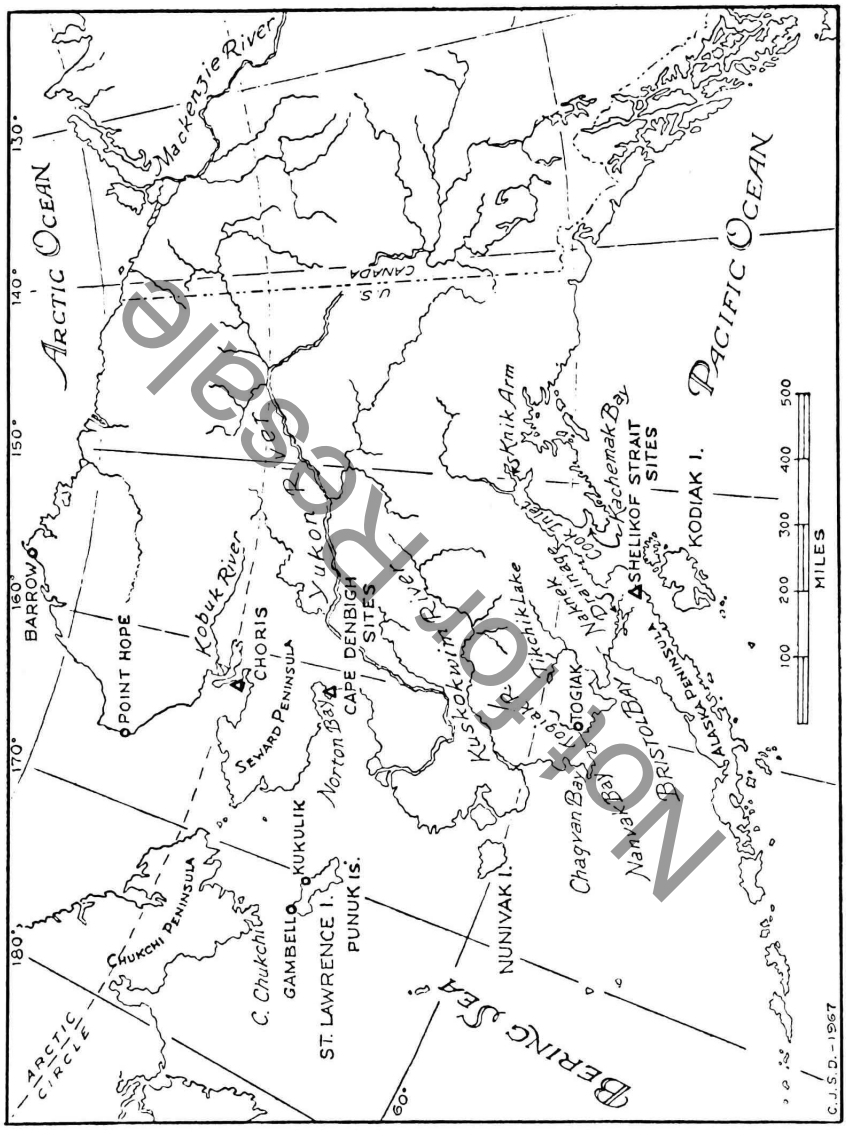



Figure 2. Some Locations Mentioned in the Text.

# THE PREHISTORIC POTTERY OF SOUTHWESTERN ALASKA

By

D. E. Dumond

General discussions of Eskimo pottery have been presented previously, notably by de Laguna (1940) and Oswalt (1955). The concern of de Laguna was especially with questions of far-reaching historical significance involving the assessment of cultural similarities and probable connections with non-Alaskan peoples both in the New World and in Asia. Oswalt attempted a precise definition of types valid for Eskimo pottery throughout Alaska. The present attempt duplicates neither of these, being much less far-reaching than de Laguna's, more summarizing than Oswalt's. It is, probably, more superficial than either; but with the luck of him who waits the longest, it makes use of information which was not available to either of them.

Specifically, this paper attempts a synthetic overview of the prehistoric pottery sequence in coastal Alaska south of Seward Peninsula, adding to that area St. Lawrence Island and the tip of the Chukchi Peninsula. Presumably this is an area of some cultural validity, in that it coincides closely with that of the speakers of the Western Eskimo language, also designated Yupik.

This entire zone will be referred to here as the southern Eskimo area, in distinction to a northern area beginning north of Bering Strait. The material will be treated according to two sub-areas: that of the Bering Sea coast; and that of the Pacific coast. Within each of these, treatment will be chronological, with temporal placements based chiefly upon radiocarbon dates.

Before taking up pottery from specific locations, however, a statement regarding prehistoric Alaskan ceramic technology in general seems advisable.

Stated briefly, the level of the technology was low. Although not infrequently pieces of well-fired, hard pottery were

produced - - both in early and in late times - - firing control was generally far from precise. As a result, the color in almost all sherd collections varies from lighter and sometimes reddish shades resulting from imperfect oxidation, to more common darker and sometimes blackish shades resulting from uneven smudging. Hardness may vary substantially from the bottom of a single pot to its top, or from one side to another. Because these characteristics are shared by virtually all Alaskan pottery, neither color nor hardness will be considered further here.

In most of the area under discussion, the tempering material is of major chronological importance. Unfortunately, the addition of temper to the clays may be so haphazard that visible temper will vary from one side of a pot to the other. Consequently, it is in practice often not possible to assign isolated sherds to even general classes of paste for which temper is a diagnostic element. And when the pottery to be classified is plain, as it frequently is, and when vessel shapes involved are simple and similar, as they are, confusion is worsened. For these reasons, any descriptive statement would benefit from statistically supported tabulations of characteristics. These have not been compiled in the present case, chiefly for want of necessary data. This shortcoming should be kept in mind, and the descriptive statements herein must be recognized as impressionistic observations of central tendencies.



