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each and by non-members at $1.00 each upon application to the Secretary.
In August and September, 1957, crumbs of charcoal were recovered from the Bull Brook site. They occurred in a reddened area which was roughly 10 feet in diameter and 9 inches thick. It lay at a depth that was somewhat greater than that of artifact-producing zone to the north, possibly because the wind had carried soil to this side of the site.

The charcoal was found at random in the reddened zone. It does not represent a hearth, but appears to have been blown from the locations of fires to settle in sheltered spots. Chips and artifacts were found throughout the reddened zone, also at random. Neither charcoal nor chips or artifacts were found outside the reddened area uncovered in this pit.

Four samples of charcoal were sent to Dr. James B. Griffin for analysis in the University of Michigan Radiocarbon Laboratory. Through his interest, and that of Dr. H. R. Crane, the samples have now been processed, and Dr. Griffin reports the results as follows. They are rendered in terms of the Christian calendar by subtracting 1950 years from the determined age.

M-807 Charcoal collected by Mr. W. A. Eldridge in August 1957. Sample was sealed in a sterile jar and baked in order to kill microorganisms; sent to Ann Arbor in original sealed jar.

M-808 Charcoal collected by Mr. Eldridge in 1955. It was brought to the Peabody Foundation along with chips and a few artifacts that were associated with it, wrapped together in a foil package. The package contained some rootlets and these were removed in so far as possible before the charcoal was wrapped in foil for storage at the Foundation. Some of this charcoal may have been of animal origin.

M-809 Charcoal collected by D. S. Byers, September 21, 1957. Wrapped in foil and kept in the Museum until it was shipped. Comment by Dr. Griffin: "a small sample that is not regarded as being of the same reliability as the other three runs."

M-810 Charcoal collected by D. S. Byers, September 28, 1957, from the same area as M-809, but after the first rain in six weeks. Wrapped in foil and kept at the Foundation until it was shipped.

These samples indicate that men were living at Ipswich about 7000 B.C. The site was a very large one, and it seems unlikely that it can be anything but the result of repeated occupations, perhaps seasonally, over a long period. When the first fire was lighted there, and when the last died out, we cannot say. This date may be considered as a good general age for the site.

It is in keeping with estimates for the age of fluted points around the southern half of Lake Michigan made by Quimby and published in American Antiquity, and by Ronald J. Mason, published by the Museum of Anthropology of the University of Michigan. Their estimates are based on geological reasoning, and suggest that the region could have been occupied by makers of fluted points approximately 3000-4500 years before our dates, and that fluted points ceased to be made at about the same time as our dates.

Ritchie has estimated that makers of fluted points lived around the shores of present-day Lake Ontario at some time between 5000 and 3500 B.C. His reasoning is based on the occurrence of fluted points within the strand line of extinct Lake Iroquois and extinct Lake Vermont. The identification of ice fronts and the shores of glacial and proglacial lakes has not been worked out in that area with the same degree of exactitude as that which applies to similar features in the Lake Michigan basin, although great progress has been made within recent years. By another interpretation of the data, Ritchie's estimates could easily approach the general time range of the Bull Brook dates.

The great importance of securing charcoal from other paleo-Indian sites is easily seen. It will not be possible to interpret our information authoritatively until we have further data of this sort. Bull Brook has shown that men were living in New England much longer ago than most people had dreamed possible.
An important aspect of our Colonial history is the manner in which the early English settlers became possessed of the Indian lands, and, in order to properly evaluate the causes leading to friction and open warfare, we must examine two diametrically opposed concepts of land tenure.

The exact nature of Indian ownership of land was not clearly understood by the new arrivals. Neither the individual Indian nor the family possessed vested rights in land. The land belonged to the tribe as a whole, and intertribal boundaries were carefully drawn and jealously guarded. Thus it was impossible for a family or any portion of a tribe legitimately to sell or give away any part of the tribal domains. The land was held in common, and the title was the clearest of all titles, the right derived from undisputed, immemorial possession.

The new world of the Colonist was the natural home of the Indian. For centuries he had survived and multiplied in an environment of primeval forests and meadows. To be sure, he had roughly cleared small areas for his crops as his established way of life became more sedentary; but his economy was still primarily one of hunting and fishing, and his local seasonal removals adequately satisfied his simple wants. The uncrowded land areas teemed with all manner of food, and the bordering sea furnished further variety for the taking. Often improvident against future needs, the larder could easily be replenished with a minimum of effort. The balance of nature was in perfect harmony with his mode of existence.

This way of life was to be rudely interrupted early in the 17th Century—first by a dribble, then a trickle, and soon a stream of newcomers. Why were vast areas soon to be conveyed for a few metal implements, coats, old kettles, a few yards of cloth or numerous trinkets? The fact is that the natives intended to convey no more than the right to occupy the land in common with themselves; and they assumed, in error, that their mode of life would be little changed by sharing the land with the new arrivals. The Indian knew nothing of landed estates, and aside from possessing articles for personal adornment or for providing for defense or livelihood, he showed no acquisitive instinct. When the fences began to go up, and he was ordered from the premises, he realized that he must either attempt to regain the lands through force or remove elsewhere where he could resume his natural mode of existence. By 1676, hardly a vestage of land was to remain in the hands of the original inhabitants of southern New England.

