

# POTTERY FROM NUNIVAK ISLAND, ALASKA

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Nunivak Island, located approximately forty miles off the western coast of Alaska between the mouths of the Yukon and Kuskokwim rivers, is archaeologically unknown. Collins (1928) visited the island in 1927 but did not carry out extensive excavations. During the summer of 1952, the writer conducted an archaeological survey of the island for the purpose of locating at least one large site for future extensive excavation.<sup>1</sup> A total of eighteen sites was observed and seven were tested extensively. The sites tested (see Fig. 1) were all similar, consisting of numerous house pits associated with midden deposit that at no site appeared to be more than six feet in depth. Testing determined the fact that all the sites belonged to the contact or immediately precontact period. For that reason, it has been possible to consider all the cultural material as a single unit. Preservation in the Nunivak sites was poor so that pottery constituted by far the greatest amount of cultural debris collected. As a result, it is possible to work out a preliminary analysis of historic and prehistoric cooking pots and lamps from the island. In this paper the Nunivak sherds will be considered with particular reference to their relationship with pottery from the Bristol Bay-Norton Sound region as well as with similar pottery finds from further north.

Although the manufacture of pottery is no longer practiced on Nunivak, many of the older people at Mekoryuk still remember the process. In 1940 Dr. Margaret Lantis obtained descriptions of pottery making from two of the older women in the village.<sup>2</sup> They stated that the clay was first rubbed to make it soft and then coarse sand and grass were mixed with it. The pot bottom was constructed first from a single piece of clay and then a coil of clay was placed around the edge of the bottom, pressed to it and smoothed with the hands. Next, another coil was placed on top of the previous one and pressed out to the proper thickness and smoothness. It should be pointed out that these were not continuous spiral coils; each row was a separate piece of clay. After the initial building up of the pot had been accomplished, more clay was put on the inside and outside and patted with the hands. No paddle or smoother was used during this stage of the operation. This clay slip was of the same consistency as the clay coils. Before the vessels were

<sup>1</sup>The archaeological survey of Nunivak Island was sponsored by the Arctic Institute of North America with funds from the United States Government and by the University of Alaska. The writer wishes to express his thanks to Mr. and Mrs. Robert Gibson, Alaska Native Service teachers at Mekoryuk, for their cooperation during the field season. The writer also wishes to express his appreciation to Mr. Wendell Oswalt who read the manuscript and offered many valuable suggestions. The photographs in this paper were taken by Mr. Wilbur Libby and Mr. Richard Smith. Figure 1 was drawn by Mr. Clark Brott and Figure 2 by Mrs. Harold Leinbach.

<sup>2</sup>The writer wishes to thank Dr. Lantis for permission to use her material on the manufacture of pottery.

fired, they were sometimes painted with a solution of burned fish eggs. For firing, a large fire was built and allowed to burn until coals were formed. Then the pot was placed on the fire and covered with willow branches. One of the old women was unable to tell Dr. Lantis the length of the firing time but the other said that a pot was set to burn when the tide went out, and fired all the time while the tide came in and went out again. As a pot began to cool, it was oiled with seal-oil which turned it black.

## DESCRIPTION

Cooking pots found at the Nunivak sites are of two shapes: Type 1, represented by 17 large sherds and one fragmentary pot, is flat-bottomed with sides that flare evenly and constrict near the neck with an additional outward flare at the rim (Fig. 2, 11, 12). In cross-section the lips of these sherds are round (8 sherds), flat and sloping inward (1), flat (8), and flat and sloping outward (1). There is a suspension hole in two sherds and the fragmentary pot contains a pair of mending holes. Twelve of these sherds are undecorated, two have a single incised line around the constricted area of the neck, while three have one or two ridges in the same area. Type 2 is represented by one large undecorated sherd. It is flat-bottomed with straight or perhaps slightly flaring sides and the lip is flat in cross-section (Fig. 2, 6).

Pots with rounded bottoms are absent from this collection while two complete flat vessel bottoms and 48 flat-bottomed sherds were recovered (Fig. 2, 1-3). Since the entire collection of Nunivak sherds did not contain a single round-bottomed fragment, the vessel types listed above have been considered as flat-bottomed.

