

# THE ARCHAEOLOGY OF HOOPER BAY VILLAGE, ALASKA

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Archaeological investigations at Hooper Bay Village, on Alaska's Bering Sea coast, were initiated in 1951 in order to determine prehistoric cultural affinities between this locality and other regions of Alaska.<sup>1</sup> The Hooper Bay region was chosen since it is unknown archaeologically and since it is situated near the southern limit of winter sea ice, which is one of the important demarcation lines between different forms of Eskimo culture. Upon historic contact the Eskimos in the Hooper Bay region were known to have been influenced by more southern groups of Eskimos and Northwest Coast Indians, as well as by northern Eskimos and interior Alaskan Indians. Investigations in this locality thus offered an opportunity to determine the prehistoric extent and relative effects of these influences.

The Hooper Bay region is situated between the mouths of the Yukon and Kuskokwim rivers and extends farther west into the Bering Sea than any other section of the Alaska mainland from Bristol Bay to Norton Sound. With the exception of the 2300 foot Askinuk Mountains to the north, the terrain forms a low alluvial tundra plain well beyond the maximum range of timber. The sea coast is for the most part low, and the daily tides (seven to nine feet) are great enough to partially drain large sections of the coast, adjacent rivers and bays. The entire region south of and inland from Hooper Bay is commonly known as the Big Lake district; this name well may be applied to the entire area, for it is honeycombed with both large and small lakes and ponds. Such country offers few suitable localities for habitations; therefore, when a good village site had once been found, it was likely to be occupied for many years. This was the case at Hooper Bay Village, where there is ready access to the sea either by an overland approach of a few miles or by one of two short water routes. The village, although on high enough ground to escape damage by even severe floods, fronts a slough where boats can be hauled up readily.

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Other factors accounting for its permanent inhabitation are that there is a sufficient summer water supply and that the region affords good year-round hunting and fishing.

Today the most important sea mammals in this region are the common seal, bearded seal, and white whale. Walrus and larger whales rarely frequent this shallow coast. The fish most utilized are the salmon, herring, tom cod, needle fish and blackfish. Other edible products of the sea are clams and cockles. Today there are no large land mammals in the locality, but the older people remember having seen caribou roam close to Hooper Bay. The only land mammal of importance at present is the muskrat, which is hunted for its skin. The shores of Hooper Bay and adjacent Igiak Bay compose the largest concentrated breeding ground in Alaska for ducks and geese; as a result the people can depend upon birds or eggs as food from early spring to late fall. The low tundra country around Hooper Bay offers so little in the way of plant food that the salmonberry, comparatively scarce at the Village itself but abundant at the east end of the bay, is the only flora economically useful to a very great extent.

Since the Hooper Bay region is not a rich source of furs, contact with Russian trappers and traders must have occurred not earlier than 1835 when St. Michael (located approximately 200 miles north of Hooper Bay) was established (Petroff, 1900, p. 195). Prior to this time the Russian Orthodox Church sent a missionary from Unalaska in the Aleutian Islands north beyond the Kuskokwim River delta (Petroff, 1900, p. 194), but that this party penetrated as far north as Hooper Bay is doubtful. It was not until December 14, 1878, that the first known European visitor reached Askinuk (Baker, 1906, p. 106), or Hooper Bay Village as it is known now. The village was visited by E. W. Nelson when he made a sled trip to collect ethnographic material during the winter of 1878-79. At that time he traveled from St. Michael south to Hooper Bay and to Cape Vancouver, returning by an inland route across the Yukon-Kuskokwim delta to the Yukon River.

When Nelson (1899, p. 249) visited Hooper Bay Village, the people living there told him that their village was higher than the surrounding country (15 feet higher according to Nelson) because of the accumulation of debris during a long period of occupancy. Nelson stated that, ". . . its present appearance would seem to justify this assertion", an assertion partially confirmed by excavations in 1950.

Hooper Bay Village is located at the northern end of the bay on a small slough that flows through Hooper Bay and into the Bering Sea. The village is built on three knolls, one behind the other, with only the first fronting the slough. Upon historic contact, dwellings were on the first knoll only; the remaining two knolls were covered with burials. Today, however, there are dwellings on all three knolls, with a Catholic Mission and a Native Store occupying most of the second, and the Alaska Native Service school, the third. The knoll fronting the slough measures approximately 380 by 150 by 50 feet; this is the only section of the village where evidence of prehistoric houses and midden was found. Midden debris is present all along this natural mound and appears to be more than fifteen feet deep in thicker sections. Still

accumulating, the deposit has already become one of the larger middens in western Alaska. Since most of the midden is covered with present day houses, the space in which to dig is limited; however, two test cuts were marked off, a 36 by 36 foot one on the east end of the midden, and a smaller one, 6 by 18 feet, at the west end. The excavations were divided into six foot squares and depths were recorded by six-inch intervals. July 7, at the time when excavations were begun, the ground had thawed to a depth of slightly more than two feet; after this layer had been removed, the thawing progressed less than two inches per day. On August 28, which was the end of the field season, depths of five and eight feet had been reached in the larger and smaller cuts respectively. Since the relatively slow rate of thaw made it impossible to reach the bottom of the midden in one season, only the upper layers of the deposit could be sampled.

Analysis of the Hooper Bay Village collection established the fact that artifacts from the test cuts were from a single synchronous time period and thus could be combined into a single unit.

The artifact descriptions that follow are under eleven headings: sea hunting, land hunting, fishing, tools, household, transportation, personal adornment, tobacco complex, toys, ceremonial objects, and miscellaneous. In each group, description of the artifacts precedes comparison of the group with similar finds. Since all major and minor artifact finds are illustrated the descriptions are usually brief. Supplementing the descriptions and illustrations is an extensive trait list of all identifiable objects and the levels from which they were recovered. In the trait list will be found a figure and specimen number for each illustrated artifact.

#### SEA HUNTING

The eleven **detachable harpoon dart heads** are of two different forms. The first, represented by one specimen, has a single barb, an off-set line hole, and is heavy and rectangular in cross section; the tang is missing (Pl. 1, 1). All other dart heads, including fragments, are lighter than the previous type, uniformly small, ovate in cross section, and multibarbed. Four of the seven bilaterally barbed dart heads have more barbs on one side than the other (Pl. 1, 2-3); two have pairs of opposite barbs (Pl. 1, 4); and one has a single staggered barb on each side (Pl. 1, 5). Of the eight complete line holes five are gouged and three drilled; one of the three examples with a drilled line hole has spurs cut longitudinally on either side of the hole, giving the appearance of gouging. (Pl. 1, 3). All line holes except one in a purchased specimen are in the center. Seven dart heads, including fragments, are made from antler, two from ivory, and two from bone.

The one antler **harpoon foreshaft** is 10 cm. long and ovate in cross section. This specimen has its greatest diameter at the line hole, which is a third of the distance from the base.

Three of the four **socketpieces** have bifurcated tangs; the one without a bifurcated tang has a hole at the end into which the shaft is fitted (Pl. 1, 7). The respective lengths of these socketpieces are 18.5 cm., 9 cm., and 5 cm.; the fourth is too incomplete to determine its original length. Two are made from antler, and two from bone; all are oval or circular in cross section (Pl. 1, 6).

The two **bladder mouthpieces** are different in form. The first, made from tooth, (Pl. 1, 8) is ovate in cross section and slightly constricted in the middle to receive the lashings. The second mouthpiece, made from antler, is round in cross section and has a lip at the top (Pl. 1, 9). There are four small holes drilled at different heights around the body of this specimen.

The four wood and two bark **float plugs** are ovate in outline and average 1 cm. in thickness; each has a deep groove encircling it (Pl. 1, 10).

The two ground slate **harpoon blades** are flat and trianguloid, resembling similar pieces from other western Eskimo collections.

Fine preservation at the Hooper Bay site made it possible to recover artifacts of perishable materials that normally would have decayed; these include a number of **dart shaft fragments**. The six dart shaft proximal ends are round in cross section and uniformly light (Pl. 1, 11). All have flat bases, and two have a small recess at the end to receive a throwing board peg. Each shaft has at the proximal end a gradual swelling toward the base which is intended to fit into the deepened groove on the throwing board near the peg (see description of throwing boards). Distal ends of the dart shafts are of three types, based on the style of socketpiece hafting. The prevailing type is flattened on two sides to fit a socketpiece with a bifurcated tang (Pl. 1, 12). The second type has a roughly cone-shaped pit at the end. One side of the cone is open to permit shaping; opposite it is a small gouged hole near the base of the opening (Pl. 1, 13). This type of shaft is made to receive an oval, tapering tang with a hook at the end, the hook fitting into the small hole. The third type is similar to the preceding except that the hook hole is absent.

One large slate **lance** or **knife blade** with finely ground surfaces was recovered; approximately half way down each side is a well-defined shoulder which marks the beginning of a wide, tapering tang (Pl. 1, 14). The one other large lance blade recovered is a wide, flat flint blade. With the greatest width near the center, it tapers to a somewhat blunted point at one end and to a long, slightly shouldered tang at the opposite end (Pl. 1, 15). Two other lance blades were found, both short and of the same general lines as the large slate blade mentioned above; one differs from the rest, however, because of its scored tang and decorations on both sides of the blade. The trianguloid section delineated near the center of the specimen in Pl. 1, 16, is a fracture mark in the slate rather than part of the design elements. The motifs are straight and curved lines (See Fig. 1, D, E). The circle or semi-circle with radiating lines occurs in three places; there are four sets of short converging lines and one set of three parallel lines.

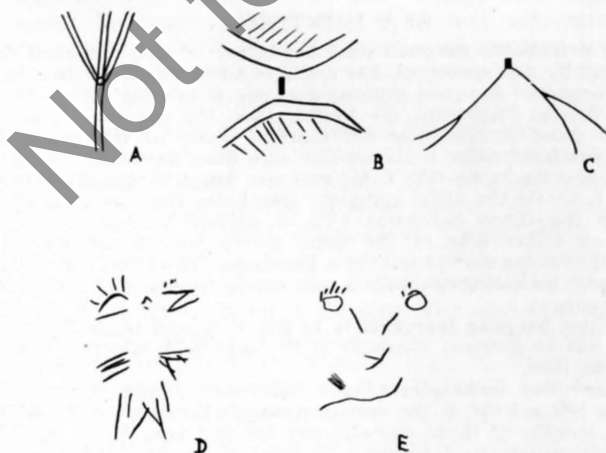


Figure 1

There are two **throwing board** fragments in the collection. One consists of the central grooved section in which the dart shaft was placed. The groove is 2 mm. deep at the end where the hand hold once was; it tapers to a depth of 6 mm. (over a distance of 20 cm.) at the point where the peg had been inserted

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(Pl. 1, 18), causing a marked downward slope to the end nearest the peg. That a similar pitch is evident on the proximal end of the dart shafts has been mentioned. The second throwing board fragment, part of a hand grip, has one antler grip peg in place; 3.8 cm. forward is a hole for a similar peg (Pl. 1, 17).

### Comparisons

From archaeological excavations and ethnographic observations it appears that the Alaskan center for the harpoon dart head is among the Pacific Eskimo, Aleut, and southern Bering Sea Eskimo. The oldest known harpoon dart heads from this general region date approximately 1000 B. C. and are from the Paleo-Aleut levels on Umnak Island in the Aleutians (Laughlin and Marsh, 1951, pp. 80-84). More recent, but still of considerable antiquity, are those from the Pacific Eskimo sites at Kachemak Bay (de Laguna, 1934, pp. 82-84, Pl. 39, 40) and the southern Bering Sea Eskimo site at Port Moller (Weyer, 1930, pp. 265 - 266, Fig. 17). In all three areas toggle harpoon heads have been recovered but they are greatly outnumbered by harpoon dart heads. During late periods at Kachemak Bay the dart heads still dominate (de Laguna, 1934, pp. 82-85); they also occur more frequently than toggle harpoon heads at the recent Bristol Bay site of Platinum South Spit (Larsen, 1950, p. 180). Eleven harpoon dart heads were recovered at the Hooper Bay Village site; no toggle harpoon heads were found, although presence of the latter is indicated by a harpoon foreshaft, harpoon blades, and a wooden toy toggle harpoon head. In northern Alaska the toggle harpoon head dominates in all periods, although dart heads also occur. The latter are found in collections of Okvik (Rainey, 1941, Fig. 13, 5), Old Bering Sea (Geist and Rainey, 1936, Pl. 77, 2), Birnirk (Univ. of Penn. Collections), Ipiutak (Larsen and Rainey, 1948, Pl. 42, 10), Western Thule (Larsen and Rainey, 1948, Pl. 95, 4), and Giddings' inland Eskimo stages on the Kobuk River (Giddings, MS). Ethnographically they are found among the Bering Sea Eskimo, Aleut, Pacific Eskimo and adjacent Indian groups (See Birket-Smith, 1929, II, tables A.30, B.22; Birket-Smith and de Laguna, 1934, p. 434). The one large rectanguloid dart head from Hooper Bay Village site with a single barb and an offset line hole is similar to one purchased by Nelson (1899, Pl. LVII, b, 33, p. 148) at a village just north of Kuskokwim Bay. It resembles also the one excavated by Larsen (1950, Fig. 55, A, 3) at the recent site of Pavik, Bristol Bay, and those illustrated by Giddings (MS) from the Kobuk River region. Bilaterally barbed dart heads with more barbs on one side than the other and with a central line hole are reported from several sites other than Hooper Bay Village. Among these are Fox Creek on the lower Yukon River (de Laguna, 1947, Pl. XXVI, 6), the Kobuk River sites (Giddings, MS), and Nelson's ethnographic collections from the Bering Sea region (1899, Pl. LVII, 16, 19, 20). Dart heads with similar pairs of opposite barbs and a central line hole are reported from Umnak Island in Paleo-Aleut levels (Laughlin and Marsh, 1951, pp. 80 - 84); Pavik, which is recent-prehistoric (Larsen, 1950, Fig. 55, A, 2); Kukulik on St. Lawrence Island in Old Bering Sea and Recent-Prehistoric levels (Geist and Rainey, 1936, Pl. 77, 2, Pl. 42, 5, Pl. 54, 3); the Kobuk River sites

(Giddings, MS), and Nelson's Bering Sea collections (1899, Pl. LVII, b, 18). The last class of dart heads, those with staggered opposite barbs and a central line hole, is reported from Port Moller (Weyer, 1930, Fig. 17, f) and Norton Sound (Nelson, 1899, Pl. LXVIII, 8).

