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BULLETIN OF THE
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Douglas S. Byers, Editor, Box 71, Andover, Massachusetts
Winthrop F. Barden, Secretary-Treasurer, 198 South Main Street,
Attleboro, Massachusetts
THE SOUTH SWANSEA BURIALS

Mason M. Phelps

Early in October, five Indian burials were uncovered by men who were excavating with a power shovel for the cellar of a small house, located on Louise Avenue, off Calif Avenue, on Gardiner's Neck, in South Swansea, Massachusetts.

The manner of excavating disturbed the burials and broke or destroyed the bones so that little information in situ was obtainable.

When members of the Warren King Moorehead Chapter arrived several days later, much of the evidence had been carried off. Tales of the discovery had also been enlarged. However, enough of the site had been held intact so that Mr. Robbins was able to verify the importance of the find and personally dig out a considerable number of the bones and copper beads which had formed part of the beaded ornament worn by one of the dead.

Also from the same grave, came a section of rush mat, bark, and parts of deer skin clothing. No other artifacts or objects were found with this or the other burials. However, there is an unverified tale that a copper band was found upon the forehead of one skull, and that the copper salts from this band had preserved a considerable quantity of hair. Although this may not have been supported by our observations, one can hardly reject the story altogether, as such a story could not originate without some foundation in fact. It is evident that the individual that wore the ornament of brass and copper beads also wore, at the time of burial, a garment of tanned deer skin. The body was wrapped in a rush mat of woven cat-tails and, perhaps, also an outer wrapping of bark.

The skull of the owner of the beads was secured in good condition, except for the teeth which had been preempted by boys of the neighborhood for souvenirs. The cranium is marred by two fairly deep, but well-healed knife scars, and the nose, badly misshapened, leads one to suspect that the individual had seen much fighting. Examination of the skull suggests that the skeleton is that of an Indian and not a Negro. The skull shows the usual features; high cheek bones, and the regularity and late development of the transverse sutures of the cranium.

Parts of three other skulls were obtained. The lower jaw and half of the upper jaw of one skull still retain most of the teeth, except for those in front; the teeth are well preserved and in good condition — they are those of a person still in the prime of life. It is of interest to note that the third molar on each side of the lower jaw was impacted by the tooth next in line; the third molar in the upper jaw was also impacted, but in this instance impaction was caused by the overlapping of a portion of the jaw bone.

Most of the bones were gathered up by the Chief of Police, who is, or was, holding them for next of kin to claim. His will be a long wait.

The area in which the graves were found was formerly part of an old homestead known to have been the first in the North to hold slaves, and the distributing point for reshipment of negroes to the South.

In those days there was a known Indian graveyard on the farm, located, it is claimed, near a large boulder. The Indians used to bring their dead across the river to inter them here. It has also been said that the slave owner buried his deceased negro slaves in the same cemetery. An attempt to locate this cemetery a good many years ago, resulted in the finding of a skeleton which was considered to be that of a negro because of alleged negroid characteristics. No other remains were unearthed and all other attempts to discover the boulder which was supposed to mark the burial ground failed.

No large stone is to be seen near the five burials recently discovered, but the people next door claim that some years ago a large rock was blasted out on their property, only a hundred feet or so away. This could have been the boulder referred to.

The graves were located on a gravel knoll overlooking an arm of the Coles River on the west; Lee River is to the east. Almost south, across a bay of the same name, lies Mount Hope. The site is near the end of Gardiner's Neck, 100 feet above sea level and nearer the Coles River shore. The different kinds of soil exposed on the side of the hole show that in this part of Gardner's Neck there is a thin covering of very stoney loam, overlying a thick layer of brown, clayey soil which also contains a great many stones. Beneath this layer, in turn, lies a deposit of motiled dark gray coarse sand and gravel. The last two layers are not uniform in depth or thickness and in places dip sharply. An admixture of very coarse gravel, rock, and boulders underlies the whole. A scattering of boulders of plumbago is encountered; these show a foliation and are of a slatey consistency. Their presence at the site is attributable to glacial action. They show no evidence of Indian industry, although some pieces were found in proximity to a grave.

The front of the house cellar faces west. According to information received, the burials were located as follows: one was near the center of the cellar; two, fairly near each other lay beyond the western edge near the southwest corner; a fourth was about midway on the rim of the southern face; and the fifth, that with the beads, was situated on the northern rim, about five feet from the northeast corner.

The burials were at a depth of about 30 inches. The possessor of the beaded article was...
interred partly in the mottled gray gravel. This much was apparent, as the writer himself took out several strands of the beads and two rib bones in this layer.

No information is available to show whether these burials were flexed or not, in what position they were laid and in what direction they faced. Lack of such data is due to the manner in which the skeletons were turned out.

Several test holes were sunk about the area without results. The writer, with Mr. Ripley P. Bullen, made a final trip down and had like results. However, in one spot, off a ways on the west, a hole was put down three feet through yellow-brown sand and gravel, this exhibited a disturbed section, entirely free of stones and discolored in places, in which were found some small pieces of shell, English pottery etc. Except for this one instance, the digging was a very tough proposition.

The finding of such a brass and copper article is of considerable interest, as it is only the second time brass beads have been found in quantity. Besides, this adds one more to the slim store of such collections which are in existence. A similar find, in Fall River in 1831, was made famous by Longfellow's poem, "The Skeleton in Armor". The skeleton is said to have been destroyed in a fire in Fall River. The artifacts, except for some of the cedar-bath fabric, were sent to Denmark. Some of the beads were returned to this country at a later date.

Historical Collections, by John Warner Barber, Worcester, 1839, contains an account of the "Skeleton in Armor," on pages 123-125. Barber writes:

"The following account of some remains found in this town, [Fall River] is from an article by John Stark Esq., of Galena, Illinois published in the third volume of the American Magazine of Boston, 1837.

"These remains were found in the town of Fall River, in Bristol County, Massachusetts about three years since. In digging down a hill near the village, a large mass of earth slid off, leaving in the bank and partially uncovered a human skull, which on examination was found to belong to a body buried in a sitting posture, the head being about one foot below which had been many years ago the sur-
face of the ground. The surrounding earth was care-
fully removed, and the body found to be enveloped in a covering of coarse bark of a dark color. Within this envelope was found the remains of another of coarse cloth, made of fine bark, and about the texture of a Manila coffee bag. On the breast was a plate of brass, thirteen inches long, six broad, at the upper end and five at the lower. This plate appears to have been cast, and is from one eighth to three thirty seconds inches in thickness. It is so much corroded, that whether or not anything was engraved upon it has not yet been ascertained. It is oval in form, the edges being irregular, apparently made so by corrosion.