There are 149 lip sherds that are too small to allow a reconstruction of the vessel shape. In cross-section the lip sherds are rounded (97) (Fig. 2, 11), flat (46) (Fig. 2, 6), flat and outward sloping (29) (Fig. 2, 4), flat and inward sloping (10) (Fig. 2, 5), A shaped with an outward bulge (9) (Fig. 2, 9), flat and inward sloping with a pronounced collar (1) (Fig. 2, 7), flat and outward sloping with two incised lines on the top of the lip and then A shaped with a slight outward bulge (1) (Fig. 2, 8). Nineteen lip fragments have a suspension hole near the rim and six other sherds also have holes but whether they are for suspension or mending cannot be determined.

Of the 750 potsherds in the Nunivak collection, 96 have some form of surface treatment. The types of decoration in order of frequency are check stamped (39), a pointed ridge on the outer side of the sherd near the rim (32), dots (9), lines and dots (5), lines (4), knotted grass matting impression on the bottom sherds (4), constricted bands (3).

The check stamped sherds from Nunivak are of two general types. Type 1 (8 sherds) is characterized by large checks, 4 to 6 mm. wide. Some of these (3) have rectangular checks and all have comparatively wide bands separating the checks (Pl. 1, 3, 6, 11). Type 2 (31 sherds) have small checks, 2 to 4 mm. in width with six sherds having the rectangular rather than square shape. Type 2 checks are separated by very narrow bands (Pls. 1, 7, 10, 12, 13). The Type 1 sherds average 9 mm. in thickness with the thickest being 10 mm. and the thinnest 8 mm. Those of Type 2 average 5 mm. with the thickest sherd measuring 8 mm. and the thinnest 3 mm. Except for thickness and the size of the check stamped design, there is no other way to differentiate these two types. The temper is the same in both types but tends to be finer and more evenly distributed throughout the ware than in those of the rest of the collection. All but two of thirteen check stamped rim sherds have lips that are flat in cross-section and although most of these sherds are small, none show any degree of convexity. This would seem to suggest that pots with check stamped decoration tend to be associated with the type 2 vessel shape.

Sherds with a pointed ridge on the side are uniform in appearance and were probably made by pinching the clay surface together in an even band around the pot (Pl. 1, 1). A variation on this type of decoration is two ridges

