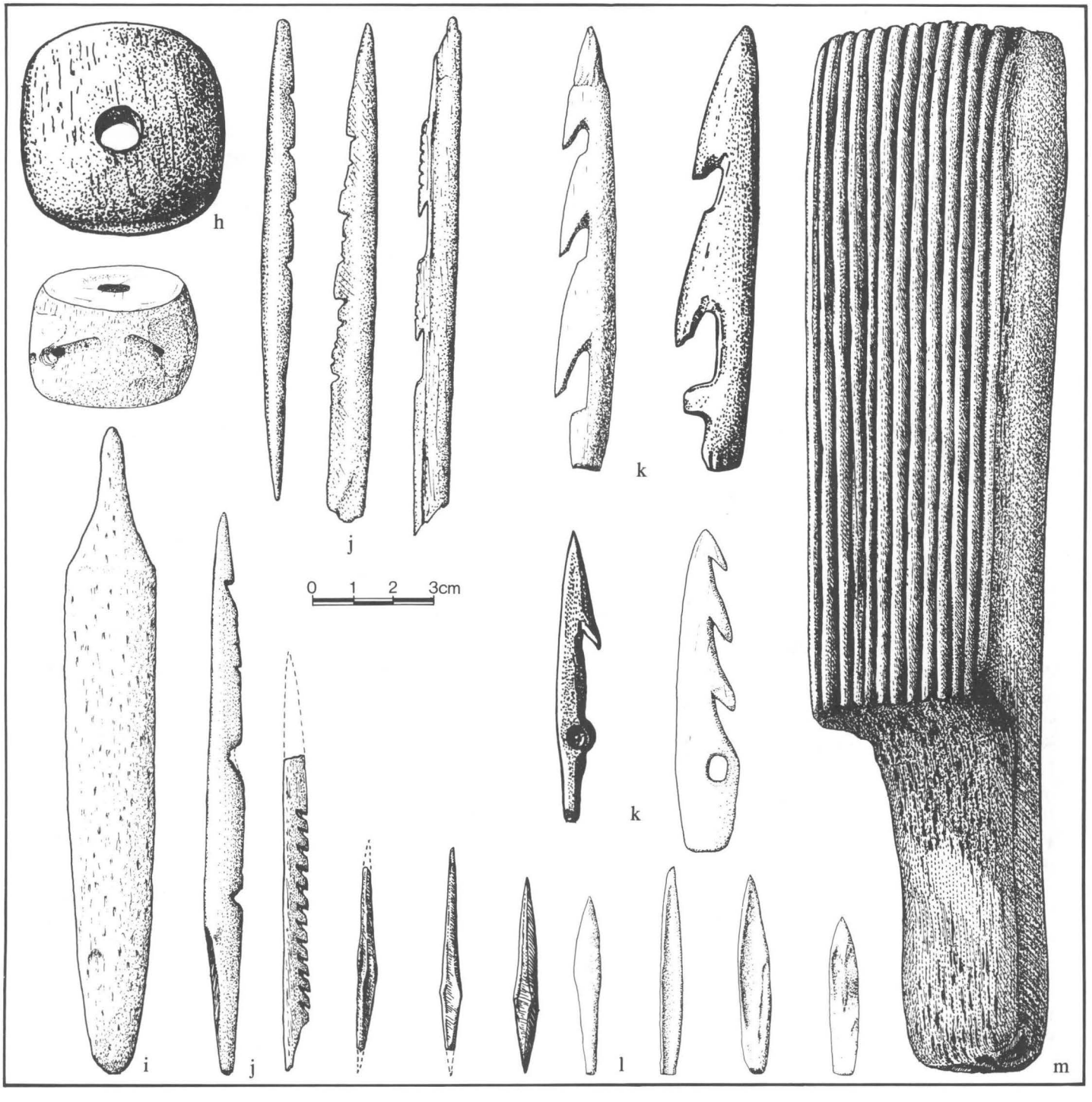



*Fig. 1:8.* Artifacts typical of the Late Period. *a* grooved splitting adze; *b* cylindrical hand maul; *c* antler socket with nephrite adze blade; *d* perforated stone; *e* various types of bone or antler composite, socketed, harpoon heads; *f* small ground slate points; *g* small side-notched or corner-notched chipped stone points; *h* bone spindle whorl; *i* ring and pin game; *j* bone arrow and leister points; *k* bone harpoon heads; *l* small bone fish hook barbs and points; *m* bone beater for cedar bark.




are a part go far back in time. Wood working is not only attested to by the actual wooden objects, but hundreds of chisel and adze blades and fragments.

