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Massachusetts Archaeological Society

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BULLETIN OF THE
MASSACHUSETTS ARCHAEOLOGICAL
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BRONSON MUSEUM

This is the Society's museum, 5th Floor of the S North Main Street Building, Attleboro, Mass. — Museum hours are from 9:30 to 4:30, Mondays, Tuesdays, and Thursdays. For special arrangements to visit on other days, contact the Director, Maurice Robbins, or the Curator, William S. Fowler by mail at the Society Office, Bronson Museum, Attleboro, Mass.

The Museum includes exhibits of artifacts and seven dioramas portraying man's prehistoric occupation of New England. The displays are arranged so as to show man's development through four culture stages, from early post glacial times.

The most recent diorama extends 15 feet across the front of the museum. It depicts an Archaic village of seven large and unique wigwams as indicated by their foundations, excavated at Assowampsett Lake by the Cohannet Chapter. Human figures to scale make the scene come alive and help create what unquestionably is an outstanding addition to our ever growing museum displays.
Editor's Note: Through analysis of bone remains from archaeological excavations, Dr. Waters hopes to trace the movements of animals and man in prehistoric New England. (Send bone material to him at the Bronson Museum, Attleboro, Mass., and have it adequately labeled as to source).

There has been considerable speculation, but until recent years relatively little sound evidence, regarding early man in New England immediately after the melting back of the last ice sheet. To properly approach the problem, one must consider early man's geographical origin, and floral, faunal, and climatic characteristics of his occupied environment prior to the melting back of the last ice sheet. With this knowledge, it may be fairly safe to speculate that man followed the northward migration routes, as the ice melted back, of the plants and animals he was dependent on.

During the Pleistocene period there were four major glacial advances and retreats (Fig. 1), the time of the last glacial advance being shown as the Wisconsin glacial age, or the ice age, as it is com-

Fig. 1. Map showing southern limits of glacial drifts in eastern North America, based on Dunbar, 1949, after Flint.
monly called. Approximately one million years has elapsed since the initial advance of the first ice sheet (Nebraskan). The last (Wisconsin) ice sheet existed for about thirty thousand years, and it has been reliably estimated by Carbon-14 dating methods (Rubin and Suess, 1956) that this ice sheet melted back from New England for the last time somewhat more than eleven thousand years ago, making the area finally and permanently available to man.

Just prior to the Pleistocene period, northern North America was covered by a forest of broad-leafed evergreens (Chaney, 1947). The area was populated by more primitive ancestors of many present-day North American animals, and by others with no living descendants in North America. Man had not yet come to the North American continent.

The first glacier pushed existing flora and fauna far to the south (Fig. 1). As this ice sheet melted back, plants and animals migrated northward. This was, of course, repeated three more times. Pollen analyses and studies of fossil mammals indicate that the climate was colder than present during the glacial stages, and warmer than present during parts of the inter-glacial stages. Apparently, normally boreal (northern) flora and fauna extended far to the south (Florida and the Gulf Coast) during the glacial stages, and southern flora and fauna extended far into Canada during the interglacial stages (see Dorf, 1959, for a more complete account of climatic shifts during the Pleistocene). Existing isolated living populations of amphibians and reptiles, in both the south and the north, were apparently left behind during and following the movements of the last ice sheet (Smith, 1957).

These sequential events caused considerable intermingling of northern and southern flora and fauna, and the rapid geographical shifts in these and in climatic zones imposed considerable environmental stress on the then existing plants and animals. Survival of many depended on structural and functional adaptations of populations to these rapid changes. The fossil record indicates that considerable evolution, and also elimination of entire groups of plants and animals, took place during the Pleistocene period, and continued following the retreat of the last glacier. Early man came into an environment of rapidly shifting climatic zones, flora and fauna.

There is good evidence that man came to Alaska from Siberia by way of a land bridge no longer in existence. There is evidence (Martin, et. al., 1950) that during the Wisconsin glacial period the glacier caused many northern European mammals to retreat to northern Asia, which was probably not glaciared, as well as to southern Europe. Man probably was attracted to this super-abundance of game. After the Wisconsin ice sheet receded, and the animals began to move north, east, and west, man followed them. Some of the animals surged into northeastern Siberia and over into North America, with man following.

According to several geologists, glaciers blocked man from North America until about twenty thousand years ago. The oldest prolific culture (ten thousand years old—dated by Carbon-14 and other methods) has been found east of the Rocky Mountains as far south as Texas. The people of this culture were nomadic. They used hearths in their hunting camps, stone implements including fluted points, and knives (see Martin, et. al., op. cit.). There is no evidence so far of shelters. They undoubtedly followed migrating game mammals, and their remains have been found in association with bison, mammoth, camel, deer, dire wolf, and American horse (extinct).

It is not unreasonable to assume that these earliest people (Paleo) overspread all of North America available to them, and inhabited the unglaciated southeast as early as ten thousand years ago; their fluted points are found as far south as Florida (Fowler, pers. comm.). This eastward movement may have been followed much later by a second migration, given impetus by the warm, dry period, which produced the Prairie Peninsula (Fig. 3) in the Great Plains. This followed the so-called Climatic Optimum (5000-2000 B.C.; see Dorf, op. cit.). At this time pocket gophers were found in Illinois, and other western mammals (i.e., ground squirrels) were found far eastward of their present ranges.

It would be most meaningful to speculate on early man’s environment (climate, flora, fauna) in the southeast prior to the final retreat of the Wisconsin ice sheet, and then to consider the possible importance of the extension of the Prairie Peninsula after the Climatic Optimum. The implication is that there may have been two widely separated migrations of early man into the New England area.