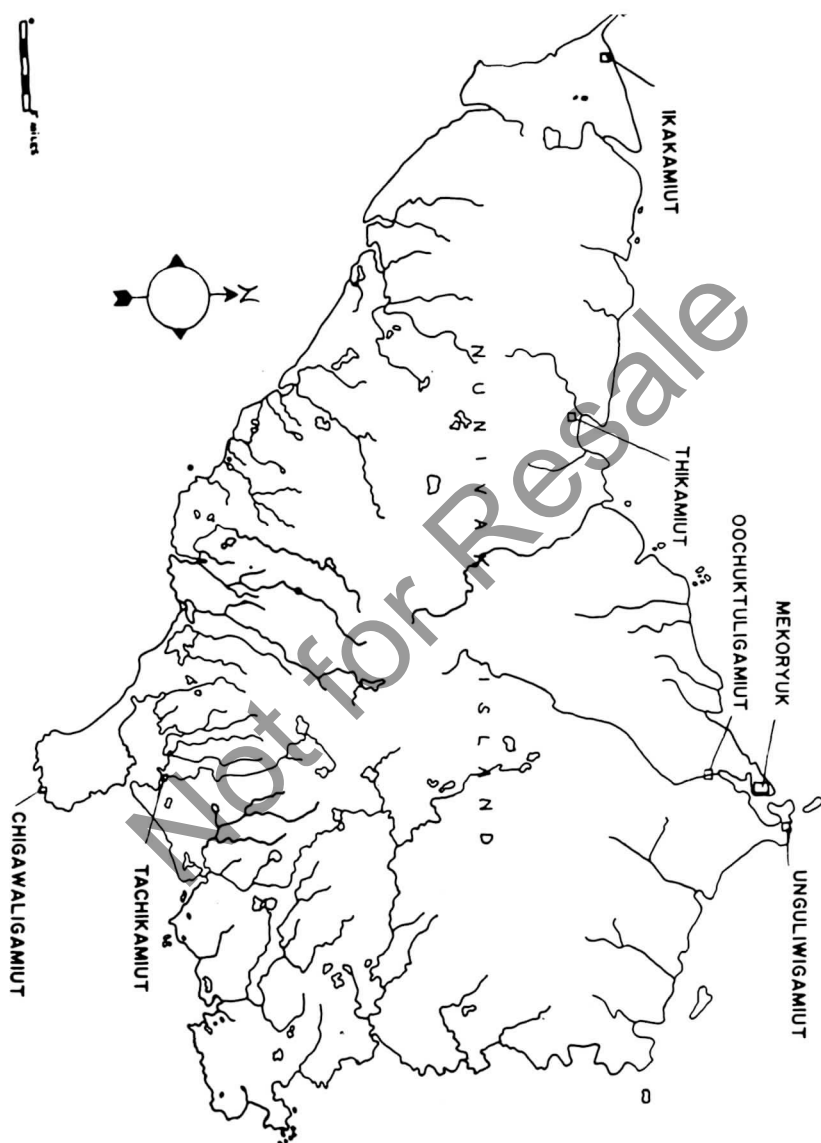


Fig. 1: Map of Nunivak Island, Alaska

with a depressed area in between (3 sherds) (Pl. 2, 1). In all cases the ridge is about 3 mm. thick. The nineteen rim sherds with this type of decoration show that the ridges are consistently located at the point where the vessels begin to constrict toward the rim and are thus always associated with the type 1 vessel shape.

Seven of the sherds decorated with dots have a single row of them just below the lip (Pl. 2, 8). On one sherd this is repeated further down the vessel side at a point just below the neck constriction (Pl. 2, 9). Another has a row of dots just below the neck constriction but none near the lip (Pl. 2, 11). Seven of these sherds have ridges modelled on the inside near the rim. These vary in number from three to five (Fig. 2, 8-9; Pl. 2, 2). Six sherds have lips that are A shaped with an outward bulge just below the lip (Fig. 2, 9). A variation of this is a lip which has a flat inner half and is then A shaped with a slight outward bulge (Fig. 2, 8).

Sherds with the line and dot combination (Yukon Line-Dot Type<sup>3</sup>) usually (3 out of 5 sherds) have a single line of varying width below the lip with a row of dots just below the line (Pl. 2, 5). On one sherd the design is repeated further down but the line is omitted (Pl. 2, 7). A single sherd is quite different in that a row of split dots occurs beneath the line. These appear to have been made by impressing a narrow stick on the edge in such a way as to give an oblong vertical impression rather than a round one (Pl. 2, 4). Two of these sherds have three ridges modelled on the inner surface near the rim while three have A shaped lips with an outward bulge beneath the lip. A variation of this occurs on one sherd which has a flat, outward sloping lip with two narrow grooves (Fig. 2, 10).

Four sherds are decorated with a single narrow incised line (Yukon Lined Type) that runs around the vessel just below the lip (Pl. 2, 3). In three of the four sherds this line is associated with the area of neck constriction.

The four bottom sherds showing grass matting impressions are from one site and may be from a single pot (Pl. 1, 4-5). The knots and twisted strands of grass are plainly visible in these sherds; the impressions may have resulted from setting a freshly made pot on a grass mat to dry.

Sherds with constricted bands all have a single band, about 1 cm. wide and slightly higher in the center than on either side, running around the vessel just below the rim (Pl. 1, 2).

All of the 750 sherds were examined to determine the type of temper used in their manufacture. The temper proved to be predominately inorganic but sherds containing a combination of organic and inorganic tempering agents are also present. The inorganic temper consists of sand, gravel, or pebbles with the coarser material being the most common; grass is the only organic tempering material. The texture of Nunivak pottery is not particularly fine nor is the tempering material distributed uniformly throughout the ware; inorganic tempering protrudes through the surface in the majority of the sherds.

To determine the thickness of the ware, all of the unexfoliated sherds were measured. The thickest was 18 mm., the thinnest 4 mm., and the average was about 8 mm.

Nearly all of the shreds are black or grey-black in color but the range is from black to buff with a few sherds that are reddish brown. The lighter sherds often have a black core. Matson has pointed out that the application of seal oil to a hot vessel immediately after firing would cause the vessel to turn black even though a hot fire had previously burned out all the carbonaceous matter in the clay, allowing it to assume its natural fired color of tan, brown, or red. (Matson, n. d.)

The thirteen lamp sherds are fragments of shallow undecorated, saucer-shaped containers. All are tempered with either gravel or pebbles.

<sup>3</sup>The type names for Alaskan pottery have been worked out by Mr. Wendell Oswalt of the University of Arizona and will be discussed in detail by him in a paper to be published in the near future.