Now let us examine the newcomers concept of the fuller life they were seeking. They had left a country mired in religious persecution, and they had been long born and raised in a feudal system which greatly restricted any personal initiative. Few in England owned land personally, and fewer still owned knowledge of the written title to land. Here was truly the land of opportunity—one promising three-fold benefits—religious freedom, equal opportunity and personal ownership of property.

Although the first arrivals did not know it, no more opportune time could have been chosen for the journey. There is no way of knowing what their welcome to these shores would have been had the native tribes been at full strength. They had only recently been decimated by a disastrous plague which had wiped out entire villages and made any initial resistance an impossibility. Then too, Massasoit of the Wampanoags was having difficulty with the neighboring Narragansetts of Rhode Island regarding tribal bounds, and he naturally welcomed the possibility of enlisting new allies to his cause. Whatever the motives, Massasoit disposed of large portions of the hereditary lands between 1620 and his death in 1661, and his friendship and cooperation remained constant throughout the remainder of his life.

From the very beginning several of Massasoit's sub-chiefs had grave doubts and misgivings of sharing their lands with the newcomers, and there was considerable discussion among the Colonists themselves regarding the proper procedure in acquiring these lands. Even before he had left England John Winthrop had written—"that which lies common and hath never been replenished or subdued, is free of any that possess and improve it. As for the natives in New England, they inclose no land, neither have any settled habitation, nor any
tame cattle to improve the land by, and so have no other but a natural right to those countries. So if we leave them sufficient for their use, we may lawfully take the rest, there being more than enough for them and us.” Of course the Indians of southern New England did have settled villages and pursued agriculture, leaving the cattle for the Colonists to import at a later date. Roger Williams, taking the opposite view, claimed that the land was the property of the natives, and that title thereto could be acquired only from them, and not by virtue of a foreign king’s grant. This was one of the statements which made him unpopular at Salem, and contributed to his banishment. A few years later he wrote from Providence to Bradford in Plymouth—“Why lay such stress upon your patent from King James? ’Tis but parchment. James has no more right to give away or sell Massasoit’s lands, and cut and carve his country, than Massasoit has to sell King James’ kingdom or send Indians to colonize Warwickshire.”

In the first general letter of instruction from the Governor and Deputy of the New England Company for a Plantation in Massachusetts Bay, written from Gravesend, England, April 17, 1629, is the following passage: “If any of the salvages pretend right of inheritance to all or any part of the lands granted in our pattent, we pray you endeavor to purchase their tytle, that wee may avoyde the least scruple of intrusion.” On March 4, 1633/34, at a General Court held at Boston it was further provided that “noe person whatsoever shall buy any land of any Indean without leave from the Court.”

Still later, on July 4, 1676, Governor Josiah Winslow of Plymouth wrote to the Governor of the Massachusetts Bay Colony “I think I can clearly say, that before these present troubles broke out (Phillip’s War), the English did not possess one foot of land in this colony, but what was fairly obtained by honest purchase of the Indian proprietors: nay, because some of our people are of a covetous disposition, and the Indians are in their straits easily prevailed with to part with their lands, we first made a law that none should purchase or receive by gift, any land of the Indians without the knowledge and allowance of our Court.”

As previously noted, this law was passed in 1633/34, and was reaffirmed in 1665. Nevertheless, although this statement is in the main probably true, many of the records of the original purchases by individuals cannot now be found. Some years after the landing of the Pilgrims it became the practice to obtain lasting evidence of lands purchased from the Indians by taking a deed and having same duly entered upon the Plymouth Court records whereas prior to 1633 the Colonial custom was often to call some of their oldest dwellers in the country to the witness stand to testify under oath that certain Indian tracts had been fairly and properly obtained of the Indians by purchase. Such depositions were entered upon the Court records and became title references without benefit of deeds, which in some cases perhaps never existed.

These various shades and decided differences of opinion regarding the taking of the lands were recorded by many early historians, and, in numerous cases, were probably dictated by an awareness of having received great benefits from mere token payments. There is now extant no positive proof of “honest purchase of all the lands” from the natives, although in some cases confirmatory deeds to certain parcels were obtained from descendants of the earlier Indian grantors.

The several early settlements in New England secured rights to the land by gift or deed from the Indians and/or by Royal Charter or patent from the king. The early courts held that the natives had only a right of occupancy and enjoyment, and they treated Indian deeds as releases or estoppels—as relinquishing and not conveying an interest in the soil. As we have seen, several laws were passed ostensibly to protect the Indians from promiscuous purchase by individuals; but their primary purpose
was undoubtedly to enable the government to avail itself of the full benefit of the grant from the Crown to themselves and their grantees by reserving the exclusive privilege of extinguishing or acquiring the Indians' right of occupancy.