Three of the socketpieces have in common one traceable feature, the bifurcated tang. Similar socketpiece tangs are found from Yukon Island III, Kachemak Bay (de Laguna, 1934, p. 195); modern Kodiak (de Laguna, 1934, p. 195); Neo-Aleut levels on Umnak Island (Laughlin and Marsh, 1951, pp. 80-84); Jochelson's Aleutian Island material (Jochelson, 1925, Pl. 22, 1-3, Pl. 23, 19-24, Pl. 26, 16, 34); in the Big Lake district between the Yukon and Kuskokwim river mouths (Nelson, 1899, Pl. LVII, 34, p. 147); and in the Kobuk region (Giddings, MS). This tang type is characteristic of late socketpieces but may be reasonably old in Neo-Aleut finds. Socketpieces with a hole at the proximal end to fit the dart shaft have been found from the Kobuk River area (Giddings, MS) and Hooper Bay Village. From numerous distal ends of dart shafts it is possible to determine still more concerning the socketpiece tangs. The most prevalent type of dart shaft socket is made to receive a socketpiece having a bifurcated tang; however, not represented in the collection is a socketpiece with a conical tang and an end hook such as would fit into the second type of dart shaft socket. Socketpieces with a conical butt and an end hook have been found, to the writer's knowledge, only at the Nukleet site on Cape Denbigh (Univ. of Alaska collections), although their presence may be inferred at Hooper Bay Village.

The float plug is found in most coastal Eskimo sites from the Okvik stage (Rainey, 1941, Fig. 12, 4-9) through the period of historic contact. The notable exception is the Ipiutak site at Point Hope where the trait apparently did not exist (Larsen and Rainey, 1948, p. 147). The bladder dart mouthpiece, a relatively recent innovation, was introduced at St. Lawrence Island during Punuk times (Collins, 1937, p. 220-221). The Hooper Bay Village examples do not have the distinctive "cannon shape" of some Punuk and more recent types (Collins, 1937, Pl. 73, 11-12; Geist and Rainey, Pl. 54, 26) but rather are similar to the cylindrical form also from Punuk to historic contact (Collins, 1937, p. 220; Nelson, 1899, Pl. LVI, a, 18-19). The cylindrical bladder mouthpiece for water containers used in the Aleutians (Jochelson, 1925, Fig. 65) is similar to some of the cylindrical bladder dart mouthpieces.

Slate or flint lance blades are very old in Eskimo culture, extending back to Okvik (Rainey, 1941, Fig. 31, 5-7), Old Bering Sea (Collins, 1937, Pl. 39, 13), Birnirk (Univ. of Penn.), and Ipiutak stages (Larsen and Rainey, 1948, Pl. 14, 13-18). The slate lance blades in the collection lack the barbs characteristic of many Kachemak Bay (de Laguna, 1934, Pl. 31) and some recent Bering Sea lance blades (Larsen, 1950, Fig. 55, b, 10; Nelson, 1899, Pl. LVII, a, 10, 24).

Incised designs on slate, such as the one found on a slate end blade, are rare from the Eskimo area. The most striking comparison is with the slate figurines reported by Heizer (1952, p. 266) from Kodiak Island. These figurines illustrate the head in a very schematic form;

this seems to be the case also with the design on one surface of the Hooper Bay Village end blade (Fig. 1, E). On the opposite surface of the Hooper Bay Village specimen is a large pair of eyes, as well as a relatively small pair of arms and legs (Fig. 1, D). If the interpretation of a body on the Hooper Bay Village figurine is correct, the body element is a point of differentiation between the Hooper Bay Village and Kodiak Island figurines.

The throwing board is found extensively in the Eskimo area, and the Hooper Bay Village examples are similar to most of those illustrated by Nelson (1899, Fig. 43) from the Nunivak-Norton Sound region. Throwing boards from the Hooper Bay vicinity in the University of Alaska ethnographic collections have the groove deepened near the peg, a characteristic found also in the archaeological specimen; this feature is compatible with the slight swelling at the proximal ends of the dart shafts.

#### LAND HUNTING

The nine complete or nearly complete **arrowheads** are ovate in cross section and range in over-all length from 5 to 16 cm.; each is made from antler, as is also the case with the arrowhead fragments. The barbless examples with end blades were considered by Hooper Bay Village informants to be war arrowheads (Pl. 2, 1); those with barbs and with or without an end blade were described as being used on land mammals (Pl. 2, 2-3). One point of uniformity in all the arrowheads is the tang type. All nine complete or nearly complete specimens, as well as five fragments with tangs, have a sharp shoulder and plain conical tang.

**Blunt arrowheads** are of five different types. The most common is made from wood (5) or antler (1) and is roughly the shape of an elongated diamond; from a sharp tip it swells to a point approximately one-third of the distance from the end of the tang, and from this spot it tapers gently to the wedge-shaped tang (Pl. 2, 4). The second blunt arrowhead, made from wood, is cylindrical with a sharpened tip; it has a socketed base. Another type, represented by one antler specimen, is rectangular in cross section and has a wedge shaped tang that slopes gently from the body of the arrowhead. The tang has two distinctive side notches, and the tip has a serrated edge (Pl. 2, 5). The fourth type of blunt arrowhead is simply a splinter of bone 1.1 cm. long inserted into the end of an arrow shaft. The last type is an empty rifle cartridge fitted onto the end of an arrow shaft.

**Bow** fragments in the collection are relatively scarce. Each is made from spruce and has a nock similar to the illustrated example (Pl. 2, 7). One of the three has a distinctive groove down each side, probably made to contain a sinew for strengthening. A wooden **sinew twister** was purchased from the boy who recovered it from the midden. It is similar in form to those usually found in the western Eskimo area.

**Nock ends of arrows** occur quite frequently in the midden. Two still retain bits of the lashing used to prevent the nock from splitting and to hold the feathering; one arrow has lashing 12 cm. from the end, and another has three split black features 12 cm. long, with the proximal binding of willow inner bark (?) still remaining intact (Pl. 2, 6).

The illustrated **bird spear center prong**, made from antler, has a wedge-shaped tang without a well-defined shoulder. Bilaterally barbed, the point has two barbs on one side and one on the opposite side (Pl. 2, 8). The distal end of another weapon point is made from ivory; it appears to be too heavy for an arrowhead but is of the same general shape as the bird spear center prong illustrated by Nelson (1899, Pl. LIX, 10) from the Bering Sea region.

### Comparisons

Land hunting equipment at the site is relatively scarce, and of the forms present most are either so widespread in distribution or so nondescript that comparison has little value. For this reason, the bow fragments, blunt arrows, and the one complete bird spear center prong will not be considered here. The sinew twister and the sinew-backed bow merit consideration since they, as well as wrist guards and armor plate, were introduced to St. Lawrence Island during Punuk times (Collins, 1937, pp. 223-225).

The uniformity in arrowhead tangs is noteworthy; all have square shoulders and plain conical tangs. The recent arrowheads from northern Alaska usually have sharp or sloping shoulders, two to four knobs, and/or a raised ring or bulge around the conical tang; some have the Hooper Bay Village type tang. The three arrowheads recovered by de Laguna (1947, Pl. XXVI, 1, 4, 9) from two different sites on the lower Yukon River have tangs like those from the site under consideration. The Hooper Bay Village type arrowhead tang is more similar to the pre-contact arrow tangs at St. Michael than to the knobbed tangs common from late northern Alaskan sites.<sup>2</sup>

### FISHING

The eight barbless complete fish spear center prongs for the **three pronged fish spear** are round in cross section and are usually long and thin. They have either a wedge shaped tang without a definite shoulder or a plain conical tang with a well defined shoulder (Pl. 2, 9, 10). Seven are made of antler and one of bone.

The group of **leister prongs** may possibly be bird spear side prongs and vice versa (see Nelson, 1899, Figs. 42, 44, and Pl. LIX). The side prongs usually have about six small barbs, but there are two examples without barbs and one with twenty-seven barbs (Pl. 2, 11-13). The twenty complete side prongs and seven fragments are of antler. The smaller side prongs may have been used for fish arrows.

The four **ice scoop rim** sections are thin rectangular strips of antler which curve slightly and have evenly spaced holes near one edge. On the convex surface is a shallow groove running from hole to hole (Pl. 2, 14).

Two thin spruce root strips wrapped with willow root and retaining at right angles other small spruce strips appear to be from **conical fish traps**. The fragments are quite light and are possibly from a small trap such as might be used for blackfish (Pl. 2, 15).

The two wooden **fish killing clubs** are 48.5 and 40 cm. long respectively. The former is round, 3.5 cm. in diameter, with the end shaped in from all sides to form a sharp tip. This club has a handle 14.2 cm. from the butt end. The second is ovate in cross section, 3.5 cm. wide at its greatest diameter, and has a curved up knife-like point. The proximal end tapers slightly and has a groove, probably to support a suspension thong, on one side.

<sup>2</sup>A group of eighteen arrowheads in the University of Alaska collections from St. Michael (Acc. 300 and Acc. 505) deserve mention since they are from the region being discussed. In this group twelve have sharp shouldered plain conical tangs; one has a sharp shouldered conical tang with scoring on the tang; two have wedge-shaped tangs, one of which is scored and the second, lacking scoring, has side hooks similar to Pl. 2, 5. One arrowhead has a socketed butt into which the arrow shaft is fitted; another is sharp shouldered and has a raised bulge around the tang half-way from the tip; the last type, also represented by a single specimen, has a sloping shoulder terminating in a plain conical tang.



**Net floats** are of two varieties. The first includes three bark and seven wood floats that are roughly rectangular in outline; in cross section they are up to 3 cm. thick in the center, tapering to either end where there are vertical holes for attachment to the net. Most of the above are somewhat carelessly made. The second type float is usually light, well made, and has an upward curve at each end (Pl. 2, 16). Three of the twelve are of bark, and the remainder are wooden.

Ten **net sinkers** are heavy, irregular in shape, and usually poorly made; sixteen others are small, light, and well made (Pl. 2, 17). Twenty sinkers are made from rib; five are made of antler, and one is of mammoth ivory.

All three wooden **mesh gauges** recovered are complete; two are for small nets since the gauging distance on each is approximately 6 cm., while the third has a gauging distance of 13.5 cm. It is likely that the former were used for blackfish or herring nets and the latter for seal or perhaps white whale nets.

The one probable **netting needle** (Pl. 2, 19) is antler and similar to those described by Nelson (1899, Pl. LXXIII, 1-7, p. 192). This same type implement has also been described as a snowshoe needle, and it appears impossible to differentiate between the two. This specimen has been considered to be a net mending needle on the premise that the snowshoes used at the site were of the type found along much of coastal Alaska today, a type that is short and has relatively few webbing thongs, making a snowshoe needle unnecessary; on the other hand, there is evidence of netting in all levels, suggesting that a net mending needle could have been used.

#### Comparisons

Fishing appears to have been quite as important to the Hooper Bay Village Eskimos as it was to most coastal groups, particularly those living south of Bering Straits where there are great salmon runs. There is evidence at the Hooper Bay Village site to indicate the use of the three-pronged fish spear, leister-pronged spear, probable use of fish arrows, fish traps, nets, as well as indirect evidence of the hook and line.

The eight barbless and bladeless points were probably used as center prongs for the three-pronged fish spear. Although none of the side prongs were recovered, this type implement was used in the region during the period of historic contact. Farther north the spear is found from the Okvik stage (Rainey, 1941, Fig. 15, 1-4) chronologically forward, including Point Hope Ipiutak (Larsen and Rainey, 1948, p. 78). At the latter site the three-pronged fish spear was the most important fishing device. In southern Alaska these spears are found at Port Moller (Weyer, 1930, Fig. 25), where they are described as toggles, at Kachemak Bay, (de Laguna, 1934, p. 92-93) and in the Aleutians (Hrdlicka, 1945, Fig. 209), where they are described as "catches."

It is possible that the leister prongs might have been used with a fish spear or as fish arrows; it is also possible that some were employed as bird spear side prongs. In any event these weapon points are similar to the same type side prongs from recent Bering Sea collections (Nelson, 1899, Pls. LIX, 1, LXVII, 2, LXVIII, 1, Fig. 44), and there is a similarity with an illustrated Old Bering Sea side prong (Collins, 1937, Pl. 33, 18) from St. Lawrence Island. The same general type, but with a lashing hole near the base, is found at the Punuk Island Okvik site (Rainey, 1941, Fig. 13, 12-13); in Recent Prehistoric (Geist and Rainey, 1936, Pl. 42, 3-4) on St. Lawrence Island; and in modern Bering Sea collections.

Although no identifiable fish hooks were recovered, their presence may be inferred from the number of ice scoop rims which were found, since ice scoops are used to remove freshly forming ice from a fishing

hole after the hole has been chipped open with an ice pick. Baleen ice scoop rims have been found in Old Bering Sea and Punuk sites (Collins, 1937, p. 171, p. 240); the rims appear in the Kotzebue region at approximately 1550 A.D. (Giddings, MS). Examples from the latter region as well as those from Hooper Bay Village are made of antler. The ice scoop rim of bone is considered by Birket-Smith (1929, II, p. 113) to be of comparatively recent introduction from Siberia. The ice pick used for fishing is not distinguishable from most harpoon ice picks which are used widely in the Eskimo area.

The two fragments of conical fish traps from the site can be compared only with those described in ethnographic collections, since archaeological evidence from other sites is absent. This type of fish trap is used along the lower Yukon River and adjacent sea coast by the Eskimos (Nelson, 1899, p. 184). Among the Athabaskan Indian groups in Alaska, of which the lower Yukon Ingalik is one, the conical fish trap is used widely, and it is also reported from the Aleutians (Birket-Smith and de Laguna, 1938, p. 438).

Fish-killing clubs from the lower Yukon River and Sledge Island are described by Nelson (1899, Pl. LXX, 1-2). They are also specifically mentioned in the Eyak Indian literature (Birket-Smith and de Laguna, 1938, p. 435). Birket-Smith and de Laguna (1938, p. 435) determined that clubs for killing game of one sort or another have a wide distribution among the Northwest Coast Indians, and it is possible that although a fish-killing club was used in some areas, it could not be identified specifically as such.

Evidence of the importance of netting is indicated by the number of net floats and sinkers. Since only sinkers are preserved in most sites, the floats will not be cross-compared. The most complete netting sequence is from the Kobuk River region (Giddings, MS). Here there are a few stone sinkers at the earliest site, Ahteut, dating approximately 1250 A.D.; at Ekseavik, dating a hundred and fifty years later, there are also relatively few sinkers, as is also the case at Old Kotzebue. Not until Intermediate Kotzebue, which dates approximately 1550 A.D., are many net sinkers found, and it is quite possible that the increase is related to the larger collection of Intermediate Kotzebue artifacts. On the other hand, indications are that the mesh gauge and net shuttle were not introduced into the area until the Intermediate Kotzebue period (Giddings, MS); these introductions might have stimulated netting and resulted in the abundance of net sinkers. Net sinkers first appear on St. Lawrence Island during the Punuk period (Collins, 1940, p. 554), and it is probable that the mesh gauge and shuttle arrived at a somewhat later date from Siberia.

