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BRONSON MUSEUM
8 North Main Street
Attleboro, Massachusetts, 02703
Tel. (617) 222-5470

The Museum is located on the fifth floor of the 8 North Main Street Building. No regular schedule is maintained and therefore it is wise to call before visiting.

The Museum has extensive exhibits of stone implements, obtained for the most part from the Massachusetts area. They are arranged in culture periods identified in the Northeast, and cover a time extension of some 10,000 years.
EDITOR'S NOTE

Barbara E. Luedtke

Burials are probably the most sensitive kind of remain an archaeologist can uncover. They are sensitive because they are often extraordinarily rich in information: burials can be a major source for data on prehistoric religious beliefs and practices; differences in grave preparation and in kinds and quantities of grave goods can reflect important social differences; and the study of the bones themselves can give clues to the health, diet, and genetic affinities of prehistoric populations. In addition, graves often include whole artifacts, which were clearly all deposited at a single point in time, and this may provide useful data on artifact associations and dating.

However, burials are also sensitive because they are the physical remains of human beings, and our society, like most others, has strong beliefs against disturbing the dead. Excavation of prehistoric burials has probably been the major source of friction between archaeologists and Native Americans over the years, and has often made enemies of people who should be natural allies.

The articles in this issue of the Bulletin are all about burials, and they cover nearly the full spectrum of related issues. They also illustrate the range of types of burials in Massachusetts.

The first report is on a single isolated burial from Nantucket, and the circumstances of this article are unusual in that the excavator, Frederic H. Turchon, died before he could prepare a final report. I felt the burial was interesting and important, so with the permission of Fred's family I took several sections from his general report on the survey, paraphrased several other portions, and put them together into a brief report on the burial. This report is surely not as detailed and thorough as Fred would have wished, but I know that he felt very strongly about making information on the burial available to the public, and this article fulfills that desire in part. Dr. Trinkaus's report was an appendix to the general contract report, which he has kindly revised for publication here, and it represents one of the few thorough anatomical descriptions of a skeleton from Massachusetts.

The second report describes burials encountered during construction and farm work in what must have been a large Indian cemetery. This report, like those of Simmons (1970) and Gibson (1980), illustrates the rich variety of grave goods sometimes found in burials, especially those of the Contact period.

The third report discusses a type of burial that is thus far unique for Massachusetts, though not for eastern North America in general. This Late Woodland ossuary contained few artifacts, but the form of burial itself has interesting implications for prehistoric social behavior, and analysis of the skeletons is providing invaluable information on population structure and health.

Finally, the issue ends with an article by State Archaeologist Valerie Talmage which discusses the legal aspects of the excavation of burials. Massachusetts laws regarding Indian burials are confusing and contradictory, but generally not favorable to archaeological interests. Now a policy has been established whereby anyone encountering an ancient burial is required to notify the State Archaeologist, who will then act as a coordinator and mediator among all interested parties, including various state officials, the Commission on Indian Affairs, the archaeological community, the landowners, and the discoverer of the burial.

This policy is only a working arrangement so far, and it is one we should all encourage and support. Should it fail to operate effectively, the alternative legislative approaches would almost certainly be far more restrictive to archaeological concerns.
In preparing this issue, I became aware that there is a great deal of descriptive information available on Massachusetts prehistoric burials, but virtually no interpretive syntheses except that of Dincauze (1968). Appropriately, most of the published material concerning burials appears in the pages of this journal, and can be found easily by checking the "burial" subheading in the Subject section of the Index to the Bulletin of the Massachusetts Archaeological Society, Volumes 1-38 (Volume 38(4):25-26). I have compiled a listing of the other major published references to burials in Massachusetts, appended to this note. This list is by no means exhaustive; some burials have been reported only in newspaper articles, contract reports, or other sources that are not easily available. Also, most town histories mention a number of locations where Indian graves were found in early days, though they usually include little information about those burials other than location. Finally, I know that some of the readers of these words have excavated burials which they always intended to write up "one of these days." Why not now?

At any rate, with just a little searching and imagination anyone should be able to find ample data for interesting studies of Massachusetts burial locations, orientations, grave goods, etc. I believe that our most important insights into prehistoric burial practices in Massachusetts will come from analysis of the data we already have, rather than from more excavation.