"Below the breast-plate, and encircling the body, was a belt composed of brass tubes, each four and a half inches in length and three sixteenths of an inch in diameter arranged longitudinally and close together; the length of a tube being the width of the belt. The tubes are of thin brass, cast upon hollow reeds, and were fastened together by pieces of sinew. This belt was so placed as to protect the lower parts of the body below the breast-plate. The arrows are of brass, thin, flat, and triangular in shape, with a round hole cut through near the base. The shaft was fastened to the head by inser-
ting the latter in the opening at the end of the wood and then tying it with a sinew, through the round hole,—a mode of constructing the weapon never used by the Indians, not even with their arrows of thin shell. Parts of the shafts still remain on some of them. When first discovered the arrows were in a sort of quiver of bark, which fell in pieces when exposed to the air.

"The skull is much decayed, but the teeth are sound and apparently those of a young man. The pelvis is much decayed, and the smaller bones of the lower extremities are gone. The integuments of the right knee, four or five inches above and below, are in good preservation, apparently the size and shape of life, although quite black.

"Considerable flesh is still preserved on the hands and arms, but none on the shoulders. On the back under the belt, and for two inches above and below, the skin and flesh are in good preservation, and have the appearance of being tanned. The chest is much compressed but the viscera are prob-
ably entire. The arms are bent up, not crossed; so that the hands turned inwards touch the shoulders. The stature is about five and a half feet. Much of the exterior envelope was decayed and the under one appears to be preserved only where it has been in contact with the brass.

"The preservation of this body may be the result of some embalming process, and this hypothesis is strengthened by the fact that the skin has the appearance of having been tanned or it may be the ac-
cidental result of the action of the salts of the brass during oxydation; and this latter hypothesis is supported by the fact that the skin and flesh have been preserved only where they have been in con-
tact with, or quite near the brass; or we may account for the preservation of the whole by supposing the presence of saltpetre in the soil at the time of the deposit. In either way, the preservation of the re-
 mains is fully accounted for, and upon known chemi-
ical principles.

"That the body was not one of the Indians, we think needs no argument. We have seen drawings
The account of the Fall River skeleton was communicated to the Society by Dr. T. H. Webb, who had previously furnished the account of the Dighton rock. From this account we gather the following facts:—The skeleton was discovered by the crumbling away of a sand-bank, during a heavy rain. It was buried in a sitting posture, the head flexed upon the thighs, and the latter pressed against the abdomen, and "the hands inclined to, if not indeed resting against the clavicular portion of the thorax." The body had been enveloped in several coverings of woven or braided bark, and "exterior to all was a casement of cedar bark." On the chest, the account, was found a breast-plate of brass or other metallic composition, measuring about fourteen inches in length by five in breadth. It was not regular in shape, and its edges had the appearance of having been irreguly broken. There was also a belt composed of small tubes (not soldered together), formed by bending slips of the same metal around small rods; some triangular arrow heads of metal, pierced with a small hole near their base, packed in moss beside the skeleton; some pieces of the shafts for the same of wood, and a few armlets or bracelets of untanned hide. The salts of the metal had very well preserved the flesh in its immediate vicinity. Dr. Webb remarks that the skull was remarkably deficient in the occipital region.

"Without stopping to consider the various analogies which the Northern Antiquaries suggest between the articles found with this skeleton and the remains of ancient Scandinavian manufacture, nor yet to do more than remark the fact that the compound metal above-mentioned differs less than one percent in its composition from the modern brass of commerce," we shall direct attention to a few simple facts, the bearing of which every person possessing common intelligence will find no difficulty in determining:

1st.—The place in which the skeleton was found is precisely such as the American Indians select for burial grounds; the mode of burial is exactly Indian, extending to the 'casement' of cedar bark, the nature of the immediate envelop of the body, the posture of the body, and the particular adjustments of the limbs.

2nd.—The presence of undecayed wood and moss, however favorable we may regard the position and the nature of the soil, must argue, in an American climate, that the burial was made at a comparatively late date,—certainly that it could not have been made seven hundred years ago, at the time of the supposed discovery of this region by Thorfinn.

3rd.—The peculiar conformation of the skull, noticed by Dr. Webb, and which is regarded by him 'as not characteristic of the Indian,' is, according to Dr. Morton and other professed Craniologists, the distinguishing feature of the aboriginal American head, throughout the continent.

"All this is positive evidence against the claim set up by the Northern Antiquaries. There is an abundance of negative evidence, which we think it unnecessary to present, but amongst which we may mention the entire rudeness of the metallic relics found with the skeleton,—a rudeness inconsistent with the per-
was it is impossible for me to say, as of woven or braided bark-cloth of different textures, a breast-plate of brass or other metallic composition, and six inches at the other.

From it we extract the following particulars. The Norse discovery. The article occupied pages 189-214 in this unidentified journal; our excerpt was not in use among the Norsemen. The sitting posture, with the legs flexed upon the thighs and the thighs bent towards the abdomen; the hands were inclined to, if not, Indeed, resting against, the clavicular portion of the thorax. The body had evidently been carefully enveloped in several coverings of woven or braided bark-cloth of different textures, the finest being innermost; and exterior to the whole was a casement of cedar-bark. On the chest was found a breast-plate of brass or other metallic composition, measuring about fourteen inches in length and five and one fourth inches in breadth at one end, and six inches at the other. The impression of the skin was very strongly exhibited in some parts, what were the original length and form of this plate is impossible for me to say, as it was broken or destroyed at both ends when found. Over the breast-plate, at its lower extremity, and completely encircling the body, was a belt, consisting of metallic tubes arranged in close contact with each other, so as to make a continuous cincture. These tubes are in length four and a half inches, and in diameter one fourth inch. These were formed around pieces of hollow reed, the edges being so nicely in contact as to give them the appearance of broken cylinders. Through the inclosed ends sinews, or narrow strips of animal hide were passed, and the ends braided together, so that another string similar in kind, might run transversely at top and bottom, and thus complete the belt. Two armbands or bracelets were found near the remains; these, when closely examined, appear to have been made not of manufactured or dressed leather, but of raw hide, (having the hair still upon them). The only other articles found were half a dozen arrow-heads, made of the same material that the breast-plate and sash or cincture were.

"These were triangular, two inches long by one and a third wide, and perforated at base. Pieces of the shafts, a few inches long, were still connected with the heads. The metal being afterwards examined by Perrault, proved to be brass, of about the ordinary composition.

"Wherever the breast-plate or cincture came in contact with or near propinquity to the body, there the flesh, underneath and for a few inches above and below, was in such a perfect state of preservation that the muscles could be readily separated or dissected from one another. The flesh and integuments on the trunk, from the top of the shoulders down to the short ribs, likewise on the hands and arms, with the exception of the elbows, and on the inner side of the right leg or knee, were well preserved. The bark coverings were much decayed, except when they came in contact with the metallic trappings."