Net mending needles such as the ones described by Nelson (1899, p. 192) from the Bering Sea region are found at Hooper Bay Village and in the Tigara midden at Point Hope (Larsen and Rainey, 1948, Table 3). The same type implement from the Ambler Island and Ekseavik sites on the Kobuk River has been described as a snowshoe needle (Giddings, MS). It is possible that such a use existed in the latter region where there was contact with Indians who used needles for mending snowshoes rather than mending nets.

## TOOLS

The **crooked knife handles** (Pl. 3, 1) are made from slightly curved pieces of antler (5) or bone (1). Four of the six handles have long curved blade slits indicating the use of metal blades; the two other handles have small (1 cm. long and .2 cm. wide; and 1.1 cm. long and .1 cm. wide), straight blade slits, but it is probable that they, too, contained metal blades. Three of the handles have drill bearing holes near the center and on one side. One also has a suspension hole at the proximal end and an engraved line with spurs extending the length of the specimen; half way down the side of this handle are two drilled holes which are quite close together.

One of the two complete **composite knife handles** is of wood; the second is of antler. The former consists of two roughly rectangular pieces of wood flat on the inner side and rounded on the outside. There is an outside groove near each end around which spruce root (?) lashing still remains intact. The end blade slot is rather wide; into it a tanged slate blade was probably fitted (Pl. 3, 2). The antler composite knife handle is ovate in cross section and slightly curving. It has a wooden peg still intact at the proximal end. The blade slot of this knife is so badly disintegrated that it is not possible to determine the type blade used (Pl. 3, 3). A purchased "composite" knife handle of antler is similar to the foregoing except that the halves are not completely separated at the base (Pl. 3, 4). One half of a composite knife handle, recovered in the third layer from the top, still retains a metal end blade. The handle of this knife is made from an imported hard wood, probably oak. A pocket knife with the blade intact was also recovered from the third layer.

A rectangular **beaver tooth draw-knife handle** made from antler has a hole drilled diagonally through two surfaces near the distal end; into this hole is fitted a small piece of wood (Pl. 3, 5). This same type handle, complete with beaver tooth and wooden wedge to hold the tooth in place, has been found at the Nukleet site on Cape Denbigh (Univ. of Alaska collections). The Hooper Bay Village specimen has a suspension hole at the proximal end and a drill bearing socket half way down one side of the handle. Two other beaver tooth knife handles are end hafted; both are of wood and similar to each other but different from the above. They have a curved oblong hand grip and, at the tip, a groove into which the tooth was fitted (Pl. 3, 6).

Five **ulu handles** were recovered from quite near the top of the deposit. Two handles, one wooden and the other antler, still retain fragments of metal blades; another wooden handle holds a complete metal blade. The fourth is slightly curved and has a slot near each end for metal arms which were riveted perpendicularly to a metal blade. The fifth handle, similar to the first three, is made of wood but lacks any trace of the blade.

The ground **slate ulu blades** fall into two types. The first, represented by four examples, has a curved cutting edge which joins the straight top used for hafting (Pl. 3, 7). The second type has a straight cutting edge and sides at right angles to the blade or sloping inward slightly toward it; the top of this form is also straight (Pl. 3, 8). The illustrated example of the second type is the only one with a notch at the side of the blade.

The one wooden **engraving tool handle** has a split base and small lashing groove (Pl. 3, 9). The bit of this tool was probably either a small animal tooth or an iron blade.

Two of the **adze handles**, one of antler and one wooden, have a single large hole near the blade end through which lashing was passed to the adze head or blade. The antler handle has a suspension hole at the end opposite the blade and a drill bearing hole half way up one side. A third handle is of antler and appears to be beach worn. It has a single hole near the top and also a heel at the back, both of which were to be used to lash the head or blade into position.

The **adze blades** are either small, flat, and intended to fit into an adze head (no adze heads were recovered) or large, heavy, and made to be lashed directly upon the adze handle. The former type blade (Pl. 3, 10) is almost indistinguishable from a type of hafted skin scraper (Pl. 4, 1) which has the same shape and is

often made from the same type of material. The thin slate blades (averaging 4.4 by 3.8 by .7 cm.) have been classed as adze blades, whereas the same shaped blades made from softer materials are considered as skin scrapers. Although some of the adze blades may be skin scrapers, it is unlikely that any of the blades made from softer materials are anything other than scraper blades. One of the two pieces of jade recovered is made into an adze blade (Pl. 3, 11). The one heavy slate adze blade that was lashed directly upon the adze handle is 7 by 5.5 by 2.5 cm. and has a beveled cutting surface slanting back .7 cm. on one side but relatively square on the other side (Pl. 3, 12).

Three different types of stone skin scrapers were recovered. The first type, an **end hafted stone scraper**, is represented by four blades and one specimen complete with handle (Pl. 4, 1). This type has a small blade similar to the small adze blades. Had one blade not been lashed to a short straight handle, all would have been classified as socketed adze blades. The only certain distinction between the small adze blades and scraper blades is that the former would not be made of soft material; the latter, however, might be made of either hard or soft stone. The second type scraper blade is flat, rectanguloid, relatively thin (Pl. 4, 2), and longer and narrower than ulu blades. This type blade was probably used in a **stone bladed two handed scraper** with a long, straight or slightly curved handle; the blade would be set longitudinally in the middle of the handle. The third type of scraper is made from a flat, usually ovate, thin section of stone which had been struck from the side of a large boulder (Pl. 4, 3). This type of tool has been described by de Laguna (1934, pp. 60-1 as a **boulder chip** and by Rainey (1939, p. 360) as a "tci-tho".

Ten of the twelve **bone scrapers** are made from a caribou scapula; each has a longitudinal blade. Although most scrapers of this type are fragmentary, one complete specimen was purchased from the boy who found it in the midden (Pl. 4, 4). Another bone scraper is made from a caribou leg bone and has a longitudinal cutting edge (Pl. 4, 5); this specimen is small but distinctive in shape. The other scraper is a small sharp-edged piece of whale jawbone (?), too incomplete to indicate the original shape (Pl. 4, 6).

Both antler **bark peeling tools** are incomplete. Each is tapered to a flat point at the end but broken off a short distance above the tip (Pl. 4, 7).

**Awls** made from bird humeri were described by Hooper Bay Village informants as being used to split grass for baskets or mats. The three bone and one antler awls are heavy in cross section and may be considered as marlin spikes. One antler handled awl from the upper foot of the midden still retains a long nail-like iron point. The wooden handled awl has a small seal tooth bit (Pl. 4, 9). When this artifact was found the sharp edge of the tooth was turned into the handle, apparently to prevent its being dulled when not in use.

The four **fire drill shafts** are each round in cross section and vary in length from 16 to 26 cm. Each is blunted at the end which came in contact with the drill board and is rounded at the opposite end which fits into the drill bearing. The two **fire drill boards** are incomplete but appear to have been made from irregularly shaped pieces of spruce. Both had also been used as cutting boards. The limestone **drill bearing inset** is ovate in cross section, has a deep well-worn hole in one surface, and a flattened opposite surface.

The complete illustrated **shovel blade** (Fig. 2 ) is the only one of its type which has been reported. The other wooden shovel fragment is a small section of the blade tip. The antler blade and its short handle are made from the flat tine over the caribou's forehead.

The bone, antler, and wooden **wedges** are numerous from nearly all levels of the site. They vary in length from 9 to 26 cm. and average approximately 12 cm. The wedges are not distinctive but constitute an important wood working implement.

The scarcity of **worked slate** at Hooper Bay Village would seem to be explained by the fact that the slate deposits are located inland where tools were roughly manufactured and then transported to the Village. The few fragments that were recovered show signs of flaking as well as sawing. The one jade fragment had also been sawed. One **stone saw** fragment, made from sandstone, was recovered (Pl. 4, 13).

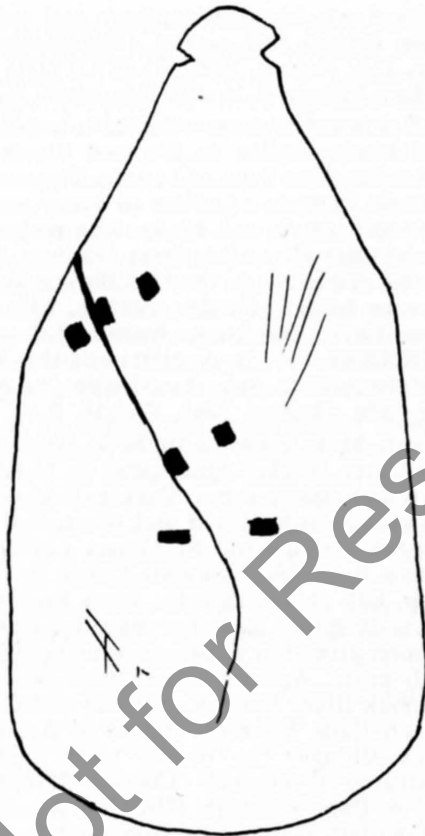


Figure 2

The **rectangular whetstones** vary in length from 3 to 9.2 cm. and in thickness from .9 to 2.3 cm. Sixteen of these whetstones were used on all four surfaces, and three were used on three surfaces (Pl. 4, 10-11).

All of the **hammerstones** are irregularly shaped except one which has been hafted. The latter is a roughly triangular shaped stone that has been pecked on all four corners about a third of the distance from the butt end. It has been lashed to a handle on the one flat surface, and the working ends show considerable wear (Pl. 4, 12).

#### Comparisons

Most prominent among the tools at Hooper Bay Village are the different forms of men's knife handles. The type occurring most frequently is the crooked knife handle. This is recognized by Collins (1937, p. 333) as a further development of the side bladed Old Bering Sea knife. The latter has a stone blade at one side near the tip of a wooden handle. The typical crooked knife does not appear on St. Lawrence Island until the Punuk period (Collins, 1937, Pl. 78, 1-3);

from this time forward it is found in northern and western Alaska from Barter Island to the Bristol Bay region (Mathiassen, 1930, Pl. 5, 10; Murdoch, 1892, Fig. 118; Nelson, 1899, Pl. XXXVIII; Larsen, 1950, Fig. 55, 5); at Hooper Bay Village it is still frequently used today.

The complete flat wooden composite knife handle probably held a double edged slate blade similar to the one illustrated by Murdoch (1892, Fig. 99, b) for the same type of handle. The more typical form of composite knife handle is made of antler or ivory and is slotted at the end to hold a relatively small end blade. The majority of the Punuk Island Okvik knife handles are of this form (Rainey, 1941, Fig. 18, 1-4), which continues to be important in the Old Bering Sea and more recent stages on St. Lawrence Island (Collins, 1937, p. 231; Geist and Rainey, 1936, Pl. 23, 6) as well as on the Alaska mainland down to historic times (Nelson, 1899, Pl. XXXVI, 8). The variation of this type, in which the base is not completely split to form two halves, is much less common than the preceding style (Rainey, 1941, Fig. 18, 5-7).

The beaver tooth knife appears to have been distributed widely among Athabaskan tribes (Birket-Smith and de Laguna, 1938, pp. 408-409) and has been found among some Alaskan Eskimos. The end-hafted beaver tooth knife handle is described and illustrated by Osgood (1940, p. 85) from the Ingalik Indians and by Nelson (1899, Pl. XXXVIII, 21, 23) from the Eskimos in the Kuskokwim-Yukon delta country. Nelson (1899, Fig. 25, 3, p. 89) also illustrates from Port Clarence a hafted beaver tooth which is described as a sharpener for iron and steel knives; however, the specimen gives the appearance of being an ordinary end-hafted beaver tooth knife. Archaeological examples of this same type tool are from the Kobuk River Eskimo sites, the Kotzebue site (Giddings, MS), and Nukleet on Cape Denbigh (Univ. of Alaska collections), as well as Hooper Bay Village. The beaver tooth draw-knife handle is described and illustrated by Osgood (1940, p. 87-88); it is also found at the Nukleet site on Cape Denbigh (Univ. of Alaska collections) and at Hooper Bay Village but is absent in the recent Bering Sea collections and from the Kobuk River sites.

The ulu handles are not distinguishable from those in most Eskimo collections, but the ulu blades are noteworthy. The typical ulu blade has a distinctly curved cutting edge. This type is found widely in Eskimo sites from Kachemak Bay to Point Barrow and east into Canada. Ulu blades with a straight cutting edge are found over most of the Eskimo area but occur more frequently in the southern Alaskan Eskimo region. They appear most often at Kachemak Bay among the Pacific Eskimo (de Laguna, 1934, Pl. 33, 10-11), in some Aleut sites (Jochelson, 1927, Pl. 16) and at Hooper Bay Village.

Engraving tool handles are found in all known cultural stages on St. Lawrence Island (Rainey, 1941, Fig. 35, 10; Collins, 1937, p. 173, p. 180, p. 237), at Point Hope Ipiutak (Larsen and Rainey, 1948, pp. 82-83), and at Ekseavik on the Kobuk River (Gidding, MS), but they are not listed by Nelson (1899).

Distribution of the heavy adze blade lashed directly upon the adze handle is almost universal among the Eskimos. For a discussion of adze blades see de Laguna (1947, pp. 154-162).

## *The Archaeology of Hooper Bay Village, Alaska*

The end-hafted skin scraper with a small ground slate blade is recorded among the Bering Sea Eskimo (Nelson, 1899, Pl. XLIX) and Ingalik Indians (Osgood, 1940, pp. 79-81; de Laguna, 1947, Pl. XIV, 48, pp. 186-187). These, however, all have crooked handles; the Hooper Bay Village specimen has a short straight handle. It is often difficult to determine whether a small blade such as would fit into a socketed adze head was actually used as an adze blade or as a skin scraper. This problem is also recognized by de Laguna (1947, p. 186), who mentions that some of the blades she considered as parts of planing adzes might have been for scrapers. It is equally possible that the adze-like scrapers from Old Bering Sea (Collins, 1937, p. 232, Pl. 42, 12-14) and Punuk Island Okvik (Rainey, 1941, Fig. 33, 3) are the same type skin working tool as the Hooper Bay Village specimens. This type scraper appears to have been absent on the Kobuk River where the discoidal shaped scraper apparently was used in its place (Giddings, MS).