It was for this purpose that the proprietary was set up. The proprietary was the earliest form of corporate life in this country, and originated in the New England Colonies. It held, managed, sold and conveyed lands and land estates. In its operation the General Courts granted and set apart a tract of land to a number of persons as grantees in fee to hold as tenants in common. These persons were called proprietors, and the territory controlled was called a proprietary. Much of the lands of the Plymouth and Massachusetts Bay Colonies were originally allotted to proprietors in township grants. Much larger tracts in Massachusetts, under land patents from the Crown, from the Council at Plymouth in England, from the General Courts of the Colonies of Plymouth and Massachusetts Bay, and from the Indians, were also claimed by the proprietors. Of the proprietaries of Plymouth and Rhode Island Colonies most of the lands were obtained by direct purchase of the Sachems or others of the Indian tribes. The Kennebec and Pejepscot proprietors of Maine claimed about three million acres each, and the Pemaquid proprietors about 90,000 acres, and upon settlement of rights and boundaries within the colonies these latter proprietors retained and held nearly one-half of what they had claimed.

Between 1636 and 1638 Roger Williams, by a deed which has been lost, conveyed his title to lands acquired from Canonicus and Miantinomo, uncle and nephew, to twelve associates, who became joint tenants. He gave them "equal right and power of enjoying and disposing of the same grounds and lands, and to such others as the major of us shall admit into the same fellowship of vote with us." All land titles in the Providence purchase are based on this procedure. After the proprietors had set off and allotted the lands under their jurisdiction their corporate life came to an end, but in some cases their activities extended over a considerable period of time. The records of proprietors with regard to the partition and transfer of their lands have a legal basis which New England courts have always sustained.

Let us go back for a moment to the early days at Plymouth. After Massasoit's first visit and treaty of friendship he made a royal gift, not a sale, of the territory included in what are now the townships of Plymouth, Duxbury, Carver, Kingston, Plympton, Marshfield, Wareham and a part of Halifax. Taunton changed hands in 1640 for a small consideration. Rehoboth, a tract eight miles square, in reality ten miles, was purchased in 1641. Wannamoissett was deeded in 1645 for fifteen pounds, and Sowams in 1653 for thirty-five pounds. Bridgewater, which included also Abington, Brockton, East Bridgewater, Rockland, South Abington and West Bridgewater was acquired in 1649. Ancient Dartmouth, which included Fairhaven, Westport, New Bedford and nearly all of Acushnet was obtained in 1652. Rehoboth North Purchase followed in 1661 "for divers good causes and other valuable considerations." These several tracts now constitute more than a score of towns in the heart of Massasoit's original territory. Mount Hope, Pocasset, Assonet and several other necks of land remained in Indian possession until 1676.

A similar pattern took form in what is now Rhode Island. In thirty-six years from the first arrival of Arnold, Harris and Carpenter the Narragansetts had lost every acre of their lands through thirty-two separate transactions extending from 1636 to 1672, and in the main between 1657 and 1660. The charter of 1663 confirmed the titles of all lands acquired from the Sachems, and also gave the Colony jurisdiction of a strip of land three miles wide extending the entire length of the East side of Narragansett Bay. The Plymouth and Massachusetts Bay Colonies violently protested this grant, and it did not become operative until 1746.

In Rhode Island, as elsewhere, these early Indian deeds were loosely and carelessly drawn, and the work of recording was often lax. Not only were the bounds indefinite, but the varied spelling of the Indian place names resulted in still further confusion. The territory acquired by some of the older towns exceeded by some miles the limits of the purchased tract, and this elasticity of the deeds added greatly to the English holdings. The western boundary of Providence was Hipses Rock, as set by Miantinomo himself. Here was a fixed bound; but, in a few months, the English were busily trading lands with each other a mile to the west.

In Connecticut the Quinnipiacs were not regarded by the Eaton settlers as being the sole owners of the soil "for the title to this section of North America was claimed by England by right of the
THE COLONIAL INVASION OF HEREDITARY LANDS

Cabot discovery and later through its occupation. The Earl of Warwick's Charter confirmed this title, and the subsequent purchase from the natives "of their pretended right to Quinnipiac" by the Colony of New Haven reinforced the claim until the younger Winthrop obtained the all-embracing Charter of 1664 from Charles II.

Private sales and gifts to the Connecticut Colonists were not unknown in this early period. As in Massachusetts, an order was passed in 1639 forbidding private purchase of lands from the Indians without approval from the Court. This law, and others of similar nature, was always more or less violated; and as late as 1722 it was found necessary to enact a new law inflicting a fine of fifty pounds upon "whoever should make such purchases in the future, or should sell lands which had in this manner been already acquired." It was doubtless the land greed of some of the individual early settlers which caused the greatest resentment among the Indians. In some cases the natives were encouraged to put themselves in debt so that their lands could be appropriated as payment.

As the 1670's approached the southern New England Indians were faced with a grave decision. They were already a conquered people, living under English law and on English lands. Should they continue their submission and adopt a way of life to which they were ill-suited, or should they make one final effort to regain what they had seemingly lost for all time? Outnumbered and outarmed, it still might be possible to wipe out the invader, village by village, in a mobile warfare to which they were accustomed. They had the fiery leader in Metacom, called King Philip by the Colonists. If they contested the encroachments with vigor and strategy they had little further to lose and much to regain. So, in 1675, the die was cast: and if their methods of warfare appear to have been cruel and barbarous, we cannot forget that they were struggling by the only means known to them, nor can we fail to admire their courage and determination in the face of insurmountable odds. Both adversaries were striving for what they believed to be just and right; the English for new colonies and landed possessions; the Indians in defense of the only homeland they had ever known. But the odds were too great. Exactly thirteen months and twenty-two days from the opening of hostilities at Swansea King Philip was slain, the rebellion collapsed, and little remained but to track down and subjugate the scattered remnants of a once proud race.