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A WOODLAND BURIAL FROM NANTUCKET

Frederic H. Turchon

A prehistoric burial was discovered in the course of an archaeological salvage survey conducted during the winter of 1978/79 at the site of a proposed sewage disposal system
on the University of Massachusetts Nantucket Field Station, Nantucket Island, Massachusetts. Previous survey at the Field Station (Luedtke 1980) had indicated that the new sewer system would disturb an archaeologically sensitive area (MHC 19-NT-67 and MAS M52 SE53), and further investigation was therefore recommended before construction began. A series of one-meter test pits was excavated along the proposed sewer lines, with more intensive testing in the area of the leaching bed (Turchon 1979). In a test pit located in the middle of the leaching bed, human bones were encountered. Since this area was definitely going to be destroyed, complete excavation of the burial was necessary.

The investigation area is primarily a knoll, gently sloping from $35^\circ$ to $15^\circ$ on the west and south sides, and about $10^\circ$ on the east. The northern portion of the project area is eroding into Nantucket Harbor, with an almost vertical drop from the top of the knoll to the beach below. The top of the knoll is approximately 9 meters above mean sea level, and the soil is composed of Hinckley loamy coarse sand. The vegetation over the project area consists mostly of wild rose, milkweed, goldenrod, poison ivy, and various grasses, with a few scattered cedar trees.

The general soil profiles in this area typify those encountered at other coastal sites in southern New England. Level 1 represents a horizon of dark brown sandy loam to an average depth of 31 cm. This level at the Field Station appears to be undisturbed, but may have been plowed for hay during the 19th century. The bulk of cultural materials appears throughout this level. Level 1 rests on a 10–15 cm transition zone of the dark brown sandy loam from above mottled with an orange brown silty sand. The very top of this transition level is where most features are initially encountered. Below this transition level lies level 3, orange brown silty sand, generally to depths of about 60 cm. This overlies level 4, composed of light yellow-grey or grey sands.

Scattered shell fragments were found throughout the dark soil of level 1 in the project area. Most identifiable fragments were quahog, with smaller amounts of oyster and whelk shell. A few bones of fish, mammal, and birds were found in the project area (Turchon 1979). Large quantities of flakes were also found, along with several flaked stone tools. One Jack's Reef pentagonal point and two Levanna points were found in test units close to the burial, along with Middle and Late Woodland ceramic sherds. Middle and Late Archaic point types were also found in test pits located some distance from the burial. Features found during testing included 24 postmolds and 2 pits, in addition to the burial.

Figure 7. 1, dark brown sandy loam; 2, transition zone, dark brown and orange mottled silty sand; 3, orange brown silty sand; 4, yellow-grey sand; F, burial pit, mottled orange and brown soil.

Figure 8. Plan view of Nantucket Field Station burial.
The prehistoric human burial was discovered in the middle of the proposed leaching bed area during the course of excavating test pit 30. Subsequent excavation of adjoining pits revealed a flexed, articulated individual, buried in a shallow pit about 95 cm across and 70 cm deep (Figures 7 and 8). The burial was first noted as a soil stain at the top of the transition in test pit 30. Normal recording of the stain, felt then to be a large storage pit, was conducted. Upon bisection of the stain, articulated arm and knee bones were revealed. The individual was slumped against the north wall of test pit 30.

Mr. David Voorhees, Nantucket County Medical Examiner, was requested to come and view the remains, to determine whether they were human. The following day test pit 30 was refilled with layers of plastic, eel grass, and backdirt, and the regular route of test pit excavation was resumed. At this point it was felt that testing of the project areas should be completed before returning to excavation of the skeletal remains. When the remainder of the project areas had been tested, excavation of test pits 30A, 30B, and 30C was carried out.

Test pit extension A revealed the other part of the transition level stain noticed in test pit 30, and produced an excellent profile of the burial pit (Figure 7). When the extension A balk was excavated, the top of the skull appeared and the identification of the skeletal remains as human was confirmed. Extension B and Extension C were then excavated, and the burial was fully revealed. When the outline of the burial pit could be discerned, systematic 5-cm levels were excavated and the placement of all artifacts and bones was recorded. Photographs were taken and sketches made at each 5-cm level. When the skeleton was completely excavated, a three-quarter scale drawing was recorded on graph paper. The job of numbering and measuring each bone in the ground before removal began at the feet and continued to the skull. Photographs of specific areas such as the feet, pelvis, and chest cavity were taken at all levels to assist with a laboratory drawing. The burial remains were then brought back to the laboratory and after cleaning and cataloguing procedures, were moved to the Peabody Museum, Harvard University, to be analyzed by physical anthropologist Dr. Erik Trinkaus.