### ANALYSIS AND COMPARISON

The Nunivak type 1 vessel shape has a disk-shaped bottom and sides that flare evenly, constrict at the neck and flare again at the mouth. This is the situla-shape and vessels of this type are widely spread from Hotham Inlet south to Kodiak Island. DeLaguna describes a pot having this same general shape from Three Saints Bay in the latter region (1939, pp. 334-43) and Heizer also mentions situla-shaped pottery from Kodiak Island (1949, p. 55). Many of the vessels from along the lower Yukon River and Hooper Bay Village are of this shape (deLaguna, 1947, pp. 226-58; Oswalt, 1952, p. 20) and Larsen reports the type from Platinum South Spit (1950, p. 180). Modern situla-shaped vessels are described by Nelson from St. Michael and Hotham Inlet (Nelson, 1899, p. 201).

Type 2 cooking pots from Nunivak Island are flat bottomed with straight or slightly flaring sides. Vessels of this type are found in

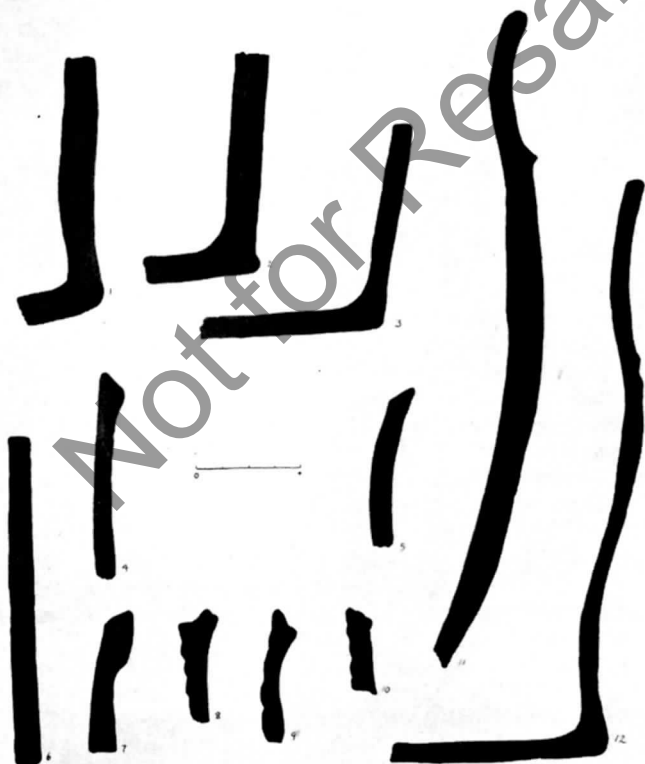


Fig. 2: Nunivak Pottery Profiles

relatively recent sites from Bristol Bay to Norton Sound, along the Kobuk River, at Point Hope, and on St. Lawrence Island (Oswalt, 1952, p. 20; 1953b, p. 11; deLaguna, 1947, Pl. XXII, 6, XXIII, 2; Larsen, 1950, p. 178; Mathiassen, 1930, p. 64; Giddings, 1952, p. 94). However, the shape is also present in an Ipiutak-related site at Chagvan Bay (Larsen, 1950, pp. 180-83) and in Kotzebue houses dating from 1450 to 1550 A.D. (Giddings, 1952, p. 94; VanStone, n. d.).

The most prevalent form of surface treatment on Nunivak pottery is check stamping; it occurs on 39 sherds. Check stamped pottery in Alaska appears to consist of two general types. The first is characterized by large square to rectangular checks (6mm. wide) often impressed on a thick, poorly fired ware. This style of surface treatment has been referred to as Nunivak Check Stamped because it was first described by Collins from sherds found on Nunivak (Collins, 1928, p. 254). Sherds of this type are widely distributed in both time and space being present in late sites at Cape Nome (Collins, 1928, p. 254), in the Old Bering Sea phase on St. Lawrence Island (Collins, 1937, p. 169; Rainey, 1941, p. 536), and in a house dating approximately 1400 A. D. at Kotzebue (VanStone, n. d.). A single check stamped sherd from the Tigara phase at Point Hope appears to belong to this type (Larsen and Rainey, 1948, Pl. 91, 11).