"These highly interesting remains, with the exception of the specimens of bark-fabric and the brass tubes, sent to Denmark, were destroyed by fire a few years since. Nevertheless, we think enough appears from the above account to show that they belonged to the aborigines of the coast, and not to any European colonist. The metal of which the ornaments were composed was undoubtedly of European origin, but the forms into which it had been wrought are almost identical with those of the copper ornaments found in the mounds of the West, (see Squier & Davis' "Monuments, &c.,") pp. 205, 207, and leave a suspicion, as a learned friend of ours remarks, that they may trace their origin to some of the brass kettles of those Frenchmen, who, in Captain John Smith's time, had so overstocked the New England market, that the worthy captain thought it not worth his while to enter Massachusetts Bay. Some of these kettles, Dr. Webb says, are found in neighbouring Indian graves. At all events, the metal, although European, does not prove the slighest presumption of a Norse origin, for even if we extend the 'age of bronze' as far as that period, these ornaments are not of bronze, but of brass, which, we believe, was not in use among the Norsemen. The sitting position of the body, it is well known, is usual among Indian remains. The braided cedar-bark is decidedly an Indian manufacture, and is still extensively used for cords among the Ojibwas and probably other tribes. Then the state of preservation of the body and of the arrow-shafts allitates..."
strongly against any great antiquity. It is true, the salts of copper exercise a strong antiseptic influence, but here the effect would be rather too extensive. For we must bear in mind that a sandbank is, perhaps, the most unfavorable position for the preservation of organic remains, owing to its permeability to water and the facility with which it condenses and absorbs moisture from the atmosphere.

To return to the main topic under discussion, the discovery at South Swansea; the most important part, the brass and copper article, was more than likely worn as a breast ornament, or pendant, or again it might have been a belt. Single beads, sections, and strands, including those in the possession of the Museum of Art and History, Attleboro, and scattered among individuals, amount to around eight hundred beads, both of brass and of copper. Whether the beads were strung to form some pattern or design by the contrast between the two metals, or whether they were used more or less at random will be left for the reader to fill in to suit his fancy.

The spectrographic analysis of the beads was made by Mary Striga of the General Plate Division of the Metals and Controls Corporation, Attleboro, Massachusetts:

Copper beads contain: copper - aluminum - nickel - silicon - tin.

Brass beads contain: copper - zinc - antimony - lead - tin - iron.

There is a heavy concentration of silicon and only a faint trace of tin in the copper beads. These beads are not soft, due to the content of both silicon and tin.

The above analysis of both the brass and the copper beads reveals the presence of tin, and gives weight to the balance in favor of the European origin of the metal. Whether the two metals came together before being traded to the Indians, or after, is non-essential. On the other hand, although of foreign stock, the metals could have been secured prior to 1620 A.D., from vessels of traders, from those of explorers, or from vessels of the fleets which have been fishing on the Grand Banks of Newfoundland since as early as 1500 A.D. It could also have been salvaged from the wrecks of ships cast upon the shore.

The production of brass was unknown to the Indian of the North American continent before the landing of the White Man. Tin, though present, is not known to be associated with any of the copper bearing ores.

The beads found in Swansea are short; in length they measure a half inch or under. They could have been rolled by the Indians by hand, upon pins of hard wood or bone from metal obtained in any of the ways suggested above. Of the half dozen beads studied, the larger ones are of copper. It is not known whether all the larger beads are of copper and the smaller of brass, nor is the total of each variety known.

The beads are not of solid, drilled material, but of flat rolled stock. In rolling, the ends of the strip are not butted together, but allowed to overlap, thus preventing the beads from spreading and avoiding the chance of loss. Some of the beads show overlapping for as much as one half the circumference. There were those whose outer lap was very irregular, the edge being as much as 35 degrees off the axis of the bead in some cases. No indication of the use of solder was found.

The beads vary in length from one quarter to five-sixteenths, three-eighths, and seven-sixteenths of an inch. The width may be one-sixteenth, three-thirty seconds, one-eighth, or five-thirty seconds. The longer beads are generally the larger. From the number of strung strands still attached and from indications of where others had been, the writer estimates that the pendant may have contained thirty-four rows, more or less, running horizontally, of perhaps twenty-four beads each. For all that is known, there may have been considerably more.

From one of the sections studied, containing eighty-nine beads on twelve strands, the writer gathered the following information: The beaded article in question was probably made on a loom or frame, the border being a thin strip of deer hide to which three ply twisted hemp fiber was strung at stated intervals across one way. Beads were strung on a thread attached to a vertical strand. Each bead was strung separately, placed between two vertical strands; a thread was looped over the next vertical strand and pulled tight, thus locking each bead to its neighbor to form one solid piece. Further examination of the method of stringing the beads reveals the use of two strands of two-ply twisted fiber instead of one.

The section previously mentioned, containing twelve strands also showed a decided curve along the edge, where the cords upon which the beads were strung were attached, narrowing as the strands graduated from large beads at the bottom to small beads at the top.

The curve was brought about by using several longer beads at the beginning and end of the strands, grading shorter as additional layers were added and the beads became smaller. Not every row was thus arranged. This arrangement caused the beads at the ends to buckle, thus giving a looped effect to the bead work, as if each strand were a separate string of beads.
hung around the neck. The rest of the beads throughout the central portion of the pendant were uniform in length, from top to bottom in each row, although the length could and did vary in the different rows. Occasional variations or errors were observed, such as a large bead among the small and the reverse or a string of small beads between the large. Two beads looked as if one of smaller diameter had inadvertently slipped within, without the knowledge of the stringer.

Still attached to one of the smallest beads, at one corner of a section of the bead work, and knotted, was a short length of rawhide, having no marks of strand attachment. This is a good indication of where the article in question was attached and how it was suspended from the neck.

No one saw the beaded article in place upon the skeleton nor in its entirety, so the above explanation may be in error. The beads might have been arranged in strands of larger beads at top and bottom growing smaller towards the center of the beaded work. They might have been a part of a belt.

The beads taken out by the writer were found in the bottom and edge of the grave from which the skeleton had come and several were also associated with the two short rib bones. Both beads and rib bones were in undisturbed ground. From the facts that beads were in association with the rib bones at the bottom and edge of the hole it would appear that the beads decorated a belt rather than a pendant.

The preserved portions of what is assumed to have been deer skin clothing might perhaps have been a pouch.

Copper salts have been responsible for preserving so much of the stringing of the beads, as well as the parts of deer skin, bark, and matting, assumed to have been in contact with the beads.

Further and final check of the beads reveals additional information. The occupant of the grave was not only wrapped in rush matting, but also in a second inner covering of thin and finely woven fiber cloth. Considerable of this material still coats several sections of the bead work, and in one instance is overlaid by a small piece of the rush matting.

From this we gather that the burial procedure of both the South Swansea and Fall River interments were similar.