Early man in the southeast did not lack for game. For example, in Florida have been found remains of many large mammals, most of them now
extinct (Olsen, 1959): mammoths, mastodons, saber-tooth tigers, horses, giant sloths, armadillos, llama-like camels, wolf, dire wolf, coyote, short-faced bear, capybaras, tapirs, peccaries, and giant beavers. Remains of a large fossil quail, turkey, and other birds have also been found (Holman, 1959). Many of the now extinct animals were in existence until three to four thousand years ago; the horse became extinct ten thousand years ago. Most of the small mammals living then in Florida exist there today.

There is evidence that some of these now extinct mammals moved northward as the Wisconsin ice sheet retreated. Remains of the woodland musk ox (Carbon-14 date 13,200 ± 600 B.P.) have been found in Michigan (Hibbard and Hinds, 1960), as well as the American mastodon (7,820 ± 450 B.P.), common beaver (9,560 ± 1,000 B.P.), giant extinct beaver, whales, peccaries, woodland caribou, mammoth (Hibbard, 1951), and giant extinct moose (Hibbard, 1958). Post-Wisconsin remains of the latter have been found in several areas, including New Jersey. In Connecticut, Flint (1930) found in carbonized twigs remains of the mastodon, the caribou now living on the barren ground tundra of Canada, and the caribou now living in the northern spruce forests of Canada. He concluded that the land surface of Connecticut was reclothed with vegetation as soon as it emerged from beneath the ice.

It is common knowledge that different kinds of animals are tied by their needs to particular types of vegetation and terrain, and that their geographical range is determined directly by these factors, and by their physiological tolerance to meteorological extremes. It is also evident that early man depended directly on the then existing game animals, and plants, for his survival. The vanishing of several now extinct large mammals after the retreat of the Wisconsin ice sheet, for reasons unknown, and the northward migration of flora and fauna, must have given considerable impetus to early man's migrations. In following his food sources, he must have followed the migration routes of flora and fauna.

Following the retreat of the Wisconsin ice sheet, the continental land mass, being released from this weight, recoiled to an abnormal elevation before subsiding again. A broad coastal plain existed east of the present New England coast until perhaps four thousand years ago (Figs. 2, 3; also see Fenneman, 1938). Braun (1950) felt that, following the retreat of the Wisconsin ice sheet, spruce was the first forest component to advance northward. Deevey (1949) cited pollen data from Maine as giving evidence of a tundra phase behind the retreating ice. Flint's (loc. cit.) find of both kinds of caribou in the same area suggests that the tundra phase was narrow and short-lived in New England. Braun (op. cit.) concluded that oaks associated with pines moved into the glaciated area soon after the period of spruce dominance, that association continuing today in New England. Braun also felt that oaks of the midwest originated from the Ozarkian Center (Fig. 2), while oaks of the northeast originated from central and eastern Pennsylvania, New Jersey, and the then emergent coastal plain. Evidence suggests a northward movement of oaks across the Allegheny Plateau by way of the upper Susquehanna River Valley to the Finger Lakes region of New York State. Today a comparatively large coastal plain flora (i.e., pitch pine, scrub oak) sweeps from the southeastern United States into New Jersey, Long Island, the coastal islands of Massachusetts, Cape Cod, Nova Scotia, and rarely inland. The presence of certain fishes in fresh water ponds on Nantucket Island (Hubbs and Cannon, 1935) suggests that the coastal plain was...
well supplied with fresh water lakes, ponds, and streams.

There is good evidence that dispersion of small mammals to New England and northward after the retreat of the Wisconsin ice sheet occurred along the coastal plain (Fig. 2; also see Starrett, 1958, for an account of meadow voles, and Waters, 1960, for an account of white-footed mice). In brief, these small mammals apparently followed their preferred habitat up the coastal plain, as well as up presently emergent coastal land areas and the Appalachian chain (Fig. 2); the latter separated migrating populations of the midwest from coastal and montane populations. Midwestern populations may have also been partially derived from the Ozarkian Center. At any rate, it is probable that these migrating animal populations migrated inland from the coastal plain through natural passageways such as the Susquehanna, Hudson and Connecticut River valleys, and others. There is evidence (Waters, op. cit.) of considerable intermingling and interbreeding in New England of animal populations derived from the coastal plain and the Appalachian chain. Living remnants of the old coastal plain populations of meadow voles and white-footed mice are to be found on the coastal islands of Massachusetts and in Nova Scotia.

Fig. 2. Early post-Wisconsin migration routes of floral elements and associated fauna. Former coastal plain enclosed in part by dash line.
The fresh water fish fauna of New England also apparently had a multiple origin after retreat of the Wisconsin ice sheet. Many were originally part of the Atlantic coastal plain fauna (Hubbs and Lagler, 1949). Others were derived from the northwest, and from the Mississippi and Ohio River Valleys, via the Great Lakes basin and the then existing Mohawk-Hudson and Susquehanna drainages, and the presently existing St. Lawrence drainage (Hubbs and Lagler, op. cit.).

It is known that early man entered New England as much as nine thousand years ago (C-14 date, Bull Brook, Byers, 1959). His fluted points have been found in the Champlain Valley, on the coast of Maine, at other river and coastal localities in New England and Delaware (Fowler, 1961), and in Lakeville, Massachusetts (Robbins, pers. comm.). It is probable that early (Ancient or Paleo) man migrated up the coastal plain and more inland areas, and down from the Great Lakes area (Fig. 3), and that his stay in New England extended over a period of several thousand years. In New England, migration probably followed major river valleys, and thence northward (see Fowler, op. cit., for an excellent account of early man in New England). Because of the scarcity of finds, it is not known what early man used for food. It is reasonable to assume that besides mastodon he used caribou in southern New England as long as the spruce forests persisted there, and it is not unreasonable to suspect that some of the now extinct mammals (giant moose, giant beaver, etc.) found in Michigan were also found in New England and were used by Paleo man. With the coming of the oak-pine forests, and a shift to a fauna characterized by animals now found in southern New England (i.e., beaver, white-tailed deer, etc.), man's food and hunting habits had to shift accordingly. There is evidence that the succeeding Archaic culture used these animals, and also the extinct sea mink (Waters and Ray, 1961), possibly the Canadian lynx, sea sturgeon, sea birds, and other coastal and marine animals for food.