A second type of check stamped pottery is thin, well fired, and characterized by small square to rectangular checks (2 to 4 mm. wide). Sherd treatment of this type, referred to as Norton Check Stamped by Griffin (1953), is the dominant form of surface treatment on pottery from the upper clay levels at Iyatayet on Cape Denbigh (Giddings, 1949, Fig. 4; Griffin, 1953, p. 41). It is also reported at an Ipiutak-related site in Bristol Bay (Larsen, 1950, pp. 181-86). Since all of these sites are relatively early, the occurrence of the Norton Check Stamped design in late prehistoric and early historic sites on Nunivak is of particular interest. A pot of undetermined age from the Alaska Peninsula is covered with checks that fall within the range of the Norton Check Stamped type (see Appendix).

Tolstoy (1953), Griffin (1953), and Collins (1937) have stressed the wide distribution of check stamped pottery throughout eastern Asia.

Sherds with a pointed ridge near the rim, of which there are thirty-two in the Nunivak collection, are very restricted in their distribution, being reported only from Hooper Bay Village (Oswalt, 1952, p. 20).

Nine sherds are decorated with dots, a type of decoration that is reported only for pottery from Hooper Bay Village (Oswalt, 1952, p. 20). Dots combined with lines, which occur on five sherds, are more widely distributed but, with one exception, still confined to late sites in the Bristol Bay-Yukon-Kuskokwim region. The type is reported from Hooper Bay Village (Oswalt, 1952, p. 20-21), from Platinum South Spit (Larsen, 1950, p. 180) and from sites along the lower Yukon River (deLaguna, 1947, pp. 142-49). The one occurrence of this type in northern Alaska is at the Igloo Point site on Seward Peninsula (Oswalt,

1953b, p. 9). Split dots, like those on a single Nunivak sherd, are reported from Hooper Bay Village and the lower Yukon River (Oswalt, 1952, p. 21; deLaguna, 1947, Pl. XXIII, XXIV).

Nine of the sherds decorated with dots and line dot combinations have a series of modelled ridges on the inside near the rim. This is a trait reported from a number of Alaskan pottery-bearing sites. A pot from St. Michael described by Nelson (1899, p. 202) has grooves and ridges on both the inside and outside. Pots from the lower Yukon River are described as having inside ridges and grooves (deLaguna, 1947, pp. 142-49) as are sherds from St. Michael and Hooper Bay Village (Oswalt, 195, pp. 21, 28). Lip sherds that are A shaped with an outward bulge beneath the lip are associated at Nunivak exclusively with dot and line-dot decoration. Similar lip treatment occurs at Hooper Bay Village and along the Togiak, Kuskokwim, and lower Yukon rivers (Oswalt, 1952, p. 20; deLaguna, 1947, p. 228.)

Pottery vessels with one or more encircling lines are rather widely distributed, occurring at Hooper Bay Village, along the lower Yukon River, at St. Michael, on St. Lawrence Island, at Cape Nome (Oswalt, 1952, pp. 20-21, 28; deLaguna, 1947, pp. 142-49; Oswalt, 1953b, pp. 6, 10), and on Nunivak Island.

Grass matting impressions on vessel bottoms appear to be restricted to southern Alaska, occurring in the Togiak and Kuskokwim river regions (deLaguna, 1947, p. 228) and at Hooper Bay Village (Oswalt, 1952, p. 20).

Sherds with constricted bands just below the rim, of which there are three in the Nunivak collection, have so far been reported only from Hooper Bay Village (Oswalt, 1952, p. 20).

The thirteen lamp sherds from Nunivak are all fragments of saucer-shaped lamps, a type limited in distribution along the coast of Alaska and shown by deLaguna (1947, p. 233) and Oswalt (1953a, pp. 19-22) to have been derived from the conical bottomed, wide mouthed clay lamp common during the early phases on St. Lawrence Island and at the Ahteut site along the Kobuk River.

The oldest saucer-shaped clay lamps are from the Ekseavik, Onion Portage, and Kotzebue sites (approximately 1400-1450 A. D.) in the Kobuk River region (Giddings, 1952, pp. 121-22; VanStone, n. d.) and the type also occurs in Kotzebue houses dating approximately 1550 A. D. (Giddings, 1952, pp. 94-95). In the Bristol Bay and Norton Sound regions saucer-shaped lamps appear to be late (Larsen, 1950, p. 180, Pls. 13, 18, 19), the oldest known specimens being from Hooper Bay Village where they were found at the bottom of an excavated layer dating approximately 1600 A. D. (Oswalt, 1953a, p. 29).

