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CULTURAL TRAITS OF THE SOUTHERN NEW ENGLAND INDIANS

A Summary of Material Derived From Historical Sources

By L. F. Hallett

Early observers of the economy of the Indian tribes of Southern New England included a number of adventurers who visited, explored, described and even tried to colonize the coastal areas preceeding the successful settlements at Plymouth, Salem and Boston. The narratives of these early visitors were our first insight into the manners and customs of our predecessors; and, when combined with the observations of the settlers who followed in their footsteps, give us a fairly clear picture of early 17th Century Indian economy in this region.

This knowledge is, of course, being constantly verified and supplemented by the intelligent interpretation of evidence from the ground itself, and this latter method is almost the sole reliable source for any degree of antiquity.

While the Northern New England tribes were relatively small and nomadic in a hunting-trapping-fishing livelihood covering a wide territory, their southern neighbors in Massachusetts, Rhode Island and Connectict occupied more fertile and populous regions, and were by nature sedentary. They were village dwellers, they jealously guarded well established tribal boundaries, and they had greater tribal unity under hereditary leadership.

The tribal sachem was absolute master of his people, and his will was the law of the tribe. In all matters of importance, however, he customarily conferred with counsellors, who were termed the paniies. These were selected from the wisest and bravest of the tribe, and were not only a council of state, but the immediate guard of his person. The sachem held disposition of the tribal lands, and was supported economically by his people. He also held sovereignty over the sea bordering his domain, and wrecks and whales taken on the shore were his property, as well as the skins of any deer killed while in the water. In executing punishment the sachem could beat, whip or put to death with his own hand.

Various forms of punishment were meted out to fit various crimes. Customarily a thief was repri­manded after his first offense, was beaten after the second, and had his nostrils slit after the third. If stealing occurred which involved two tribes, the offended tribe sent for payment. If recompense was not made, the sachem of the offended tribe granted the right to the offended parties of taking satisfac­tion themselves, which was not to exceed their own loss. In cases of murder, the family of the victim assumed the right to pursue and take the offender. Then, with the sachem's consent, they tortured him to death.

The lesser chiefs were appointed, and acted under the command and protection of the Sachem. The sachemship was entirely hereditary, descending regularly from father to son, and if male heirs were wanting, devolving to the females. So strict was their reverence to birth that it was demanded that the mother should always be of noble blood.

The Southern New England tribes spoke a language understood by all, but with certain dia­lectic variations. The number of primary or radical words in the language was comparatively few. The words were made up of harsh consonant sounds little relieved by the softer vowel sounds “I” and “r.” Besides the guttural and nasal sounds, they had a peculiar whistling sound which cannot be represented by any letters in the English alphabet, hence in words in which it occurred, no two persons would probably spell them in the same manner.

The Indian place names were not single words. They selected some prominent feature in the locality as the principal element in a descriptive phrase, and this became the name of that place. If a sharp rock, the name would be “At the Place of the Sharp-Pointed Rock.” In forming the phrase name the Indians did not use the whole of each constituent part but only what is called the “root.” Often only a small fragment of the word is used, and the whole word must be inferred. The analysis of these place names calls for a high degree of linguistic skill. The name of an animal was never used to denote a localized place or river. The orthography of the Indian language is wholly the work of the English, and the variety in spelling of the early settlers has only added to the general confusion.

In the communal life each sex had well-defined responsibilities. The man's duty was to protect his immediate family and relatives, to provide the products of hunting and fishing, to make weapons and wooden utensils, to build fortifications and provide poles and bark for the lodge, to make canoes and
dugouts, and to clear land for cultivation. To woman was assigned the household labor, care of the children, the tanning of skins and the weaving of mats and baskets, the making of bark utensils, the covering of lodges and the making of clothing, and the gathering of roots and berries, seeds and fruits. The sowing and cultivating of crops was almost exclusively woman’s work. She sometimes received assistance in these various duties from her children and from old men, but on an entirely voluntary basis.

In discussing family traits it is well to bear in mind that many customs of the colonists seemed repugnant to the Indians, just as many practices of the latter seemed barbarous to the early settlers. Most of the accounts agree in regard to certain features of Indian marriage customs. Permission of the parents was needed, and also the permission of the tribal sachem. Wampum was exchanged to bind the agreement, and a feast or festival served as a marriage ceremony. Dissolving of the marriage occurred occasionally, generally on grounds of displeasure, disaffection or adultery. Several observers noted polygamy, but stated that one of several wives was always greatest in esteem and affection.

Childbirth was easy and rarely incapacitated the mother for more than three or four days. The newly born were bathed and greased, wrapped in a small beaver skin, and strapped to a cradle board. After about three months they were removed from the board, and went about naked until the age of five or six. Parents had great affection for their children, whom they rarely punished. This often led to boldness, sauciness and misbehaviour. With the approach of teen age the youth were rigorously trained to hardship and the various arts and crafts of the adults. The subsistence and safety of the tribe depended so much on the hunter and warrior that young men were put under the direction of the most successful hunters. Childhood names were changed upon reaching maturity.

Early observers were all impressed with the physique of the Indian. Tall and well proportioned, possessing great endurance and stoical under pain, it was unusual to see even the very old dependent on a cane or staff. Their hair was straight and black and rather coarse. Facial hair was scanty, and was customarily plucked out. Color of the eyes varied from hazel-brown to dark brown. In children the fold called Mongolic was general, but not excessive. Prolonged exposure to the elements darkened the skin, the children being born much lighter in color than the adults later acquired. The ailments of the Indian were chiefly those which arose from exercise, hardships and fatigues. Maladies arising from luxury, sloth, intemperance and want of exercise were unnamed and unknown.

Village sites were chosen with care. Good agricultural lands and good hunting and fishing grounds were essential, as well as a nearby supply of fresh water. Along the water courses the larger settlements appear to have been located at the junction of two streams. The village people rotated from place to place according to the season; from thick, warm valleys in winter to planting fields and the seashore in summer. An abundance of fleas or reasons of hygiene often forced removal to a new location during any season. The plague preceding the Plymouth settlement forced the abandonment of entire villages.

Their houses or wigwams were built with small poles fixed in the ground, and bent and fastened together in an arch at the top. Some were nearly circular and others rectangular in shape. The best sort were neatly covered with overlapping bark of large trees, slipped in the spring and dried in the desired form. Others were covered with woven mats. These houses rarely exceeded 20 feet in width, but some communal dwellings were over 60 feet in length. Chimneys were a wide open hole at the top with a covering mat for inclement weather. Single or multiple doorways, about a yard in height, had a covering mat or skin. No particular order of arrangement of the wigwams was followed, the head of each family choosing his own spot. The smaller family units had a single fireplace in the center, and beds raised a foot from the ground were around the walls. Skins and mats were used for bed coverings. Their few household utensils included a cooking pot, trays, spoons, dishes and storage baskets.

Summer clothing consisted solely of a loincloth of square deerskin, aproned front and back, and pulled over a belt-like string fastened around the middle; plus moccasins of moose or deer skin. The men were bareheaded summer and winter, but in winter the women often wore a cap-like headgear. The loincloth of the women had a wider front apron.

Winter garments consisted of deerskin shirts and leggings with the hair on the inside. These
were often ornamented with paint and beads. Thicker moosehide moccasins and snowshoes aided travel in this weather. Coats or mantles, some woven of feathers from the turkey or goose, others of deer or beaver skins, hung to their knees. These were ordinarily sleeveless, and women’s robes were longer and fuller than those of the men. In extreme cold, blankets of hide were worn over outer-garments.

In Southern New England the custom of oiling the body was practiced as a protection against insects as well as to prevent the skin from blistering in summer, and to protect the body from cold in winter. Oil from fish, raccoons and bears was commonly used for this purpose.

As the clothing was destitute of pockets, various pouches and bags were universally used. Large leather bags served for carrying game and other food. Smaller ones of various forms were ornamented with beadwork, quillwork, pigments and dyes.

The motive of personal ornament, aside from the desire to appear attractive, seems to have been to mark individual, tribal or ceremonial distinction. Elaborate ornamentation of garments was reserved for the ceremonial dress. Headbands, armlets, bracelets, belts, necklaces, embroidered buckskin and woven fibres had their practical use, but were made decorative, and often were symbolic.

Copper ornaments, undoubtedly originating from French and Basque fishermen, were occasionally noted in this region. They differed little in pattern from those of stone, and included plain gorgets, globular and cylindrical beads, and a single reference to breastplates 6x12 inches, hung from the neck.