### Bering Sea

From this area, there are four sequences or near-sequences which cover a considerable span of time and which will be relied upon principally. The first of these is from St. Lawrence Island and the nearby Asian coast (Collins 1937; Geist and Rainey 1936; Rainey 1941; Rudenko 1961). The second is from Norton Bay (Giddings 1964; Griffin and Wilmeth 1964). The third is from the Chagvan Bay area (Ackerman 1964; Larsen 1950). The fourth is from the area of the Naknek drainage to the south (Dumond 1962; 1964; 1965). Other areas represented by smaller collections or known for shorter periods of prehistory will also be mentioned (as in Kowta 1963; Oswalt 1952; VanStone 1954).

### Earlier Wares

The earliest dated pottery from the Bering Sea is the collection from Norton Bay which is assigned by Giddings (1964) to the Norton culture, and which has been described by Griffin and Wilmeth (1964). Based on the most recent C-14 determinations (770 B.C. ± 130, M-1260; Crane and Griffin 1964; 255 B.C. ± 110, P-13; Rainey and Ralph 1959), the Norton manifestation will be taken to fall sometime between 700 and 200 B.C.

The bulk of Norton pottery has been divided by Griffin and Wilmeth (1964) into two decorated types--Norton Linear Stamped and Norton Check Stamped. In paste characteristics these two types are similar: Temper is predominantly plant fiber (76%), although some examples (16%) exhibit sand grains. Thickness ranges from 3 or 4 mm to more than 10 mm, with the mean around 7 mm. Fracture is said to be irregular, flaking, frequently with splitting. The whole vessel shapes are not described by Griffin and Wilmeth (1964), but most rims are said to be concave or bowl-like, and walls are said to flare outward from a flat base. Sherds examined for this paper suggest the presence of at least two forms, one of them a restricted vase-like jar (Figure 3, a), and the other unrestricted and more bowl-like (Figure 3, b). Giddings (1964: 169) reports the presence of two flat clay lamps, without decoration.

Although the two decorated types apparently were associated with each other at the Norton site, the same association is not consistent throughout the area to be treated here. Relationships of the two types will therefore be considered separately.



### Linear Stamped Wares

At the Norton type site, the linear decoration has been described as composed of lands ranging in width from .5 to 2 mm (mean, 1 mm); troughs range from .5 to 3 mm (mean, 1.5 mm). These were presumably made with a grooved paddle (Griffin and Wilmeth 1964). Vessel shape was that of Figure 3, b, and possibly that of Figure 3, a.

Although the Choris Peninsula is not within the southern area, it seems reasonable to digress far enough to mention the pottery recovered from the Choris culture houses on Choris Peninsula by Giddings in 1956 and 1958 (Giddings 1957; 1967). Charcoal from the houses has been dated at around 700 B.C. (677 B.C. ± 125, P-96; 688 B.C. ± 117, P-203; Rainey and Ralph 1959). A few Choris sherds examined at first hand are tempered with what seems to have been hair, and are about 8 mm in thickness. Lands and grooves are about 1 mm wide. That is, the sherds are within the Norton range. It is customary to consider Choris to be somewhat older than Norton, and this precedent will be followed here, despite the lack of clear radiocarbon evidence in this regard.

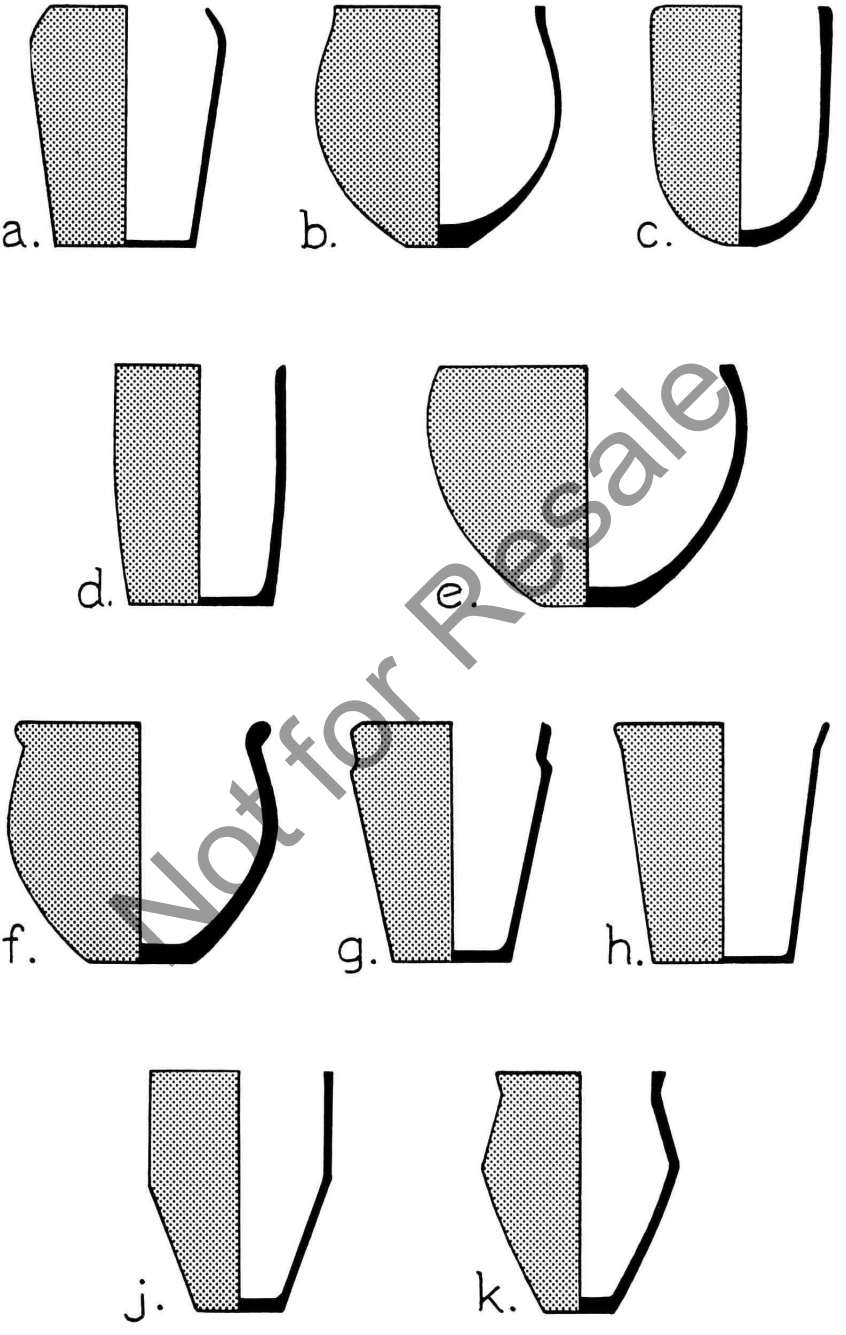
Back within the area of interest, and moving southward, linear stamped pottery within the range of Norton ware, with hair temper, has been recovered by Ackerman (1964) at Chagvan Bay, and apparently by Larsen (1950) at Nanvak Bay. Some of the Chagvan Bay sherds were from a trench which also yielded charcoal which was radiocarbon dated at A.D. 660 ± 250 (WSU-117; Ackerman 1964), and apparently accompanied a Norton-like assemblage of stone artifacts.