COMMENTS ON A SHAWSHEEN RIVER SITE — PINE RIDGE CEMETERY

MAS SITE #M12SW88

By

WALTER A. VOSSBERG

Illustrations by Eugene C. Winter

This site was first reported to the MAS by R. P. Bullen in 1945 as a large sand blow located at the head of Heath Brook, which flows into the Shawsheen River after a course of only a mile or two.

The original reporting gave an account of side-notched points and coarse mineral-tempered pottery in loam, and hearsay evidence of material found during burials and reportedly sent to Harvard University.

Bullen reported on this site again in 1949, detailing a general description of the topography and a listing of quartz and felsite chips, "coarse mineral tempered sherds—some plain, some cord or textile-wrapped paddles; and the basal portion of a point having wide side notches. These were in the lower part of the loam and the very upper part of underlying yellow-brown sand, as at Foster's Cove and Camp Maud Eaton, Test VI."

Investigations at this site by the writer over the past two years have revealed several additional points of interest. One area, covering about three five-foot squares, was excavated. It is here that an exception was found to Bullen's findings on culture continuity. "At no sites were the culture bearing zones separated by extensive sterile layers." The profile at this small excavation showed about 4 inches of a poorish brown-black loam underlaid by a dark yellow clay-sand combination which ex-
Artifacts 1-22, surface finds; 23-25, excavated from upper level; 26-33, excavated from lower level. All specimens are from Shawsheen River Site, M12-SW-88.
tended down to gravel and white sand at a depth of 30". Artifacts recovered were few and chips were not abundant. In the loam were a gray finely chipped chert arrowpoint (tip only), a large green felsite triangular point of fine workmanship, and a few coarse mineral-tempered sherds paddled inside, stamped outside, and exhibiting the coil process of manufacture. The chips extended from the surface to the transition from black loam to yellow, with a few coarse quartz chips 2-3 inches into the yellow. The material was largely porphoritic felsite, somewhat patinated, but still of a dark surfaced matrix. Chert, jasper, quartzite, slate and felsite were also present.

Twelve to sixteen inches of sterile soil separated the foregoing materials from a thin lens of another cultural strata. This lens was 18-22" from the surface. The variation does not indicate the thickness of this culture layer, but rather the irregularity of the sloping and disturbed surface. Chips were even less abundant at this level, but artifact recoveries included:

2—Non-pitted hammerstones showing considerable use with one noticeably faceted.
1—Pecked axe of rectangular form 2" x 4", with a chipped bit, not ground (no groove). This appears to be an entirely serviceable tool, but one not requiring much labor to shape.
1—Corner removed point, #7.
1—Small quartz steep-edge scraper.
1—Large porphoritic scraper.
2—Stemless knives.

A bulldozer preparing house lots put a hasty finish to excavational activities at this location and the immediately adjacent area. There is surface evidence of material from the later culture extending from this location to 500 yards downstream above Heath Brook, and for several hundred feet away from the excavation in the opposite direction. Test pits over a large area did not reveal any evidence of the older cultural strata. The excavation is on a slope 10 feet from the present source of the brook. Local residents say a free flowing spring existed here only a few years ago. This spring has evidently been covered and the brook is being fed underground from this spring.

The area has been surface hunted for years, particularly the large sand blow mentioned by Bullen, which is known locally as "Indian Hill," or the "Desert."

Surface material in my possession from this general area includes: 3 small triangular points, 1 eared #4, 2 corner removed #8, 2 corner removed #5, 1 corner removed #7, 3 small stemmed, 1 corner notched, 1 side notched #4, 1 leaf knife, 1 asymmetrical stemmed knife, 1 expanded base drill, 1 gray porphoritic scraper, 6 potsherds, 2 Kaolin pipe fragments and 1 soapstone fragment*.

Classification follow the "Preliminary Classification Outlines" published by the Massachusetts Archaeological Society.

2 Ditto.

* All rights reserved by author.
spring of pitch, both near a large river and a good harbor. In the Pictou region of Nova Scotia, at Stellarton, an open coal seam burned at the bottom of a hill, from the top of which pitch flowed down in what is now called “Coal Brook” and crossed the burning seam.

Stimulated by the geological proof presented by Hobbs, I made geographical identifications concerning the place of landing, and also dated the landing, showing that it occurred on June 2, 1398. The Zeno narrative says that as the autumn approached, many of Sinclair’s large company expressed a desire not to remain over the winter in “nuovo mondo”. The Zeno narrative use of the phrase “New World” is the earliest on record. Prince Henry, a benevolent ruler, gave permission to go home to all who requested it, and he ordered his admiral, Antonio Zeno, who was also his secretary, to take them home with all the ships. Antonio Zeno says that Sinclair “retained only boats propelled by oars”, which is positive evidence that he planned to avail himself of the rich stand of timber in Nova Scotia and to build a ship there in which he himself would return home. He was accustomed to building ships, for he had been adding to his navy for 20 years. And so he must have retained frieze-cloth to make sails, and spare ropes and nails and rivets and carpenter’s tools. Antonio Zeno afterwards wrote that Sinclair “explored the whole of the country with great diligence”, and attempted a permanent settlement. But Antonio gave no clue as to where this was.