There is a question as to the origin of Archaic man in New England (see Robbins, 1960, for a graphic description of an Archaic village in Lakeville, Massachusetts). The time of appearance of Archaic man was also the time of the eastward extension of the Prairie Peninsula (Fig. 3). Was Archaic man derived from an existing New England culture, from an intrusive Western culture, or from both? Ritchie (1944) feels that the cultural change in the Northeast (including New England) from Archaic to Ceramic (Laurentian I to Laurentian II) may have been caused in part by the arrival of new people in the area, who brought with them a knowledge of pottery and the custom of using ground slate tools.

Obviously, an enormous amount of work must be done, before the bulldozer obliterates all evidence, to answer these questions regarding early man's origins, movements, and habits in New England. Non-human skeletal materials should be as carefully preserved and documented as associated human materials and artifacts. The oldest sites are perhaps the most important. The professionals cannot begin to do enough. Only much careful, consistent work by capable, interested amateur groups can begin to provide the needed information. The Massachusetts Archaeological Society is, and has been, taking major steps toward meeting that end.

ACKNOWLEDGMENTS

This paper was inspired by a series of stimulating discussions with members of the Cohanet Chapter, Massachusetts Archaeological Society. Particular thanks are due to Dr. Maurice Robbins for providing various information and suggestions, and for the opportunity to study human and non-human skeletal materials from excavations on Assowampsett Lake, Middleboro, Massachusetts.

Bronson Museum,
Attleboro, Mass.
July 12, 1961

LITERATURE CITED


SOME CONNECTICUT BURIALS

BERNARD W. POWELL

The writer is indebted to the following persons, among others, who were instrumental in placing at his disposal data from which this account was prepared: Mr. Richard Roberts of the Stamford Museum and Nature Center, Stamford; Mr. Paul C. Howes of Bruce Museum, Greenwich; Dr. Rudolph Colmers of Stamford; Mr. Lloyd Fowler and Mr. Cliff Hawthorne of the First Stamford Company, Stamford; and especially he is indebted to Dr. Herman S. Rockoff of Stamford for the separately expressed opinion on the dentition from Burial 3.

The wisdom of burdening an overcrowded literature with reports on fragmentary and inconclusive finds is sometimes questioned. In the case of the burials to be described, a twofold defense is offered: 1) We lack altogether any published material on aboriginal burials from this immediate area. 2) Every find of prehistoric material, no matter how fragmentary or unspectacular, that vanishes without record in archaeological literature impoverishes the field to some degree, not only for current researchers, but for the researchers of tomorrow.

Accustomed as we are in archaeology to look backward in time, it might be well occasionally to look forward to the problems of the future. As more and more prehistoric sites vanish before the bulldozer in housing developments, certain it seems that tomorrow's archaeologists must rely heavily upon previously excavated material. It would be regrettable indeed, if the broader perspectives and refined techniques of future scientists were blighted because early workers were lax in recording and reporting data.

The three burials described, hereafter, all come from the general vicinity of the Greenwich-Stamford town line in southern Fairfield County, Connecticut. The Boston Post Road, U.S. 1 traverses the area roughly east and west. Only a short time ago, the tract south of the Post Road was undeveloped woodland. This area is known loosely as Laddins Rock (sometimes Aladdin's Rock), a corruption derived from the name of an early Dutch settler, Cornelius Labden. A delightful and rather romantic legend records that this same Labden, absent from his cabin one day, returned to find that Indians had massacred his wife and daughters. One version holds that on entering the smoking ruins of his house he beheld his family's heads inside the cooking pot. Be that as it may, the tale records that Labden, pursued by these same Indians, spurred his horse over a rather precipitous ledge (Fig. 4) and plunged to his death below, taking with him several of his tormentors. If any faith may be put in this
A gentle valley extends southward through the region, becoming rather steep in the vicinity of the aforementioned ledge. A small and badly polluted brook follows the channel of an earlier and no doubt purer watercourse. Beyond this, it is possible to read some of the events of glacial times. Flint indicates a local temporary ice lake in the northern portion of the area, and a partially sorted drift spreads southward down the valley. A most interesting ridge, once located in underbrush, which was subsequently removed during housing development, was either an esker, or more likely the debris of a drift-filled, lateral ice crevasse butted against the ridge to the west. This is mentioned in passing, for such features often are taken to be earthworks of man.

**BURIAL 1**

An unnumbered collection now in the files of the Stamford Museum and Nature Center, Stamford, purports to be remains of a burial, uncovered September 28, 1927 on Acosta Street, Stamford. Unfortunately, this burial may not be a burial at all, for no human remains of any kind are included among the specimens. Indeed, the sole reason for terming this a burial rests on an accompanying label, which records that an Indian child was buried in a shell pit from which the material was taken. Museum officials are not sure that any skeletal material was actually turned over to them. Presumably, the human remains, if any, disappeared into unknown hands. A search through local newspapers of that date reveals nothing.

What is present are 32 sherds of nondescript, exterior cord-marked, grit tempered pottery, including no rim or neck sherds. Further inventory includes one white quartz blank (triangular)—probably for a large projectile point—and 2 stem fragments of a white clay (kaolin) tradepipe undistinguished by markings. There are also some

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1. See separate map accompanying Flint’s report.
miscellaneous deer bones and other bone fragments, most likely food scrap from the shell pit. A fair amount of oyster and scallop shells—no clam—together with some charcoal grains, also were present.