Still farther south, similar surface decoration is represented in one find in the Naknek drainage, apparently limited to the sherds of a single pot. The sherds were in possible association with charcoal dated about A.D. 725 ± 130 (I-521; Trautman 1964); it must be emphasized that this association is doubtful. Thickness of the sherds is less than 10 mm. Vessel shape could not be determined.

So far, mention has been made of thin ware, generally tempered with fiber. Farther to the northwest, however, there



Figure 3. Some Vessel Shapes Mentioned in the Text. The proportions of each pot are accurate, although the scales of different vessels vary for purposes of illustration; all were drawn from actual examples unless otherwise indicated. a, Smelt Creek phase, Naknek drainage. b, Norton culture, Iyatayet, Cape Denbigh (hypothetical reconstruction from examination of sherds). c, Old Bering Sea, St. Lawrence Island (hypothetical reconstruction from description by Collins 1937 and Oswalt 1955). d, Brooks River Weir phase, Naknek drainage. e,f, Brooks River Camp phase, Naknek drainage. g, Yukon River (after de Laguna 1947: Plate 23, 3). h, Pavik phase, Naknek drainage. j, k, Kodiak Island (after Clark 1966: Fig. 7, and de Laguna 1939: Plate 19).



is a related type in that which Oswalt (1955) has termed St. Lawrence Corrugated. On St. Lawrence Island itself, sherds of this pottery were recovered from the houses of the Hillside site at Gambell, some of them from beneath and between the floor stones in contexts believed to be those of Okvik or Old Bering Sea style 1. Decoration is in the form of broad grooves, apparently made by paddling (Collins 1937: 168) and described by Oswalt as about 3 to 6 mm wide, separated by lands as much as 1.8 mm wide. The thickness of the vessels reportedly averages between 1 and 1.5 cm, so that both vessel thickness and the decoration are outside the range of the Norton specimens. Vessel shape is said to be cylindrical with rounded bottom (Figure 3, c; Collins 1937: 168; Oswalt 1955: 32); thick-walled, shallow, conical lamps also occur (Collins 1937: 342). Temper of the majority of St. Lawrence sherds is reportedly coarse sand and gravel; some of the apparently earlier sherds, however, were tempered with vegetal fiber; and the two tempering agents were never found to occur in the same sherds (Collins 1937: 167). Although the corrugated decoration apparently persisted into the Punuk period, the plant-fiber temper did not (Collins 1937: 238). Recent C-14 dates for the two houses which yielded these earlier sherds at the Hillside site suggest a possible time between A.D. 200 and 600 (A.D. 537 ± 230, P-70; A.D. 528 ± 121, P-94; A.D. 316 ± 106, P-95; Rainey and Ralph 1959).

Similar corrugated sherds are reported from the earliest part of the site at Kukulik on St. Lawrence Island (Geist and Rainey 1936: 223), and from the Okvik site in the Punuk Islands (Rainey 1941: 550)--although in these the temper is not specified. They are also reported from Sirhenik, near Cape Chukchi on the Asian mainland, apparently from Old Bering Sea and early Punuk contexts (Rudenko 1961: 83, Pl. 26); temper is described as both gravel and hair.

A number of corrugated, vegetal-tempered sherds from St. Lawrence Island were examined for this paper. They do indeed appear a relative of the Norton sherds--a relative in which the overall wall thickness has increased, and in which the decoration has been enlarged. In view of the relevant C-14 dates, the St. Lawrence pottery may well be a descendant of

the Norton-Choris ceramics, as, of course, has been suggested by others (e.g., Oswalt 1955).

*Summary.*--Linear stamping is known from the Norton type site at least as early as the middle of the first millennium B.C. It may appear as late as A.D. 600 or 700 farther south. A variant is the decorated ware of St. Lawrence Island of around A.D. 300 or earlier.