It is likely that the larger flat rectangular stone blades (Pl. 4, 2) were hafted in the center of a two handed scraping tool. Such tools, with either a stone or iron blade, have been described from the Chukchee (Bogoras, 1904-9, Figs. 144-146). It is also possible that this is the same type blade found on the Kobuk River and described as a stone "axe" (Giddings, MS). It is significant that Type 1 of the Ipiutak discoidals made from flint (Larsen and Rainey, 1948, Pl. 15, 1-8) is similar in shape to the rectangular slate scraper blades from Hooper Bay Village. Hafted scrapers which possibly could be of the two handed scraper type also appear in Kachemak Bay III (de Laguna, 1934, pp. 76-77, Pl. 34, 9).

Boulder chip scrapers such as were found at Hooper Bay Village are usually ovate in outline, but they may assume the irregular shape of the stone from which they are struck. This type implement is characteristic of Kachemak Bay sites during all periods (de Laguna, 1934, pp. 60-61), is a typical tool type from some interior Alaskan sites (Rainey, 1939, pp. 358-405), and has been used by historic Indians (Rainey, 1939, p. 360; Osgood, 1936, p. 67) in the interior. Eskimos living inland on the Kobuk River apparently did not use the boulder chips extensively; rather, they replaced them with discoidal shaped scrapers which are "finished by grinding or by flaking on both sides" (Giddings, MS) and are very similar in shape to the Type 4 discoidal from the Point Hope Ipiutak site (Larsen and Rainey, 1948, Fig. 23, d).

Caribou scapula scrapers with a longitudinal blade are characteristic of Kachemak Bay III (de Laguna, 1934, p. 98); they are also present in the Yukon Indian sites (de Laguna, 1947, Pl. XV, 24-26) and are in all periods (1250 A.D.+ ) on the Kobuk River. This type scraper is considered by Giddings (MS) to be a fish scaler. Leg bone scrapers with a longitudinal edge are found in the Birnirk site at Point Barrow (Mason, 1930, P. III, 6) and in all periods on the Kobuk River (Giddings, MS). They are also found along the Yukon River during both prehistoric and historic periods (de Laguna, 1947, Pl. XV, 27). Bone scrapers made from dog leg bones were found by Collins (1937, Pl. 30, 12-14) in the Old Bering Sea culture.

Scrapers with a transverse working edge, a type described as a bark

peeling tool, are found archaeologically on the Kobuk River (Giddings, MS) and on the Yukon River (de Laguna, 1947, p. 169); bark peelers in general have a wide distribution (de Laguna, 1947, p. 169).

Bone awls are found almost everywhere in one form or another; therefore, comparisons are not very useful. At Hooper Bay Village there is a dominance of birdbone awls, but there are also a few of caribou bone or antler plus a hafted seal tooth that must have been used as an awl or reaming tool.

All the drill shafts in the collection are for a fire drill, although there are many artifacts with uniformly drilled holes indicating the use of a stone-tipped drill shaft. There are no bow drill handles that can be identified positively as such, but some of the handles or toy bow fragments may actually be for bow drills. The one drill shaft bearing recovered is made to be set into a drill mouthpiece. The center of distribution for this type, according to de Laguna (1947, p. 171), is in the Norton Sound region. One probable reason no more drill bearings were recovered is that knife handles often acted as drill bearings, and in one case the same is true of an adze handle.

Wood, bone, or antler wedges are common at the site as they are throughout most of western North America (Birket-Smith, 1929, II, Tables A, 90, B, 59).

One of the two pieces of jade in the collection is an adze blade. Although Hooper Bay is approximately four hundred and fifty miles from the only known Alaskan source of jade, on the Kobuk River, it is not surprising to find the stone used so far from its source. Jade, because of its suitability for cutting blades, was traded over wide areas in prehistoric times. Thus we find it as far east as the Mackenzie region (Mathiassen, 1930, p. 13) and south to the southern Bering Sea region.

The stone saw appears to have been a relatively recent innovation in the Kobuk River sites since it did not appear until about 1500 A.D. (Giddings, MS); at Kachemak Bay it arrived during the IIIrd period. Stone saws were apparently used in the Aleutian Islands, among the Pacific Eskimo and further south in Salish sites (de Laguna, 1947, p. 167).

Whetstones are another universal tool; the only interesting feature of the Hooper Bay Village examples is that many are small, rectangular in shape, and used on four surfaces. The only distinctive hammerstone is the trianguloid specimen pecked for hafting.

## HOUSEHOLD

Six **birdbone tubes** were recovered, but of these only one may be assumed to be a needlecase. This particular tube is fitted at one end with a wooden plug representing an animal head (Pl. 5, 1) and is almost identical with the birdbone needlecases illustrated by Nelson (1899, Pl. XLIV, 33-36). One other birdbone tube is decorated and considerably longer than most of the known needlecases. This has been described, with reservations, under the heading of snuff tube, as illustrated by Nelson (1899, Pl. XC). The three other complete birdbone tubes and one fragment are plain and could have been used as drinking tubes, needlecases, or snuff tubes.



## The Archaeology of Hooper Bay Village, Alaska

The antler **cord shuttle** closely resembles the average net shuttle although it is smaller and narrower than most. This example is complete except for a broken prong at one end (Pl. 5, 2).

Four of the miscellaneous **handles** are wooden, two are bone, and one is antler. Each is rounded to ovate in cross section, and six of the seven have lashing grooves around each end (Pl. 5, 3). The seventh handle has end notches for hafting. Such handles were probably used on buckets.

There are six **spoons**, five wooden and one antler, that have bowls which tend to be round and deep (Pl. 5, 4); the handle may be either straight or curving. Another type of spoon, of which there are six antler and two wooden examples, has a shallow, oblong bowl and relatively straight handle (Pl. 5, 5). The last type is represented by two antler examples that have rectangular bowls and off-set handles at one corner (Pl. 5, 6).

The small **fish-shaped box** (Pl. 5, 7) is a good example of the woodworking abilities of the Hooper Bay Village Eskimo. The box is partially hollowed out in the center to act as a container; the lid fits snugly into the top of the opening. Along the sides are small cross lines to represent scales of a fish, and the gills are represented by a heavy curving line on the head.

The **cutting boards** are either well-made rectangular sections of spruce or irregularly shaped pieces that have served temporarily as cutting boards. One large, much-used cutting board which differs from the above is rectangular and has a suspension hole at one end, with a crow's foot design radiating from the opening. Around the edge on both surfaces of this board is a line; in addition there is a groove on the edge surrounding the body of the board. This specimen has traces of red paint on the sides.

The twenty complete or nearly complete wooden **vessel bottoms** are all ovate in outline and range in their greatest diameter from 10 to 55 cm. with the average being approximately 20 cm. Although few of the vessel bottoms are completely flat, the majority have a flat section near the center of the bottom and flare upward slightly a few centimeters from the sides. Some of these vessel bottoms may have been shallow bowls, but judging from the sharp edges on many of the vessel sides it is more likely that they had high wooden sides with a groove to receive the sharp edges of the bottom. A few bottoms have flat sides and still retain pegs, indicating a method other than grooving by which sides were attached. The one clear-cut example of a **bowl** is oval, approximately 31 cm. long, and has an incised line around the edge of the lip. At one end there is a small rectangular projection which is for decoration only.

There are eighteen **decorated vessel bottoms**, from nearly all levels, that have designs on the under surface. Eight are too incomplete to determine their original design elements; the remaining ten vessel bottoms have one of four motifs. The most common design, at the center of the bottom of four specimens, is an X with or without a small rectangular or oval depression where the two lines cross. There are three bottoms with the crow's foot motif (Fig. 1, A); three others have two pair of curved parallel lines with short lines running from the concave side (Fig. 1, B). One half of a vessel bottom has two sweeping curved lines, with a single spur from each (Fig. 1, C). In this group also should be mentioned one bottom that has the X design on the inside and center of the bottom.

The wooden **vessel sides** vary in height from 1.4 cm., which is hardly more than a rim, to approximately 16.3 cm. The majority of the side pieces are fragmentary, but the average height for the sides is approximately 6 cm. These vessel sides were made from a single large flat piece of wood which was bent to fit the bottom and then fastened with either pegs or root lashings.

One small **cup** is complete with handle, bottom, and lashing. The handle and sides are made from one piece of wood, and at the end of the handle is the carving of a caribou (?) head. Two other fragments were found that are handles for cup-shaped containers; these examples are slightly larger than the preceding.

The one **birch bark basket** fragment is a section of the container edge. Around the edge is a band of willow stitching which fastens to the basket a decorative strip of bark (Pl. 5, 8).

Comparisons

As previously mentioned, of the six possible needlecases only one is positively identifiable as such; the other birdbone tubes may have been used as snuff or drinking tubes. The one distinctive needlecase is like those described and illustrated by Nelson from the Kuskokwim-Yukon delta region (1899, p. 103, Pl. XLIV, 33-36). Birdbone needlecases are also specifically recorded from the Aleutians (Dall, 1877, II, p. 82). Needlecases on St. Lawrence Island go back to Okvik (Rainey, 1941, Fig. 23, 1) and Old Bering Sea times (Collins, 1937, Pl. 17, 4-9), but the birdbone needlecase was introduced during the Punuk period (Collins, 1937, p. 194). De Laguna cites examples of birdbone tubes from Kachemak Bay III which may have been used as needlecases, and she refers to similar tubes from Port Moller which also may have been needlecases (de Laguna, 1934, p. 198). Birdbone tubes have also been reported from Point Hope Ipiutak (Larsen and Rainey, 1948, pp. 90-91), Ambler Island on the Kobuk River (Giddings, MS), and from the Yukon River sites (de Laguna, 1947, pp. 220-221).

The cord shuttle is probably a late modification of the net shuttle which has been considered under fishing. The former appears to be a localized trait restricted to the Hooper Bay region.

Spoons with rounded bowls like those from Hooper Bay Village are reported ethnographically from Point Hope (Nelson, 1899, Pl. XXX, 7) and archaeologically from Punuk levels on St. Lawrence Island (Collins, 1937, Pl. 78, 16). Spoons with oblong bowls, either squared or rounded at the end, are more common and are the only type reported from the Kobuk River sites (Giddings, MS); these are also illustrated by Jochelson (1925, Pl. 26, 19) from the Aleutian Islands. Similar spoons are present in the Bering Sea ethnographic collections (Nelson, 1899, Pl. XXX, 3) and in finds from Kachemak Bay and Port Moller (de Laguna, 1934, p. 201). Spoons with a rectangular bowl and an offset handle appear to be restricted to the Hooper Bay collection (Nelson, 1899, Pl. XXX, 8) and the late Aleutian finds (Jochelson, 1925, Pl. 26, 18).

The small fish-shaped box is similar to those illustrated by Nelson (1899) on Plate LXII. These boxes are described by him as being used to hold arrowpoints. This type container, usually made into the shape of some mammal or fish, seems to be limited to the Bering Sea locality during the period just prior to historic contact.

One goose leg bone, much too long for a needlecase or snuff tube, was probably used as a drinking tube. Birdbone tubes have been discussed previously.

Tent pegs are all of the type used on canvas wall tents and represent an introduction during recent times. The one tent peg found in the sixth level (30 inches) was probably intrusive into this depth.

The wooden vessels are of two types. The first is a shallow, low-sided oval bowl made from a single piece of wood. The second type container is composite, with the bottom usually made from one piece of wood and the sides from another. The former type is found in the Bering Sea region (Nelson, 1899, Pl. XXXI, 5) and among the adjacent

Indian groups (Osgood, 1940, pp. 119-120; de Laguna, 1947, Pl. XXII, 7). Containers having flat or nearly flat bottoms with sides fitted snugly against them are found in most periods of western Eskimo development (Rainey, 1941, Fig. 34, 1-2; Collins, 1937, p. 350; Giddings, MS; Larsen and Rainey, 1948, p. 111; Nelson, 1899, Pl. XXXI, 6, Pl. XXXII, all except number 7).

Decorated vessel bottoms are both plentiful and unique; although Nelson did not describe any of the containers in his collection as having decorated bottoms, he made a reference to the fact that lower Yukon Indians mark containers. Nelson (1899, p. 70) stated that "They fashion from spruce large numbers of wooden dishes, buckets, trays, and ladles, which they ornament with red and black paint, and the maker usually places his totem mark on each utensil. They make trips down the river for the purpose of selling their products to the Eskimo. . ."

Drinking cups from Hooper Bay Village are similar to those described by Osgood (1940, p. 128) for the Ingalik. Nelson (1899, Pl. XXIX, 7-8) illustrates dippers made in the same manner, but none seem as small as the Hooper Bay Village and Ingalik specimens.

The grass matting (Pl. 8, B) from Hooper Bay Village appears similar to that found by de Laguna (1947, Pl. XIX) in the lower Yukon sites and in the Prince William Sound region (de Laguna, 1947, p. 217). Nelson (1899, Pl. LXXIV, 15) also illustrates grass matting similar to the examples under consideration. Today at Hooper Bay Village mats are used primarily for kayak seats.

## TRANSPORTATION

Artifacts functionally related to travel are plentiful. Those associated with the kayak or kayak sled constitute the largest assemblage in this group. Most types of **kayak** parts are represented, each type being similar to that used today at Hooper Bay Village. The parts not found were sections of the ring around the man hole and stringers from along the bottom of the vessel. The side supports for the man hole ring are of two varieties. The first, represented by two specimens, averages 4.5 cm. wide, 1.5 cm. thick, and 14 cm. long with offset bottoms to permit mortising into the main side stringers. The tops of the pieces have an L-shaped angle cut so that they fit snugly against the man hole ring; there is also a square hole near the top and center of each piece to permit lashing to the ring. The second variety of support, also represented by two pieces, averages 12.5 cm. wide, 1 cm. thick, and 17 cm. long. The bottom of one of these side supports is missing, but the other is shaped like a broad wedge in order to fit into the stringer. Whereas the former type has an L-shaped cut along the top for lashing, the latter has only a flat surface. The second type has two lashing holes near each side at the top for attachment to the ring and a narrow semilunar groove cut on the inner surface approximately a fourth of the way from the top. One piece of the second variety has a 1.5 cm. square hole in the middle of the semilunar groove.

The **bow and stern shoes** are used at each end of the boat so that the cover will not be worn through when the kayak is drawn up on the beach. These keel shoes average 1.6 cm. wide and have holes at irregular intervals for insertion of the pegs which attach the shoes to the kayak (Pl. 5, 9). Five of the keel shoes are bone and three are antler. This same type of shoe is used on kayaks at Hooper Bay Village today.