Abundant evidence for fishing occurs in all habitation sites of the Late Period. Numerous stone-walled fish traps found throughout the Bella Bella region likely date to the present period of sea level covering the last 3000 years (Pomeroy 1976).

There is some archaeological information for the Northern Coastal regions of the Tsimshian, Haida and Tlingit in the Late Period. MacDonald (1968) in discussing Prince Rupert notes "There are almost 50 sizeable shell middens in the harbour that show continuous occupation for more than 4,000 years. . . . about half of these are large winter villages." In Alaska at Ground Hog Bay Ackerman (1968) describes an artifact assemblage from a plank house village dating in part to 345 years ago: blades for splitting and planing adzes, harpoon heads with

a hole for line attachment, beads of jet and amber, socketed toggle harpoon heads, bear tooth pendants, carved stone bowls and lamps and bone points. Fredericka de Laguna's (1960) work in late Tlingit sites shows much of the same artifact inventory, as does Fladmark's and Severs' work in the Queen Charlottes. The entire complex of heavy pecked stone tools: blades for splitting and planing adzes, stirrup mauls and maul heads grooved for hafting are highly distinctive of the Late Period of the Northern Coast, as are harpoon heads with line holes. The heavy pecked stone tool complex has similarities with Asiatic forms (LeRoi-Gourhan 1946). The North Coast can be characterized as a region of continued cultural growth and elaboration during the Late Period. Archaeological work has not yet proceeded to the point where cultures of the Tlingit, Haida and Tsimshian can be differentiated from each other. Shared technological and social traditions seem to have extended throughout the region.

There were at least two natural events which took place during the Late Period and affected human occupation on the North Coast. Tlingit traditions (Swanton 1909:337) describe the destruction of a village by an advancing glacier; de Laguna (1958:2) gives further evidence of late glaciation. On the Nass an eruption of lava which must have taken place in very late prehistory is still vividly described in oral tradition. Nishga informants have told me of the burning of the villages, and the search for the river forced from its channel by the flowing lava. Such events caused some population displacement during the Late Period, but did not significantly alter the way of life over large regions. The most significant event of the Late Period was the arrival of Europeans: the Russians in 1741, the Spaniards in 1774 and the English in 1778. With these intrusions the prehistoric era ended and history began.

The first major effect of European contact was increased cultural elaboration through the fur trade as the Indian peoples became enmeshed into an expanding world economy, and luxury goods grew in abundance. The long term effects were, however, of social disorganization and cultural decline as disease wiped out some entire peoples, and greatly reduced others in numbers, as missionization worked at destroying the belief systems which fostered art and ceremony, and colonization resulted in loss of control over natural resources. It is only recently that the descendants of those peoples who survived this period are increasing in number.

The culture of the Northwest Coast retained up into the period of European contact the subsistence base and associated classes of implements which are known earliest in the late Paleolithic and Mesolithic cultures of the old World. Fishing, supplemented by shellfish gathering and by sea and land mammal hunting, became the subsistence pattern which persisted long after food production through plant and animal domestication had overtaken major parts of both the Old and New World. The harpoon and the bow and arrow were widely used, and among the northern Tlingit even the spear thrower survived into the historic period. Containers of wood, basketry and bark remained the norm as in most other cultures of the northern boreal forests.

The Late Period merges almost imperceptibly with the ethnohistoric cultures. Small notched projectile points usually identified with the introduction of the bow and arrow reached southern and central coastal regions, diffusing from the interior to the east. Cultural continuity throughout the Late Period is indicated for the Central and Northern Coasts, and probably for the Salish region.

The art examined in the following chapters should be looked at in the context of the prehistory outlined in this chapter. The emphasis has been on technology and subsistence as items relevant to these cultural sub-systems constitute the overwhelming mass of discernable archaeological data. The art described in the following chapters, though limited in quantity, provides more insights into belief systems and other aspects of culture available from no other body of data. These chapters begin not with the earliest art found, but with the ethnographic art, where context and meaning are known, which can then be used to help understand the prehistoric art of the later chapters.