### Check Stamped Wares

At the Norton type site, Norton Check Stamped pottery is described as tempered predominantly with plant fiber, mean wall thickness 7 mm., with the exterior bearing paddled impressions of small rectangles or squares, the sides of which normally measure less than 4 mm (Griffin and Wilmeth 1964). Vessel shape was that of Figure 3, a, b. The temporal occurrence at the type site is apparently the same as that of linear-stamped decoration, here considered to begin somewhere between 700 and 200 B.C.

Farther south at Chagvan Bay, thin pottery stamped with small checks is apparently associated with charcoal dated at A.D. 210 ± 60, A.D. 540 ± 60, and A.D. 660 ± 250 (WSU-102, WSU-123, WSU-117; Ackerman 1964). The sherds appear in a Norton-like context, and may have been contemporaneous with linear-stamped pottery. Vessel rims (Ackerman 1964: Fig. 7, f) suggest the vessel form to have been similar to that in Figure 3, a.

Pottery virtually identical to both that of Chagvan Bay and of the Norton type site appears in the Naknek drainage by the second century B.C. Here there is no clear evidence that the check-stamped pottery was associated with linear-stamped ceramics. In the resume of the Naknek material which follows, dates cited in the Christian calendar are derived from a battery of thirty-two separate C-14 determinations, both published (Trautman 1964) and unpublished, which are directly pertinent to cultural material. The Naknek drainage ceramics have been only briefly described in print (Dumond 1962).

Smelt Creek Check Stamp is the local designation of the

most Norton-like, decorated with impressed small squares, small rectangles, and small diamonds, all less than 4 mm on the side. Vessels are relatively thin - less than 10 mm - and are tempered with either hair or plant fiber or both. Fracture is irregular, and noticeably platy; vessel walls split easily into hard component laminae; many recovered sherds are split fragments. This pottery apparently appears as early as 200 B.C., and lasts at least until A.D. 100. It is unlikely that it persists beyond A.D. 300, when it is superseded by a descendant characterized by seldom-completely-square checks 4 mm on a side and larger. This larger, later stamped pottery has been called Brooks River Falls Diamond Stamp. In this decoration, lands intersect at an angle between 60° and 90° ; the ware is often thicker, ranging from 4 to 15 mm, with the thicker examples generally later in time. The decorative technique lasts at least until A.D. 800, and perhaps as late as A.D. 1000, although before this later time it may rather have been entirely replaced by undecorated pottery of similar paste.

During the entire period from 200 B.C. to A.D. 1000 there is no sharp change in paste characteristics. At all times after A.D. 300, plain sherds outnumber decorated sherds, although during the heyday of the Falls Diamond Stamp decoration it appears that most plain sherds are from vessels made with a checked paddle, which were then carefully smoothed. After about A.D. 800, however, it is possible that no carving was used on the paddle. Throughout this period from 200 B.C. to 1000 A.D., the fiber-tempered pottery of the Naknek drainage is associated with a steadily evolving but generally Norton-like series of stone assemblages.

During this same 1200-year period there is also great consistency of vessel form. The small-check-stamped decoration appears predominantly upon a restricted, frequently graceful, vase-like form (Figure 3, a), a form which, as indicated above, is probably represented at the Norton type site and elsewhere. During the first century A.D., and perhaps during the last centuries B.C., it appeared upon vessels of no other shape. Later, a cylindrical or barrel shape predominates (Figure 3, d), and this form persists throughout the period of the later Diamond Stamp and plain pottery

until A.D. 1000 or 1100. The cylinder shape may also have predated the vase-like form; at least it appears in sherds from one small site dated about 160 B.C. ± 350 (I-1158)--but of course the range covered by this determination is so great that it would not preclude a date as late as A.D. 200. No pottery lamps are known during this period.

The progression in surface decoration from small checks to large checks is probably not confined to the Naknek drainage. Large checks have appeared on pottery from St. Lawrence and perhaps the Punuk Islands (Collins 1937; Geist and Rainey 1936; Rainey 1941), and on the Siberian mainland from Old Bering Sea or Early Punuk period sites, associated with the corrugated pottery mentioned previously (Rudenko 1961: 83, Pl. 26). Unfortunately, the period of the larger checks is not represented in collections from Norton Bay, and it seems unlikely that it is represented in the collections described to date from Chagvan Bay (Ackerman 1964; Larsen 1950).

Both small and large checkerboard impressions have been previously reported for pottery from Nunivak Island (Collins 1928; Oswalt 1955; VanStone 1954), with checks of all sizes recovered from the same excavation units, implying a lack of temporal significance in size alone. A large additional sample of pottery with checks varying in size from 2 mm to 6 mm on a side was recovered in 1967 by Michael Nowak. The check-stamped pottery is stratigraphically separated from a later, pebble-tempered pottery, which is affiliated with wares to be discussed later, but analysis of the collection is not sufficiently advanced to allow a convincing statement as to whether there is evidence of a tendency for check-stamped decoration to be enlarged through time. A brief examination of the check-stamped pottery has indicated it all to be similar in paste and vessel form. As in the Naknek drainage and elsewhere, fracture is irregular, with the pottery tending to split into hard, platy fragments. But unlike check-stamped pottery mentioned from other areas, the temper--where any is present at all--is almost exclusively small sand. The vessel form is bowl-like, similar to that shown in Figure 3, b, but with broader base and straighter, more erect rim. The Nunivak check-stamped ware is clearly and closely related to other

check-stamped pottery discussed here. In 1967 it was found associated with Norton-like flaked stone implements.