Ear ornaments of shell, metal or bone were a mark of family thrift, wealth or distinction, and indicated honor shown to the wearer by his kindred. Ceremonies usually attended the boring of the ear, and sometimes these perforations extended around the entire rim of the ear.

The use of paint on the face, hair and body was not haphazard in nature, but in color and design referred generally to clan beliefs, indicated bereavement, or was an act of courtesy. It was always used in religious ceremonies, and was used to honor a guest or to celebrate an occasion. The practice of painting was widespread and was observed by both sexes. Paint was also put on the faces of adults and children as a protection against wind and sun. War paint’s primary purpose was to intimidate the enemy. Black, red and blue are the colors generally noted by the early observers, although yellow and white are mentioned.

Hair dressing was an important daily function. Oiled and dyed a deeper black, the custom among the men was to tie the hair up in a knot at the back of the head, with a feather stuck in the knot. The women bound their hair behind in a club, about a hand long, in the form of a beaver’s tail, with a band of wampum drawn around the forehead and tied in back. Boys and girls did not wear their hair like adults. It was clipped shorter and generally received less care. Some men shaved all except a narrow central ridge resembling a cock’s comb.

Use of wampum as decoration was widespread among men, women and children, those of royalty having entire capes, aprons and scarfs made of the material. Less ornate were necklaces of periwinkle shells and bear claws. Ear pendants of bone, shell, and stone shaped in the effigy of some bird, fish or animal were also recorded. Disks cut from the conch shell were worn as ornaments. Face tattooing, although not common, was practiced to some extent through skin incision and insertion of colored pigments.

Basket making was a woman’s occupation. Materials included grasses, reeds, rushes, wild hemp, maize husks, birch bark and hickory splints. Birch bark dishes sewed with threads of spruce or cedar roots were often ornamented with beads and porcupine quills.

A gouge shaped instrument was used in hollowing out boats, the larger of which were made from logs, and were capable of seating 30 or 40 persons. The surface of the log was burned on one side until the wood became sufficiently charred to be easily workable with crude tools. The largest dugouts approached 40 to 50 feet in length. Pine and chestnut were the favored woods. Their paddles were short, and broad at the end.

The use of bone and related materials including antlers, horn whalebone, turtle shell, and the teeth and claws of many animals was universal in Southern New England. Their cordage was so even, soft and smooth that it resembled silk more than hemp.

Dye materials were extracted from vegetable substances. The fibres used were boiled in water
and the material to be colored was then soaked and steeped in the coloring. Cedar leaves and bark gave a rich olive green, alder bark a dark red, rotten wood a dark blue, white maple a light blue, ash bark a yellow, and hemlock or pine bark a dark reddish-brown. Various roots and berries produced still other color variations.

Paint making pigments included sedimentary iron oxide, limonite of iron, hematite, red and yellow ochre, graphite, charcoal, burned bone and clays. The resulting paints were frequently articles of intertribal commerce.

Skin tanning involved several processes. The larger animals were skinned as soon as killed and the hide rolled up green to be taken home for dressing. After scraping the hair off the skin, the grease and fat were removed and the texture softened by a scraper. The skin was next soaked in oil or grease and washed. Then the hides were brought inside and were pulled, wrung and stretched in a heated room until soft and dry. The skin was then sewed up like a bag with the mouth opening downward over a tunnel, under which a smudge was lighted. Here it was left until well smoked. Varying the quality of the smudge gave different shades of tan.

When we investigate tools and weapons we find that the former is often interchangeable into the latter; for instance the flint arrowhead or blade could be used for both killing and skinning a deer or moose. Some industries were practiced by men, some by women, others by both sexes. Early colonists agree that there was considerable specialization by individuals within the tribe. Some followed only the making of bows, some arrows, some dishes, and some specialized in fishing, others in hunting. A modern authority has stated that fully seventy per cent of all tools and artifacts were of wooden material, a material almost wholly lost to present day excavators.

Pottery making included all articles made of baked clay. In its production the Indians dug the clay from natural sources and worked it by kneading to the desired consistency. The tempering material was next mixed into the mass. It consisted of various materials, including coarse sharp sand, pulverized mica schist, burnt granite, cracked shells or other similar strengthening substances. When thoroughly mixed, the clay was rolled into ropes and coiled in the shape desired. The clay was kept moist and the ropes were united by paddling the outside and scraping the inside. Some pots were built up at the bottom within a gourd bowl. Others possibly were hung in grass basket-bags or nets during the drying process, and show the impressions of the cords. Most pots were covered with cord lines or an ornamentation stamped in with a cord wrapped paddle. Others were fashioned from soapstone, a comparatively easy material to work. The women made nearly all the vessels of clay.

Very little is known of the textile fabrics of the Southern New England Indians, but we do know that they made a serviceable closely-woven cloth of Indian hemp, and probably also of the soft bast of the linden. Robes of grass and hemp were also made, silk grass probably being used for the warp, and cords of hemp for the woof.

Wooden utensils included bowls made from the knotty parts of the maple and other hard woods. Ladles and spoons were wrought from the crooked, knotty branches of the mountain laurel. Buckets with bails, boxes of various sizes, platters, etc., were made of birch bark. The buckets were for holding liquids, the seams being made tight with spruce gum.

Food in abundance was at hand in Southern New England, and in great variety. In addition to the products of hunting and fishing, there were the wild and cultivated crops to be gathered in their seasons. The hard maples were carefully tapped for the spring sap and the resulting maple syrup. From woods borders, berries and edible roots were available in quantity. Walnuts, hickory nuts, chestnuts and the sweeter acorns provided winter foods of importance. The list of cultivated crops included several kinds of corn, such as dent, flint, and sweet corn, various kidney or navy beans, squashes or pumpkins, cucumbers, the common sunflower and the Jerusalem artichoke.

Certain foods were dried, others smoked, and were stored away for future use. There was no set time for meals, and the larder was replenished when the supply neared exhaustion. When other sources failed, the squaws trudged to the clam banks. Neither fish nor flesh were eaten raw. They were cooked by roasting before the fire on the point of a long stick, or by boiling in vessels. Water for cooking purposes was not heated directly over the fire, but by immersion in it of heated stones.

The Indians practiced agriculture without fully clearing the land, and with a minimum of tools. A digging stick and a hoe sufficed. The planting was usually done in “hills”, often by setting
several kinds of seed, such as corn, beans and squash in each heaped up mound of earth. The custom of allowing fields to lie fallow for a certain period was practiced.

Stone chipping of artifacts was an important industry as the volume of food material available depended on the accuracy of the product. Workshops were scattered throughout the area. Their location can still be noted by masses of material gathered from the gravel beds and rock formations; by the cores or remnants too small or irregular to be of further use; by the large flakes which may or may not be considered as finished implements; by blocked out specimens which were subsequently discarded due to some flaw not detected at the outset; by specimens nearly finished but irreparably injured by some unlucky finishing touch; by chips and splinters of every size and shape; by hammerstones; and by a few small flat slabs of stone with trace of hammering on either side, and possibly used as lapstones, or in connection with bone flakers. The flakers were fragments of bone or antler from 1 to 6 inches in length used for pressing against the edge for the purpose of still further reduction to desired shape.

Great numbers of stone tools have been found in Southern New England, and it seems curious that references to their use by the Indians are very scarce in early accounts. A possible explanation may be that these tools were mainly used in their inland winter villages and thus did not come to the attention of early observers, as no European traveled far inland for years after contact along the coast. However, gouges, axes and drills were noted in the coastal areas.

Their implements of war included the war axe or tomahawk, the bow and arrow, the knife, the lance or spear, and a wooden club. Their manner of waging war varied little among the several tribes. Surprise attacks and carefully planned ambushes were standard procedure in intertribal wars. The battles, however, were never very bloody. In a historic battle between the Narragansetts and Pequots in Connecticut no more than thirty of the defeated party lost their lives. In the forest every tree served as a shield, and in open country they danced and leaped about to avoid each other's arrows. The more sedentary tribes built fortifications and stockades for their protection, and some were of considerable dimensions. Trenches and embankments were not unknown. A party of Nipmucks entrenched themselves on the banks of Quinebaug river against the Narragansetts, where they remained for three days. Prisoners underwent various kinds of treatment. Occasionally the captive was adopted in place of one slain in battle. But if not thus adopted, death by torture was common practice.

Tribal wars were generally caused by boundary disputes. As late as 1635 a bitter argument arose between Massasoit and Canonicus regarding the ownership of several islands in Narragansett Bay. Peace was restored by Roger Williams when he induced Massasoit to withdraw his claim.