No matter what the identity of the individual whose skeleton was found in Fall River in 1831, both he and the South Swansea warrior (Massasot or an earlier Sachem perhaps) had been highly respected by the Indian tribes living in or near the vicinity and had been buried upon the shore where they could look out across the waters upon a proud people and Pokanoket, head sasum they once ruled, in silent benediction.

Attleboro, Massachusetts January 18, 1947.

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Fig. 14- Map of a portion of Greenland showing settlements of the Polar Eskimo.
DISTRIBUTION OF SETTLEMENT AMONG THE POLAR ESKIMO
W. Elmer Ekblaw

Of all the interesting adjustments that the Polar Eskimo make to the land in which they live and win their living, none is more distinctive than their selection of site for settlement or residence. Like folk everywhere they select sites of residence upon considerations of comfort, ease, and security of living; but the problems that they must solve by such selection in a land of very high latitude are essentially different from those of peoples living farther south, and most of them are more difficult of solution.

THE LAND OF THE POLAR ESKIMO

The Polar Eskimo dwell permanently farther north than any other group of people. They live along the coast of northwest Greenland between Latitudes 75 and 80 North, where the Danes have given the name Thule. Thule includes the narrow ice-free coastal lands that lie between the ice-cap and the sea, from Cape Seddon at the southeastern corner of Melville Bay to Cape Calhoun at the northern end of Kane Basin, and the great glaciers that dissect them. Two great glaciers, Melville Glacier at the South and Humboldt Glacier at the North, form barrier boundaries to Thule, with which they are included; between them lies a large peninsula about two hundred miles in width from North to South, and about one hundred miles in width East to West. It is roughly bisected from East to West by Inglefield Gulf and its extensions, Murchison Sound on the North, and Whale Sound on the South, and further broken by a number of other minor bays and sounds, some of them fjord-like in character, into several peninsulas.

The ice-cap covers most of the southern insular half between Melville Bay and Inglefield Gulf, except for numerous coastal areas which are free of ice. The northern half is similarly submerged in the ice-cap over the larger southern part of its area, with small ice-free tracts of land along the southern and southwestern coasts to Cape Alexander, but the smaller northern part for a distance of about a hundred miles along its northern and northeastern coast from Cape Alexander to Humboldt Glacier is free from ice inland from the shore ten to twenty-five miles, the largest area of ice-free land in Thule, named from the English explorer, Inglefield Land. Small islets are sparsely scattered along the coast of Thule, and a few larger islands guard approaches to the larger inlets. The peninsula is a high plateau formed of uptilted sedimentary rocks and igneous intrusive masses, and dissected by glacier and fjord, to form a young, rugged topography, grand and picturesque, but difficult to traverse for even short distances because of its rough and broken relief, and its covering of sharp-angled rubble of riven rock, wherever it is bare of ice. Land travel is feasible by foot or sledge only when snow covers the rocks, and affords a continuous and smooth avenue of movement for the winter part of the year, when travel on ice along shore is safest and easiest.

Kane Basin and Melville Bay are generally frozen over with ice which at times breaks to open long leads. It regularly forms a rather solid sheet that persists throughout most of the year. Both are more or less closely set with huge bergs that ground and are frozen in most of the year, but that drift about if, and when, the ice breaks up in the summer, a rather rare condition. The outer fringe of the ice is irregular and variable, and unstable even in the height of winter, at times breaking off in huge sections and drifting out to sea. Along the western peripheral coast where tides run strong from Smith Sound to Cape York, only a relatively narrow border of unstable ice forms in winter, about and between the promontories, with open water and drifting bergs and fields of ice. A short distance off shore even in the coldest and calmest seasons. The sounds, bays, fjords and other inlets usually freeze over more or less solidly. Smith Sound rarely freezes over from Cape Alexander across to Cape Isabella on Ellesmereland, whereas, even in summer, Kane Basin only occasionally breaks partly open, Melville Bay more frequently.

The climate of Thule, like all polar climates, is distinguished by pronounced seasonality of light, instead of temperature as in mid-latitudes, and of rainfall as in tropical lands. Thule is characterized by four months of continuous, twenty-four hours a day sunlight, from mid-April to mid-August; four months of continuous absence of sun from mid-October to mid-February, two months from mid-August to mid-October when days shorten and nights lengthen at the rate of about twenty-four minutes a day, and two months from mid-February to mid-April when days lengthen and nights shorten at the same rate. Seasonality of light is the most distinctive attribute of polar environment. The Polar Eskimo makes some of his most significant adjustments to the seasonality of light and numerous consequences that accrue to it.

Temperatures are definitely littoral, though also definitely polar. Proximity of open water along the western promontories tempers winter cold and tends to keep temperatures relatively high for the latitude. For four years of continuous record by the Crocker Land Expedition from 1913-1919, temperatures at 80° rarely dropped below -42° Fahrenheit, and then only when winds blew from regions farther north where open water did not prevail. In few places along the Thule coast temperatures do fall substantially lower, but only for brief periods. On the other hand, temperatures in summer rarely rise above 60° Fahrenheit. At all seasons of the year diurnal range of temperatures conforms to littoral location and is relatively uniform within limits, though locally variable. Similarly the annual range is moderate.

Snow falls every month of the year, but total fall for the year is significantly light, ex-
except where moisture from open water drifts regularly in to shore and is precipitated. Rain may similarly come in any month of the year, but rarely does. Southernly foehn winds over the ice-cap may bring melting temperatures and rain in the coldest months, January, February and March, but only most infrequently. Few fogs beset the land, but variable and strong winds sweep the peninsula. The winds and ice, and weather conditions consequent upon them, form an important element of the Thule environment.

Waters of polar seas are always of low temperature and low salinity. Sea-water temperatures are kept low in winter by cold off-shore winds and in summer by melting freshwater berg-ice. Low evaporation and addition of melting berg-water reduces salinity. Low temperatures are favorable to relatively high content of carbon dioxide and oxygen. High gas content and low salinity tend to promote rich development of plankton and other small plant and animal organisms and luxuriant algae in the seas, with resultant abundant supply of food for macroorganic life there—for incredible numbers of sea birds, like eiders, guillemots, murre, ducks and brant, for fish, and for marine mammals such as porpoises, seals, walrus, and whales which are a feature of Thule environment. The polar bear is widely scattered along the coast, particularly in berg-studied waters.

Short growing season, physiological drought, low temperatures and almost total absence of soil, restrict plant growth and limit development of vegetation to low herbs and shrubs, grasses and sedges, mosses, lichens and other low forms. Except when guano has accumulated about bird rookeries, or refuse about Eskimo settlements, vegetation is sparse and even lacking. Yet there is enough plant growth on land to furnish food for many arctic hare and lemming; a few carious of which there is steady replacement from unglaciated tracts of Greenland's east coast; wolves, foxes, ermine and other predatory mammals; and a few land birds of which the ptarmigan is of the most value to the Eskimo. Insect life, of relatively few genera, is fairly abundant for the short summer season and yields food for shore-birds, redpolls, longspurs, wheatears, and snow buntings, that derive their living from the land.