*Summary.* Small check impressions appeared on fiber-tempered wares by the middle of the first millennium B.C. at Norton Bay, and by 200 B.C. in southern Bristol Bay. Through time there was probably a general tendency for the decoration to become larger; this is not to expect, of course, that any one specific size - - such as the 4 mm square which is useful in separating earlier from later check-stamped pottery in the collection now at hand from the Naknek drainage--will prove universally useful as a temporal indicator. At any rate, larger checks were present after A.D. 300 in the Naknek drainage to the south, and presumably at about the same time on St. Lawrence Island and the nearby Asian mainland. The check decoration was apparently abandoned on St. Lawrence and the Chukchi Peninsula by A.D. 800, and possibly by the same date in the Naknek drainage. By inference, similar pottery existed at the same times in the intervening regions; ceramics from Nunivak Island, while very similar in other respects, commonly contained inclusions of sand rather than fiber. [1]



### Other Decorated Pottery

*Dentate.*--One certain example of dentate impression is present at the Norton type site, on a sherd of fiber-tempered ware. This one sherd exhibits three rows of stamps. The date presumably is between 700 and 200 B.C. (Griffin and Wilmeth 1964).

*Cord-wrapped paddle.* --Twenty-two sherds so impressed and of a single barrel-shaped vessel were recovered in a scanty camp site in the Naknek drainage, a site which also yielded six check-stamped sherds and three diamond-stamped sherds of the later, larger type, and twenty-four unidentifiable

[1]This description does not include mention of the fiber-tempered, check-stamped sherds recovered at Tikchik by VanStone (1968) during excavations of nineteenth-century houses. I have examined these Tikchik sherds--as well as a few of the gravel-tempered sherds found with them--and without hesitation I would place them in the fiber-tempered class of wares discussed here; I would expect them to have been made no later than the first millennium A.D. VanStone

sherds. All of them were fiber tempered. That the association of types was valid is unlikely; a C-14 date of 160 B.C. ± 350 (I-1158) may or may not apply to the cord-wrapped-paddle-impressed sherds.

### General Summary

Up to this point, discussion has centered upon a class of ware which is marked by the predominance of temper of organic fiber--either plant fiber or animal fiber or both--although in some areas the fiber may be replaced by sand; wares of this class are hard, generally well fired, with a tendency to split into platy segments upon fracturing. The class could be subdivided according to other paste characteristics--as, for instance, thickness. The class frequently includes types characterized by linear or check impressions in some variety of size, of which the size itself may be temporally significant; the class may also include other decorated types as

(1968: 317) is inclined, however, to consider them to be contemporary with the historic Tikchik houses, since they were recovered in the floors, and he concludes that check-stamped decoration persisted into the contact period, an opinion shared by Oswalt (1967: 250).

Besides a scattering of out-of-context occurrences, the additional evidence for their view that is cited by one or both of them includes one sherd recovered from a Tigara phase burial at Point Hope, one from a recent house at Kotzebue, and twelve from a house at Deering known to have been abandoned in 1902; it includes VanStone's earlier experiences on Nunivak Island; and it includes the whole Alaskan pot of uncertain provenience in what is now the Thomas Burke Memorial Washington State Museum, Seattle, described (de Laguna 1947: 229) as tempered with gravel, mended with iron staples, and bearing check-stamp decoration.

Unfortunately, I have not examined any of the sherds referred to, but some recent evidence from Nunivak Island suggesting that check-stamped pottery is properly early at that location is indicated in this paper. In 1968, in the Burke Museum in company with James B. Griffin and George I. Quimby--both surface-decorated-pot buffs with vastly more experience than I--I was able to examine the staple-repaired pot (100-313) as well as another very similar to it and now a part of the collections (2-3197). Both pots are tempered with gravel and one of them is indeed mended with a pair of iron staples; on the basis of paste I should class them with wares of the later, gravel-tempered class described farther on in this paper. The decoration, however, is certainly a dentate stamp, rather than a check stamp; interestingly, a dentate-stamped pot in the Haffenreffer Museum, Brown University, is known to have been made at Cape Krusenstern in the nineteenth century (Douglas D. Anderson, personal communication).

On the basis of present evidence I prefer to continue to operate with the hypothesis that check-stamped pottery, generally fiber-tempered, was early in Alaska, and did not persist anywhere past about A.D. 1000.

well. Pottery lamps are uncommon in collections from the Alaskan mainland, more common in the earliest collections from St. Lawrence Island. The earliest wares of this class probably appeared in the Bering Strait vicinity by the middle of the first millennium B.C., and on the shores of Bristol Bay by 200 B.C. On mainland Alaska and Nunivak Island these wares are associated with a Norton-like stone industry.

The stimulus which gave rise to these wares was undoubtedly Asian, but the collections considered here do not themselves reflect clear evidence of influences moving from Asia. That is, the earliest Asian archaeological manifestation here discussed--Okvik or Old Bering Sea--seems to postdate the appearance of pottery both at Choris and at Cape Denbigh in Norton Bay, and seems to represent an offshoot of a culture already present in America. A discussion of presumably earlier pottery of what has been termed the Neolithic of the Chukchi Peninsula (see Dikov 1963; 1965), which is possibly directly ancestral to this early Alaskan pottery, is outside the scope of this paper.



**Later Wares**

On St. Lawrence Island vegetal fiber was apparently used to some extent in tempering pottery during the Old Bering Sea period, but it was not so common as coarse sand and gravel. Vessel form in use during the Old Bering Sea period (Figure 3, c) apparently persisted almost until the historic period (Collins 1937: 238f.; Oswalt 1955).