Just what the native ailments were and how the medicine men dealt with them remain obscure, although their knowledge of the application of drugs was considerable. Their medicine men knew how to deaden local pain with anesthetics and narcotics; how to combat poisons with emetics and antidotes; how to stop the flow of blood with styptics; and how to combat diarrhea with astringents and constipation with cathartics. They also knew how and when to apply lotions, plasters, poultices and salves. Besides many specific remedies, they had numerous general medicines. At least 63 of the many roots and herbs known to have been used by the New England Indians are found among our own official and unofficial remedies today, and over half of these are used for exactly the same purpose now as then.

Burial and mourning customs appear to be similar throughout this region. Closely flexed burials are characteristic of the pre-Colonial period. The corpse was usually sewed in a mat, and the remains were often buried with grave goods including implements and food. Finely powdered red oxide of iron was sometimes scattered in the grave. There was a prescribed mourning period during which relatives painted their faces black, refrained from certain normal habits such as playing games, and continued to wail and lament at certain times. Most of the accounts give the duration of this mourning as one year. Wigwams were always abandoned after a death had occurred in them. Canonicus, the Narragansett sachem, burned his house with all the goods in it after the death of his son. The dead were never mentioned by name, and if any living person bore the name of the deceased he changed his name. Mentioning the name of a dead sachem was considered a crime. In times of general mortality from epidemics, the Indians omitted the ceremonies of burying and fled the area.
Grave goods bear mute testimony that the Indians believed in life hereafter. It is certain that they believed in one great and invisible deity, who was variously known in different tribes as Kiehtan, Woonand and Cautantowit. He lived far away to the southwest, and concerned himself little with the affairs of men in this life. His nature was benevolent, and it was through his gift, the Indians said, that they first obtained their corn and beans. Fearing him not, he received little of their veneration; and their old men told the English colonists that worship of the good Kiehtan had declined among them, even within their remembrance. They paid much respect to Hobbamocko, or Hobbamock, the spirit of evil, the author of all human plagues and calamities. From the fear which his supposed power and malignant disposition inspired he received great veneration; many dances were performed in his honor, and many sacrifices offered to appease his wrath. There were numerous other minor gods or divine powers; the sun, moon, fire, water, earth, the deer, the bear, etc. A Massachusetts visitor to the Narragansett tribe in 1638 brought home the names of 38 of their gods, all that they could remember at that time.

A serious study of the Indian economy in Southern New England discloses a well-ordered and highly socialistic type of society, depending on cooperative labor by all, and directed by an intelligent and all-powerful ruling class.

Recent methods of accurately dating recovered material tend to show that this condition prevailed in this area for a much longer period than was formerly supposed.

Whether for better or worse, this economy was wiped out in a single generation, a tragic ending to a long established way of life.
RHODE ISLAND PREHISTORY AT THE GREEN POINT SITE

By William S. Fowler

INTRODUCTION

During the seasons of 1953 and 1954, members of the Narragansett Archaeological Society of Rhode Island, under the direction of the author, excavated a location in Saunderstown, Rhode Island, known as the Green Point site. Acknowledgment is made of the permission generously granted by the Plantation Management Company, owners of the property on which the site was situated, to excavate such portion of their land lying adjacent to a spring-fed brook and within easy reach of Narragansett Bay as was found desirable by the Society; and to have access to the site over their land by private road as was required. Also, grateful personal appreciation is due the owners, Mr. and Mrs. Benjamin B. Sturges, and Mr. and Mrs. Paul P. Johnson for their friendly assistance, which aided the work in many ways so that it became more productive than otherwise would have been possible.

Green Point site lies about 300 yards from the shore on the west side of Narragansett Bay, at a point opposite Conanicut Island. Here, the beach curves in to meet the outflow of fresh water from a large sized brook. Quantities of stone artifacts of all kinds have appeared on plowed fields in this area over the past hundred years or more, and several large collections have been assembled from surface recoveries. It was because of this past record that the site was selected for further research under controlled excavation and careful recording of data. Belief persisted that remains of village-sized settlements would be found if the right area could be located. In making selection of the plot to be excavated, consideration was given to availability of drinking water for its occupants, and to its location as being far enough removed from the Bay to make disturbance from ocean storms and floods unlikely. Further, preference was shown for a strip of land that showed no signs of having been cultivated in recent times. The following report seems to reflect the soundness of these preliminary steps in locating the best area for excavation.

In the matter of analysis of artifacts, it should be pointed out that enough work has now been completed on sites not disturbed by plowing under the direction of the author in Connecticut, Rhode Island, and Massachusetts, to make possible the establishment of a typological sequence pattern. At Ragged Mountain1, Potter Pond2, Twin Rivers3, and Nunkatusset4 type sequences dovetail so closely as to leave little doubt as to the related order of many kinds of artifacts. Therefore, I have deemed it proper to apply this pattern to the Green Point evidence in the delineation of culture levels. It has seemed to me that this approach will assure better understanding of the evidence, and will do most toward advancing the archaeology of New England.

(1) Fowler, 1951a
(2) Fowler-Luther, 1950
(3) Fowler, 1952
(4) Engstrom, 1951

THE SITE

The plot finally selected for excavation lies at an elevation above sea level of about ten feet, and, as formerly stated, is removed from Narragansett Bay a distance of about 300 yards (Fig. 1). The terrain falls away in a gentle slope to the beach through fields which have been plowed repeatedly since the days of Colonial settlement. On the upper side furthest removed from the shore, the plot is terminated by an abrupt rise of land. This forms a knoll now covered with a growth of young pines. On the edge of this wood, between the knoll and the main field, lies a strip of land that apparently has not been plowed for many years. At its southerly end flows a brook fed by a never failing spring. This source of drinking water would have been essential for a large camp, and it made this location seem desirable as a likely spot for excavation. Furthermore, appearance on the surface of crushed shell at various places gave evidence of more extensive shell deposits below. Therefore, decision was made to start excavation at this place. A small pond had been made at some time in the past by damming the brook just south of the plot, but this did not interfere with the selected area. It seemed far enough removed to prevent any possible disturbance resulting from its construction. During the first season excavation of the strip of land referred to was undertaken with encouraging results. For the second season, excavation was extended through the field toward the shore. All told, 7,092 sq. ft. were excavated, equivalent to 197 6x6' squares; and 889 artifacts having diagnostic value were recorded. As a matter of record it should be said that the original strip of land excavated the
first year showed evidence of shallower plowing than that of the area excavated the following year. Whereas the former’s disturbed depth measured 5-6", the latter’s measured 8-9". It is obvious from this that the first strip of land had not been plowed in recent years by machine plowing. As a result it provided a more extended view of refuse pits which penetrated the humus; and this has helped provide a better understanding of refuse pit chronology as associated with artifact content.

GEOLOGY OF THE SITE

A study of the geology of the area in which the site is located helps explain certain parts of the evidence. Therefore, it seems advisable to call attention to certain probable events which took place in the formation of the terrain, as they may be related to early settlements of man in the Narragansett Bay drainage basin.

Some time after the ice sheet retreated north from its terminal morain as marked by Nantucket, Martha’s Vineyard, Block Island, and Long Island at the close of the fourth and last glaciation, inland seas abruptly drained into the ocean due to uplifting of the land, leaving rivers in their place. This occurred as a result of the removal of tons of ice that had formerly covered the land through meltwater which was returned to the ocean. As water continued to flow into the sea, water level rose and in time more than equaled the rise of the land. However, for many years prior to this a large glacial stream, which I have named the Narragansett River, flowed through the area now occupied by Narragansett Bay. Early man with fluted points navigated this river in reaching the uplands where he camped. However, as time passed later arrivals doubtless made settlements along its banks. Therefore, it may be seen that because of the great distance from present Bay shores to the channel where this glacial river once flowed, Green Point site would probably have been unsuitable for occupation in early days before Narragansett Bay had been formed; might very well have been passed by. Many years later, however, the rise of sea level caused river camps to become inundated and forced evacuation inland to higher ground, which might have reached as far as the site. Consequently, only sparse evidence there of the Early Archaic settlement may be expected, and none at all of the Late Pleistocene. Indeed, it may not be too speculative to say that artifacts found there in the Early Archaic horizon represent coeval arrival with the formation of Narragansett Bay. If, then, an archaeological date may be placed on the settlement represented by this zone of occupation, a general idea may result of the geologic time for the formation of the Bay. Of course, any such conclusion should be reached only after due allowance is made of the time it took for the rising sea level to make the site accessible. That is to say, the time span between man’s first settlements in the region when shores first began to form, and a later settlement near the present site after the present shoreline had been reached might have been of long duration. In such an event, early camps during the first stage of occupation and part of the last would doubtless be somewhere out in the Bay, inundated by the higher sea water of today. Therefore, any evidence of Early Archaic settlement at the site would probably denote a late phase of arcaic occupation.