The writer believes, on sketchy grounds, true, that a burial may have been uncovered here. The two following burials are submitted as support for the probability of aboriginal burials in this general region. Further, it seems that whoever dug up this pit must have seen enough to suggest that a child's burial had been disclosed. However, it is true, great caution is required in evaluating reports of untrained observers, particularly when we do not even know who dug the shell pit. Also, it is certain that many people frequently attribute all exhumed bones to be human burials—"Indian burials"—despite the fact that 90 percent of such unearthed bones in this vicinity clearly derive from the modern butcher shop.

As near as the writer can determine at this date, Burial 1 was on the east side of a valley near its head. The area is completely developed today, and a cursory surface check suggests further investigation here would not be profitable.

**BURIAL 2**

Specimen No. 6796 in the Bruce Museum, Greenwich, is an adult human cranium recovered along with other material during excavations in a gravel pit off Laddins Rock Road in July 1936. The circumstances of the find, as we shall see, foreshadowed those of Burial 3 found more than 20 years later. Workmen accidentally uncovered the burial while stripping gravel and turned the skull over to local police. After a lapse of some days, the find was brought to the attention of P. G. Howes, Curator of Bruce Museum. Together with P. T. Jones, he went to the site and attempted to recover whatever else might be disclosed. Unfortunately, finds were minimal since most material had by then been removed and rolled into a nearby road foundation.

The inventory includes: one adult human cranium (without mandible) and with missing zygomatic arches and facial and nasal bones; one broken human ulna; portion of human fibula; human rib fragment; few small miscellaneous bones; some worked white quartz; quantities of oyster, clam and scallop shells, also, the boat shell, Crepidula.

H. L. Shapiro of the American Museum of Natural History subsequently examined the cranium, and Howes quotes him as having said that such an angular, flat-sided skull (Fig. 5, #4) with pentagonal shaped roof is characteristic of Indians, but Shapiro would not say positively that the find was Indian. Interestingly, this same conservatism reappears in Shapiro's assessment of Burial 3 found a short distance north of Burial 2 many years later, as explained below. The Bruce Museum record states further that N. C. Nelson, then also of the American Museum of Natural History, verified the quartz objects as fragments of broken artifacts. The record concludes that the burial was evidently about 3½ feet deep in glacial sands and gravel, and was evidently a midden type interment. It was Shapiro's opinion that the specimen was that of an adult male between 30 to 40 years of age.

**BURIAL 3**

On October 31, 1958, workmen, digging a foundation trench for a building at the corner of Laddins Rock Road and West Main Street, U.S. 1, uncovered a human burial (Fig. 6). Police recovered such skeletal fragments as they could and these were brought to the attention of R. Colmers, Medical Examiner for Stamford. Dr. Colmers, a personal friend, notified the writer of the find, and of his suspicion that it might prove to be Indian. Accordingly, the material was acquired for study. This included a badly broken cranium and the maxillary portion of the jaw, with upper teeth intact. There were also a radius and an ulna.

On the following day the writer explored the site further. Sifting through the badly disturbed soil, he recovered a few more bones: missing pieces of the skull and the lower jaw or mandible. A portion of it was poured into the bottom of the concrete footing, and was recovered by the writer by digging beneath the footing and then sliding in on his back, while with hammer and cold chisel he removed the piece of jawbone from the cement—a novel archaeological procedure to be sure. Interrogation of workmen at the site developed the following account. Workers for several days had noticed bones while digging but had thought them only dog bones, which is very possible since there is widespread recent surface trash here. Evidently, they went right through the burial without knowing it. A worker with a pick loosened the soil within inches of the skull, and thus it was revealed. He told the writer that the skull was intact at the time; a point to be often recalled during the hours spent in its restoration. This, because at the time of discovery, some ignorant fellow workers, fearful of the find, had deliberately smashed the skull with a shovel.
The foreman for these workers, more observant than they, revealed that the body had apparently been buried extended in dorsal position, and oriented along a SW/NE axis, head to the SW. Interment was in clean sand about 5½ to 6 feet deep, actually about 18 inches below the old sod line. The spot is less than 50 feet from the edge of busy U.S. 1, and there has been dumping with trash accumulation on the slopes of this highway for a long time. The burial lay between a split in a rock ledge. There were no associated goods or cultural materials.

Shortly after the find was made, the writer showed the skull to Shapiro. His examination was most cursory, to be sure, but while he remarked the find as “interesting,” he would not commit himself as to race, sex, or age on the basis of the specimen alone. Expert opinion may thus decline to fix the race to which an individual specimen belongs in line with orthodox anthropological procedure, which is based upon series collections. Nevertheless, comments seem appropriate relative to specimen and indices approved by many field workers as Indian evidence. Bearing in mind that the skull is restored with some pieces missing, and may be distorted from earth pressure and unavoidable air warping, the writer believes there are present certain racial features commonly associated with North American Indians. For instance, there is slight, if any, depression at nasion. The skull shows some maxillary alveolar prognathism (Fig. 5, #2). There is some “shoveling” of the upper incisors; and the lower incisors, appear rather small. However, H. S. Rockoff, D.D.S., says that frequently he encounters mild shoveling in his dental practice among contemporary Caucasoids. His report on Burial 3’s skull follows:

“There are 32 teeth present in the specimen. Occlusion appears normal, though slight deviation occurs on the right side in the molar region, which may be attributable to imperfections in skull reconstructing. Occlusal surfaces of the teeth show some
wear. This probably reflects consumption of rougher foodstuffs than is custom today. There is no evidence of abnormal trauma, and wear is not excessive on any one tooth or group of teeth. There is no evidence of either microdontia or macrodontia. The upper right first molar shows evidence of carious exposure with consequent periapical involvement (abscess) as seen in the X-ray (Fig. 7, B). It is assumed that the proximal portion of the crown of this tooth broke (Fig. 7, A) and subsequently decayed in the absence of modern dental care. This assumption is bolstered by the absence of enamel broken away from the underlying dentine on other teeth."