Nova Scotia is 350 miles long. Where in that great territory should one look for Sinclair’s attempted settlement? The area was so large that a search for the winter campsite seemed silly. How could anyone find it save by accident? I gave up looking for it.

Two years later I stumbled upon the clues which led me to it. Studies of the Micmac Indians of Nova Scotia had been published long before Professor Hobbs identified Nova Scotia as the land Sinclair explored. They were filled with stories of “Glooscap”, a “culture hero” who they said was “the first and greatest” who came among them as a visitor. The 19th century scholars who had written down what the Indians gave in their epic chants, had all agreed that this visitor was a European, but they assumed he came shortly after Columbus. When I read that Glooscap’s first meeting with the Micmacs was at the same place where Sinclair first met the Micmacs—at Pictou, I was struck with the coincidence. Could Sinclair have been the visitor the Indians remembered? His visit would naturally have given rise to a legend. Was Glooscap actually Sinclair? I found 17 parallel details in the stories of the two. Seventeen are too many to be discarded as coincidences. The Glooscap-Sinclair equation became established beyond doubt.

Here are some of the parallels: Each was a “prince” who came across the ocean via Newfoundland. Each was a “king”, who had often sailed the seas. The home of each was in a “large town”, on an “island”, and each brought with him many “soldiers”. The principal weapon of each was “a sword of sharpness”, (hence he came before the advent of firearms). Each had three daughters. Each explored Nova Scotia extensively. Each spent only one winter in the land. Each built a ship and sailed home in it. Neither one was a religious teacher, but a man who lived like other men, a secular individual. Each ascended a high hill or mountain and discerned in the great distance another high hill or mountain (“monte” in Zeno narrative, “mountain” in Indian legend) to visit which involved a journey of “eight days” (Zeno narrative) and “at least a week” (Glooscap legend). Each had the same character, being notably generous, except when openly defied.

The 19th century scholars had recorded what the Indians told of where the visitor went in his exploration of Nova Scotia. He followed the east coast from Pictou to Bais Verde and crossed to Cumberland Bay. Then he followed the canoe route from Hebert River to Parrsboro. He explored the shores of Minas Basin, visited Cape Blomidon, and the south side of Minas Channel westward to Digby, and to the site of Annapolis and up the Lequille stream, and thence by canoe journey into Liverpool Head Lake, whence the Mersey River carried him through a series of lakes to the ocean at Liverpool. He returned to the shore of Minas Basin, where at the site of the present village of Spencers Island he and his men made a large roundup of animals, killed them, and dried their flesh for winter food.

The Micmacs told where he spent the winter. They said: “He remained all winter near Cape D’Or.” There “at the place called the Portage” and “guarded by sentinels”, he “resided near salt water, on a high bank against which the deep sea dashed.” The campsite had to be near a plentiful supply of fresh water, and close to a likely shipbuilding site.

These were the clues on which I based my geographical sleuthing. There is no space here for
the details of the repeated failures to find the one
and only spot to which all the clues pointed. Suffice
it here to say that the winter campsite could not
have been close to the principal point of Cape D'Or
near the lighthouse, because there was no place
there to build a ship. And where was the portage?
There seemed to be no reason for a portage on the
Cape D'Or peninsula. The bank was indeed “high”,
especially on the western side of the cape, where it
rose to 450 feet, but the Indian description “against
which the deep sea dashed” seemed inapplicable to
a shore of an inland body of water more than 50
miles from the ocean. How could “the deep sea”
there “dash”? I visualized ocean waves and break­
ers. I made no progress toward a solution of the
geographical puzzle until one day I chanced to
arrive at the lighthouse point at the middle of an
incoming tide. Water churned up in waves was
racing past the point at incredible speed, with a
loud roaring, and a semi-circle of white water ex­
tending out for two miles. The lighthouse keeper
told me how fast the tidal rip raced—“16 knots”.
That is 19 miles an hour! Minas Basin, an arm of
the Bay of Fundy, boasts of the highest tides in the
world, sometimes 50 feet. More than two cubic
miles of water pass Cape D'Or four times a day.
The Indian word “dash” is perfectly descriptive of
what the deep sea there does. No Indian would
attempt to round the cape in a canoe, and there had
to be a portage. My next problem was to find the
original portage trail that by-passed the cape. Vari­
ous trails, old and new, cross Cape D'Or peninsula.
Would it be possible to identify the anicent Indian
portage trail?

One afternoon, when Mr. Morris, the light­
house keeper, his father and a cousin of his were
helping me search the woods for cellar holes or
other evidences of a settlement, I observed that a
trail close to the edge of the high cliff was in long
stretches devoid of vegetation, and in one place
where I could see it lying straight for over 100 feet,
it shaved the trunk of a large tree, so that anyone
who stuck to the trail would strike his shoulder
against the tree. The trail did not turn out to
avoid the tree. Roots of the tree had grown over
the trail. Here was evidence that the tree had
started its growth after the trail had been long
established. The tree was a black spruce 22 inches
in diameter, and experienced lumberman agreed
that it must be 150 years old. Further evidence of
the age of the trail was its disappearance at erosion
fall-outs of the cliff, one of them 200 feet wide. The
trail had preceded the formation of several such
gaps. Also, I found it easy to dig with a shovel to a
depth of 18 inches just adjacent to the trail, but the
8 inches of width of the trail itself had to be at­
tacked with a mattock, which cut out only small
chips of compacted earth. This ancient Indian trail
started on the east side of the peninsula at a tiny
cope less than 200 feet in width, and went through a
gully to a brook and up the side of a ravine. When I
inquired whether the little cove had a name, old
timers told me it had always been called “Injun
Cove”. The Indians undoubtedly knew it as “the
place called the Portage”.