In the Naknek drainage, the cylinder-shaped, fiber-tempered pot (Figure 3, d) continued in ever-thickening versions- -to 15 mm or more - - until about A.D. 1000, all the time associated with a local, Norton-derived flaked stone assemblage. Around A.D. 1000, however, change occurred rapidly and smoothly. The amount of sand and expecially of gravel in the paste--which almost never had been completely without gravel in pottery thicker than about 10 mm - - was increased enormously. Virtually immediately after this, the form also was changed and the amount of hair was decreased, so that tempering became predominantly stream-rolled pebbles, some of them 10 mm in diameter. Sherds of this pottery fracture

with an irregular break in which crumbling replaces the pronounced tendency to split which was noted in the earlier wares. The new vessel forms were globular (Figure 3, e, f); unbaked, untempered, saucer-shaped clay lamps also came into use. At the same time this new pottery technique was taken up, the chipping of stone was abandoned in favor of grinding, and the non-ceramic assemblage took on a definite Western Thule cast (Dumond 1962). In a number of cultural elements--not to be enumerated here--continuity is strong, however, and this shift in technology is not interpreted as part of a major population replacement.

Not present on St. Lawrence was a decorated pottery characteristic of much of the Alaska coast for a period after about A.D. 800. This pottery was called by Oswalt (1955) Barrow Curvilinear Paddled, and Ahteut Curvilinear Paddled. It appears in the Nukleet materials of Norton Bay about A.D. 900, to judge from recent C-14 dates (A.D. 900 ± 110, M-1260; Crane and Griffin 1964). Usual forms there have been described as wide-mouthed bowls with conical or rounded bases (Giddings 1964: 104); the Nukleet collection examined in the preparation of this paper is such as to suggest that the forms include those indicated in Figure 3, e and f. Shallow bowls were used as lamps (Giddings 1964: 106; Griffin and Wilmeth 1964). The forms, of course, are shared with plain pottery of the same period. Decoration is in the form of paddle marks consisting of spirals or concentric circles (Giddings 1964: 104). Temper was chiefly sand and pebbles, although considerable fiber, including feathers, might be added. Thickness averages about 10 mm, with some sherds as thick as 16 mm. Fracture is irregular and generally crumbling (Griffin and Wilmeth 1964). The stone industry with which this appears features the grinding of slate, and in a generic sense may be termed Thule-like.

Similar pottery appears in the Naknek drainage. Although the great mass of sherds of the period after A.D. 1000 is plain, there are six sherds which display concentric circle impressions on the surface. These sherds are identical in paste to the more characteristic plain sherds of the locale and period, and pertain to an occupation dated about A.D. 1300. Walls are thicker than 10 mm. Temper is stream-washed sand

and gravel, which is as large as 10 mm in diameter. Shapes--there are possibly two vessels represented--are that illustrated in Figure 3, e (Dumond 1962).

This curvilinear decorative motif has not been reported between the Naknek drainage and Cape Denbigh, possibly because the proper time periods have not been sampled at intervening sites, such as those at the mouth of the Togiak River and in the Chagvan Bay vicinity.

A change in the dominant pottery at Nukleet is evident at about A.D. 1500 to 1600, when the thickness decreases, shape becomes that of the bucket or situla with wide flat bottom (Figure 3, g, h), and the common decorative elements are incised lines and dots on the exterior and sometimes on the inner surface of the rim. The variety of lip treatments increases. Temper remains predominantly sand and pebbles, with some lesser organic tempering sometimes added as well. Fracture is described as irregular and crumbling (Giddings 1964: 104ff.; Griffin and Wilmeth 1964: 276).

This pottery is assignable to the Yukon Line Dot and Yukon Lined types of Oswalt (1955), the distribution of which has been described by Griffin and Wilmeth (1964) as including the area from Seward Peninsula to the Yukon. It is known from all late sites of this area, including Nunivak Island, and also from at least as far south as Togiak (Kowta 1963) and a site excavated by VanStone on Tikchik Lake on the Nuyakuk River in 1965 (VanStone, 1968). Presumably this lined pottery is closely related to the apparently less widely distributed types like Seward Striated and Hooper Bay Shell Striated, both of which were defined by Oswalt (1955). It is also apparently pottery of this general group which has appeared in Athapaskan territory along the Yukon and on the upper Kuskokwim (de Laguna 1947; LeFebre 1956). Flat, saucer-shaped clay lamps are common at this horizon (see Oswalt 1953b).

At the Togiak midden excavated by Kowta (1963) a line-dot type appears in the upper half of the midden. It seems to follow after a pottery characterized by exterior modeled horizontal ridges, and its appearance is correlated with a decrease in thickness. This slightly earlier, externally ridged pottery is not yet known with frequency from the

southern Bering Sea area, but it appears in small numbers in the Naknek drainage after A.D. 1500. There is no Yukon Line-Dot known from the Naknek drainage.

It seems reasonable, therefore, to suggest that line-dot decorated pottery is principally at home between northern Bristol Bay and Seward Peninsula. It probably nowhere predates 1550. It appears to have been the dominant pottery in much of this area at the time of contact.

In the Naknek drainage, on the other hand, the pottery of the eighteenth and nineteenth centuries is thin, small-gravel-tempered plain ware which usually takes the form of a bucket or flower pot (Figure 3, h), at times with the barest suggestion of a flare to the rim. It is the direct descendant of the thicker, gravel-tempered ceramics which at times had exhibited concentric circle impressions on the exterior (Dumond 1962). The saucer shaped clay lamp, relatively untempered and probably unbaked, continues.

On St. Lawrence Island the historic pottery is also predominantly thin, plain, and tempered with sand and gravel. Here, on the other hand, the square cooking pot (not illustrated) is standard (Collins 1937: 239; Oswalt 1953a), as is a flat-bottomed rectangular lamp.