Such, in brief summary, are essential attributes of the Polar Eskimo's natural environment, of the place or land in which they live and make a good, happy living.

THE POLAR ESKIMO

The Polar Eskimo represent the latest immigrants into Greenland from the Canadian Archipelago. They constitute the rear guard of Eskimo movement into Greenland which populated sparsely both the east and the west coasts southward to Cape Farewell. They probably include stock of the original immigrants with additions from at least one later historical immigration, well recorded about the middle of the nineteenth century, and possibly, perhaps probably, others earlier, but subsequent to the first settlement. At any rate, several periods of culture have been distinguished, of which some may reflect accretions of new members to the community from extraneous sources, bringing new artifacts, new techniques, new methods and means of adaptation to the peculiar Arctic environment. Their attributes, activities, psycholistic, and entire culture form simple, direct, and obvious adjustments to the unique combination of factors that make their Thule homeland.

Remote and isolated, separated by hundreds of miles of formidable glacial wall and strong treacherous expanse of sea-ice, from their nearest neighbors to the southward, they maintained themselves as a distinct cultural group in a far Arctic land for many generations, having lost contact with all other peoples of the world. When they were discovered by Parry in 1816 and designated by him the Arctic Highlanders, they believed themselves the last remnant of humanity surviving upon a frigid earth. Afterward the spread of whaling in the early nineteenth century brought them into intermittent but fairly frequent association with Americans and Europeans, and later the association continued with numerous exploratory expeditions seeking the North Pole and greater knowledge of the seas and lands that form its environs.

Such early associations were too infrequent and intermittent to change substantially their way of life or their Nic's native adjustment to their distinctive land; but when, in the early part of the twentieth century, Knud Rasmussen established his permanent trading station in Thule and a few years later the Danish government extended its political sovereignty and economic supervision over the Polar Eskimo, the pristine character of their culture became subject to powerful influences of our Western European civilization and lost its native form. The white man's order revolutionized their simple primitive society and disrupted their ancient way of life.

That way of life has been adequately described and interpreted by numerous students who have lived with the Polar Eskimo and reported in a host of publications details of their culture. Everyone knows about their food, their clothing, their equipment, their dogs, their hunting techniques, their social habits, and all general facts of their economy.

DISTRIBUTION OF POLAR ESKIMO SETTLEMENT

The Polar Eskimo are solely a hunting people. Their fishing activities are so insignificant in their economy, so negligible in the contribution to their dietary, that they may be neglected. The Eskimo are essentially a coastal people, living on the shore, but hunting chiefly on the sea and deriving the major part of their living from it. Their food is almost exclusively meat and blubber, eaten boiled or raw. The vital organs are eaten raw. They have no vegetables, fruits or cereals, not even roots or berries. The fuel to heat their homes, and to light them, and to cook their food is blubber, of whale, porpoise (baluga or narwhal), walrus and seal, and sometimes of bear. The material of which they fashion their every item of clothing is of furs and hides, tanned and made pliant by scraping and chewing. Their whips, their dog harnesses and traces, their harpoon lines, their kayaks, are of leather from animal skins. Many of their tools and implements like harpoon points, are of ivory, their bows of caribou antler. Bone and horn are used for a few items of their home life. Except for soapstone pots and lamps and primitive ulus and other scrapers, practically all artifacts in their economy and culture are from animal sources, obtained by hunting and trapping.

The sites of their settlements must then rep-
present primarily an adjustment to their hunting activities. Easy access to adequate and varied supplies of available game constitutes the major factor in choice of both summer and winter sites of settlement. Comfort; convenient water supply; access to ice-cap and summer travel routes over the ice; shelter from wind and storm; and other considerations play but secondary role in selection of the sites.

Settlements of the Polar Eskimo are widely scattered and separated along the whole coast of Shule. Many sites once occupied have been abandoned for years; some sites have been more or less continuously in occupation from time immemorial, though temporarily deserted for several years in succession; other sites are still occupied occasionally but not at all continuously. Etah, Umenak, Kangerdluksuk, and Ivanegnok have been almost permanent village sites throughout the history of the group, and a number of other sites have found favor almost as continuously as they.

Some sites are occupied only in summer, some only in winter; many sites are paired - a summer site near early open water and a long sea-hunting season, or supply of some kind of game particularly desired, and a complementary winter site relatively near, where open water provides opportunity by sledge for winter hunting along the edge of the ice, where there is protection from wind, or easy access to good sledge routes, smooth ice, safe ice-foot, or some other favorable sledding condition. A few sites are occupied summer and winter because they possess definite advantages for round-the-year hunting, security, comfort and easy traveling.

Eskimo sites consist of from a single igloo to five or six igloos at the most. No site affords enough game for a large number of hunters for continual residence throughout the year. Supply of game, too closely hunted, becomes depleted either through continued slaughter or through being frightened away after persistent or prolonged pursuit. Under such conditions even the most assiduous hunting within reasonable range of the settlement yields insufficient reward and dooms the people in that settlement to dearth and relative poverty. There is a very nice balance among hunting territory, sustained supply of game, intensity of hunting, and assured comfortable standard of living. Whenever the booty of the chase decreases, supply of meat and blubber for use in the igloo or tupik diminishes, but more important that that is the consequence of limited food for the dogs. With a well-fed, powerful dog team of eight or ten dogs the hunter can sledge far to hunting-grounds wherever game is most abundant and having made his kill can haul a heavy load of flesh, blubber, and skins home to the settlement, or cache it along shore at some place where he can get it when he or his fellows need it. His wife's igloo will be well lighted and heated, his children well fed, healthy and happy, and his dogs kept numerous for replacements when needed and for the trail upon any occasion. The Eskimo of a settlement will then be prosperous and effective.

But if game becomes scarce, the supply of food and fuel and clothing for the family and feed for the dogs is reduced. The family suffers, the dog team soon loses its power and endurance for long trips and the hunter can not sledge to remote hunting grounds where game is plentiful and unfrightened, but must confine himself to nearby fields where game is scarce from overhunting, wary, and hard to kill. Then as supply of food and feed decreases, the hunter loses some of his dogs or perforce kills them, and those that are left lack strength. Once an Eskimo's dog team falls him, one is indeed in hard luck. It is a vicious circle.