A look at soil formation reveals that both early water-washed and wind-blown sand has produced the overburden. Wind has been the leveling-off agent that has built uniformity into the soil during its formation, so that today there is little variation in its depth. As will be seen, this uniform condition makes for more accuracy in the recording of data as to the depth of artifacts.

METHODS OF EXCAVATION AND RECORDING OF DATA

There are several good techniques which have been employed successfully in obtaining and recording data. However, the one selected for use at Green Point has been used repeatedly by the author, and has proven to be efficient and reliable. Above all, it ensures accuracy and uniformity. Further, it facilitates the recording of artifact depths as related to profile, for it requires automatic recording of profile measurements at the exact spot where an artifact appears.

The plot selected for excavation was staked out in 6 foot squares from a line that followed the contour of the area. Alphabetical lettering one way and numerical numbering the other facilitated transfer of the layout to paper, in forming a chart of the site. Excavation was performed by troweling or its equivalent, and was carried out on a horizontal shelf about 1½ feet in width, after a trench had been dug from which to operate. In this way the vertical face of the shelf was kept open at all times to enable profile reading to the bottom of excavation. When an artifact appeared at least two
measurements were taken to the nearest inch; the linear system was found preferable to the metric. With one end of a level resting at the grass roots a measurement was taken from artifact to the grass root level, and a second measurement from artifact to the line demarkation where humus stops and subsoil begins. This line will be referred to as junction, for the sake of brevity. Besides these measurements which were recorded upon a suitable paper form, the stratum in which the artifact appeared was noted. Of course, the junction line is not clear cut but it has sufficient definition to permit measurements within a reasonable tolerance. Use of the linear system with recordings to the nearest inch tends to aid in allowing for slight movements due to disturbance from frost or other uncontrollable causes.

The value of recording artifact positions in this way should appear obvious. First, it enables immediate recording of strata at the place where artifact occurs, and furnishes prompt information concerning related position of other artifacts. Second, it eliminates the need of taking profile at the sides of squares. Third, it makes it unnecessary to wait until the dig is completed and artifact depths are checked against profile readings before delineation of culture zones may be made. Fourth, it gives a most sensitive and accurate record, for profile is taken where artifact appears, and not two or three feet from it, as often is the case when profile is taken at sides of the square under orthodox procedure. For example, if the junction line dips or rises inside a square, then any artifact lying within this irregularity will be accurately placed in relation to it following the site method. On the other hand, if handled in the orthodox way, such unevenness of stratum might easily be overlooked resulting in throwing certain borderline evidence into the wrong culture zone.

The paper work of transferring data from field records to control chart was a continuous process at Green Point that took place after each day's work was completed. After specimens were cleaned and numbered they were classified under titles as suggested by the Research Council of the Massachusetts Archaeological Society. A running frequency record of recorded artifacts listed by depths in inches was continually added to as new artifacts appeared. Thus at any time, work results could be intelligently evaluated as to distribution of traits. In this way, trait changes could be seen taking shape at different levels long before the dig was terminated, and an idea of probable culture levels obtained.

(5) Fowler, 1950

STRATIGRAPHY

The layers of soil in which artifacts occurred at the Green Point site consist of humus and yellow sand subsoil. These were underlaid by sterile white sand. The top soil or humus had been repeatedly turned over by plowing since Colonial days, so that today, its artifact content is thoroughly mixed. However, some of the strip of land excavated the first year had had only part of its humus stratum disturbed, which enabled a better study of its refuse pits than those in the area excavated the second season where the humus had been disturbed its entire depth. The humus stratum in both areas measured about 9" in depth. Below it, the yellow sand stratum was undisturbed and had a depth of 10-12" depending upon whether the measure was taken over a depressed or elevated section of the underlying white sand.

As was pointed out in the "Introduction," a typological pattern, the result of previous research, was used as a guide for the establishment of culture zones. For it seemed reasonable that type sequence, which had been found to apply in the case of four regional sites untouched by Colonial cultivation, would also apply at Green Point. Hence, three culture periods were recognized as being present at the site, although there was only meager evidence of the oldest. In delineating them, junction of humus with yellow sand was used as a base line. Thus, the lower zone extends from an undefined depth in yellow sand up to 6" below junction. The middle zone extends from 4" below junction in the yellow sand to junction. While the upper zone is confined to the humus from junction to grass roots, a distance of about 9". It should be noted that the 1" spread between lower and middle zones is to provide for border line trait variation due to uncontrollable disturbances. For instance, an artifact appearing within the 5" level below junction is considered a part of either the lower or middle zone depending upon its typological affinity.

Now, since the entire upper zone has been disturbed, only those of its traits which do not appear below are considered diagnostic of its culture. However, in the case of the middle and lower zones, only those traits appearing in situ, regardless of
whether or not they are out of context in the next zone, are considered to belong as being diagnostic. Accordingly, when making selection of artifacts for illustration and recording, specimens which were out of context by overlapping or otherwise, no matter how perfect, were omitted.

In the matter of naming the culture periods, it was decided to follow culture nomenclature as established in previous research for this area, since lithic traits were found to be similar as before. Accordingly, zones will be referred to as follows: lower zone—Early Archaic; middle zone—Stone Bowl; and upper zone—Ceramic-Agricultural. The reasons for these names will no doubt become obvious as the evidence is presented.

**OCCUPATIONAL EVIDENCE**

**Stone Hearths.** There were many disturbed firestones appearing throughout the middle and upper zones, which indicated the former presence of hearths. However, 15 undisturbed or partially demolished stone hearths were uncovered, all lying below plow disturbance in the middle zone. Only one of these had a well defined fire pit with flat faced hearthstones, and because of this may have belonged to the lower zone. All the rest consisted only of stones thrown together indiscriminately to form circular cumulations varying in diameter from 14" to 34". At one spot a group of beach pebbles and five cobbles lay on white sand about 10" below junction. However, since they showed no evidence of fire or other use by man, they apparently have no significance and have not been used as evidence.

Two of the middle zone hearths have important meaning because they contained artifacts. One yielded a 10" sandstone pestle (Fig. 3, No. 25) which had been used extensively at both ends. Under it lay several pieces of deer bone which may be associated with its use. Not more than eight feet away another hearth at the same level produced a small eared point of white quartz which lay under one of the firestones. From this it seems apparent that both hearths were contemporaneous, which should establish close relationship between pestle and eared point.

**Refuse Pits.** The site was generously supplied with refuse pits of which 45 were recorded with diameters of from 13-48" and with varying depths. Many others ran into each other to such an extent that they were unrecognizable as pits. Of those that were tabulated, 35 contained artifacts, which lent typological significance to the pits. However, before pits may be used effectively as evidence their age should be determined as far as possible. In determining a chronological measure, artifact trait contents reveal much of course, but of greater importance is the depth of the top of the pit. When a pit has not been disturbed, its top level may be considered as its level of origin. That is to say, the line where an undisturbed pit begins should mark the level of occupation of the culture making it, since pits are dug downward from the living platform as a usual rule. Unfortunately at Green Point all pits which had their origin in the upper zone have had their top sections sliced off by the plow from 4" above, down to junction, thus destroying this important measure. Nevertheless, 5 pits, of which 4 contained artifacts, had their origin at levels 1-8" below junction; therefore were not disturbed and so become important as evidence. An interesting condition that facilitates the study of some refuse pits is the fact that refuse from shellfish including quahaug, scollop and oyster appears throughout 37 pits; has aided in following the outline of these pits. However, 8 pits contained no shell as will be noted in the following presentation of the evidence:

One pit certainly originates in the lower zone (Early Archaic). Its top was 8" below junction. It contained blackened refuse; no shell or artifacts were present.

Four pits are known to originate in the middle zone (Stone Bowl). Their levels of origin were undisturbed, and lay 1-5" below junction in yellow sand subsoil. Therefore, their artifact content may be considered as having diagnostic value. They contained the following artifacts: eared, small stemmed, corner-removed No. 3, No. 7 point types; plummet; grooved sinker; hammerstone; and graphite. No trace of shell nor any potsherds were found in these pits; and only a small amount of calcined bone was present. Also, two additional pits with level of origin at junction—probably disturbed—are presumed to belong to this horizon because they contained no shell. Their artifact contents consisted of: eared, small triangular, and small stemmed point types; and Cumberlandite strike-a-light.

Four pits are believed to belong to the upper zone (Ceramic-Agricultural) during its early phase; may be considered transitional from the Stone Bowl
Fig. 19 The site.