The bite appears to have been edge-to-edge, or close to it. Wormian bones are present in the lambdoid suture. On the other hand, molars do not seem unduly wide, and the face is rather long in contrast with the widely encountered broad face of many Indians. For whatever value it may have, after restoration, the cranium revealed a maximum width of 134 mm and a maximum length of 190 mm, giving a cranial index of 70.5, indicating dolichocephaly.

As to sex, the lack of brow ridges and high, smooth forehead would generally be interpreted as female characteristics. Age-wise, the specimen is adult. Ectocranial suture closure is by no means marked; apparently the specimen is somewhere in the young-to-middle-age adult range.

It seems to the writer in considering some of these points, particularly regarding the specimen in context with the nearby finds of aboriginal artifacts—broken bone awl and potsherd from the nearby horizon—that there is little reason to entertain this find as other than Indian. The same, for similar reasons, might also be said of Burial 2.

About 25 feet east of the burial, exposed in the same foundation trench, a number of clam and oyster shells appeared about 18 inches below the surface. Further away, perhaps 90 feet SE of the burial, a lens of badly broken marine shells occurred about 18 inches in diameter. This had probably been a more extensive feature at one time, but earth grading equipment had nearly obliterated it. This broken shell matter had a soft, silky texture, dove gray in color. It was reminiscent of shell fragments
noted at the top of feature 14 at the Indian Field site some few miles away. Artifacts recovered consisted of the end of a small polished bone awl and a tiny fragment of cord-marked pottery. Besides these were quartz flakes, split animal bones and charcoal. Quite evidently, the feature was a hearth or refuse pit of aboriginal times. It is presumed to have lain within 10 inches of the surface prior to grading.

About 180 feet SW of the burial, irregular area in the ground was noted. It had a diameter of perhaps 15 feet or more, as exposed by a bulldozer. The area was marked by heavy deposits of charcoal and bright orange-red soil. Samples of the charcoal and soil were retained. The layer had a thickness of about 10 inches. If aboriginal, the feature suggests a large hearth of sorts, perhaps even a crematory, although no bone fragments were noted. However, shortly after this interesting feature was discovered a heavy rainstorm arose. The rainwash, coupled with the churning of the omnipresent bulldozers, completely obliterated the feature by the following day. Possibly the disturbance may have been recent in origin, as the area was once the site of a farm, more recently a golf-driving range. However, if the present soil level can be trusted—the feature was about 18 inches down—it would suggest aboriginal deposition.

CONCLUSION

In addition to the three burials described, there have occurred numerous stray artifact finds throughout the area, mostly projectile points, which further substantiates the presence of aborigines in the region at some period in the past. If credence may be placed in the tale of Labden’s adventure, then certainly, Indians were also present in historic times, and the occurrence of two white kaolin trade-pipe fragments in Burial 1 may relate to this period. The burials share some features in common, as shown below:

![Fig. 7. X-RAY OF TEETH, BURIAL 3.](image)

<table>
<thead>
<tr>
<th>Burials</th>
<th>No. 1</th>
<th>No. 2</th>
<th>No. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broken Shell</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
<tr>
<td>Kaolin Pipe</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
<tr>
<td>Assoc. Chips</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
<tr>
<td>Char’l Bone</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
<tr>
<td>Pot- sherds</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
<tr>
<td>Extended Dorsal</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
<tr>
<td>Head SW</td>
<td>X</td>
<td>X</td>
<td>Nearby</td>
</tr>
</tbody>
</table>

Burials 1 and 2 share several features. Both had marine shells, animal bone scrap, and charcoal: possibly evidence of shell pit or midden type interment. Both had associated fragments of white quartz artifacts. In addition, Burial 1 was accompanied by cordmarked pottery and contact material in the form of kaolin pipestem fragments. In a general way, the traits of these burials are those of Late Woodland (Ceramic) cultures—revealed by excavation in contiguous areas.

Burial 3, while yielding the best preserved and most extensive skeletal material, is the most unlike of the three, and the hardest to assess, for it seems devoid of clues that might indicate its cultural environment. It might be earlier than, or later than Burials 1 and 2, or contemporaneous with them. Actually, there is nothing to prevent it from belonging to Late Woodland times. Perhaps it is noteworthy that a witness reported a SW/NE orientation of the body, lengthwise, with head to the SW, for this is a trait often reported for burials of Late Woodland times in southern New England.

Norwalk, Connecticut
January 1961

3. See, for instance, the rather abbreviated burial data listed by Smith in Trait Table, p. 113, for foci of the Shantok Aspect in eastern Connecticut and eastern Long Island, and similar data in Trait Table, p. 126, for foci of the East River Aspect near the mouth of the Hudson River and on western Long Island. Also, Skinner, pp. 57-61, describes what I presume to be Late Woodland burials on Manhattan Island; p. 15 refers to shell-heap interments.
4. See, for instance, Skinner, p. 17 and p. 61 in which I believe the references are to burial manifestations of the Late Woodland (?).
5. Robbins (1956) records a probable SW orientation for an aboriginal burial near Swansea, Mass.; the same author (1959a) reports the majority of over 20 burials of a very late Woodland complex at the Titicut Site, Bridgewater, Mass., were oriented to the southwest; again, Robbins (1959b) presents data which may indicate SW-orientation for burials in southern New England has considerable antiquity: grave shafts of secondary cremation burials in an Archaic complex at Wapanucket 6, Middleboro, Mass., were SW-oriented, and further, calcined human bone when located, was always concentrated in the SW quadrant of the graves. Russell (p. 42) apparently encountered SW-oriented burials. His data pertaining to "positions of bodies in Connecticut Indian graves," are not precise enough, in my opinion, to support some of his conclusions relative to orientation of these burials. The original version of this footnote considered this problem at some length—and subsequent problems arising from purported relations between burials and positions of the sun, compass points, etc.—but space requirements prohibit presentation of these points at this time. The author, however, has considered this area at some length, and has attempted to define some of the problems quantitatively. I derived three basic considerations in the longer footnote, and these dealt respectively with astronomical, physiological and mechanical aspects. These I cannot elaborate further here—but would welcome inquiry from anyone who may have been, or who may ultimately be, concerned with skeletal position and orientation in graves. Just south of the New England Province, is Manhattan Island. Skinner (p. 11) refers to a belief of the Historic Manhattan in a home of the dead in southwestern skies. Farther yet is southern Pennsylvania, but there is an Historic site of the Susquehannocks, Witthoft and Kinsey report the majority of the graves oriented to the southwest.