Very little can be said concerning the method of manufacture of Nunivak pottery except that since most of the sherds have a tendency to exfoliate in layers, the vessels were probably made by the patch modelling method. However, the description of pottery making during recent times, obtained by Lantis and discussed at the beginning of this paper, would seem to indicate a method of manufacture that combined the coiling and patch modelling methods.

Although most Alaskan pottery appears to have been made by

patch modelling, the coiling method is also reported, being described for recent pottery from St. Michael (Nelson, 1899, p. 201) and for one sherd from the Old Bering Sea phase on St. Lawrence Island (Collins, 1937, p. 168).

Inorganic material, predominantly gravel and pebbles, was the dominant type of tempering in the Nunivak pottery collection. Temper is not generally a valid criterion for cross-comparing Alaska pottery and sherds containing only an inorganic tempering agent are reported from many places along the Alaskan coast (deLaguna, 1934, p. 68; Weyer, 1930, p. 263; Collins, 1928, p. 254; 1937, p. 167; Oswalt, 1952, p. 26; 1953b, p. 6).

An interesting fact was observed as a result of comparing surface treatment of Nunivak pottery with the tempering agents. Table I shows that the two types of check stamped ware are tempered primarily with the finer materials while the rest of the decorated sherds are characterized by heavy, inorganic temper. Coarse temper is generally characteristic of the plain pottery also.<sup>4</sup> Since all the pottery under consideration is presumably of the same age, the significance of this relationship is not clear. However, the writer believes that further excavation in Nunivak middens will show that the check stamped ware, though existing into historic time contemporaneous with the other pottery styles, extends backward in time further than any other decorative style and may be the oldest pottery type on the Island. This seems quite likely since it is one of the oldest types on the adjacent mainland.

TABLE I  
Surface Treatment and Temper Comparison

Surface Treatment	Pebbles	Gravel	Pebbles and Grass	Gravel and Grass	Sand	Sand and Grass
Norton Check Stamped	1	4			17	9
Nunivak Check Stamped		1			5	2
Yukon Line-Dot	6	8				
Yukon Lined	2	2				
Pointed Ridge Near Rim	17	14	1			
Grass Matting Impression on Vessel Bottom		4				
Constricted Bands		3				
Plain	304	206	101	33	5	5

The similarity between certain pottery styles of the Bristol Bay-Norton Sound region of Alaska and those from Japan, the Kuriles and Kamchatka has been pointed out by deLaguna (1947) and Oswalt (1952; 1953c). The major point in this resemblance is the presence of the situla-shaped vessel decorated with horizontal lines and dots, split

<sup>4</sup>In a collection of modern pottery obtained by Dr. Lantis on Nunivak Island in 1940, a single check stamped sherd is different from all the others in the collection because it "was made of extremely pure clay that contained only a few small quartz grains and iron lumps as impurities". (Matson, n. d.).



dots, shell-made striations, zig zag lines, rim knobs and horizontal ridges and grooves in both areas. The fact that these decorative styles are relatively early in eastern Asiatic sites and late in Alaskan sites indicates that the diffusion of the elements was from west to east (Oswalt, 1953b, c). As can be seen, several decorative styles found on Nunivak Island occur in the above list. Since check stamped pottery is old in both eastern Asia and Alaska, it is doubtful whether the type can be considered as belonging to this flow of pottery elements from the Japan-Kurile-Kamchatka region to Alaska that apparently took place relatively late in the prehistoric period.

Perhaps the most obvious point to be made in connection with the Nunivak pottery collection is the close resemblance to pottery from Hooper Bay Village. Not only are the vessel shapes the same, but all the types of surface treatment occurring on Nunivak vessels, with the exception of check stamping, are also characteristic of Hooper Bay pottery. It is thus apparent that along with the Hooper Bay pottery, that from Nunivak fits into the Bristol Bay-Norton Sound pottery category as defined by deLaguna (1947, pp. 228-29). However, the presence of check stamping as the dominant decorative motif suggests the influence of more widely distributed pottery techniques and represents the survival of an older Eskimo pottery style.



Fig. 3: Pottery vessel from lower Manwhynuk Lake.



Fig. 4: Pottery vessel from Nelson Island. This pot stands 17.5 cm. high and has a diameter at the mouth of 16.5 cm.