Consequently settlements are not only limited in number, but widely enough spaced and scattered along the coast to afford maximum territory for sustained and successful hunting. Since most of the game is in the sea, and conditions favorable for abundance and variety vary from one area to another, there can be no regularity or average in spacing of settlement or in number of families occupying any particular site. In an area of paucity and monotony of game, settlements must be widely spaced, with distances of as much as eighty to a hundred miles intervening, and the number of hunters in the settlement relatively few, in some places but two or three. Where game is abundant and varied, both on land and sea, there settlements are closer, in the most advantageous localities perhaps but twenty to thirty miles apart, and the number of hunters in a settlement rises at times to eight or ten.

Any one territory yields only a few species of game, limited variety of food, of furs, and of other raw materials. Some settlements yield abundance of a very few kinds of game; some settlements yield greater variety but a smaller aggregate of supply; a very few settlements, like Etah, Kangerdluksuk, Umenak, and Ivanegnok (Cape York) supply both assured quantity and desirable diversity. For occasional change in dietary and in scenery, and required assortment of furs and skins for the several items of clothing for man and woman, Eskimo families change residence from one village to another almost every year, rarely living two years in succession at the same site.

Composition of the group of any settlement varies with every year. A group at a settlement one year disperses to several other settlements the next, and is replaced by families that the year before may have resided at as many sites as there are families. There is no continuity of settlement, or of composition of population at a settlement, from one year to the next. A site may be occupied one year and abandoned the next, particularly if it affords but limited choice or quantity of game.

Etah, on Foulke Fjord which normally yields ample supply of varied game - a moderate supply of walrus, seal, narwhal, and polar bear; a rich harvest of doveries on the slopes of Foulke Fjord, and eider from Littleton and other islands, and consequently of blue and white fox that feed upon these birds and their eggs; and a reasonable number of hare, caribou, ptarmigan, and salmon in favorable seasons - is rarely wholly abandoned. After it has been deserted for a year or two, or perhaps three (and such desertion happens at only rare intervals), abundance and variety of game are restored and as many as eight to ten hunters may make their home there for several years, though of changing families. Etah is one such site favored most by the Eskimo.

Kangerdluksuk, near the head of Inglefield Gulf is another good hunting site, yielding rich supply of seal this year round, of landlocked salmon from a small lake near by in summer, and sometimes in winter too; and when a "sawat" forms, a great
There are very rarely is Ivananganek deserted. Nesting murres, guillemots and gulls in islet-nesting, where they keep the water in constant turmoil, and easy passage over sea-ice or icecap to other villages where snow provides best footing for sledging, or iglooyaks in winter and for tupiks and land activities for all, children particularly, during summer. Summer settlements represent flexible adjustments to summer conditions. Tupiks, that is sealskin tents, which form the dwelling for summer, may be easily transferred from one place to another and set down on any flat area that may be convenient. If there are bird rookeries near, the Summer site is generally chosen near them. If seal hunting on the ice dominates, however much the site is chosen near the leads and calm stretches where the seals sun themselves; care is taken to avoid places where broad lanes of open water are likely to in-
Whatever the attributes of site that determine its selection for summer settlement, they must include a sloping beach or delta to provide an easy breaking of the ice, and where the water is prevalently calm and safe for kayaking.

Winter settlements are more firmly established at sites long since selected for definite advantages that they possess. Igloos, being of stone, must be built where suitable stone is available, and can not be removed from one site to another. Consequently winter settlements are more permanently fixed and regularly inhabited, generally in the very same places where the igloos were first built. Like summer villages, winter villages must insure as easy and trustworthy facilities for hunting as possible; consequently they are established where the shore slopes gently to make the ice readily accessible for sledge or kayak as the season permits; where issuing glaciers make gaps in the barrier cliffs and afford routes for sledge travel over the ice cap to other villages should necessity arise; and where any stores laid up in caches along the coast in successful summer hunting remain easily available for times of winter stress, and for trapping foxes that seek such caches for plunder.

In winter, when all land sources of fresh water are frozen, and all streams are dry, the only supply is from offshore icebergs, except the few places where small freshwater lakes or ponds are near. Sites otherwise favorable become increasingly desirable if shallow water prevails near shore, upon which drifting bergy may ground and furnish potable and other domestic water. Should perverse currents or winds keep the bergy from grounding, then the Eskimo must sledge their supply of ice for their homes from remoter sources, a hazardous chance should inclement weather long prevail; or they must remove to a more favorable site.

Though proximity to productive hunting grounds, either beside open pools or leads off shore, or where open water extends near shore, constitutes the determining element of choice of site for a winter village, the character of the ice approach to the hunting ground is also important. It must be smooth and sound enough to insure safe and easy winter sledding, and it must be stable enough not to break out with storm or change of tide. Shelter from heavy wind, storm, heavy snow and undue cold remains important in choice of winter site. Whereas summer villages may be located well into the depths of fjords and bays where seal bask in the sunshine and doves nest in the talus slopes and eiders on the islets, winter villages must be established near the mouth of the fjord or gulf, toward some shoal upon which icebergs ground conveniently, or some pool where tides or winds keep the ice open nearly or quite all winter, and sea animals haunt shallower coastal waters.

As culture of the Eskimo has changed through the centuries, their choice of settlement has been decided upon different factors. Similarly, changes in ice and weather conditions; in character, habits, and haunts of game; in tides, currents and salinity of the sea; all of which must have come again and again, have indisputably modified the location of both winter and summer settlement. Improved hunting equipment, larger sledges, better home equipment and a multitude of wares for better living, all provided by contact with the white man, and purchased with ivory and furs, have expanded appreciably the Eskimo's hunting range to grounds where game is abundant and trustworthily regular, and given them greater assurance of ample supplies of the necessities of life.

Hunting has ever been, and remains, the one significant activity of the Polar Eskimo. Their distribution and type of settlement represents adjustment to their unique economy. Agriculture, industry, and trade as ways of making a living are denied them. Their hunting economy forces upon them a definite place, as well as way of living.

Worcester, Massachusetts
March, 1917

NEW MEMBERS

Active:
Miss Dorothy Gleason, 16-A Elm St., Worcester, Mass.
Joseph J. Vickery, 76 Sandwich St., Plymouth, Mass.

Family:
Mrs. Matilda D. Vickery, 76 Sandwich St., Plymouth
Miss Lora C. Armstrong, 72 West St., Worcester, Mass.