Fig. 20 Lower Zone. (Early Archaic Age), 1, Ulu (ground); 2, Ulu chipped. Points 3, 4, Long-eared; 5, Corner-removed No. 5.
Fig. 21. Upper Zone. (Ceramic-Agricultural Age). 1, Corn-planter; 2, Triangular hoe; 3, Spade; 4, Notched net sinker; 5, Sinewstone; 6-8, Potsherds; 9, Club prong; 10, Hatchet-club; 11, 12, Crescent drills; 13, Pendant. Points, 14-17, Large Triangular; 18, Diamond.
Fig. 22. Middle Zone (Stone Bowl Age) Misc. Implements. 1, End pick; 2, Corner pick; 3, Graphite; 4, Woodworking scraper; 5, Plain gouge; 6, Grooved gouge; 7, Woodworking notcher; 8, Plummet; 9, 10, Knives; 11, Steatite bowl fragment; 12-17, Skin scrapers; 18, Grooved sinker; 19, Red ochre; 20, Perforated stone; 21, 22, Strike-a-light set; 23, Pipe reamer; 24, Gorget; 25, Pestle.
Fig. 23. Middle Zone (Stone Bowl Age) Projectile Points and Drills. Points, 1-5, Side-notched; 6-14, Small triangular; 15-23, Small stemmed; 24-27, Corner-removed No. 7, 28-31, Tapered stem; 32-34, Leaf; 35-45, Eared; 46-52, Corner-removed No. 3. Drills, 53, Eared; 54, Plain; 55-57, Flake.
age. Their levels of origin were apparently sheared off by the plow, two at junction, the other two 1” above junction in humus. All contained either eared points or Early, Stage I potsherds; one had both. Their complete assemblage of artifact contents follows: eared, and small triangular point types; stemless knife; steepedge scraper; and Stage I potsherds. All but one contained shell refuse, and two had deer bone fragments. With these pits the most significant evidence is the association in one pit of Stage I potsherds and eared point, which appeared in no other pit.

Seven pits belong without question to the upper zone (Ceramic-Agricultural) during its second stage of pottery development, because Intermediate, Stage II potsherds appeared in every pit. The artifact contents of these pits consisted of: diamond, tapered-stem, side-notched, corner-removed No. 3, small stemmed, and small triangular point types; corn-planter; stemless knife; pitted-stone; and hatchet club. All of the pits contained shell and some deer bone remains. Their levels of origin were cut off by plow disturbance 1-4” above junction in humus.

Finally, it seems probable that eleven additional pits belong to the upper zone (Ceramic-Agricultural) when judged from a typological standpoint. Their levels of origin were plow-sheared at varying heights from junction to 4” above in humus. All contained shell, and many had bone fragments, but none yielded potsherds. They contained the following artifact traits: large triangular, small triangular, small stemmed, side-notched, and corner-removed No. 3 point types; gorget; net sinker (notched); triangular hoe; anvil; and graphite. It is significant that the net sinker was in a pit whose level of origin was 4” above junction. This will be referred to specifically in the “Conclusion.”

Potsherds. There were 36 potsherds recorded, representing the first two stages of ceramic development. Stage I sherd (Fig. 5, No. 8) represents 8 sherds of relatively thick ware; coarse mineral temper; straight necks with rounded edge; cord-wrapped paddled inside and out with no other form of decoration. Presumably, they had conoidal bases as has been established for this ware at other sites. It equates closely with Ritchie’s New York State Vinette I pottery, and probably was contemporaneous. However, at no New England site so far reported has this early pottery resembled stone bowls with flat bottoms and lugs at both ends, although such specialized ware has been reported occurring on Long Island and in Pennsylvania. For example, at Orient, Long Island in a grave plot appeared one clay vessel, which was an exact copy in ceramic of a soapstone vessel with flat bottom and lugs.

Stage II sherds (Fig 5, No. 6, 7) represent 28 sherds of various wares: plain surfaced both sides, plain inside with maleation outside, basket marked inside with maleation outside, and stick-wiped inside with maleation outside; both mineral and shell temper; constricted neck; round and flat rims; protruding lip; dentate and trailing design techniques.

It is of interest to note that with the exception of one pit with Stage I pottery, all refuse pits containing potsherds, also had shell. And further, whenever sherds appeared outside pits they were always located in the upper zone in humus.

Steatite Bowl Fragments. There were 22 fragments of steatite bowls recovered. The lowest fragment occurred at 2” below junction, while 6 others were at junction, all being undisturbed in the middle zone. There were 5 fragments which appeared 1” above junction in humus, of which several had probably been disturbed by the plow. All other fragments were scattered throughout humus as a result of plowing, and therefore have no value as diagnostic evidence. However, it seems significant that 7 out of the entire assemblage were undisturbed in the middle zone, while occurrence of a few undisturbed fragments at 1” above junction in the upper zone suggests normal overlapping of the use of stone bowls, but not of their manufacture.

Stone Implement Traits. Since many artifacts have been disturbed by the plow, it seems best to consider for evidence in both illustrations and frequencies only those which have been undisturbed, except certain artifacts in the upper zone. These are considered to be culturally pure in spite of their disturbed condition by virtue of their appearance nowhere below. Hence, traits are listed under culture headings in zones where they first occur. Trait frequencies in all zones will be shown in parentheses after each heading. Traits as listed are believed to be diagnostic of the cultures under which they are recorded.
EARLY ARCHAIC (lower zone)

Long-eared Point (2) (Fig. 2, No. 3, 4) represents spear blades of quartzite with long basal corners, sometimes rounded. These appear as ears by virtue of a deep concave base and side-notching.

Corner-removed Point No. 5 (1) (Fig. 2, No. 5) shows spear blade of quartzite with basal corners removed to form a narrow stem with sloping shoulders, and a slight bifurcation of its base.

Ulu (2) Fig. 2, No. 1) is a fragment of a ground slate semi-circular knife; (Fig. 2, No. 2) is a chipped ulu of coarse grained stone semi-circular in shape.

STONE BOWL (middle zone)

Small Triangular Point (25) (Fig. 3, No. 6-14) denote arrow blades usually of quartz or quartzite in triangular shapes, equilateral and isosceles, with bases about 1” in width or less.

Small Stemmed Point (42) (Fig. 3, No. 15-23) represent arrow blades, usually of quartz or quartzite, less than 1½” in length with irregularly made stems in many shapes, whether with thick or thinned bases.

Corner-removed No. 3 Point (24) Fig. 3, No. 46-52) depict arrow blades of quartz, felsite, and argillite, relatively narrow and more than 1½” long, with well defined stems made by removal of basal corners, usually thick and sometimes slightly rounded.

Corner-removed No. 7 Point (10) (Fig. 3, No. 24-27) show spear blades — smaller sizes are for arrows — relatively broad, more often of argillite than of other stones, with truncated stems produced by removal of basal corners, usually thick and sometimes slightly rounded.

Leaf Point (3) (Fig. 3, No. 32-34) illustrate arrow blades of quartz, felsite, and argillite, over 1½” long, relatively narrow and lanceolate in shape.

Side-notched Point (18) (Fig. 3, No. 1-5) represent arrow and spear blades depending upon their size, made mostly of quartzite, felsite, argillite, and flint, over 1½” long; all sizes whether broad or narrow have wide side-notchings near the base as a usual rule.

Tapered Point (9) (Fig. 3, No. 28-31) denote arrow blades mostly of quartz, felsite, and argillite, over 1½” long, medium width, with basal sides which taper to the base; may be truncated or irregularly rounded.

Eared Point (52) (Fig. 3, No. 35-45) illustrate arrow and spear blades depending upon width of base, made of quartz, quartzite, felsite, and argillite, in various sizes, with basal corners carefully worked. These appear as ears as a result of various degrees of side and basal notching; bases are always thinned.

End and Corner Picks (3) (Fig. 4, No. 1, 2) represent tools incident to the steatite industry, with pick point at either the end or at the corner of the implement respectively; made of durable stone material such as quartz, quartzite, or pegmatite.

Pipe Reamer (1) (Fig. 4, No. 23) shows a tool used to ream pipe bowls; made of argillite with a bit that measures about ⅜” wide by 2” long, which tapers slightly.

Plummet (1) (Fig. 4, No. 8) is from refuse pit without shell content with level of origin in the middle zone; made of a sandstone elongated pebble with worked knob.

Grooved Sinker (1) (Fig. 4, No. 18) is from refuse pit without shell content with level of origin in the middle zone; made of fine granite with groove partially pecked. Another specimen with fuller groove appeared just above in humus, apparently deposited there by plow from the pit, presumed to belong in this middle zone pit.