All of the **kayak seat boards** in the archaeological collection are fragmentary, but they appear to be the same as the modern Hooper Bay Village type. These boards are approximately 80 cm. long, 5.5 cm. wide, and .8 cm. thick. About six

of these boards are placed side by side; each is stitched to the adjoining piece at the side and near the end. The completed group of kayak seat boards is placed lengthwise in the bottom of the kayak so that it forms a cradle-like seat fitting the rounded contour of the inside of the kayak. A grass mat similar to the fragment illustrated in Pl. 8, B is usually placed over the boards.

All **kayak sled uprights** are similar in size and shape to the illustrated example (Pl. 5, 10). These uprights extend from the runner to the cross pieces which hold the two runners together. On either side of the sled and above the cross pieces is a longitudinal wooden strip extending from the front to the back of the sled. Each cross piece is lashed to the longitudinal strip by a thong that passes through the hole in the sled upright and over the strip. The uprights are wedged into the runners and are spaced at approximately two foot intervals. The **kayak sled cross pieces** have an average width of 4 cm. and a thickness of 1.4 cm. Each cross piece has a pair of notches on either side near the end; these are used to bed the lashing thongs. Three of the four cross pieces have a gouged line down one side for decoration.

**Umiak sled uprights** are the same shape as those described for the kayak sled except that they are considerably larger. The average length of the kayak sled uprights is 8.1 cm., whereas the length of the one complete umiak sled upright is 13.5 cm.

Sections of two types of paddle blades were recovered, those from a **single bladed paddle** and one from a **double bladed paddle**. Of the former there are seven crutch handle pieces and two blade sections. Both blade sections have pointed tips and a central rib which shows on both sides. The double bladed paddle section has a heavy central rib down one side; the opposite surface is slightly concave and does not have a rib.

The four antler kayak **meat hooks** are similar in shape to the illustrated example (Pl. 5, 11). These hooks, according to an informant at Mountain Village, are used in the kayak for pushing meat to the front or back of the vessel when loading and for hooking onto the meat and drawing it out when unloading. The Eskimo word for the implement in this region means to push or pull.

The three wooden and three antler **kayak harpoon rests** are all similar to the illustrated example (Pl. 5, 12).

The sixteen antler and thirty-six whalebone **sled shoes** range in width from 1.5 cm. to 3 cm. and are as much as .7 cm. thick. There are irregularly spaced staggered holes in the shoes through which they were pegged to the sled runner (Pl. 5, 13).

The incomplete **breast yoke** is a curved strip of wood which is made to fit across the chest and aid in packing heavy loads. The one complete side has an end notch for lashing the supporting lines, but there is no way of telling whether the opposite side had a hole such as is present in the breast yoke illustrated by Nelson (1899, Pl. LXXVI, 14). The complete half of the breast yoke from Hooper Bay Village is 26 cm. long, 1.2 cm. thick, and up to 4.8 cm. wide. The under side is flat but the top curves slightly.

### Comparisons

The kayak parts recovered from the Hooper Bay Village midden were identified by people living there as being from the same type of kayak as that used at the Village today. This type of kayak, with an inverted V-shaped deck and a large mooring hole at the bow, is illustrated from Nunivak Island by Nelson (1899, Pl. LXXIX, 1-2). Nelson (1899, p. 220) states that "At Kashunuk, Askinuk (Hooper Bay Village), as well as along the southern border of the Yukon mouth, the Nunivak Island style of kaiak is in use. . . ." The kayak seat boards used beneath the kayak mat were not mentioned by Nelson.

A kayak sled from St. Michael (Nelson, 1899, Fig. 61) differs

slightly from the Hooper Bay Village examples. The primary difference is that the Hooper Bay kayak sleds, since they are lower, do not have small rectangular upright wood stanchions; instead, they have short stanchions with wedge shaped bottoms and round tops with a hole through one diameter. This form of sled, both the Hooper Bay Village and St. Michael models, differs from many of the simple sleds used in western Alaska for hauling boats and heavy loads. The St. Lawrence Island type has short cross pieces lashed at right angles to a pair of walrus tusks (Nelson, 1899, Pl. LXXVI, 1). A similar type of sled is found at Point Hope (Univ. of Alaska collections) and at Point Barrow (Murdoch, 1892, p. 355).

The umiak sleds in use today at Hooper Bay Village are similar to those used for kayaks except that they are much longer and somewhat wider. One such sled is approximately twelve feet long. It will be recalled that large uprights were found at the site and that these were similar to the kayak sled uprights except in size. It is noteworthy that the sled from Nunivak Island illustrated by Curtis (1927, vol. 20, p. 58) has the same kayak or umiak sled uprights as those at Hooper Bay Village even though the sled has been modified to resemble the modern built-up sled.

The double bladed paddle is used by nearly all Eskimo groups, but the single bladed paddle exists only among the western Eskimo and adjacent Indians (Birket-Smith, 1929, II, Table A, 51).

The meat hook has been included under transportation since at Hooper Bay Village it is used in the kayak to push game in front of or behind the man hole and then to retrieve it again. Meat hooks are present in all the stages of culture in the northern Bering Sea region (Raine, 1941, Fig. 17, 1-8; Nelson, 1899, Pl. LXXX, 4-5).

The wooden breast yoke from Hooper Bay Village is narrower than the one illustrated by Nelson (1899, Pl. LXXVI, 14) from Nunivak Island but is similar to a breast yoke in the University of Alaska collections from the Ingalik Indians living today at Lake Minchumina. Osgood (1940, p. 343) mentions a rawhide breast strap for heavy packing, but wooden breast yokes are not mentioned.

The two snowshoe cross pieces (Pl. 5, 14) do not tell anything about the shape of the Hooper Bay Village snowshoes since the same type of cross piece is used for both the highly specialized Athabaskan snowshoe and the simple Eskimo examples. Today the people at Hooper Bay Village use the short shoe, a type similar to that illustrated by Nelson (1899, Fig. 64) from Cape Darby, for packed snow.

#### PERSONAL ADORNMENT

Each **labret** is illustrated since no two are identical in form. The antler example (Pl. 6, 1) is ovate in cross section and 2 cm. wide at its greatest distance across. One ivory labret (Pl. 6, 2) is also oblong but has a uniform width of 1.1 cm. The limestone specimen is ovate and has a hole in the center, probably for the suspension of beads (Pl. 6, 3); badly weathered, this piece has a thickness of only 6 mm. The small, flat aragonite labret is 4 mm. thick (Pl. 6, 4) and was described by informants as being the type used for a small boy who was just beginning to wear labrets. The second ivory labret is sickle-shaped with two small bead suspension holes drilled on the side (Pl. 6, 5).

The three **earrings** are all made from ivory but each takes a different form. The elaborate earring with compass-drawn circles (Pl. 6, 6) still retains a small inset, also of ivory, at the bottom and in one corner. The ring was probably attached to the ear with a hook at the back and top; part of this hook still remains. The earring with a human face on the front (Pl. 6, 7) has a complete suspension hook at the bottom of the back. It appears as though the head was to be upside down when the earring was worn. There is a small hole at the back for the suspension of beads. The plain lined earring has, at the back, a small suspension hole at the narrower end but the hook at the opposite end is missing (Pl. 6, 8).

Only four **beads** were recovered; three of these are small blue-glass trade beads (Pl. 6, 9) and the fourth is a cylindrical limestone bead (Pl. 6, 10).

The iron **bracelet** found in the upper foot of the deposit is a narrow circular band that overlaps at each end.

The one **hunting visor** is made from spruce root and is semi-lunar in shape; at each end is a lashing hole, and on the top and in the center is a small hole probably intended for some decorative inset.

That the **spruce root hat** was used is indicated by the finding of flat, oblong pieces of antler with regularly spaced drilled holes. These were identified by Hooper Village informants as having been used to bind together the back of a spruce root hat.

#### Comparisons

The oldest labrets thus far recovered in Alaska are from the Aleutians (Laughlin and Marsh, 1951, p. 82), Kachemak Bay (de Laguna, 1934, pp. 109-112), and probably Port Moller (Weyer, 1930, p. 265). In northern Alaska labrets are absent during the entire cultural sequence on St. Lawrence Island and are relatively rare at Ipiutak, but Larsen and Rainey (1948, p. 114) suspect that they were used more frequently than the number of finds would suggest. On the Kobuk River labrets are absent at the Ahteut site; there is one "novice's labret" from Ekseavik plus another lateral labret that is suspected of being intrusive (Giddings, MS). At Kotzebue there is adequate evidence of labrets in houses dating slightly later than Ekseavik (verbal communication with J. Van Stone), and in more recent collections from coastal Alaska labrets are quite common. De Laguna (1934, pp. 204-206), in her detailed analysis of labrets, points out that the medial form was used at Kachemak Bay, in the Aleutians, and north and east as far as Barter Island and Point Atkinson. It is possible that two of the Hooper Bay Village labrets are of this type (Pl. 6, 1-2), although they are not so large and distinctive as many medial labrets. Lateral labrets are present at Kachemak Bay, the Aleutians, and along the western and northern coasts of Alaska. At Hooper Bay Village there is one of this type with a hole through the center, probably for the insertion of a set or beads. The small medial labret is probably a novice's labret (Pl. 6, 4). This flat specimen is almost identical with one illustrated by de Laguna from Kachemak Bay (1934, Pl. 51, 23). The sickle-shaped labret, worn by women (Nelson, 1899, p. 45), is apparently a late local development in the Hooper Bay Village region.

Earrings such as were found at Hooper Bay Village are described by Nelson (1899, p. 52), and seemingly this region was the center for such styles. It is significant that the relatively plain earring from

Hooper Bay Village (Pl. 6, 8) was recovered from the tenth level (60 inches), and the more elaborate form (Pl. 6, 6) was from nearer the top of the deposit.

All of the glass beads recovered, one found alone in the midden and two set into the deck of a toy boat, are pale blue and from the upper foot of the deposit (Pl. 6, 9). There is a small suspension hole at the bottom of the earring found in the tenth level (60 inches); although it is likely that the hole was for the suspension of a bead such as was found on a similar late earring from the locality, there is no way of determining the type of bead which may have been used.

Binding pieces for spruce root hats are described for the Bering Sea region (Nelson, 1899, Pl. LXIV, 20-22, Fig. 45, p. 167) but appear to be somewhat longer than the examples recovered at Hooper Bay Village.

#### Tobacco Complex Compared

All Hooper Bay Village equipment connected with the tobacco complex was recorded earlier by Nelson (1899, pp. 271-285) for the Bering Sea region; therefore, no description of the individual pieces is given here. In the Hooper Bay midden there is evidence of smoking in the seventh level, forty-two inches deep, where a wooden pipe stem was found; this is the earliest tobacco complex evidence that was discovered. In the sixth level, thirty-six inches deep, was a piece of spruce driftwood whose outermost ring dates 1836, indicating that subsequent layers were deposited after this date. Thus it seems reasonable to assume that the seventh level would date around 1800 A. D. Captain Cook (Anderson and Eells, 1935, p. 63), when he visited Norton Sound in 1778, found that the Eskimos there were familiar with tobacco although the ones in the Bristol Bay region did not use it at the time. It would appear that tobacco was introduced into the Hooper Bay region from the north about 25 years after it had been observed in Norton Sound. Rainey (1947, p. 267) is of the opinion that there was a trade in tobacco, iron, etc. across Bering Straits shortly after Russian cossacks established the Anadrsk trading post in northern Siberia in 1649. If such trading existed, the Hooper Bay region must not have felt its effects (at least with respect to tobacco) until a hundred and fifty years later.

#### TOYS

Toys are well represented in the total number of artifacts recovered. **Story knives** alone include thirty-five identifiable pieces. The story knives all take the form of the illustrated example (Pl. 6, 14); thirty-two are made of wood and three are antler. Two of the wooden knives and one of antler have suspension holes at the end. The small antler tip with a design along one edge (Pl. 6, 15) is probably part of a story knife, but this identification is not certain. The majority of the **toy bow** fragments include only a small section below the nock; all are much the same as the few sections of large bows. The **toy toggle harpoon head** with its bifurcated spur has the rude outline of the late type harpoon heads from this area. The model also includes a foreshaft carved from the same piece of wood. The **toy fish spear side prong** is like an ordinary side prong except that it is made from wood. Although the **toy**

**throwing board** is unusually small, it conforms with the full sized examples from the area except that it lacks the finger pegs. All of the **tops** are slightly ovate in outline and have a dome-shaped upper surface, which in two cases flattens toward the center. One composite top was found, half of which was in one section of test cut A and half in an adjoining section at the same level. This top had been pegged together and had a small groove near the edge in which there are still traces of red paint (Pl. 6, 16). The **toy kayak** and two **toy umiaks** look like the full-sized ones at Hooper Bay Village today. One toy boat, from the upper twelve inches of the deposit and obviously copied after a modern boat, has two small pale blue beads set into the deck. The two **pop gun** plungers (Pl. 6, 17) were described by various individuals at Hooper Bay Village as being used with a cylindrically hollowed out piece of wood or straight birdbone. The end of the cylinder was stuck into the mud a short distance, rotated, and pulled out again so that it retained a mud plug at the end; the plunger then was forced quickly into the cylinder, thus propelling the mud.

Nineteen **carvings of human faces** have the head, neck and shoulders indicated; three others have only the head represented. Six of the carvings have lines to depict the facial features, while all others have at least some contours to the face. The present inhabitants of Hooper Bay Village, both men and women, stated that the carvings of men always have the corners of their mouths turned up while those of women always have the corners of their mouths turned down. It was found that seven of the faces do not have the mouth represented, three have straight lined mouths, five have the corners of the mouth turned up (one of these has a labret at each corner), and seven have the corners of the mouth turned down. One of the latter group is covered completely with red paint and also has the breasts represented (Pl. 7, 3). One of the illustrated carvings of a man has a shallow groove all around the face (Pl. 7, 2). Twenty of the human representations are wooden, one is antler and one, ivory.

### Comparisons

The story knives described from Hooper Bay Village are the same as the "snow knives" illustrated by Nelson (1899, Pl. XCIV), but the writer has preferred to use the former term since snow knife has come to denote a different tool. The story knives are used by women to draw pictures in the sand or snow to illustrate a story, and too they are used by children to draw pictures for amusement. The practice of using story knives still continues at Hooper Bay Village, but the metal table knife has for the most part replaced the wooden or antler story knife. Nelson (1899, p. 345) observed that children of both sexes used the story knife, but the writer has seen only young girls use them today. Archaeological evidence of these knives is thus far limited to Hooper Bay Village, but Nelson (1899, p. 346) mentions that they occur from the southern limit of the Eskimo area north nearly to Point Barrow. An antler skin dressing tool from Norton Sound (Nelson, 1899, Pl. L, 15) looks very much like a story knife, and it is possible that the two may be confused.