Institutional:
University of Colorado Libraries
Boulder, Colorado
Dartmouth College Library
Hanover, New Hampshire
PEBBLE BEACH WORKSHOPS OF THE SOUTH SHORE

Odum B. Howe and Henry F. Howe

The archaeological information which can be obtained from surface hunting of ploughed and otherwise disturbed village sites is necessarily limited by the lack of any indication as to the depth from which stone implements originally came. However, there are certain types of analysis from the study of such sites which can be of interest and of value in certain special problems in archaeology. Among these are an examination of the extent to which the occupants of the village made use of known local materials in making their stone implements and a study of their choices of materials for different types of implement. The beaches themselves represent the breakdown products of glacial drumlins which line the open shore. In the Town of Scituate two such large sites exist: M-37-2, at North Scituate Beach, extends along both sides of Hatherly Road in the level fields which were first farmed by Timothy Hatherly, the first settler, about 1670, and have been sporadically cultivated ever since. Only shallow, brackish Masconnet Pond separates the site from an immense pebble beach on the ocean shore. Another similar site, M-37-4, exists south of Scituate Harbor in similar great cultivated "Green fields" adjoining salt marshes separated only by a creek from the pebbly beach known as Peggoty Beach. This site, only three miles away from the Hatherly site, was occupied in the 1650's by the first settlers of Scituate who migrated there from Plymouth before 1633. We have over a period of the past ten years accumulated collections of approximately 185 stone implements from each of these two sites. The obvious fact that a barrier beach consisting of pebbles in great variety, chiefly of felsites, porphyries and diorites, providing a mine of available materials for both flaked and pecked or polished implements, stands prominently in front of each of these sites naturally arouses speculation as to the proportion of implements found that are made from these materials. In an attempt to collect information on this point, we have made a study of the proportions in which materials found on the beach are duplicated in the implements themselves.

A word should be said as to the origin and frequency of these materials elsewhere than in these beaches. These materials represent geologically the breakdown products of glacial drumlins which existed along the shore, or as islands immediately off-shore, which in the course of centuries have been broken down by storms and their pebbles distributed along the beaches. The original sources of the felsites, prophyries and diorites were small eruptions, dikes and intrusive beds laid down along the southern border of what is geologically known as the Boston Basin, in Hingham, Cohasset and Nantasket. The principal grades of red and black and gray felsite and prophyritic felsite can occasionally be identified in ledges in the Nantasket area a few miles to the northward of these sites. Their fragments were distributed in decreasing frequency by glacial action southward along the coast, and their highest concentration is certainly to be found in these pebble beaches between Nantasket and Marshfield. They are easily recognizable because of their striking color, crystalline matrix, or characteristic flow structure, and cannot be easily confused with any other rocks found in Eastern Massachusetts. The diorites likewise can be identified and compared with their original source in the greenish-gray dikes which occur throughout the granite ledges of the shores of Cohasset and North Scituate. The only other sources of similar diorites are along the northern shore of Massachusetts Bay in the neighborhood of Swampscott and the northern boundaries of the Boston Basin. It can, therefore, be understood that the chances that any of these materials were introduced from any distance greater than 15 or 20 miles is extremely unlikely when one identifies them with the materials found among the beach pebbles. It will be shown that without exception the only materials among these collections which cannot be found in the pebble beaches are soapstone and flint, of which only one or two examples exist in the collections from these two sites. The sandstone and slates can be duplicated in the pebbles of the beaches, these materials probably originating from sedimentary layers deposited in the Boston Basin, which likewise were transported by the glacier to this region. The granite is common in both beaches, though much more common at Peggoty Beach.

A classification of the types of implements from these sites is added for whatever it is worth in indicating the type of culture represented in the two sites. Such a classification also helps in emphasizing the deliberate selection of materials used. The high incidence of plummetts and grooved pebble sinkers is characteristic of these shore sites where fishing must have been one of the principal activities of the inhabitants. These sites are also characterised by quantities of blanks roughed out in the process of making plummetts, axes, adzes, and many varieties of flaked tools, so that one can demonstrate specimens of half-finished implements in all the stages of manufacture from the original beach pebble to the finished implement. No further indication than this is needed to prove that the mine of materials in the beach pebbles was usually utilised as the source of stone for these workshop areas in the sites, since the type of water-worn surface characteristic only of beach pebbles is many times recognisable in the blanks and half-finished implements.

These observations, therefore, serve to provide us with information as to what types of materials the Indians used for definite classes of implements. We can guess the conclusions that these workshop men had reached as to the adaptability of stones of certain hardness, fineness of grain, and tensile strength for the purposes to which they intended to apply these implements. We can attach some significance to the fact that diorite was never used to make flaked knives or projectile points, but that axes and adzes were always made of diorites with...
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the exception of a few from hard slate. Conversely, it is of interest that all knives and projectile points were made from felsites, quartz, quartzite, and porphries with the exception of a few slate blades. We can note that in no instance is there evidence of the technique of pecking applied to porphry or felsite but that this technique was regularly used on diorite and slate. We can observe that flaking was very ineffective on diorite and to a lesser degree on slate, and that in most instances this technique appeared in these materials only in the process of roughing out blanks. Likewise, abrasive polishing never was applied to any of the felsite or porphry implements but was frequently applied to diorite and slate, and the pebbles with which such abrasion was done can be found in the site. Such observations as these are common to many sites but are particularly dramatic as seen in workshops such as these from which the original materials in the beach can be followed from raw materials to final finished implements.

The information in the accompanying table suggests that such differences as existed between the cultures of the two sites were dependent mainly on the differences in composition of the two beaches. In the North Scituate beach there is much less granite, much less banded red felsite, and considerably more banded gray felsite than in Peggotty Beach. The proportion of dark gray porphry is likewise higher in the North Scituate beach. These differences are strikingly reflected in the artifacts from the two sites. But the two sites have in common an obvious selectivity in the rejection of granites, sandstones, soft slates and schists, except for the making of the most rudimentary types of artifacts, and likewise the careful choice of the best available materials for such specialized uses as drills, adzes, corner-removed knives and small points. The types of artifacts in the two sites show no significant differences, except that the proportion of crude geometric-based leaf-shaped knives is greater, and the carefully worked stemmed or corner-removed knives less, in the Greenfield site than at Hatherly. Otherwise the two cultures seem identical. Both sites have of course been disturbed for centuries, and no estimate can therefore be made as to whether these are a single culture or a mixture of several.

The most valuable conclusions, therefore, that can be drawn from these sites have to do rather with the materials used to manufacture the artifacts than with the type of culture involved. It is clear that these aborigines had in both beaches a wealth of available materials that included diorites, hard and soft slates, sandstone and mica schist, several varieties of granite, quartz and quartzites, both plain and banded varieties of red and gray felsites, and light and dark varieties of both red and gray felsites, and light and dark varieties of both red and gray porphries. All the felsites and porphries were of very fine grain, and often fractured with a curved or conchoidal surface in very thin flakes like flint or jasper. The small porphyritic crystals did not interfere with clean fracture lines. Some of the hard metamorphic slate could occasionally be worked almost as well. But the diorite was of coarser grain, though it could be polished, and the granite contained large quartz and feldspar crystals that made it quite unworkable. The sandstone also is of a very brittle type that is not well adapted to fine work. With these various materials, it is interesting to find what the Indians made.
THE ERNEST S. CLARKE COLLECTION

Ripley P. Bullen

The heirs of our late friend and fellow member, Ernest S. Clarke of Marion, have given his collection of Indian material to the Massachusetts Archaeological Society. This addition to our collection has been catalogued and, except for twenty-four projectile points on loan in a special exhibit at the Peabody Museum, Cambridge, is now in the Society's repository in Andover. Specimens include 564 chipped objects (points, knives, drills, and scrapers), 77 beads, and 30 larger artifacts including several pebbles, grooved axes, adzes, celts, gouges, grooved sinker, plummet, semi-lunar knife, effigy pipe, drilled and incised pebble, and a toy pottery vessel. The collection includes no local sherds.