Indian Cove is 400 feet north of the eastern
point of the cape, where the outgoing tide dashes
swiftly though somewhat less violently than the
incoming tide at the lighthouse point half a mile
away. Just above the cove and extending to the
rocks against which the outgoing tide dashes, is a
plateau of 4 acres, rendered inaccessible except on
its western side, by precipitous cliffs over 100 feet in
height. This is a natural fortress where Earl Sin­
clair could have been “guarded by sentinels”. The
plateau is protected by forested ridges and hills
from winds from the southwest, west, north, and
northeast. Of all locations I have seen in Nova
Scotia, it is not only one of the most suitable for a
campsite, but one of the most beautiful. The gully,
30 feet wide at the shore of Indian Cove, and 80
feet deep, athwart the portage trail, must have been
where the visiting prince of the Micmac tradition
built a decked ship with masts (plural, presumably
two masts). To launch it, his men had only to
move it on rollers down the shore at low tide, and
let the rising tide float it.

Fishing shacks have existed in the gully from
time to time during the past 75 years, so that the
surface is much disturbed. But on the floor of the
gully, 3 to 5 feet of earth, apparently and for­
tuitously, flowed in from the steep sides soon after
the first stand of timber was cut. Under that earth,
just above the original undisturbed surface, an
archaeological investigation may well reveal evi­
dence that a ship was built there in the late 14th
century. I have talked with the owner of the land,
and have been assured that he will give permission
to dig there to persons with archaeological experi­
ence or who are under the direction of an archaeolo­
gist. I shall be happy to join any group that decides
to devote a few days to the site. If the theory points
correctly, various objects should be found that will
establish a new page in the pre-Columbian history
of North America.
A CERAMIC FIND AT HUNTING RIDGE (CONN.)

By

BERNARD W. POWELL

As the result of continued survey in the south-western coastal area of Connecticut, in June, 1958, I located some aboriginal material near the base of a large rock in the town of Stamford (see map). The find does not really warrant being called a "site" as it is too restricted in areal extent and in quantity of artifacts. The location is on private land in a residential section of town called Hunting Ridge. The immediate area is wooded land marked by rock outcrops and a few glacial erratics. The material recovered was near the upright face of one of these rocks.

In all, an area some 6 by 12 feet fronting this rock was excavated to a depth of about 18 inches, but the total inventory was very scant, being confined to one small quartz knife blade, and 66 pieces of pottery (see illustration). A fire pit with an ashy, sandy texture was encountered near one end of the shelter and had penetrated into the subsoil. A few partially modified quartz flakes, broken from stream or glacial cobbles, were noted at random during the digging, but there was no other cultural material. The fire pit was noted at the time as having one of the most durable, hard-baked linings I have ever encountered. The hardened silty subsoil lining this pit was reddened from ancient fires and speckled through and through with micrograins of charcoal. Several pieces of the lining were left exposed in the spoil after the dig was finished. Some months later on revisiting the site, I was surprised to note that the pieces were still intact and little affected by the rains and weathering to which they had been exposed.

Evidently the place was visited only a few times by Indians. The large number of potsherds was almost the first thing encountered, and raised hopes that more material would be forthcoming. Such proved not to be the case. The sherds themselves were found immediately beneath a 6 to 8 inch layer of humus and duff. This material, the accumulation of centuries in the sheltered spot, was tightly matted together by many as-yet-undecomposed...
A CERAMIC FIND AT HUNTING RIDGE (CONN.)

Three potsherds and one knife blade. (A) A421 at the upper left, is most likely a rimsherd of Van Cortlandt Stamped ware. The surface treatment is cord-marking. (B) HRR2 at upper right is a body sherd from same vessel. The surface is likewise cord-marked, with decorative elements made by impressing the edge of the cord-wrapped paddle in a series of parallel impressions in the pot. The arrow indicates part of a "lacing-thong" hole. (C) Another A421 HRR2 body sherd of same vessel, showing further variation of decorating technique. (D) A420 HRR1 (D) is a quartz knife blade (not a projectile point). The artifact is quite keeled, as can be seen by farthest end sketch to right (head-on view at tip). The asymmetric keeling of the artifact, and the whole manner and shape of working is strongly suggestive of a tiny knife blade suited for hafting (?).

All these objects are from a site fixed probably somewhere in time between 1200 and 1500 A.D. in the East River culture—a coastal phase of the seaboard Algonquin in southeastern New York and adjoining Connecticut. The culture was evidently quite influenced by the Owasco Aspect of interior New York state.