*Summary.*——A later class of wares may be described as predominantly tempered with sand and gravel, although organic tempering is not absolutely lacking. In the southern area the earliest known form of this is from St. Lawrence Island, where it appears by A.D. 300, and where it has completely replaced vegetal-fiber-tempered ware by A.D. 800. On the mainland, the chief representative of this later ware class from about A.D. 900 to 1550 is thick pottery which sometimes bears circle impressions. Because the late temper class does not appear in the Naknek drainage before A.D. 1000, it seems reasonable to suggest that the stimulus for its production moved from north to south through the southern area. This is further borne out by the occurrence of circle-stamped ceramics at Point Barrow by as early as A.D. 800 or even before.

After the introduction of this pebble-tempered ware class, there was a tendency for ceramics to become thinner. On the mainland the thinning is associated with the appearance of

varieties decorated with incised lines and dots in various patterns, pottery pertaining to Oswalt's Yukon Line-Dot type. This subclass of pottery apparently is not at home south of the north coast of Bristol Bay.

The later class of wares is found with implements of polished slate in a stone industry which may generally be said to be Thule-like.

#### Relationship to Northern Alaska

In general terms, the sequence just described is repeated north of Seward Peninsula. That is, following its apparent first appearance with the Choris culture, the early fiber-tempered class of wares of the Choris-Norton horizon, frequently impressed with checks or lines, spreads north at least to Point Hope (Larsen and Rainey 1948; Oswalt 1955) and reappears in the vicinity of the mouth of the Mackenzie River (MacNeish 1959). The late gravel-tempered wares of Birnirk and Western Thule, often impressed with concentric circles or other similar curvilinear designs, are distributed over the same area--north from Seward Peninsula, and near the mouth of the Mackenzie, but unlike the earlier ceramics are known also in the Barrow vicinity (Ford 1959; Oswalt 1955) and inland up the Kobuk as far as Ambler Island (Giddings 1952; Oswalt 1955). These later wares seem to make their appearance after A.D. 500.

Between the occurrences of these two ware classes, however, the sites between Seward Peninsula and Point Hope commonly display the Norton-like but non-ceramic Ipiutak occupation, which apparently covered several centuries of the early part of the first millennium A.D.

This is not to say, of course, that the order of appearance of particular design elements or vessel shapes in the north exactly duplicates that described for the coast of the Bering Sea. Further discussion of ceramics of the northern area is beyond the scope of this paper.

#### The Pacific Eskimo Area

By now it is possible to make some definite statements

regarding the arrival of pottery on the north Pacific, and its distribution there. Excavations by the University of Oregon on the Pacific coast of the Alaska Peninsula, first in 1953 and most importantly in 1964 and 1965, have yielded the following information: Pottery initially appears, in very small quantity, around A.D. 300 or a century or so later. This pottery--all of it plain–is identical to the plain ware known from the Naknek drainage of the same period. That is, it is a representative of the earlier, fiber-tempered, barrel-shaped pottery related to Norton ware. By A.D. 1200, there is present a pottery representative of the later class of wares--that is, exactly similar to the Naknek drainage ware which carried the concentric-circle impressions, but without decoration. The situation with regard to ceramics after A.D. 1500 is not known on the Pacific coast of the Peninsula.

Pottery from Kodiak Island has been previously described in print (e.g., Clark 1956; 1966; Heizer 1949; de Laguna 1939; 1940). A number of sherds recovered on Kodiak in recent seasons by the University of Wisconsin were examined for this paper; all sherds seen are clearly of the later, pebble-tempered class of wares, and most of them are thick.

It is clear that pottery was concentrated on the southern portion of the island, although a few sherds have been found on the northern tip of Kodiak Island proper (Clark 1966: 173). The earliest radiocarbon date clearly pertinent to pottery is near A.D. 1000 (Clark 1966), which in view of the situation in the Naknek drainage must be the earliest possible date for this pottery on Kodiak. The latest Kodiak pottery seems to be characterized by an increasing complexity of lip form. This may be related to a lip complexity which goes with the Yukon Line-Dot type farther north. The later Kodiak materials also include exterior ridges and occasional incised grooves (Heizer 1949). The vessel forms (Figure 3, e, j, k; see Clark 1966; Heizer 1949; de Laguna 1939; 1940) seem generally reminiscent of the globular Naknek drainage forms (Figure 3, e, f) of the period between A.D. 1000 and 1500, rather than of the bucket-like forms which occur at the time of Russian contact farther north.

Northeast of Kodiak on the Pacific coast, the occurrence of pottery is infrequent. De Laguna (1934; 1947: 245) reports

finding only two sherds at Kachemak Bay, and discusses some scanty finds of Jacobsen from the area.

In 1884, Jacobsen recovered sherds from a house in a village believed to be an early post-contact, and perhaps in part pre-contact, settlement of Tanaina (Woldt 1884: 370-73). Both de Laguna (1947: 255) and Osgood (1937: 77) have taken this as probable evidence of the use of pottery by Tanaina. An alternate view--with which Jacobsen's account does not conflict--is that these sherds were proper to an underlying pre-Tanaina Pacific Eskimo occupation; this position has been taken elsewhere (Dumond and Mace 1968), and is adhered to here. Jacobsen describes those sherds as resembling the pottery in use during the nineteenth century on the lower Yukon, which seems an accurate description of virtually any of the pottery known from the Pacific coastal area.

In 1966, sherds of relatively thick gravel-tempered ware, globular in form (Figure 3, e), with a simple rim identical to those from the Naknek drainage of the time between A.D. 1000 and 1500, were recovered from what was interpreted as a Pacific Eskimo occupation at a site on Knik Arm, the northernmost extension of Cook Inlet (Dumond and Mace 1968).