Perforated Stone (1) (Fig. 4, No. 20) is a coarse sandstone pebble with hole pecked through from both sides; use unknown, but now seem to belong to the Stone Bowl complex.

Eared, Plain, and Flake Drills (10) (Fig. 3, No. 53-57) represent relatively long bitted implements in three basal styles; made of felsite, quartzite, and argillite. Eared characteristics are similar to those of eared points; plain style is without basal enlargement; flake style is made from flakes with unworked bases.

Grooved Gouge (1) (Fig. 4, No. 6) is typical of the period; made of igneous stone with lateral groove pecked across its back near the base; is polished smooth overall.

Plain Gouge (1) (Fig. 4, No. 5) is short with plain stem; is made of igneous stone.
**Pestle (1)** (Fig. 4, No. 25) is pecked and ground overall; made of blue-gray sandstone; has 2" diam. and is 10" long; has been used for crushing material both ends, presumably in a stone mortar.

**Gorget (2)** (Fig. 4, No. 24) represents broken fragments of perforated specimens; made of comparatively hard stones.

**Pronged Club (2)** (not illustrated) made of conglomerate and fine quartzite; this type of club has one roughly pointed end with side-notching near base for hafting—probably used to despatch wounded game.

**Stemless, and Stemmed Knives (13)** (Fig. 4, No. 9-10) represent asymmetrical blades for the most part, of argillite, quartz, and quartzite. Stemless blades are elongated without stem definition, sometimes irregularly expanded; stemmed blades have well defined shanks for hafting, may be both side-notched and corner-removed.

**Stemmed, Thumbnail, and Oval Scrapers (13)** (Fig. 4, No. 12-17) represent skin scrapers of quartz, quartzite, shale, granite, and flint in three different shapes: stemmed may be small or large with a well defined stem as the name implies; thumbnail is small resembling the thumbnail in size; oval (not illustrated) is usually large and oval in shape with wear showing generally on more than one edge.

**Woodworking Scraper (2)** (Fig. 4, No. 4) shows a rudely chipped stone block of quartz with one edge slightly concave, also with hand grip somewhat smoothed by chipping—probably used for scraping wooden projectile shafts.

**Woodworking Notcher (2)** (Fig. 4, No. 7) depicts relatively thin spalls of quartz or quartzite in irregular shapes, with one straight edge that is carefully chipped—probably used for notching the butt end of shafts and handles for insertion of stone blades to be hafted.

**Strike-a-light (9)** (Fig. 4, No. 21, 22) represents stones used in striking sparks for lighting fires; usually of iron pyrites, but also of Cumberlandite, a local magnetic stone with about 45% iron content. Hard stones such as flint or quartz are struck against the iron content stones; in two instances were crystalline quartz to form strike-a-light sets as illustrated.

Following are additional traits which complete the stone assemblage from the middle zone: hammerstone, anvil, pittedstone, turtleback, bone flaker, red ochre, graphite, and steatite bowl fragments.

**CERAMIC-AGRICULTURAL (upper zone)**

(Only those traits are listed which appear solely in the upper zone)

**Large Triangular Point (16)** (Fig. 5, No. 14-17) describe spear blades, usually of quartz in triangular shapes, with bases over 1" in width; occasionally with concave base and sides.

**Diamond Point (7)** (Fig. 5, No. 18) denotes arrow blades of quartz and quartzite more than 1½ long, with more or less straight basal sides which taper to form a point, thus forming a shape that resembles a diamond. One of these points appeared at junction—probably out of context as a result of disturbance from plowing.

**Triangular Hoe (15)** (Fig. 5, No. 2) depicts blocks of stone, usually of granite, argillite, or pegmatite spalls, which have been roughly flaked as needed to form irregular triangular forms, of which the pointed apex is thinned from a thick oblique base; one or both basal points are frequently knocked off. This implement may be easily attached to a straight stick to become a hoe; high frequency over other styles indicate preference as an agricultural tool.

**Corn-planter (4)** (Fig. 5, No. 1) illustrates elongated stones or spikes, which are roughly flaked from semi-friable stone such as hornblend, sandstone, or argillite, with at least one end somewhat pointed; the other end is often stemmed for hafting—probably an agricultural tool for making holes in corn hills to receive seeds.

**Spade (3)** (Fig. 5, No. 3) represents more or less flat faced stones of shale, argillite, or granite, five or more inches in length, which have been roughly flaked to form pointed or rounded bits, with well defined shanks for hafting—probably an agricultural tool.

**Crescent Drill (4)** (Fig. 5, No. 11, 12) depict short and long bitted drills of quartz and felsite, but with similar bases which have slight or deep concavity to give the appearance of a crescent. This type of drill has always appeared in ceramic horizons elsewhere.

**Sinewstone (1)** (Fig. 5, No. 5) shows a large beach pebble which has been used apparently to abrade cords of leather or gut, resulting in grooves.
Hatchet-club (3) Fig. 5, No. 10) represents stone clubs of granite, argillite, or quartzite, which have a more or less straight blade with wide side-notching above center for hafting. They resemble hatchets and were probably used to despatch wounded game, as well as for weapons; always have appeared in ceramic horizons elsewhere.

Pendant (1) (Fig. 5, No. 13) displays a beach pebble which has been grooved at center by honing—presumed to be a fetish.

Net Sinker (11) (Fig. 5, No. 4) represents beach pebbles or stone cores in various sizes, which have carelessly chipped notches near center, presumably for the attachment of net cords; always have occurred in ceramic horizons elsewhere.

War-club Prong (1) (Fig. 5, No. 9) shows a thick quartz spall pointed at one end to form a prong; may be made of other hard stones—probably inset in wooden clubs and used as weapons in protohistoric times or before.8

Gun Flint (1) (not illustrated) indicates evidence of Colonial contact.

French Coin (1) (not illustrated) is a copper Liard (~ farthing, or ~ penny) of 1703 Louis XIV mintage—probably indicates Colonial contact in seafaring days, when there was trading with French possessions in the West Indies.

DISCUSSION

Study of the evidence reveals several new manifestations which suggest interesting hypotheses. These represent notable contributions, it would seem, to the archaeology of Rhode Island as it is related to that of New England. First of all, there is significance in artifact type sequence, which equates closely with that at three other excavated sites in the Narragansett Bay drainage. For example, Early Archaic evidence appears at Twin Rivers, Nunkatusset, and Green Point in corresponding horizons. It is represented chiefly by the ulu and corner-removed No. 5 spear point, while at Potter Pond this early period is absent. However, at all four sites the succeeding culture period, Stone Bowl, is present and is identified by similar evidence such as: small projectile points, presumed to be arrow points, including the triangular shape; broad bladed corner-removed and side-notched spear points; and eared spear and arrow points in various shapes and sizes. Also, all four sites exhibit a final culture period, Ceramic-Agricultural, with similar traits: large triangular spear points; triangular hoe blades; and hatchet-clubs. Furthermore, sequence of steatite bowl fragments and potsherds with stone bowls preceding pottery is the same at all sites except Twin Rivers. There, this evidence was absent, probably, on account of its use solely as a hunting site. This similarity at different sites has contributed toward the development of an artifact type sequence pattern, which is now being used for comparative study. And now, due to appearance at Green Point of additional traits in situ associated with culture horizons, it has been possible to enlarge the scope of this pattern accordingly.

Next, attention should be called to the scarcity at Green Point of Early Archaic evidence, as well as to its complete absence at Potter Pond, another shore site on lower Narragansett Bay. As has been suggested by geology in a previous section, the non-use of the latter and partial use of the former sites in early archaic times may be accounted for as a result of the delay in formation of Narragansett Bay until the end of that age. As has been shown, a retarded rise of sea level in those days finally inundated the area which kept these sites from being accessible as camping places until the end of the period. If this hypothesis is supported by future research, then the approximate age when Narragansett Bay was formed might be computed. For example, through previous Carbon-14 tests of Early Archaic remains this period is now estimated to have occurred between 6,000 and 4,500 years B.P. 1954 (Before Present). Therefore, it could be argued in view of the evidence that Narragansett Bay shores reached their present outline between 5,000 and 4,500 years B. P., toward the close of the Early Archaic age. Hence, there may be an interesting link at Green Point between the geology and archaeology of the region.