Toy hunting equipment from Hooper Bay Village is not distinctive; similar toys are found in most western Eskimo archaeological collections. The top has a very wide distribution in both archaeological and ethnographic collections (de Laguna, 1947, pp. 221-222.).

It is possible that the grass ring (Pl. 8, C) recovered is for the ring tossing game described by Nelson (1899, p. 333), who mentions



that "a small ring of twisted grass about six inches in diameter" was used. The grass ring found at Hooper Bay Village is about this size but is made more elaborately.

The form of pop gun recorded from Hooper Bay Village is mentioned by Birket-Smith (1929, II, p. 121, p. 205) as being used by the West Greenland and Caribou Eskimos. It is also present among the Eyak Indians (Birket-Smith and de Laguna, 1934, p. 238) and has a scattered distribution in North America and Siberia.

The carvings of human faces, often extended to include shoulders, are probably dolls, which are common playthings among most Eskimo children (Birket-Smith, 1929, II, Table A, 107). Another indication that this particular type of carving represents a doll is that a child's grave excavated by the author's party near the Yukon mouth contained thirteen such figures. Archaeologically, dolls are found in most Alaskan sites but are notably absent from the Kobuk River sites (Giddings, MS). In the Hooper Bay group the one ivory doll with a long narrow nose and narrow head (Pl. 7, 1) appears to be in the Okvik doll tradition (Rainey, 1941, Fig. 30).

### CEREMONIAL OBJECTS

The group of masks and maskettes collected by Nelson in the Hooper Bay region makes it possible to identify many similar objects recovered from the midden. The one large section of a **mask** in the collection was purchased from a boy who said he found it near the test cuts. On one side is a hole for a lashing thong, but unfortunately the face is too incomplete to show definite features. It appears likely that one side of the mouth turned up and the outer corner of one eye turned down in a curved line that intersects a round raised nose. The second mask is only 10.3 cm. across and appears to be too small for wearing. This mask does not have holes on the sides for a suspension cord. In the upturned mouth there are still traces of a little red paint and below each corner of the mouth as well as above each eye there are small holes which were probably for the insertion of feathers or other appendages (Pl. 6, 18).

Each of the three **finger masks** has on one side a face with an upturned mouth and on the opposite side a face with a turned-down mouth (Pl. 7, 5). Each finger mask also has a groove around the face for the attachment of a ruff. One finger mask was held by a handle through which the index finger was slipped; another has a short handle, and the third, from the third or fourth level, was probably held by an iron ring, part of which is broken off in the wood. Two maskettes still retain traces of red paint.

The **mask appendages** are nearly all similar to those illustrated by Nelson. These include small faces, a wand, hands, caribou, seal, and a bird head model (Pl. 7, 6-10). Those found but not illustrated by Nelson are small fish, mink, bird (?), bird beak (?), and a white whale. Three other animal representations were found but cannot be identified.

### Comparisons

In the western Eskimo region the elaborate mask carvings, finger masks and mask adornments have a relatively limited distribution, being confined primarily to the Yukon-Kuskokwim delta country. Masks, etc., similar to the archaeological material are illustrated by Nelson (1899, Pls. XCV-CV) from this region, and the Ingalik Indian mask forms from the adjacent interior Alaskan region are much the same (de Laguna, 1936, pp. 569-585).

## MISCELLANEOUS

The spoon-shaped object is decorated on both sides with similar patterns of compass-made circles (Pl. 7, 11). The small straight lines running from one circle to the next are found only on the front. This specimen is quite thin and made from antler.

The small ivory carving of a white whale is complete except for the tail (Pl. 7, 12). On the flat underside two holes have been drilled near the head. These holes converge at the bottom, leaving a small ivory bridge which has been broken out. This carving was probably attached to a hunting helmet (Nelson, 1899, Fig. 45).

The flat antler strip (Pl. 7, 13) of unknown use is decorated with a series of straight and slightly curved lines within a line nearly outlining the piece.

The small carnivore tooth stuck on top of a stick (Pl. 7, 14) is of unknown use.

The cylindrical piece of antler with a slot cut through the side was probably used as a small toggle (Pl. 7, 15). It is decorated with short lines at the sides of the slot.

**One birdbone inserted into another** is a common find at the Hooper Bay Village midden. The birdbones appear to be from either ducks or geese. Each bone, without exception, has both condyles missing. There are 18 examples of one bone inserted into another (Pl. 7, 16) and eight bones with a smaller bone at one end and a piece of wood at the opposite end (Pl. 7, 17). There are also two examples in which a birdbone has only a piece of wood stuck through it. One more unusual piece has a sharp antler awl in one end, with the birdbone appearing to act as a handle (Pl. 7, 18); another has a fish spear side prong sticking through a birdbone.

The one **drum handle** (Pl. 7, 19) is made from wood and is ovate in cross section except where it narrows to a point inside the drum. The **drum rim** fragment is a thin strip of wood approximately 1.5 cm. wide with a groove cut into the side of the convex surface. The groove is for securing the leather binding which holds the drum head in position.

### Comparisons

One birdbone inserted into another (Pl. 7, 16-18), a common find at Hooper Bay Village, is a Punuk characteristic (Collins, 1937, p. 240), and, like those from Punuk sites, these bones always have both condyles missing. Similar birdbones, one inserted into another, are found in eastern Thule sites. A boy at Hooper Bay Village suggested that the smaller bone was pushed through the larger one to dislodge the marrow so that it could be eaten; this seems reasonable but does not explain why some large birdbones have a bone stuck in one end and a piece of wood in the opposite end.

Although the tambourine type drum is a widespread feature of North American material culture, the type with a handle is recorded primarily from the Eskimo (Birket-Smith, 1929, p. 201).

It should be mentioned that the cooking pots from Hooper Bay Village have been considered separately (Oswalt, 1952) and an analysis of the clay lamps will be published soon.

### Yearly Cycle

According to the residents of Hooper Bay Village their yearly cycle was formerly much the same as it is today. As soon as the ice went out in the spring, king salmon were caught in gill nets and dip nets. The latter were used in the slough, while the former were set

out in the bay and constantly attended from a kayak. The king salmon and those that run next, the dog salmon, were dried for fall and winter consumption. Ducks and geese were speared in the spring when they arrived at the breeding grounds; later in the season bird eggs were consumed, and in the fall molting birds were taken in drives.

During the summer and fall when young bearded seal and white whale frequented the bay, sporadic hunts were organized to take these animals. The young bearded seal were hunted from kayaks; usually a number of hunters went together, taking the animals by means of a detachable dart thrown with a throwing board. White whale hunting was conducted from umiaks; a number of boats usually tried to drive a school of the easily frightened whales into shallow water, where they were killed with "big spears." Formerly caribou were hunted in the fall on the flats behind the Village and toward the modern village of Bethel. During the winter seal were hunted in the open water on the adjacent Bering Sea coast.

#### Age of Hooper Bay Village Site

Using the Douglass system of tree-ring dating as it has been applied to the Alaskan Arctic by Giddings (1941), the writer has been able to date a limited number of spruce driftwood samples recovered from various levels in the midden. The oldest dated sample is from the twelfth level (72 inches deep). The date is 1690 A. D. near bark, indicating that this layer was deposited after the foregoing date. A date from the sixth level is 1836 n. b., and one from the fifth level is 1874 n. b. From these three dates it would appear that the bottom of the excavation, fifteenth level, would date shortly after 1600 A. D. This date is not for the bottom of the deposit but rather for the lowest level reached in one field season.

#### Comparison Summary

From the text comparisons it is apparent that archaeological material from the Hooper Bay Village site is much the same as the material in Nelson's ethnographic collections from the same general area. However, as thorough and systematic as Nelson was in collecting items of Eskimo material culture, he apparently did not record the following types found in the Hooper Bay Village midden and undoubtedly in use upon historic contact.

- engraving tool
- boulder chip scraper
- rectangular scraper
- leg bone scraper with longitudinal edge
- straight handled skin scraper
- stone saw
- one birdbone inserted into another
- "composite" knife, spring type
- beaver tooth draw knife
- small drinking cup
- kayak sled stanchion of the Hooper Bay Village type
- kayak seat board

The similarity between the material culture of the coastal and inland Eskimos inhabiting the Yukon-Kuskokwim river deltas and that of adjacent Ingalik Indians has long been recognized. A comparison between archaeological types at Hooper Bay Village and at Ingalik sites along the Yukon River (the latter supplemented by Ingalik ethnology) gives the following list of comparable features:

From archaeological excavations in lower Yukon River Indian sites as far down stream as Holy Cross (de Laguna, 1947)

adze head for small adze blade  
hafted hammerstone  
rectangular whetstone  
stone saw  
scapula scraper with longitudinal edge  
leg bone scraper with longitudinal edge  
leg bone scraper with transverse edge  
crooked knife  
stone inset for drill mouthpiece  
barbless and bladeless arrowhead  
arrowhead, sharp shouldered with a plain conical tang

From the *Ingalik Material Culture* (Osgood, 1940)

hafted skin scraper  
end hafted beaver tooth tool  
beaver tooth draw knife  
ulu  
flat wooden composite knife handle with end blade  
adze, large blade hafted directly to handle  
antler wedge  
wooden wedge  
wooden club  
irregular whetstone  
braided grass line  
ovate dish made from one piece of wood  
wooden bowl with high sides, sides separate from bottom  
wooden bowl with low sides, sides separate from bottom  
wooden drinking cup  
wooden dipper  
birch bark basket  
grass mat  
situla shaped clay vessel  
shallow bowl-shaped clay lamp  
fire drill shaft and board  
cutting board  
hammerstone  
toggle harpoon head  
detachable dart head  
throwing board  
bow  
three split arrow vanes  
blunt arrow with basal notches for hafting  
net shuttle  
mesh gauge  
gill net  
fishing ice pick  
fish rake (?)  
small conical fish trap  
labret  
sled shoe

crutch handle paddle  
kayak  
umiak  
red paint  
top  
tambourine drum  
ceremonial (?) doll  
face mask, plain  
finger mask

From a group of Ingalik Indian masks (de Laguna, 1936, pp. 569-585)

mask wand  
mask hand  
bird beak on mask  
fish model as mask adornment

From University of Alaska collections, Lake Minchumina Ingalik Indians

wooden breast yoke

From Nelson's remarks (1899, p. 70) about lower Yukon Ingalik Indians

totem marks on vessels

The above comparison makes it evident that exclusive of widespread general forms there are important specific artifact types common to the Hooper Bay Eskimos and Ingalik Indians. One of these types is the end-hafted beaver tooth knife which is found widely among the Athabaskan Indians. It is essentially a tool of forest-dwelling peoples but has spread to the Bering Sea coast Eskimos and inland Eskimos living on the Kobuk River. The distribution would seem to reflect a local Eskimo borrowing of a widespread Athabaskan implement. References to the beaver tooth drawknife, however, are limited to the Ingalik Indians upon historic contact and the Bering Sea Eskimo archaeological sites of Nukleet on Cape Denbigh and Hooper Bay Village; even though this type is restricted in distribution it would also appear to be a case of Eskimo borrowing.

Another connection between the Ingalik and coastal Eskimos appears to have been a trading from Indian to Eskimo of wooden vessels. Nelson (1899, p. 70) refers to such a trade and states that the maker puts his totem mark on each vessel. To judge from the number of marked vessel bottoms recovered, this trade must have been extensive and a significant link between the two groups.

The situla-shaped clay pot found among the Ingalik and the Bering Sea Eskimos from Bristol Bay to Norton Sound has been shown to have a restricted distribution in Alaska (de Laguna, 1947; Oswalt, 1952). It has been demonstrated that the type is relatively late in both groups and is an eastern Asian cultural element which spread to the Bristol Bay-Norton Sound region of Alaska; from here it spread inland and was adopted by the Ingalik.

The double bladed paddle is found throughout the Eskimo area, but it is only in Alaska when there has been contact with interior

Indians that the single bladed type has been adopted. This again would be a trait borrowed by the Hooper Bay Village Eskimos from the Athabaskans.

The similarity between Yukon - Kuskokwim delta Eskimo and Ingalik Indian ceremonial paraphernalia of face masks, finger masks and mask appendages is one of the most striking parallels between the two groups. It has been proposed by Birket-Smith (1936, pp. 179-180) that much of the richness of southern Bering Sea Eskimo culture is due to influence received from the Northwest Coast Indians. Lack of a Northwest coast prehistoric cultural sequence suggesting local development of the elaborate features of Northwest Coast Indian material culture makes it tempting to search elsewhere for some of its origins. If we look to the Bering Sea region for the mask complex there is the 1000 year old Ipiutak culture to draw upon. It had a highly developed ceremonial life and was at the same time widespread. At Hooper Bay Village we know that the specialized mask forms are at least 300 years old and that upon historic contact it was in this region that Eskimo mask ceremonialism had reached its peak. It would not be surprising, therefore, to find this roughly the center of origin for both the Northwest Coast and Ingalik Indian masks.

Types of relatively unknown archaeological age that appear at Hooper Bay Village are:

- story knife
- grass mats
- mask adornment
- conical fish trap
- beaver tooth draw knife
- end socketed beaver tooth knife
- breast yoke
- kayak or umiak sled with distinctive uprights (Pl. 5, 10)

Types that appear to be of very recent development at the site are:

- earrings like Fig 6, 6-7
- the tobacco complex
- blue glass bead (?)
- inlay on dishes.

It should be noted that both the Hooper Bay Village informants and the excavations indicated that bolas were not used in this region. Another seemingly significant absence is the single bladed slate knife blade, which quite possibly had been replaced by the metal bladed crooked knife which was found in nearly all levels of the excavated deposit.

In conclusion it may be said that the excavated part of the Hooper Bay Village site dates from approximately 1600 A. D. to the present and the artifact types are, with some important additions, the same as those described by Nelson when he visited the region in 1878. The artifact assemblage from Hooper Bay Village shows many connections with late developments in northern Alaska as well as a strong likeness to adjacent Ingalik Indian material culture; however, since at present the latter lacks prehistoric depth, separation of Hooper Bay Village diagnostic traits into those borrowed from the Ingalik and those of local development may be hypothesized but cannot be proved.