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A KINGSTON POT
DONALD J. VIERA

Relics of bygone days often come to light in roundabout ways. So it was in the case of the pot, which is the subject of this report. One day in June, 1959, Horace Horner, who had been engaged to dig a cellar for a new house in Kingston, Mass., began bulldozing a site off River Street on a knoll overlooking Jones River. This was on a part of what is known as the Bay Farm. Because of its rocky con-
tunity to view arrival of visitors coming by water, long before their dugouts had made their way up the river.

In previous years on several occasions Society members have done sporadic digging on this Bay Farm site, and have recovered projectile points, knives, and other artifacts. In the course of the digging, a great many chips were encountered, as well as fire stones and considerable shell refuse scattered all about. This was evidence of occupancy, probably during the Ceramic Age, when shell fish were important as food in the diet of coastal peoples. However, the stony nature of the soil discouraged more than occasional digging, so that the extent of occupation was never determined.

On the day Horner started bulldozing, he had opened up quite an area, removing the loam and a generous amount of subsoil, when something exposed by the mound of dirt he had just pushed up caught his eye. It might have been crushed shell refuse or the object itself. Whatever it was, he got down from his machine to get a better look. There, packed in among shell in what was probably a refuse pit about 4 feet below the ground level, he found the broken remains of a ceramic pot. Shell refuse indicating the top of the pit appeared about 3 feet below the surface of the ground. Perhaps, what held his attention and made him think twice before turning away was a peculiar twisted rope effect, which appeared on the edge of some sherds. Here, evidently, was a broken pot of some kind, which may have seemed to him worth preserving. At any rate, he decided to pick up the pieces of pottery and take them home to show his wife. Some sherds were quite large, others small, while some crumbled, made soft by the unusually wet condition of the soil. When he had recovered all he could find—about 120 pieces all told—he felt satisfied he had broken with his machine. As it turned out, he had recovered but half the rim and neck, the bottom, and only a few sherds from the body.

After he had taken them home and found that reassembly was quite impossible, he lost interest, and within a few days gave them to James Cordeiro. Now it occurred to the new owner that the writer, who is his cousin and a member of the Massachusetts Archaeological Society, had a large collection of artifacts and might be interested in seeing them. So they examined the sherds together in the presence of another Society member. It was then suggested that restoration might be possible, and William S. Fowler, Curator of the Brownson Museum, was asked to attempt it. After many weeks of labor the pot has finally been restored and illustrated (Fig. 8). When all contiguous sherds had been glued together, the unusual decoration of rim and neck seemed important enough to report. Then the writer was asked to get the facts surrounding the pot's discovery, and these he has attempted to present in this short report.

Plymouth, Mass.
February, 1961

APPENDIX
( Editorial Comment)

Recovery of this Kingston pot seems of sufficient importance to warrant further remarks concerning the vessel's typological significance. Ceramic ware has proven valuable evidence in determining chronological positions in the ceramic span of different stratigraphic levels on which its several stages may appear. And this has enabled the placing of approximate age tabs on artifacts found associated with the different ceramic stages. By careful recording and observation of ceramic evidence, as it is related to stratigraphy, pottery making techniques, and decorative designs, it has been possible to recognize four well defined stages of ceramic advance from the earliest ware down to the final
products made during white occupation. For purposes of simplification, these are referred to, as Stages 1, 2, 3, and 4—further descriptive ramification now seems unnecessary.

Analysis of the Kingston pot reveals certain outstanding traits. It is conoidal in shape with a somewhat rounded pointed base; has an opening at its mouth of 12", and a depth of about 16". The ware is smooth inside, cord-marked outside, is about ¾" or more thick, with shell temper, and exhibits signs of coiling. Neck constriction is considerable, with a wide, thick vertical termination, which appears as a collar. Surmounting this is a well formed rim embellished with a twisted rope effect, which produces a distinctive appearance. Immediately below the collar appears an incised triangle design motif, under a five linear horizontal.

Typologically this pot appears to belong to Stage 3 ceramics, when geometric designs, including triangles, were used as important decorative elements, and when pointed bases began to be modified into less pointed shapes. Also, this stage, which just precedes historic times, is marked by the introduction of incised design work by means of a stylus. Stage 3 pots have well regimented rims with distinctive design treatments, which sometimes are extended for a short distance inside the rim. Another marked departure from earlier stages, occasionally present, is a simple straight collar, which often is laminated by addition of an extra coil of clay, but probably not in this case.

Comparing the Kingston pot with these Stage 3 characteristics reveals marked similarities; a semipointed base, straight collar, elaboration of design treatments with a twisted rope rim and triangle neck decorations by incision. Therefore, we may place it in a time period just before colonial occupation took place. This was when warfare between tribal groups is presumed to have been in force. However, apparently this sort of military disturbance could not have been so upsetting to pottery growth as to prevent the free exchange of ideas within not too widely separated cultural areas.