Several other interesting pieces of evidence are presented by the refuse pits, already described. If plowing had not obliterated the level of origin of those pits which extended into humus, much more could be deduced. Nevertheless, enough undisturbed evidence is available to enable several important hypotheses. Chief among them centers about the shell content of pits. For example, Early Archaic evidence appears at Twin Rivers, Nunkatusset, and Green Point in corresponding horizons. It is represented chiefly by the ulu and corner-removed No. 5 spear point, while at Potter Pond this early period is absent. However, at all four sites the succeeding culture period, Stone Bowl, is present and is identified by similar evidence such as: small projectile points, presumed to be arrow points, including the triangular shape; broad bladed corner-removed and side-notched spear points; and eared spear and arrow points in various shapes and sizes. Also, all four sites exhibit
be the evidence. Therefore, the fact that some pits contained shell while others did not, at once presents an interesting topic for discussion. Review of the evidence shows that all pits with origin in the upper zone contained shell; and all pits with potsherds had shell except pit No. 42 with Stage I pottery (transitional). Of six transitional pits including this one with origin at junction or 1" above, only three contained shell and two had Stage I potsherds, one of which had shell. Four other pits with origin in the middle zone contained no shell; and one pit in the lower zone had no shell.

This evidence might be used to support the previous conclusion, that the Early Archaics probably arrived at an early date before Narragansett Bay shores had become stabilized. This might have been before shellfish had found their way into these waters. At least, absence of shell in the lower zone pit might be construed to mean that shellfish were not available at that time. Also, absence of shell in all middle zone pits might indicate that the Stone Bowl Makers of that period were there before shellfish beds had formed in the Bay. Either this, or the people did not discover or acquire a taste for this food during the entire extent of the period, which seems a little strange. Finally, the fact that only part of the pits of the transitional age contained shell while Stage I pottery was being made suggests partial use of shellfish in the diet at that time. Therefore, it seems evident that the start of shellfish eating, whatever the history of shellfish is, was contemporaneous with the advent of pottery making.

Turning now to artifact analysis, arrow points, suggesting use of bow-and-arrow, occur first in the middle zone (Stone Bowl age). Furthermore, the evidence indicates continued use of spears with arrows throughout the last two ages, although probably with arrows on the increase. Stone Bowl industrial activities are indicated in the middle zone by the presence of steatite bowl fragments together with quarry tools in the form of end and corner picks. Also, the presence in this zone of a pipe-reamer is probable proof of stone pipe making activities, although no pipe fragments were recovered. The grooved sinker is a new comer to this horizon and is believed to be associated with the modified plummet as a line sinker in the catching of fish.

In the last culture period, Ceramic-Agricultural, the chief activities may be deduced through occurrence of potsherds and agricultural tools in the upper zone and nowhere else. These tools consist of triangular hoe, corn-planter, and spade, which are now seen to be the most diagnostic traits of agricultural activities. There are 20 out of 31 Stone Bowl traits which overlap and are found in the ceramic economy of the upper zone. This extensive use of similar tools strongly suggests racial continuity. However, the appearance in the upper zone of 11 new traits seems clear evidence of continuation of creative effort.

Based on Carbon-14 measurements of Ritchie's New York State evidence of comparable periods, and of fluted point occurrence at Lubbock, Texas, estimates have previously been made of New England's four culture chronology. However, evidence as presented at Green Point seems to indicate an earlier date for the start of the Early Archaic, and a longer span for the Stone Bowl age. Therefore, re-estimate of the chronology as it now appears probable would be tentatively as follows: Late Pleistocene—9,000 B.P. 1954; Early Archaic—6,000 P.B.; Stone Bowl—4,500 B.P.; Ceramic-Agricultural—2,200 B.P. If future work at other sites in the Narragansett Bay drainage produces evidence to confirm that shellfish eating did not take place until the end of the Stone Bowl epoch, the idea of pushing that migration back to 4,500 B.P. will be strengthened. As things look now, it was many years after arrival of the first Stone Bowl Makers that industrial activities got under way; when pipes and bowls were cut out of stone.

(9) Ritchie, 1951

CONCLUSION

There remains but to reconstruct the probable events contingent upon prehistoric settlements at Green Point. While the evidence seems convincing in part, it must be remembered that it is only circumstantial, and represents excavation of but a small part of the whole occupied area. Further, the interpretation of the evidence is that of the writer and does not necessarily represent the opinions of others. However, in evaluating the evidence an attempt has been made to form conclusions which are as sound as archaeological evidence ever permits. Whatever one may think, it is significant that they appear to support conclusions reached at three other excavations in the Narragansett Bay drainage already mentioned.
It now seems probable that toward the close of the late Pleistocene, Early Archaic hunters came up ice age Narragansett River in dugout canoes and camped along the river's bank. This could have occurred as early as 6,000 years ago, probably before forestation of the area and long after Paleo-Americans with fluted spear points first navigated the river. As years passed, rising seas flooded river camps and forced resettlement on higher land more removed from the river. Finally, when rising waters continued to push back the shores of Narragansett Bay, the Early Archaic age was nearing its close with the site at Green Point being occupied for only a short while. Archaic peoples had ulus, which somewhat resemble Eskimo ulus of the North. Therefore, they appear to represent an early migratory wave out of Asia having common ancestry with the Eskimos who came over at a much later date. Early Archaic evidence at Green Point reveals little more except to suggest that these people were spear-throwing hunters, who may have depended for some of their food upon herds of elk which were doubtless here before the coming of deer. As trees began to grow, the elk moved northward, followed no doubt by the Archaic peoples. Hence, when the next migrants entered the region, few of the former settlers remained to pass on their customs and implement traits. This may explain absence of much overlapping of traits between this age and the one that followed. Slight overlapping is noted at Green Point in the modified plummet in less aesthetic form than that of the Early Archaic from other sites. Also, the next age has eared points which may have been inspired by the Archaic's long-eared spear points.

Whatever happened, somewhere about 4,500 years ago a new nomadic movement took shape. The first of its arrivals, like the earlier settlers, probably came in dugouts but over the widening waters of Narragansett Bay. However, unlike the Archaics out of Asia, these people may have represented the first wave of Americans out of the Southwest whose predecessors had also come from Asia, but had settled first in regions to the south and west. All evidence seems to indicate that they represented a more advanced culture, for they introduced many new ideas, which resulted in a more complex economy than that of the Archaics. From Green Point evidence it begins to look as though the first of the new comers, who were the Stone Bowl people, arrived just as Narragansett Bay shores were becoming stabilized, and possibly before shellfish had established feeding beds in these waters. Doubtless, forests were only just appearing with deer and other smaller animals arriving for the first time.

The Stone Bowl period may have lasted for some 2,000 years, and during this time certain things happened, which may be deduced from the evidence. For example, the bow-and-arrow may have been brought in at first and used to supplement spears. Some time later, however, the smoking pipe may have arrived with later migrants. It could well be that introduction of the pipe furnished the spark that touched off industrial operations of stone cutting at steatite quarries. For, in searching for suitable pipe stone the people may have discovered Rhode Island's steatite (soapstone) outcrops, and from there on their inventive genius knew no bounds. Besides pipes, eating and cooking vessels of all sizes were made from stone, much of which was steatite. But before these products could be made, tools had to be invented and made out of durable stone; at least eight classes have been identified. By these acts, the Stone Bowl Makers showed their ability to invent for the sake of economic advancement, and this industrial activity, more than anything else, must have left its mark upon their culture. The industry lasted for a millennium or more, during which time there occurred a marked cultural uplift that produced a rising standard of living. For with the introduction of permanent eating vessels, eating customs were changed and liquid foods were made possible. But for all this, apparently people had not added shellfish to their diet. Either shellfish at that time did not exist, or generations of cultural growth were required before a taste for this food could be acquired, or perhaps a little of both. Their food consisted, of meat, fish, and nuts for the most part; at Ragged Mountain appeared evidence to show that hickory nuts were an important element of their diet. And now at Green Point a much used pestle has appeared in such convincing association with their remains as to leave little doubt as to its intended use. Therefore, it may be inferred it was used for grinding nuts and possibly bone, as several pieces of deer bone were lying just beneath it. Relatively short pestles like this may now be considered as having been invented and used by the Stone Bowl Makers. However, long handled pestles may still safely be assigned to the agricultural epoch for grinding maize in deep wooden tree stump mortars.
In the final Ceramic-Agricultural age another cultural uplift took place. However, this time unlike the former it was female dominated, for women had become ceramic potters and agriculturists. While site evidence at Green Point for this age is disturbed, there are some parts of it that seem to have pure culture implications. For one thing, there is every reason to believe that Stage I pottery marks a transition between stone bowl and clay pot making. This is the time when steatite quarries were closing down, because of woman's preference for light weight cooking pots which were being made of clay. This was about 2,200 years ago, and by then people had commenced to acquire a taste for shellfish, which food was added to their diet. All evidence suggests that they were Stone Bowl artisans turned potters and agriculturists, and that an important change from male to female dominated industries had taken place; hunting and fishing continued as male activities down to historic times.