Vegetal fibers. We actually peeled this overburden back, almost like a rug, and there lay the sherds in proximity upon the uppermost layer of the subsoil. In our area, subsoil often consists of yellowish eolian and fluvial deposits formed in postglacial times. The closeness of the sherds, and their number and size immediately raised hopes that we had a single restorable vessel. Such indeed, was not so. In fact, of the total, we had only one rimsherd and it rather badly weathered. The remainder were miscellaneous body sherds which we were not able to reconstruct in any very helpful fashion. We lacked altogether any sherds from the bottom of the vessel which would be useful in establishing the form and shape of the pot. However, a study of the paste and decorative technique strongly suggests a pot in
A CERAMIC FIND AT HUNTING RIDGE (CONN.)

an early Owascoid tradition. Specifically, the designs suggest the type Carpenter Brook Cord on Cord. That the vessel was paddled all over with a cord-wrapped paddle is determinable, and there has been subsequent wiping of the cordmarks on the upper portions of the pot. This has not removed all traces of the cordmarks. Apparently running over this upper zone were bands formed by closely contiguous markings from the cord-wrapped stick or edge of the cord-wrapped paddle. These marks were not even each-to-each, but rather staggered, with each successive mark displaced a bit more than its neighbor in the direction in which they run. See illustration. Although the region of the find lies generally in the area recently proved to harbor components of the East River Aspect, the technique is not strictly in the East River tradition. The design is not Bowmans Brook Stamped, nor is it again the type Van Cortlandt Stamped—both identified with the East River Aspect. One cannot go too far with such fragmentary remains, but as noted, the technique is certainly similar to the Late Woodland pottery in vogue with the potters of the more western Owasco components, and described generally in the literature as Owasco Platted and Owasco Oblique, with the exception that the designs are superposed over cordmarked body surfaces and so more like Carpenter Brook Cord on Cord. The sole rimsherd is not collared, but is mildly restricted. The lip has been lightly notched, presumably with the cord-wrapped stick, but is so badly weathered this is not certain.

The sherds are relatively compact and grit-tempered. Just what the tempering medium is, is doubtful. It gives no reaction to a mild acid (acetic) test, so presumably does not include limestone. Examination by low power magnification shows tiny flakes of a hornblende- or tourmaline-like mineral disseminated in the larger grains of some of the tempering grit. Nothing further along this line has been developed. The exterior color of the sherds is the common orange-buff frequently encountered on some of the wares of this tradition. The interior is darker and more tannish. Surface treatment of the exterior below the shoulder is cordmarking without subsequent wiping. The interior is plain wiped. A number of the body sherds were drilled (from both sides toward the middle) for the so-called “lacing thong.”

In all, the sherds are strongly suggestive of a technique which finds a generic relation with the pottery of the Owasco Aspect in New York. That this extreme southern and western portion of Connecticut was influenced a bit by Owasco notions behind the East River traditions is becoming more and more evident with continued research. Radiocarbon dates from both a site in Connecticut and one in New York suggest the time around 1300 A.D. or so as a period when these influences were being felt here. Then, too, there is always the possibility of trade with other areas. MAS members, perhaps more familiar with eastern Connecticut traditions, will surely be interested in developments likewise in the western parts of Connecticut and adjacent New York State.

Lacking critical segments of the pot for even partial restoration, it nevertheless seems most likely that it was elongate-globular in shape. No dimensions can be determined.

The “site” was one of the hardest to work I have ever encountered. It was laced with tree roots, fallen stone and timbers, plus the tenacious vegetal mat previously mentioned. In places a shovel was no avail at all, and one had to literally claw open a crack and then try to pry up the tangled, impervious overburden. Our dispositions were none improved by the generally sterile nature of the location, disclosed after such arduous effort! Thanks are certainly due my wife, Jean, and “Mac” McCormick, two faithful helpers without whose added efforts the Hunting Ridge find would never have been worked.

On a later revisit to the site a tiny scrap of clam shell (V. mercenaria) was noted in the spoil. The location is about 6 miles in a straight line from the nearest saltwater along the Long Island Sound shore.

FOOTNOTES:


2. Personal communication with R. Suggs.
DIMENSIONAL DETERMINATION FROM POTSherDS

By
MELVIN V. LANDON

No one can hold a shard in his hand without wondering just what the pot looked like that day, perhaps thousands of years ago, when it came from the fire. While one can always see it in his mind's eye, there is always the suspicion that his dream holds little relation to reality. The purpose of this article is to give the amateur a tool that he can use to find at least the radius of the circular parts and indicate a method by which the non circular parts can be studied.

In Fig. I, ACB is the arc of a circle, while AB is the Chord, S, and OB is the radius, R. OC is perpendicular to AB and the segment CD we will call h. In the triangle DOB, we have the sides S/2, (R-h) and the hypotenuse R. It can be shown from the Pythagorean theorem that if h is very small, then

\[ R = \frac{S^2}{8h} \]

This gives us a tool to determine the radius of the pot from which the shard came. In Fig. II the shard is laid on a piece of paper and the inner curve traced. A chord is drawn and the height of the curve at the mid point of the chord is measured. When the value of S and h are substituted in the above formula, the value of R is readily found.

Since this method is only approximate, a final check is made by drawing a circle with the radius found and testing the shard against the circle. If it doesn't fit, the radius may be changed slightly and a new curve drawn. A little practice will enable one to find the diameter very quickly.