It seems reasonable to say that there is at least a sporadic occurrence of the later pebble-tempered pottery along the shores of Cook Inlet. Pottery is not known farther south along the Pacific coast, from areas such as that of Eskimo speech on Prince William Sound.



### General Summation

A schematic indication of the temporal and spatial distribution of the classes of pottery discussed in this paper is contained in Table 2.

1. An earlier class of related, fiber- or fine-sand-tempered wares, having a pronounced tendency to split into hard laminae on fracturing and commonly associated with Norton-like stone implements, is known at Norton Bay, where it appeared perhaps before 500 B.C.; it was presumably related to perhaps still earlier pottery from the Choris

Peninsula in Kotzebue Sound. This class was present in southern Bristol Bay by 200 B.C. It was apparently reflected in the earliest known ceramics of St. Lawrence Island. It had been spread to the shores of the north Pacific no earlier than about A.D. 300, but apparently did not penetrate to Kodiak Island.

2. A later class of wares is of predominantly inorganic temper, gravel and very coarse sand, has a noticeable tendency to crumble rather than split, and is commonly associated with Thule-like implements of ground slate. Representatives of this class occurred on St. Lawrence Island during Old Bering Sea times--before A.D. 500, probably--and appeared around Norton Bay by A.D. 900. Its first representatives at Norton Bay were relatively thick, and frequently bore the impressions of concentric circles or spirals. Representatives of this class appeared first on the northern edge of the Alaska Peninsula at or shortly after A.D. 1000, and again were in some cases found with circle-shaped impressions. At about this same time the class appeared in its plain aspect on the Pacific coast of the Peninsula and on Kodiak Island.

A second version of the same class was thinner, with some changes in form, and appeared often with incised lines around the rim, either inside or outside the vessel. This incised form appeared chiefly from Seward Peninsula to northern Bristol Bay, probably after A.D. 1550 or 1600. The accompanying tendency towards thinness, however, extended farther, involving the late prehistoric and historic pottery of St. Lawrence Island, and the late ware of the Alaska Peninsula and perhaps of Kodiak Island. It is this later version, especially in the area of the incised line decoration, which is characterized by the so-called situla shape.

*Acknowledgments.* An earlier version of this paper was read at the thirty-first annual meeting of the Society for American Archaeology, in Reno, Nevada, in 1966. Samples of pottery from the following areas were examined at first hand in its preparation: Choris Peninsula, St. Lawrence Island, Cape Denbigh, Nunivak Island, Chagvan Bay, Togiak, Tikchik Lake of the Nuyakuk River system, Iliamna Lake, the Naknek drainage and Pacific coast of the Alaska Peninsula, Kodiak Island, and the Fish Creek site on Knik Arm. Pottery of the

Naknek drainage and Pacific coast of the Alaska Peninsula, and of the Fish Creek site, was recovered during research by the University of Oregon sponsored by contracts from the National Park Service and by National Science Foundation grants G-12964, GS-79, GS-655, and GS-1037; the pottery is now in the Department of Anthropology of the University of Oregon, and will ultimately be deposited in the Museum of Natural History of the University of Oregon. Pottery from Nunivak Island which was recovered by Michael Nowak during 1967 in research financed by National Science Foundation grant GS-1412 to The Colorado College, is now in the Department of Anthropology of The Colorado College, and will ultimately be deposited in the Museum of Natural History of the University of Oregon. I am grateful to the

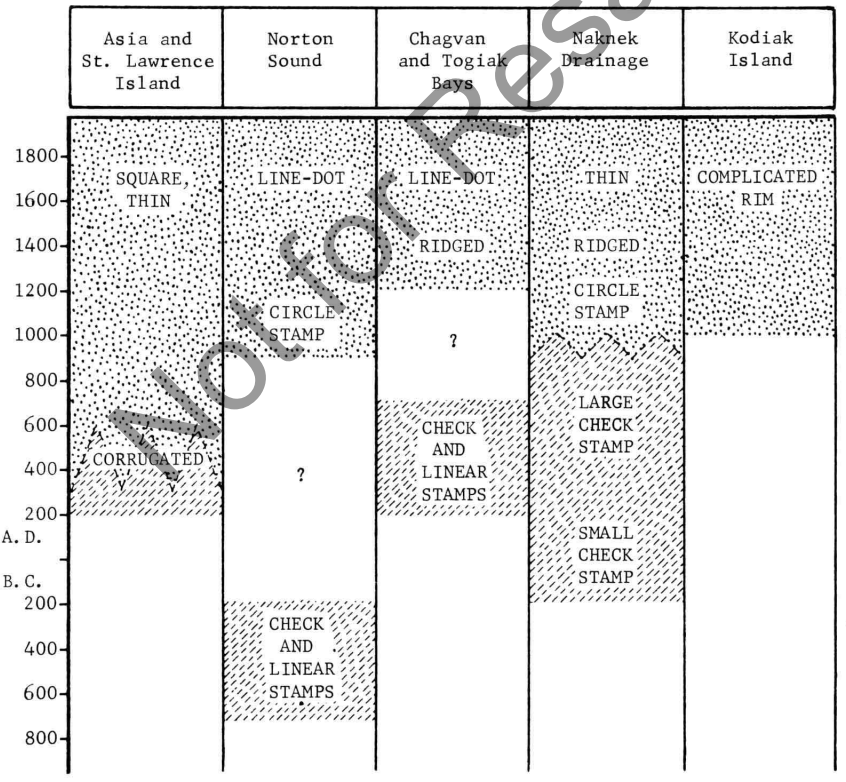



Table 2. Temporal and Geographical Distribution of Some Pottery Mentioned in the Text.

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