The Archaeology of Hooper Bay Village, Alaska

TRAIT LIST I

Six-Inch Levels

	1-2	3-4	5	6	7	8	9	10	11	12	13	14	15	ND	Pur.
<b>SEA HUNTING</b>															
harpoon dart head, single barb (Pl. 1, 1).....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
harpoon dart head, small light, multibarbed (Pl. 1, 2-5)....	—	2	—	—	—	—	1	—	—	2	—	—	—	—	2
harpoon dart head frags.....	—	—	—	—	—	2	1	—	—	—	—	—	—	—	—
harpoon foreshaft .....	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
harpoon socketpiece with bifurcated tang (Pl. 1, 6)	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
harpoon socketpiece with sockets at both ends (Pl. 1, 7).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
bladder dart mouthpiece (Pl. 1, 8-9).....	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—
float plug (Pl. 1, 10).....	—	—	2	1	2	—	1	—	—	—	—	—	—	—	—
harpoon blade, slate.....	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
dart shaft, proximal end (Pl. 1, 11).....	—	1	—	—	—	2	1	—	—	3	—	—	—	—	—
dart shaft, distal end flattened on two sides (Pl. 1, 12)....	1	1	—	—	—	—	1	3	—	—	—	—	—	—	—
dart shaft, distal end cone shaped with notch (Pl. 1, 13).....	—	—	—	—	—	—	1	1	—	—	1	—	—	—	—
dart shaft, distal end cone shaped .....	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—
harpoon shaft, distal end cone shaped with notch....	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—
lance shaft, distal end slotted	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
lance blade, slate (Pl. 1, 14 and 16).....	—	2	—	—	—	—	1	—	—	—	—	—	—	1	—
lance blade, flint (Pl. 1, 15)....	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
throwing board (Pl. 1, 17-18)	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—

Six-Inch Levels

	1-2	3-4	5	6	7	8	9	10	11	12	13	14	15	ND	Pur.
<b>LAND HUNTING</b>															
arrowhead, barbless with end blade slot (Pl. 2, 1).....	—	—	—	—	—	1	—	2	—	—	—	1	—	—	—
arrowhead, barbs and end blade (Pl. 2, 2).....	—	—	—	—	—	1	1	—	—	1	—	—	1	—	—
arrowhead, single barb (Pl. 2, 3).....	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
arrowhead fragments .....	—	—	1	2	—	—	3	—	—	—	1	—	—	—	—
blunt arrowhead, elongated diamond (Pl. 2, 4).....	3	2	—	—	—	—	—	—	—	—	—	—	—	—	1
blunt arrowhead, cylindrical	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
blunt arrowhead, rectangular, serrated tip (Pl. 2, 5).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
blunt arrowhead with split bone tip .....	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
blunt arrowhead, rifle cartridge .....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
bow fragments (Pl. 2, 7).....	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
sinew twister .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
arrow shaft, nock end (Pl. 2, 6)	4	4	5	—	1	2	5	4	—	4	—	1	1	—	—
bird spear center prong (Pl. 2, 8).....	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—

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	1-2	3	4	5	6	7	8	9	10	11	12	13	14	15	ND	Pur.
<b>FISHING</b>																
fish spear center prong, wedge tang (Pl. 2, 9).....	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	1
fish spear center prong, conical tang (Pl. 2, 10).....	—	1	—	—	—	—	—	—	—	—	—	3	—	1	—	—
leister side prong (Pl. 2, 11-13)	—	—	2	1	2	5	2	2	—	4	1	1	—	—	—	1
leister side prong fragments.....	—	—	—	—	2	—	1	2	—	1	—	—	—	—	—	1
fishing ice pick (?).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ice scoop rim (Pl. 2, 14).....	—	—	—	1	—	—	—	—	1	—	1	1	—	—	—	—
conical fish trap frag. (Pl. 2, 15)	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—
fish killing club.....	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—
net float, rectangular.....	—	—	—	1	—	—	2	1	3	—	2	1	—	—	—	—
net float, thin and curved (Pl. 2, 16).....	3	4	1	—	—	—	—	—	3	—	—	1	—	—	—	—
fish net sinker (Pl. 2, 17).....	3	12	2	—	2	—	—	3	2	—	—	—	—	—	—	2
mesh gauge.....	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
net shuttle (Pl. 2, 18).....	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
netting needle (Pl. 2, 19).....	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOOLS</b>																
crooked knife handle (Pl. 3, 1)	—	—	1	—	—	—	1	2	—	—	—	1	1	—	—	—
composite knife handle (Pl. 3, 2-3).....	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
composite knife handle spring type (Pl. 3, 4).....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
beaver tooth drawknife (Pl. 3, 5).....	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
beaver tooth tool handle end socketed (Pl. 3, 6).....	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—
ulu handle.....	2	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—
ulu blade, curved (Pl. 3, 7).....	—	—	1	1	—	—	—	—	—	—	2	—	—	—	—	—
ulu blade, straight (Pl. 3, 8).....	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—
engraving tool handle (Pl. 3, 9).....	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
adze handle.....	—	—	1	1	—	—	—	—	1	—	—	—	—	—	—	—
adze blade, small, thin (Pl. 3, 10-11).....	—	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—
adze blade, large, heavy (Pl. 3, 12).....	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
skin scraper handle with blade (Pl. 4, 1).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
skin scraper, blade only.....	—	2	—	—	—	1	1	—	—	—	—	—	—	—	—	—
skin scraper blade rectanguloid (Pl. 4, 2).....	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
boulder chip (Pl. 4, 3).....	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—
scapula scraper (Pl. 4, 4).....	—	—	—	—	—	1	1	1	1	—	3	2	—	—	—	1
leg-bone scraper (Pl. 4, 5).....	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
jaw-bone (?) scraper (Pl. 4, 6)	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
bark peeling tool (Pl. 4, 7).....	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—
awl, birdbone (Pl. 4, 8).....	2	1	1	—	—	—	—	—	—	—	2	—	—	—	—	—
awl, seal tooth with handle (Pl. 4, 9).....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
awl, bone or antler.....	1	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—
awl, antler handle and metal bit.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
fire drill shaft.....	—	—	1	—	—	—	1	—	—	—	1	1	—	—	—	—
fire drill board.....	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—
drill bearing.....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
shovel blade (Fig. 2).....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
wedge, antler or bone.....	4	9	3	2	8	5	8	18	—	—	10	3	3	—	—	5



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	1-2	3-4	5	6	7	8	9	10	11	12	13	14	15	ND	Pur.
wedge, wood .....	4	7	—	2	3	3	—	1	—	—	—	—	—	—	—
slate blade frags.....	1	3	1	3	2	—	1	1	—	1	—	—	—	—	—
jade, worked .....	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
slate, worked .....	—	—	1	—	1	—	1	—	—	—	—	—	—	—	—
stone saw (Pl. 4, 13).....	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
whetstone, rectangular, used on three or four sides (Pl. 4, 10-11).....	6	5	1	1	—	2	1	—	1	2	—	—	—	—	—
whetstone, hexangular .....	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
whetstone, irregular .....	4	7	6	1	1	3	3	6	—	1	2	—	—	—	—
hammerstone, irregular .....	3	6	1	2	1	1	1	1	—	—	—	—	—	—	—
hammerstone, hafted (Pl. 4, 12).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>HOUSEHOLD</b>															
needle case (Pl. 5, 1).....	2	1	1	1	—	—	—	—	—	—	—	—	—	—	—
cord shuttle (Pl. 5, 2).....	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
handle (Pl. 5, 3).....	—	1	3	—	1	—	1	—	—	1	—	—	—	—	—
spoon with round bowl (Pl. 5, 4).....	2	2	—	1	—	—	—	1	—	—	—	—	—	—	—
spoon with shallow oblong bowl (Pl. 5, 5).....	1	1	1	—	—	2	—	1	—	1	—	1	—	—	—
spoon with rectangular bowl and offset handle (Pl. 5, 6).....	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—
spoon fragments .....	2	—	—	—	—	1	—	—	—	1	—	—	—	—	—
dipper or large spoon.....	—	3	—	1	—	1	—	—	—	—	—	—	—	—	—
fish shaped box (Pl. 5, 7).....	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
cutting board .....	1	4	—	—	—	2	1	1	—	1	—	—	—	—	—
drinking tube, birdbone.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
vessel bottom, wood .....	2	4	1	3	3	1	2	3	—	1	1	1	—	—	—
side of wooden vessel.....	1	5	1	1	1	2	6	6	—	4	2	2	1	1	—
cup, wood .....	—	1	—	—	—	—	—	—	—	2	—	—	—	—	—
grass matting (Pl. 8, A).....	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—
grass kayak mat (Pl. 8, B).....	—	1	—	—	—	—	1	1	—	—	—	—	—	—	—
grass braid .....	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
container, birch bark (Pl. 5, 8).....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
<b>TRANSPORTATION</b>															
kayak stern piece.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
kayak bow piece.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
kayak ring support, wide.....	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—
kayak ring support, narrow.....	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
rib fragments .....	3	3	2	1	—	2	1	4	—	1	3	5	—	—	—
kayak bow or stern keel pieces (Pl. 5, 9).....	—	4	—	—	—	1	2	3	—	—	—	—	—	—	—
kayak seat board.....	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—
kayak sled upright (Pl. 5, 10).....	3	2	—	2	—	1	1	1	—	1	1	—	—	—	—
kayak or umiak sled cross piece .....	1	2	—	—	—	—	1	—	—	—	—	—	—	—	—
umiak sled upright.....	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—
crutch paddle handle.....	1	2	—	—	2	1	—	1	—	—	—	—	—	—	—
single bladed paddle.....	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—
double bladed paddle.....	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
kayak meat hook (Pl. 5, 11).....	—	—	—	1	2	—	1	—	—	—	—	—	—	—	—
kayak harpoon rest (Pl. 5, 12).....	—	3	1	1	—	—	—	—	—	1	—	—	—	—	—
sled shoe (Pl. 5, 13).....	9	10	6	3	2	3	2	4	—	7	2	1	—	—	2
breast yoke .....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
snowshoe cross piece (Pl. 5, 14).....	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	ND	Pur.
<b>PERSONAL ADORNMENT</b>																	
labret (Pl. 6, 1-5).....	—	—	—	—	1	1	1	—	1	1	—	—	—	—	—	—	—
earring (Pl. 6, 6-8).....	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—
glass bead (Pl. 6, 9).....	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
limestone bead (Pl. 6, 10).....	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
iron bracelet .....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
visor .....	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
binding piece for spruce root hat .....	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
<b>TOBACCO COMPLEX</b>																	
pipe stem; split, wooden (Pl. 6, 11).....	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—
pipe bowl (Pl. 6, 12).....	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
snuff tube (Pl. 6, 13).....	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
quid box .....	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
tobacco grinding mortar.....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
pipe bowl, modern.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOYS</b>																	
story knife (Pl. 6, 14-15).....	14	12	2	4	—	—	—	1	—	—	—	—	1	—	—	—	1
harpoon head with bifur- cated spur .....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
bow fragments .....	3	2	1	—	—	—	—	1	2	1	—	2	1	—	—	—	1
fish spear side prong.....	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
throwing board .....	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
blunt arrow, complete.....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
blunt arrow head.....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
top (Pl. 6, 16).....	2	1	2	—	—	—	—	1	2	—	—	—	—	—	—	—	—
kayak .....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
umiak .....	—	—	—	—	—	—	1	1	1	—	—	—	—	—	—	—	—
modern boat .....	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
grass ring (Pl. 8, C).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
pop gun (Pl. 6, 17).....	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ice skate; wood, modern.....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
carved human faces (Pl. 7, 1-4) .....	4	6	—	—	1	1	—	—	—	2	—	4	1	—	—	—	3
<b>CEREMONIAL OBJECTS</b>																	
mask (Pl. 6, 18).....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
finger mask (Pl. 7, 5).....	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
mask wand .....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
mask hand (Pl. 7, 6).....	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
carving of human head for mask (Pl. 7, 7) .....	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
carving of mink for mask .....	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
carving of caribou for mask .....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
carving of bird (?) for mask (Pl. 7, 8).....	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
carving of white whale for mask (Pl. 7, 9).....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
carving of seal for mask (Pl. 7, 10).....	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
carving of a raven head for mask .....	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
carving of fish for mask .....	1	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
carving of bird beak (?) for mask .....	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—

The Archaeology of Hooper Bay Village, Alaska

	1-2	3-4	5	6	7	8	9	10	11	12	13	14	15	ND	Pur.
<b>MISCELLANEOUS</b>															
spoon shaped object (Pl. 7, 11).....	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
white whale carving (Pl. 7, 12).....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
decorated antler strip (Pl. 7, 13).....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
tooth on end of stick (Pl. 7, 14).....	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
toggle (Pl. 7, 15).....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
trade goods: iron, dish fragments .....	2	4	—	—	—	—	—	—	—	—	—	—	—	—	—
mending and re-inforcing strips .....	2	4	2	—	1	—	1	—	—	—	—	—	—	—	—
small birdbone inserted into large birdbone (Pl. 7, 16)	1	—	—	—	1	1	4	7	—	2	1	1	—	—	—
large birdbone with small birdbone at one end and piece of wood at opposite end (Pl. 7, 17).....	—	1	—	2	—	1	—	1	2	—	1	—	—	—	—
birdbone with piece of wood inserted into it .....	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—
birdbone with sharp piece of antler inside (Pl. 7, 18)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
birdbone awl with fish spear side prong inside .....	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
handle with forked end .....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
drum handle (Pl. 7, 19).....	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
drum rim .....	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—

Not for Resale

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PLATE 1

1. Harpoon dart head
2. " " "
3. " " "
4. " " "
5. " " "
6. Harpoon socketpiece
7. " "
8. Bladder dart mouthpiece
9. " " "
10. Float plug
11. Dart shaft, proximal end
12. Dart shaft, distal end
13. " " " "
14. Lance blade
15. " "
16. " "
17. Throwing board
18. " "