## APPENDIX

This section is devoted to the description of two previously unpublished pottery vessels, one of which is in the University of Alaska collection, while the other was briefly on loan to the University.

From Kilik Camp on the Lower Manuwhyenuk Lake at the head of the Alaska Peninsula, is a large, flat bottomed vessel with sides that flare to approximately a quarter of the distance from the mouth and then constrict toward the rim (Fig. 3). The pot is tempered with sand and grass and has Norton Check Stamped decoration.

A flat bottomed pot with flaring sides that constrict slightly at the neck was purchased from Mr. Frank Waskey who collected it on Nelson Island (Fig. 4). The vessel is characterized by Yukon Line-Dot decoration but since it is complete, tempering materials used can not be determined. The University Museum possesses a number of sherds obtained by Mr. Waskey on Nelson Island which have Yukon Line-Dot and Nunivak Check Stamped decoration. This would seem to suggest that historic and recent-prehistoric pottery from near the mouth of the Kuskokwim River will be closely related to that found in the Nunivak sites.

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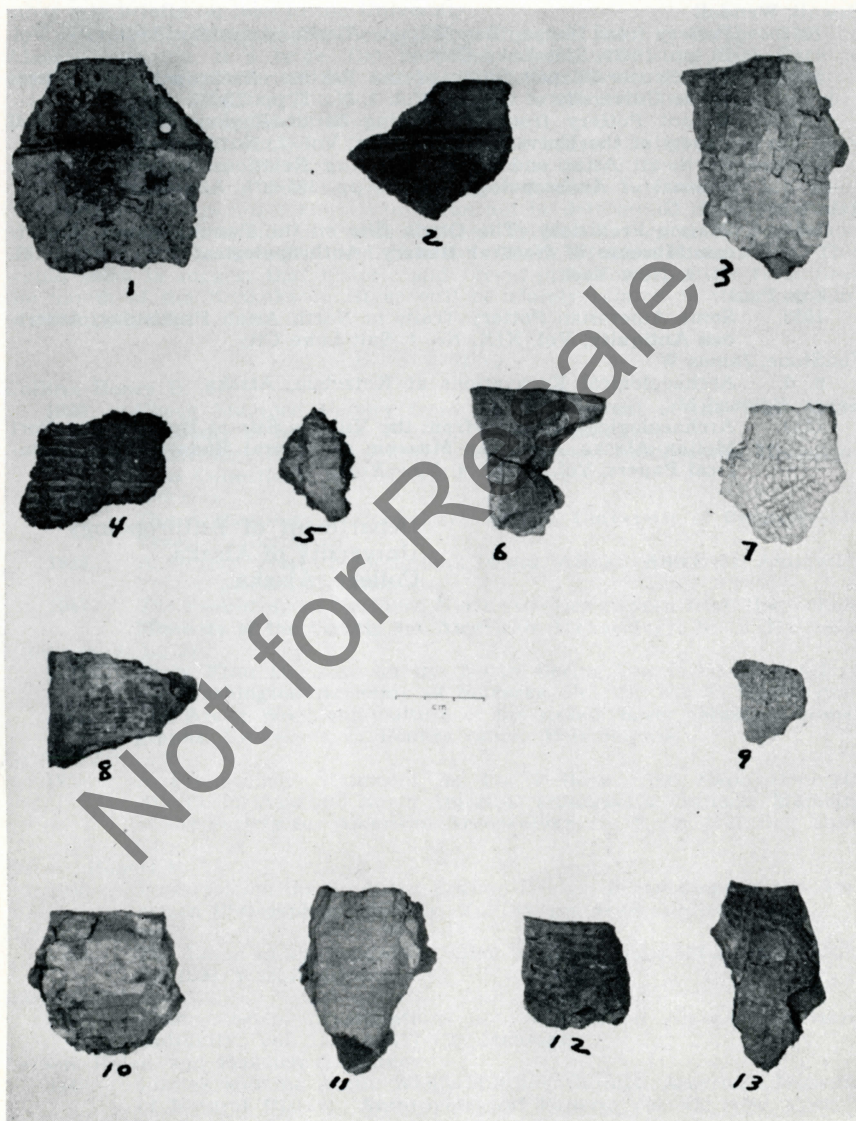


Plate 1: Sherds from Nunivak Island, Alaska



Plate 2: Sherds from Nunivak Island, Alaska