In support of this hypothesis, it is of interest to note that remains of a similar pot were recovered in Middleboro, Mass., and, now restored, are on exhibition in the Bronson Museum. This large section of a pot has a twisted rope rim with a triangle motif very much like the Kingston pot. However, the technique seems to be by trailing a three pronged marker rather than a stylus, and the neck is merely constricted without a collar. These departures, although only slight, might indicate more of a transitionary period of styling between Stage 2 and 3 ceramic times. Nevertheless, because of the close similarity of design work, it seems probable that cultural contacts must have taken place between the two areas of Kingston and Middleboro over an extended length of time.

A TYNGSBORO POT

EDWARD J. BIELSKI

As a teacher in the public schools, I have an opportunity to spend my summers in a variety of exciting ways. Last year I spent my much envied vacation as a mason’s helper. Now, this may not seem like a good way to come in contact with Indian culture, for concrete and brick are far removed from artifacts.

However, during the course of the summer, I had the opportunity to work on a stone chimney at the home of Mr. Fred Rolfe of Lawson Terrace in Scituate, Mass. During the tenure of my work there, one noon hour Mr. Rolfe came out to survey our progress and to offer some cool refreshments. During the course of our conversation, he told me that his home had once been part of the Lawson estate and showed me about the grounds. As we passed the garden, I asked, quite incidentally, if he had ever picked up an arrow point in it. Little did I imagine that Indians were also of great interest to him, as they have always been to me.

It struck me at the time, how a common interest such as archaeology makes instant friends of strangers.

Mr. Rolfe then showed me a very fine collection of artifacts that had been in his family for some time. Included in this collection was a ceramic pot, which had been partially, but poorly restored. When I expressed concern about the welfare of this pot, Mr. Rolfe offered it to me, if I would have it properly restored. He told me that the pot had been found in 1927 in Tyngsboro on the property of
a doctor, who found it accidentally during an excavation on his land. It was probably in a grave, which had been uncovered by chance, for no shell midden appeared with it. It should be noted that the pot was reported intact at the time of its discovery, but was broken during the excavation.

Upon assuring Rolfe that I would have the pot restored, the broken remains were given to me. About two-thirds of the vessel was imperfectly glued, with masking tape stripped on outside for added security to help hold it together. The remaining sherds were in a box in large and small sizes. I took these with the broken pot to the Bronson Museum and asked Dr. Fowler, its curator, if he would attempt restoration. While at first glance, the shattered remains presented a discouraging sight, upon more careful inspection, the shape and construction of the pot suggested a phase of ceramics worth further study. So the work of restoration was commenced.

After weeks of labor, ungluing, cleaning, and refitting the sherds, restoration was finally achieved as shown by the illustration (Fig. 10). I was told by Fowler that, while numerous small areas of the pot were missing, all sherds were found to be contiguous but two, and the rim was completely intact. This seems to me sufficient evidence to support Rolfe's account that the pot was originally found whole in an unbroken condition. Usually, ceramic pots are uncovered in a fractured state with only a portion of the vessel present.

Marshfield, Mass.
February 1961

APPENDIX
(Editorial Comment)

This Tyngsboro pot, because of its lack of design treatment, may seem at first glance, unimportant and without culture significance. Nevertheless, a more careful investigation reveals several important facts, which are worth consideration in an attempt to place it in its proper cultural sphere. Obviously, with its full globular shape, it cannot belong to any one of the first three ceramic stages of development, since it lacks conformity to their conoidal shape with pointed base. Therefore, the only place where it seems to be at home is with Stage 4 pottery, which has a semi to full globular shape. However, it may trouble some to even place it here, because of its failure to conform to other well defined Stage 4 traits: castellated pressed-out collar and collar design treatments.

Therefore, let us consider further facts concerning this pot. The ware is well made, with medium mineral temper, smooth inside and cord-marked outside and its tensile strength is high from efficient firing. A constricted neck provides convenience in handling, while an even flat rim denotes skill in manufacture. Altogether, such traits seem to convey the feeling of achievement at the end of a period of manual development, rather than at the start. This could conceivably have been toward the end of Stage 4 manufacture during colonial times, when contact with English products was frequent. This was a period when independent invention was fast disappearing among native artisans, who were more ready to copy or use English-made goods than create products of their own. This is confirmed, when in 1634 William Wood reported on Indian fishing: "... since the English came they (Indians) be furnished with English hookes and lines, before they made them of their owne hempe more curiously wrought, of stronger materials than ours, hooked with bone hookes but lazinessse drives them to buy more than profit or commendations winnes them to make of their owne ..." So great was the impact, apparently, of white culture upon the native economy, as may be seen from this single observation, that a creative decline must have taken place. Is it any wonder, then, that the work of women potters was seriously affected, so that they were more ready to copy than create? With this state of affairs, it seems only reasonable to expect a deterioration of the beautiful Stage 4 ware as an anticlimax, replaced by copies of copper or iron kettles, and maybe even bean pots.

In support of this hypothesis, it is significant that the Tyngsboro pot is presumed to have been
found intact in a grave. In its unbroken condition, with a recognizable skeletal interment, the probability is that the remains were comparatively recent — protohistoric — without enough elapsed time to have destroyed them and crushed the pot.

Another associated fact that tends to confirm this point of view is the recovery of a similar pot from Springfield, Massachusetts (Fig. 11). Here, in about 1640 at the south end of town near the Connecticut River, the English helped the Pecowsic Indians construct a palisaded enclosure, known as the Pecowsic Fort. This was built as a protection for the native inhabitants against Mohawk raids, which, even then, were made at times upon the River Indians. Parts of this site were never plowed after the exodus of the Pecowsic occupants at the end of Philip's War, and came down to present times in a comparatively undisturbed condition. In about 1935, or earlier, Harry Wright of Springfield found this pot at the Pecowsic Fort site in an unbroken condition except for a slight crack in one side. It was lying in a hollow protected by a large stone, and apparently had escaped demolition throughout the intervening years. There can be not much doubt of its manufacture and use by the Pecowsic Indians of the fort. Its shape and its preservation intact seem to suggest a late, rather than an early ceramic origin. This pot, now on display in the Bronson Museum, has a smooth inside with cord-marked exterior; has no decorative design treatment.