Then there is one more interesting deduction that seems worthy of note; one that to the writer's knowledge has never been presented before. It rests upon evidence composed of rudely side-notched stones. These may be large or small and are generally believed to have been used for net sinkers; are present only in the upper zone at the site as well as at all other sites. Therefore, it has been customary in the past to assign the introduction of net fishing to the Ceramic-Agricultural age. However, the appearance of a net sinker (Fig. 5, No. 4) in refuse pit No. 18 with shell content leads to interesting speculations. As good luck would have it, this pit lay near the wood in the strip of land first excavated at a spot where former plowing had cut to a depth of only 5". Consequently, the pit's level of origin could be traced as high as 4" above junction in humus leaving 5" above of disturbed humus. However, since its top had been sheared off by the plow, it seems only fair that an estimated 2½" might be added to compensate for the destroyed area. This would make the restored level of origin 6½" above junction, leaving 2½" of humus above. Now since the total depth of humus is 9" which represents a span of 2,200 years, approximately, then elapsed time as represented by the 2½" distance from pit's level of origin to the top of the ground would equal 2.5/9 of 2,200 or 611 years. Deducting this from today's date of 1954 gives a date of 1343 A.D. for the origin of the pit, of the net sinker, and presumably of net-fishing. However, since this is subject to error, add or subtract 50 years, whichever lends itself best to any given situation. While this result is somewhat speculative, it seems to have enough validity to link native net-fishing to the following authenticated historical account:

In 1558 a narrative was written and published by Nicolo Zeno, Jr., the great-great-great grandson of Antonio Zeno of Venice, Italy, from letters written by Antonio in 1394, found many years later. Antonio was a navy officer in the employ of Prince Henry Sinclair, ruler of the Orkney Islands, which lie north of Scotland. In one of Antonio's letters to his brother Messire Carlo in Venice, he relates a story told Sinclair on reliable grounds by certain of his fishermen, who had escaped with their lives from an extended captivity in western lands. Here are Antonio's own words:

"Six and twenty years ago (about 1371 A.D.) four fishing boats put out to sea, and encountering a heavy storm, were driven over the sea in utter helplessness for many days; when at length the tempest abated, they discovered an island called Estotiland (probably Newfoundland) lying to the westwards above one thousand miles from Frislanda. (With their experiences in Estotiland we are not concerned, so we will pass on to what ultimately befell the fishermen). "He (the king of Estotiland) says that towards the south there is a great and populous country, very rich in gold. They sow corn"—"They have woods of immense extent."—"the king sent them with twelve boats to the southwards to a country which they call Drogo; but in their voyage they had such contrary weather that they were in fear for their lives. Although, however, they escaped the one cruel death, they fell into another of the cruellest; for they were taken into the country and the greater number of them were eaten by the savages, who are cannibals and consider human flesh very savoury meat.

"But as that fishermen and his remaining companions were able to show them the way of taking fish with nets, their lives were saved. As this man's fame spread through the surrounding tribes, there was a neighboring chief anxious to have him with him, and see how he practised his wonderful art of catching fish. With this object in view, he made war on the other chief, with whom the fisherman then was, and being more powerful and a better warrior, he at length overcame him, and so the fisherman was sent over to him with the rest of his company."
“During thirteen years he dwelt in those parts, he says he was sent thus to more than twenty-five chiefs, and became acquainted with almost all those parts. He says it is a very great country, and, as it were a new world.”10 (Such a new world to 14th Century fishermen could have been none other, it would seem, than the Atlantic Coastal regions including New England).

(10) Pohl, 1950

Interpretation of the balance of the report suggests that the fishermen may have extended their traveling even as far as Mexico. Eventually, however, they returned north and finally found their way back to Newfoundland, and from there to Frislanda, their starting point to the north of Scotland.

This account seems to suggest that knowledge of net-fishing among northeastern coastal natives was derived from the Old World through contact with fishermen explorers in about 1371 A.D. Certainly, the natives visited by the fishermen knew nothing about net-fishing; and presumably their predecessors before them had no knowledge of it either, or they would have passed it along. Furthermore, if the natives who were taught by the fishermen were not New England natives, who were they? Most assuredly, they lived in Atlantic coastal regions somewhere between Newfoundland and Mexico, which obviously should include New England. This was long before Columbus, and significantly, at an authenticated date which fits quite closely that of 1393 A.D., adjusted to correct possible error as obtained from the Green Point net sinker evidence. This testimony of the fishermen has seemed of sufficient worth to be introduced here, since it dovetails so closely in point of time with probable origin of net-fishing at the site. It now remains for future research to produce supporting evidence that will tend to establish 1371 as the approximate date for the advent of net-fishing in pre-historic New England.

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Bronson Museum,
Attleboro, Mass.

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FINISHING

On completion of the structural work and after sufficient air drying to give it rigidity, such ware is ready for finishing and decoration. At this stage the whole exterior and interior surfaces must be moistened to render them more plastic for working. Absorption by the ware is so rapid that at intervals during the work it is necessary to moisten the surface, to keep it sufficiently plastic for the final finishing and decoration.

Finishing by wiping the surface of both the exterior and interior by hand was probably the first operation. Scraping implements were used extensively for the removal of all unevenness thus bringing the walls to a comparatively smooth surface. By this process, the pots were greatly reduced in thickness. In one pot of ten inches in diameter at the rim, the shell of the body had been reduced to three thirty-seconds of an inch in thickness. This variation in thickness seems to have been quite common, for many sections show a wide range, the thinner sections coming generally at the widest portion of the ware. The worker had no calipers or any instrument that would gauge its thickness, and as long as it held together he knew of no defects to be remedied.

It was the practice of the Connecticut Valley Indian to use graphite to a large extent in connection with the manufacture of his pottery. Many potsherds of this material have been found upon their pottery workshop sites. The coarser quality was pulverized and used as a tempering material. The finer quality pieces indicate use by rubbing the edges of the graphite fragments against the pot's surface to fill the pores of the vessel, both inside and out. In a majority of cases this application was made on the inside of the pot only. This coating when polished, gave an attractive luster and a contrasting color from the tan-grey tone generally found on the ware. Judging from the number of fine quality graphite fragments found that had been worn down and seen service, its use must have been quite common in this Connecticut Valley area. Each of the pieces, whether of thick or thin fragments, were worn down on the edges by having been rubbed against other surfaces, some having had so much use that they were hardly large enough to hold between the thumb and finger.

Decoration by several variety of implements have been found on potsherds collected throughout New England territory. They include work done by tools used for indentation that had a wedge toothed end for stamping on the ornamentation; punctation with either a round, a square, or a rectangular end implement; incision markings by a sharp pointed stylus type of implement; and the edge of a scallop shell for making a curved zig-zag continuous band ornament. True sculptural work has been found on only one piece of pottery known to date. Probably no specific type of implement was used for this purpose.

After completion, the pot was subject to a certain amount of air drying to remove the moisture and make it firm and rigid in handling. It was then placed over the coals of fire and baked to the required hardness. None of it seems to have been baked throughout its whole thickness. In curing or baking, the heat seldom, if ever, rose to such a degree of temperature as to form a dense and brittle shell, or to give it a true terra-cotta coloring. There never was a fusion of the material to the point of vitrification save in one locality, which is herein-after mentioned in detail, and they knew nothing of glazed or porcelain ware. Where crushed shell was used for a tempering material, there seems to be no evidence on any fragment examined, that heat intensity had reduced it to a calcined state.

The use of color beyond that of graphite was limited, unless the pigments used in painting the ware has disintegrated through its long period of exposure to the elements both in and upon the surface of the ground. Recent reports, however, state that traces of painting has been found upon fragments of ware from two widely separated sections of the territory.

Symbolism either in outline, color, decorative treatment, or in the form of their pot is not found in the ware of the aboriginal New England Indian, save only on a few known pieces from the Connecticut Valley district. Two of these seem to be raised symbols of corn and the other is an incised rectangular type of figure eight.
EARLY ALGONKIAN POTTERY TYPES

A

LONG ISLAND

B

WAREHOUSE POINT

C

REVERE
EARLY ALGONQUIAN POT
FROM
RHODE ISLAND AND NANTUCKET TYPES
Early Algonquian Pot, Found at Derby Conn.

From the Norris Bull Collection.
Found at Derby Conn.
from the Norris Bull Collection.
EARLY SOUTHERN NEW ENGLAND ALGONKIAN

1
2
3
4
5

EARLY MAINE ALGONKIAN

6
7
8