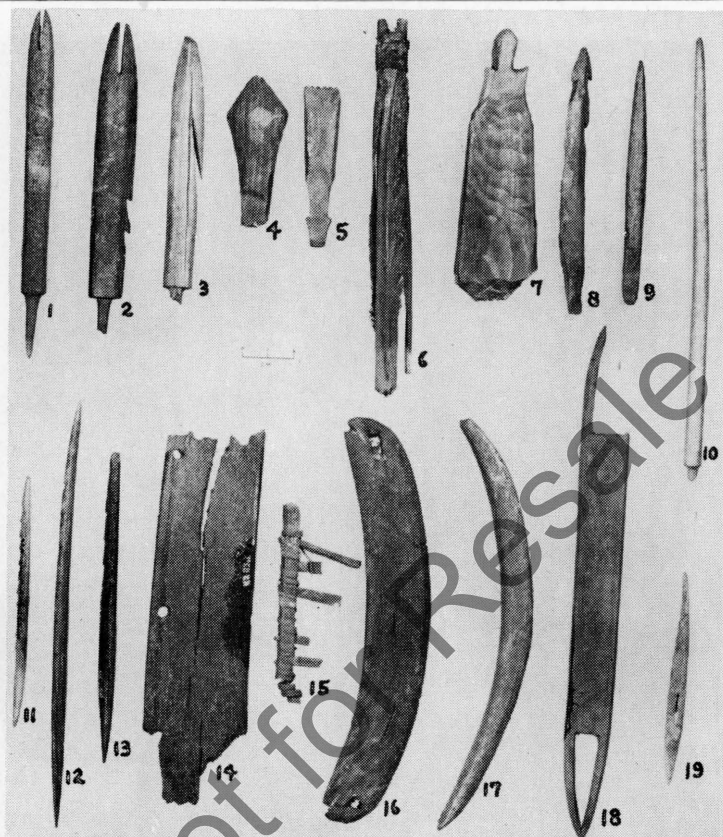


PLATE 2

1. Arrowhead
2. " "
3. " "
4. Blunt arrowhead
5. " "
6. Arrow shaft, nock end
7. Bow fragment
8. Bird spear center prong
9. Fish spear center prong
10. " " " "
11. Leister side prong
12. " " " "
13. " " " "
14. Ice scoop rim
15. Conical fish trap fragment
16. Net float
17. Net sinker
18. Net shuttle
19. Netting needle

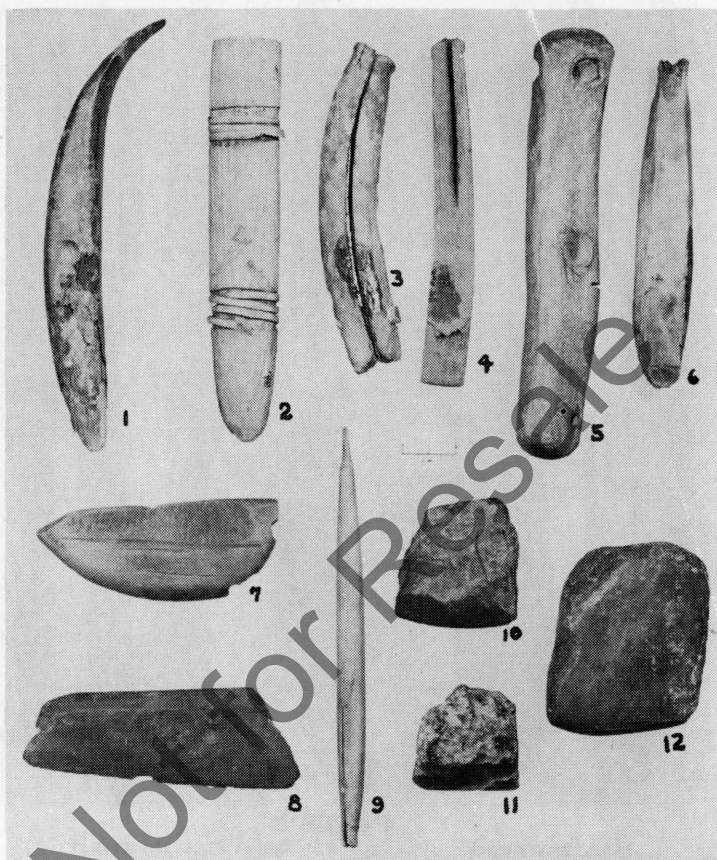


PLATE 3

1. Crooked knife handle
2. Composite knife handle
3. " " "
4. Composite knife handle, spring type
5. Beaver tooth drawknife
6. Beaver tooth tool with end socket
7. Ulu blade, curved edge
8. Ulu blade, straight edge
9. Engraving tool
10. Adze blade, slate
11. Adze blade, jade
12. Adze blade, heavy slate blade



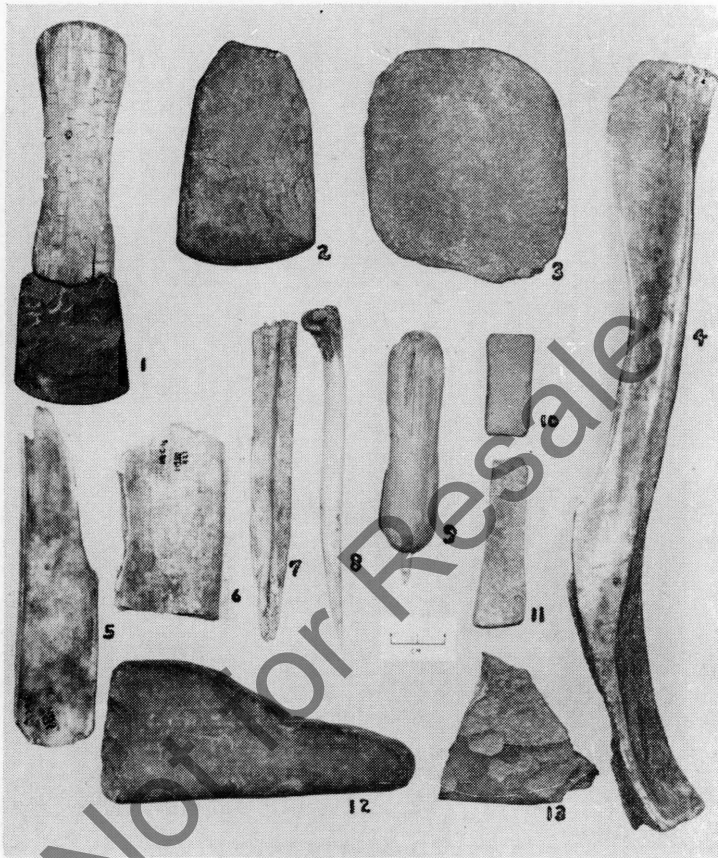


PLATE 4

1. Skin scraper handle and blade
2. Skin scraper blade
3. Boulder chip
4. Scapula scraper
5. Leg-bone scraper
6. Jaw-bone scraper
7. Bark peeling tool
8. Awl, birdbone
9. Awl, with seal tooth tip
10. Whetstone
11. "
12. Hafted hammerstone
13. Stone saw



PLATE 5

1. Needle case
2. Cord shuttle
3. Handle
4. Spoon
5. "
6. "
7. Fish-shaped box
8. Birch bark container
9. Kayak keel plate
10. Kayak sled upright
11. Kayak meat hook
12. Kayak harpoon rest
13. Sled shoe
14. Snowshoe cross piece

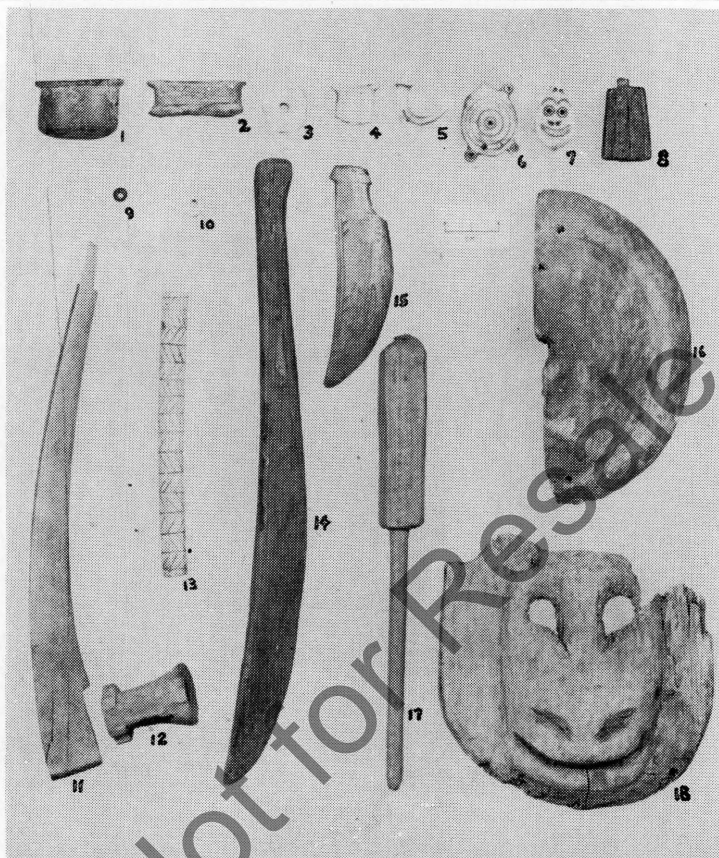


PLATE 6

1. Labret
2. "
3. "
4. "
5. "
6. Earring
7. "
8. "
9. Glass bead
10. Limestone bead
11. Pipe stem
12. Pipe bowl
13. Snuff tube
14. Story knife
15. " "
16. Top
17. Pop gun plunger
18. Mask

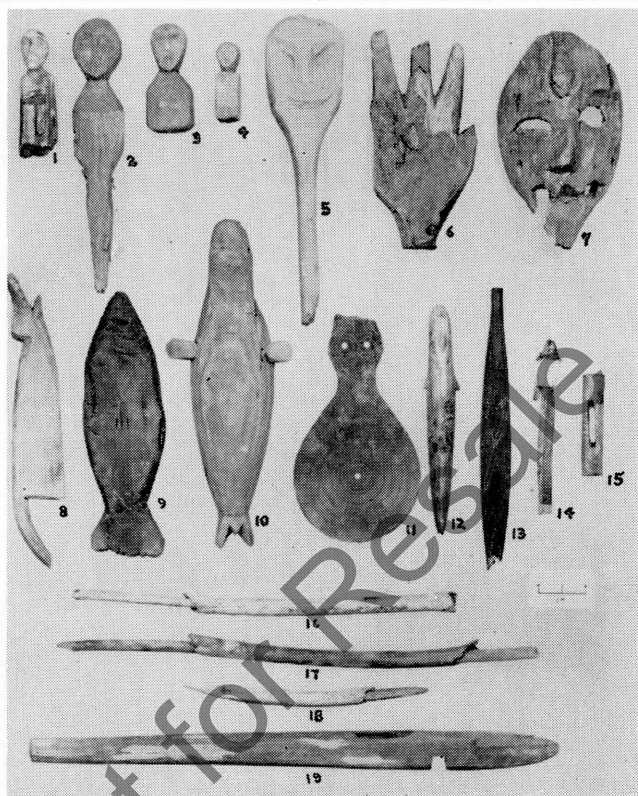


PLATE 7

1. Human face carving
2. " " "
3. " " "
4. " " "
5. " " "
6. Mask hand
7. Mask adornment
8. Bird (?) carving for mask
9. White whale carving for mask
10. Seal carving for mask
11. Spoon shaped object
12. White whale carving
13. Decorated antler strip
14. Tooth on the end of a stick
15. Toggle
16. Small birdbone inserted into large birdbone
17. Large birdbone with small birdbone at one end  
and a piece of wood at the opposite end
18. Birdbone with sharp piece of antler inside
19. Drum handle

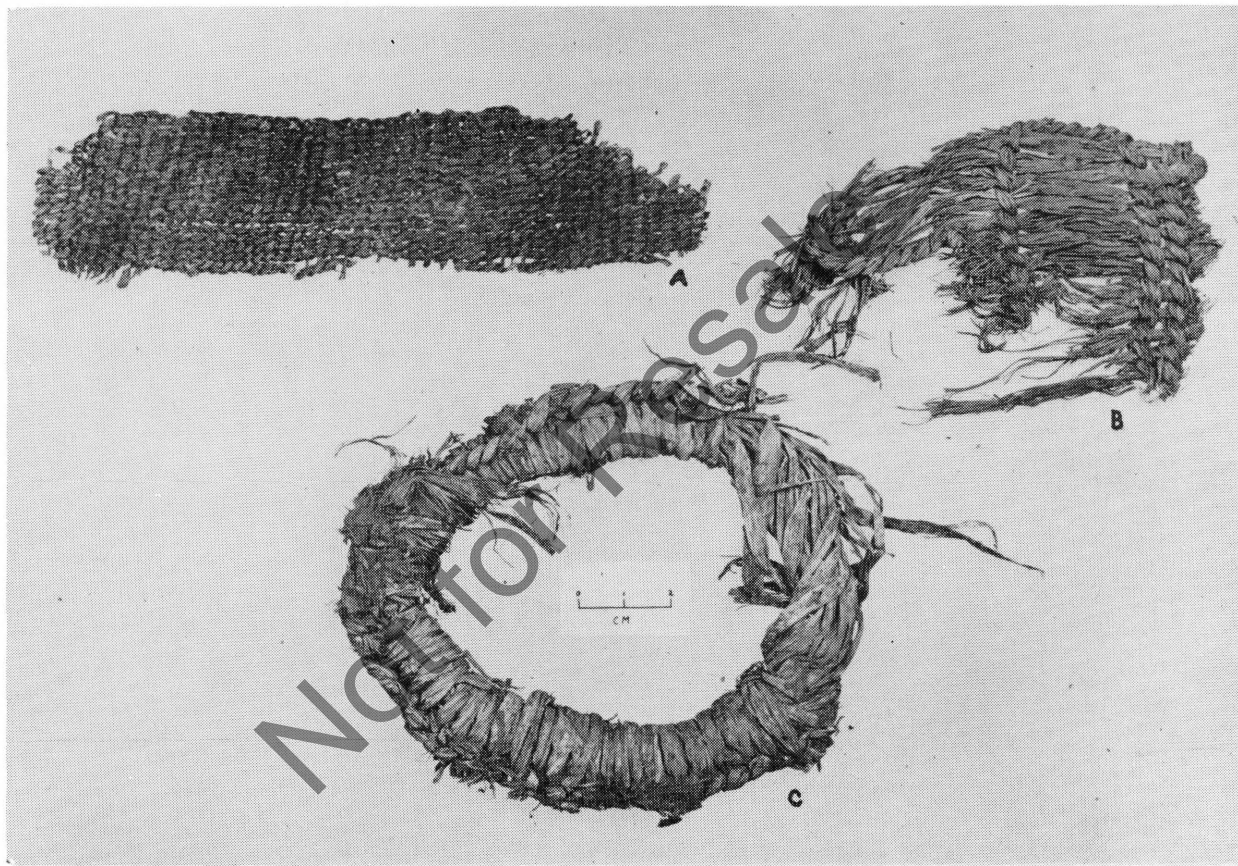


PLATE 8

A. Grass mat fragment, B. Kayak mat fragment, C. Grass ring.