Possibly the most interesting specimens are twenty-three elongate points (Fig.15) found by Clarke himself in a cache in his garden. Nine are complete, eight nearly so (missing only tips), and six are represented by basal halves. On one of the basal halves the edges of the specimen and edges of chipping scars have been rounded or smoothed as if by wave action. Two of these points are of quartzite and one of rhyolite(?); but the rest are of heavily patinated felsites. They are of medium thickness, chipped all over, and especially uniform in shape and size; apparently all were made for the same purpose. They vary in length from the longest illustrated (Fig.15), which is 3-3/16 inches long, to 2-1/2 inches. They vary in width from 10/16 to 13/16 of an inch at their widest point. In the balance of the collection, extremely few tools, only three of four, approach these points in shape and size.

Three items comprising beads are worthy of note. Most of them were found near a hearth at what may have been a rock shelter at Charles Rock, Marion. Two beads are barrel-shaped and made of bone. Twenty-three are disc type shell beads of substantially varying thickness and diameter. The diameter of the remaining 52, which are also of disc type, is uniform and closely approximates 3/16 of an inch. Eighteen are white discs with rounded edges, slightly less than 1/16 of an inch, in which holes 1/16 of an inch in diameter are drilled. Thirty-four are black discs with sharp edges, a full 1/16 of an inch thick and are pierced by holes less than 1/16 of an inch in diameter. The black peripherals appear polished. A white substance adheres to the unpolished sides, which are lighter and slightly brownish in color. These 52 beads, both the white and the black appear to have been made from quahog shell, probably after the arrival of the first colonists. The Society's site survey records indicate that seven projectile points, three triangular and four notched, have been found at Charles Rock. Some of these points were associated with some of the beads but the record is not specific.

Among the various chipped specimens collected by Clarke from the Marion region are three large and thick quartz knives (Fig.16a and b). These are asymmetric and similar to those in the Dwight Blaney collection from around Eastham (see Fig. 14, p. 77 of the July 1946 BULLETIN, Vol. VII, No. 4). Also included in Clarke's collection is the large, thin, chipped specimen illustrated in Fig.16c. It is 4-1/2 inches long, waterworn, and made of felsite which has become extremely patinated. This tool would have made an excellent spear point or knife.

While some of the projectile points in the collection are segregated by sites the quantities representing separate sites are not sufficient for valid comparisons with the exception of those from Stewart's Island and White Horse Beach (Clarke's Point site). These two sites are separated by only a small stretch of water and may represent two parts of the same site. Further information regarding these sites, the surrounding territory, and the geological problems pertaining thereto will be found in articles by Robbins and Clarke in the January 1943 BULLETIN, Vol. IV, No. 2.

There seems to be no significant difference between shapes of projectile points from the shingle of Stewart's Island and those from White Horse Beach. Large triangular, small triangular, notched, stemmed, and corner-removed points are representative of both places. It is noticeable, however, that only heavily patinated points are either corner-removed points or those which have wide notches at the sides. Points which have a waterworn appearance include examples of these same types and also some of the small stemmed quartz points. Pending excavation, the significance of a waterworn appearance is not clear. Specimens from these sites will be valuable for study when Stewart's Island is investigated further.

The same comment about patination and wear may be made regarding other projectile points in the collection which are not allocated as to site. The percentage of corner-removed points having this waterworn appearance is much greater than that of other types. Some of the side-notched, small stemmed, and small triangular are also waterworn but none of the large triangular points exhibit this feature.

This does not imply, ipso facto, that waterworn points are older than others, as the wear is a function of the length of time the specimen has been on or in an active beach. It does imply, however, that the makers of large triangular points lived in a different place, or in a different situation at the same place, or had different habits of procuring food so that their tools were not so apt to get in places where they would become waterworn.

As this is the first collection, with the exception of that excavated at Nantucket by Edward Brooks, which has come to the Society, members may be interested to learn what happens to such a collection.

Upon receipt at the repository, the collection was sorted and all specimens whose provenience
was indicated, either by number and catalogue, by being in marked boxes, or otherwise identified, were catalogued by the system outlined below using white water paint or black Indian ink over which a drop of amboind and acetone solution was put to protect the writing. A 3x5 card was made out for these specimens giving the available data as to where and how found, etc. The collection was then sorted over again, worthless fragments and non-archaeological material discarded and the balance catalogued and specimen cards typed.

The identification system used is as follows:

MAS - 1 to 99, for general equipment (transit, trowels, bags, etc.)
MAS - 100 to 999, for identified bone.
MAS - 1000 and up, for artifacts from Massachusetts but exact site unknown.
MAS - M-1/1/1 to M-52/ /, for specimens allocated to definite sites.

For example, under the last arrangement M-11/10/25 would be the 25th specimen from site 10 in quadrangle 11 of Massachusetts, in this case White Horse Beach at Marion, Mass. The "MAS" indicates ownership by the Massachusetts Archaeological Society.

The reason for handling the cataloging in this manner is twofold. First, it does not produce numbers which are astronomical in size. More important, it makes a ready way for recording members' collections. Every Society member should have his collection catalogued by sites. He might well put the "M" number on his specimens. If he uses this system, which ties the specimen and site into the state site survey nomenclature, and then gives his collection to the Society, all this is required is the addition of "MAS" to indicate ownership by the Society. Also, if the member keeps his record or catalogue on cards, they can be slipped into the proper place in the Society's file without recopying.

Such details are important to a custodian as it takes much time to catalogue completely a large collection. It should also prove entertaining for members to catalogue their collections by sites to see what differences they might find from site to site and, incidentally, increase substantially the scientific value of their collections.

There is in the repository a small Craftsman transit (without stadia lines), stadia rod (2.4 meters), plumbobs, Alvar, acetone, plaster of Paris, 60 cloth and 500 paper bags, which will be made available to Chapters of the Society as needed. Also available are seventeen items of identified bone with which bird or animal bones may be compared for identification.

As the collections of the Society grow, we hope to amass a body of data which in time will be very important for study. It is also expected that some specimens will be used for travelling loan exhibits for education, special short-time exhibits at meetings, etc., reasonably long term exhibits like that now at the Peabody Museum, Cambridge, and eventually semi-permanent exhibits in the Society's headquarters or elsewhere.

Andover, Massachusetts
January 20, 1946