This evidence, all of a similar nature, seems to point to a ceramic creative decline, which may have covered a span of years in New England dating from about 1630 to 1675. If this hypothesis is valid, then ceramic vessels resembling English-made pots and kettles may be expected to appear from time to time among recovered artifacts. And it is suggested that they be classified as Late Stage 4 ware, so they will not be confused with the preceding native-created pots of Stage 4 ceramics.

EDITORIAL

AMATEUR AND PROFESSIONAL RELATIONS

(Reprint of editorial by Carl B. Compton, courtesy SCIENCE OF MAN)

It is a rather basic desire for people to collect things, something which we might categorize as "the magpie effect." Important among the things that people collect are the material culture remains of the long vanished inhabitants of the earth. Since these material culture items fall within the field of interest of the professional archaeologist, some of these professionals have rather strong opinions concerning the propriety of such collection. We should like to examine the matter objectively and logically; we do not collect.

The most extreme position of which we have ever heard is that of one professional anthropologist who cautions students not to pick up anything—projectile point, flake, or even chip—as it might be in situ and to remove it might be to lose a scientific clue should the site be examined professionally. This is, of course, a ridiculous position. In the first place, should this anthropologist's student leave the object in place, the next, and less brain-washed person who passed, would not. In the second place, no surface object can be said with any assurance to be in situ.

Since man began to be aware of his surroundings in any sense other than that which was directly connected with mere livelihood and survival, he has been a collector. In some of the earliest caves inhabited by man, archaeologists have found objects which had no utility in the sense of contributing to survival. Odd and pretty bits of stone, bones of long extinct animals, curiously shaped stone con-
creations, and the like, have all been found in these caves, collected by men who lived thousands of years ago. In Indian graves in the United States there have been found artifacts made by people who lived thousands of years before the person interred in the grave. Because the form of these artifacts was different from that of his own tools the Indian had collected and retained as prized possessions these puzzling and fascinating objects and they were buried with him.

As the Indians of the United States were pushed back into the West or onto reservations, and generations grew up with nothing but romantic or slanderous tales about the Indian in their experience, they grew interested in the artifacts of these Indians, which they found while plowing their fields, wandering along streams, or perhaps strolling in sandy wastelands. Perhaps most of the earliest collectors of “arrowheads” were young boys. However, even the most stolid farmer would not fail to pick up a projectile point or stone axe which he found while plowing. He usually took this find home and put it on the mantelpiece or shelf. [Arthur George Smith says: “. . . and put it on a ledge in the barn.” Ed.]

Gradually the hunting for Indian relics became a hobby shared by many people. There grew to be clubs of such hobbyists where they could compare their treasures and perhaps trade their unwanted pieces for some they desired more. Then slowly these hobbyists began to want to know more about the people who made these pieces which so interested them. They began to study and to seek advice and information from professional anthropologists. Actually, only a mere half-century ago these professionals were not numerous and the great majority of them specialized in classical or European archaeology. But they did give advice and encouraged the hobbyists to catalog their finds as to place found, conditions under which they were found, and the like.

Within the last twenty years or so, interest in American archaeology has burgeoned among the American people, and we use the term “American” in its hemispheric sense. Professionals have come to realize that not only must they educate the amateur and the “arrowhead hunter” in order to prevent vandalism and preserve the cultural heritage, but also that the amateur, if trained, can be a very valuable asset to American archaeology.

While our universities are training vastly more archaeologists than ever before, the number is still woefully inadequate to keep ahead of destruction of archaeological sites by dam building, highway construction, urban expansion, etc. By training the amateur and by keeping in touch with his finds and his collections, the professional can in effect multiply himself many times. Too, many of these amateurs become genuine authorities on the pre-history of their own regions. We could cite dozens of amateurs who know more about their particular regional archaeology than any professional. Their collections are competently catalogued and well organized and preserved. They are frequently used by the professionals in preparing scientific papers.

Many professionals are inclined to consider all collectors as vandals, pothunters and nuisances. Unfortunately, the term “collector” is so broad that it does indeed include such menaces to knowledge. Thus many very capable amateurs of archaeology are tarred with the brush of opprobrium quite unjustly. Actually, the amateur archaeologist is even bitterer about the vandal and pothunter than is the professional, if that be possible. As a consequence, these amateurs often make great efforts to organize local societies for the study of archaeology and its methods. Many of these societies render invaluable aid in excavating sites, under the direction of professional archaeologists. Often these could not otherwise be excavated and might eventually be lost forever.

Except for a few Brahmanic and fanatical professionals who regard any encroachment on their sacred precincts as insupportable, the problem of the collector resolves itself into a question of semantics. The criticism of collectors is usually directed only at the unscientific and unscrupulous individuals among them. It behooves the collectors to purge their ranks of such individuals as, indeed, they are trying to do at the moment.

As for the professionals, it is not only their duty but it is good sense to encourage the scientific amateur. Not only do such amateurs furnish “slave labor” for the professional, in many instances, but they are a powerful influence in discouraging undesirable practice. Moreover, these collectors, being an influential element in the electorate of a democratic system, can directly affect the livelihood of these professionals. In one instance which we recall, the protests, largely from amateurs and collectors, resulted in the retention of a department of anthropology in an important university after it was decided to abolish it. [It must be remembered, too, that as voters, these amateurs can be a power in changing our antiquity laws, for better or for worse. Ed.]

The true collector is, by definition, “one who collects.” The archaeologist is “one who collects.” The point involved is how one collects, why one collects, and where one collects. As in all other aspects of today’s world, some agreement between contending forces must be worked out. Unless agreement is achieved, there will be academic war. Though man learns nothing from history, history is very positive on one point: elite civilizations have never successfully withstood barbarian assaults in force.