As a help to the reader some typical values are listed in the table. S and h are given in inches at the top and side of the table respectively, while the radius is given in the body of the table, also in inches. If a number of shards are to be examined, it is more convenient to make up a template made of a series of concentric circles drawn on heavy cardboard. The shard is then matched up with the suitable circle and the diameter determined directly.

When we come to the non circular curves the situation is much more complicated. Indeed it is beyond the scope of this paper or the skill of the average reader. Often, however, a good approximation may be made by the use of a set of French curves used by draftsmen.

<table>
<thead>
<tr>
<th>TABLE GIVING THE RADIUS FROM S AND h.</th>
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<tbody>
<tr>
<td>h</td>
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<tr>
<td>----</td>
</tr>
<tr>
<td>.1</td>
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<td>.4</td>
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<td>.5</td>
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Intermediate values may be found by interpolation. For example: S = 3.5 (Any value of S shown above may be selected by drawing the chord right.)

\[ h = \frac{S^2}{8h} \]

Intermediate values may be found by interpolation. For example: S = 3.5 (Any value of S shown above may be selected by drawing the chord right.)

\[ h = \frac{S^2}{8h} \]

\[ h = 0.1 \]

\[ h = 0.2 \]

\[ S = 15.31 \]

\[ S = 7.65 \]

The desired value lies \( \frac{0.6}{0.6} \) of the way between these two values.

\[ R = 15.31 - 4.60 \]

\[ R = 10.71 \]

FIG. I.  

FIG. II.
RED PAINT CREMATIONS AT CEMETERY POINT

By

GUY MELLEgren

On Sunday, September 9, 1956, Ed Runge and I arrived at a friend’s camp on a thorough-fare between Lake Maquapit and Grand Lake, New Brunswick, Canada. Ed had been up there several times picking up artifacts left along the waterways by generations of prehistoric people.

We had a canoe along, and although we arrived at 3:00 A.M., after a twelve hour journey, we arose at 6:00 A.M. and paddled off to inspect shorelines which Runge had previously hunted. We stopped here and there, but eventually arrived on the south side of the lake at a point of land beyond Ring’s Island. Like the island itself, it was low flat land which consisted of a dense stand of Swamp Maple and Alder which in a few more years will probably lose its identity to the annual erosion following the ice break-up and the ensuing spring floods. The shore sloped gently to the northeast and here we found several items.

On the last day of our visit, we returned to this area and with hoes in hand, we scraped away an inch or two of sand in the hope of recovering a few more stone tools. Directly beneath the sand, we met with a clay base of a consistency which nearly defied our efforts and immediately encountered charcoal, ash, calcined bone and the stain of Red Paint!

Attacking the clay, we found that the red ochre had been layed in deposits of a pound or two to each cremation. The color was vermilion to lake red. The cremations were so numerous, that they frequently over-lapped and the stains had penetrated four to six inches into the clay.

After about three hours of back-breaking, blister-forming labor, we had disturbed about two dozen of these cremations. Although I took a series of colored pictures, about the only one that amounted to anything, was a shot, from the canoe, of Runge’s posterior.

We tried in vain to get a good sample of the brilliant ochre, but it was so diffused, that we had to take a jar of the impregnated clay.

Only two items could have been grave goods, and they were: two leaf-shaped knives. (See Figure 1).

A list of finds from within a mile radius were: side-notched points, long-stemmed points (see Figure 2), long knives, four pitted anvils, three pieces of ground polished tablets, ground-axe bit, steep-edged scrapers, drills, two plummetts and a basal portion of what was perhaps a large and most beautiful platform pipe made of amber-colored quartzite.

Materials were largely exotic and included: sugar quartz, chalcedony, banded slate, cherts and felsites.

NOTE: It is our intention to submit at a later date, a fictional account of the activities of a Pre-Algonquin people, based on five personal experiences of recoveries of implements of this culture.
WANTED
Society members, including men and women of all ages, to participate in our program of research. Wages will consist solely of the satisfaction engendered through accomplishment. Must be capable, willing and sufficiently tenacious to follow the job through to a successful conclusion. Various openings include stenographic and technical work. Contact Douglas S. Jordan, Chairman, Research Council, 12 Church Street, Wakefield, Mass.

Of late there has been some discussion of economy with regard to our various functions, and particularly concerning our publications.

We all realize the importance of issuing an attractive and informative Bulletin, and we are aware that our publications are the sole means of contact with many of our members.

As in all other lines of endeavor we are also faced with constantly rising costs of operation. Since our beginning as a Society we have continually maintained a basic membership fee, and it is the present wish of a majority of the Trustees to seek to expand our membership and look to other sources of revenue rather than increase the basic three dollar fee.

Another and widely accepted move toward reducing publication costs concerns the number of illustrations accompanying submitted papers. The present cost of a full page of line drawings is five dollars, and a page of halftones (photos) comes to six dollars. Thus any considerable number of accompanying illustrations rapidly increases the publication costs of the issue involved.

At this point we are merely going to suggest that the author share the cost of such illustrations. In the case of American Antiquity, published quarterly by the Society of American Archaeology, when illustrations and/or tables cost more than the price of two full pages of halftones, the author pays for the excess. This seems to be an entirely sensible procedure, and one which we could adopt to advantage.

In the future your Editor will contact the author and suggest a similar arrangement with respect to articles which are profusely illustrated.