The burial was that of an adult male, over 40 years old. He was buried flexed and lying on his right side, in a pit with no personal or associated artifacts. The only cultural items recovered from the burial pit were flakes and sherds of Middle and Late Woodland ceramics, apparently dumped in with the pit fill during burial. The sherds suggest that this burial dates to the Late Woodland period. A large ventifact stone slab was found at the top of the stain outside of the pit, and is most likely not at all associated with the burial except that it was probably in the way when the pit was dug to deposit the individual.

The burial was found directly in the middle of the proposed leaching bed. Subsequent testing in this area and in the areas of the leaching tanks revealed no other burials. It was felt that the total of 14 test units in the area of the burial was sufficient to assure that this was probably an isolated burial. Over 20% of the leaching bed area, including all of the major impact sites, was completely excavated.

Editorial postscript: Trained observers were present during construction of the sewer system, and no further burials were encountered. On July 9, 1979, the bones from this burial were reburied by representatives of the Federated Eastern Indian League and the Commission on Indian Affairs. The reburial is located close to the original location but out of the area of the sewer system. State Archaeologist Valerie Talmage cooperated with John Peters, Executive Director of the Commission on Indian Affairs, in arranging the reburial of the skeletal material.

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THE HUMAN SKELETON FROM THE NANTUCKET FIELD STATION SITE

Erik Trinkaus

The skeleton excavated from the Nantucket Field Station site is preserved so well that most of the bones are in good condition. Only a few of the hand and foot bones are not represented, and almost all of the preserved portions show little or no post-mortem damage. A thorough evaluation of the physical characteristics of the individual is therefore possible.

CRANIUM

The cranium retains all of the cranial vault without post-mortem damage, most of the cranial base, and a sufficient portion of the facial skeleton to permit an assessment of its overall shape. The cranial base is lacking only the orbital plates and the left half of the sphenoidal body. The facial skeleton preserves all of the zygomatic bones and most of the maxillae around the nasal aperture, the palate and the anterior alveolus. Although both infraorbital foramina are preserved, the anterior maxillary surface between them and the alveolus is absent bilaterally. Little remains of the molar alveoli. All of the internal nasal skeleton is lost, although traces of the ethmoid bone and vomer remain superiorly and posteriorly. Both of the zygomatic processes of the temporal bones have been broken off at their roots, but the frontozygomatic and sphenozygomatic sutures are sufficiently intact on both sides to permit proper orientation of the facial skeleton.

Since both pterygoid processes are missing from the sphenoid bone, it was necessary to orient the palate using the contours of the anterior facial skeleton and the mandible. A small amount of distortion may have resulted from the restoration of the facial skeleton.

Morphologically the cranium is similar to many robust Amerindian adult males. The vault is large, well-rounded with moderate muscular markings. There is a slight occipital protrusion flanked by a well-defined nuchal plane. Both mastoid processes are large and rugose. The facial skeleton shows prominent superciliary arches with a protruding glabella region, lateral portions of the brow which are thin but projecting, and a large interorbital breadth (24mm). The zygomatic arches flare laterally, providing the impression of a relatively narrow upper face and an extremely wide mid-facial region (bifrontal breadth = 106mm; bizygomatic breadth = 144mm). The palate is moderately large (maximum internal breadth = 47mm), but it appears dwarfed by the large breadth of the zygomatic arches.

The cranial sutures are completely obliterated on the endocranial surface, but they are all evident exocranially. There is a large sutural ossicle near lambda on the right side, but otherwise the sutures are free of wormian bones.

Except for dental disease (see below), the cranium is free of abnormalities.

MANDIBLE

The mandible is complete. However, extensive dental loss prior to death resulted in alveolar resorption in the molar and incisor regions. The rami appear to have lost bone
as well, probably as a result of general decrease in masticatory function following tooth loss. Yet, the medial pterygoid and masseteric muscular attachments and the coronoid process are prominent, implying either masticatory muscles which were well developed at one time or resorption of bone around the muscle attachments.

DENTITION

All of the preserved teeth exhibit extensive ante-mortem or prior to death occlusal wear, which resulted in the removal of the crown on at least one edge of all the teeth. For some of the teeth, the top of roots were functioning as the occlusal surface. The preserved teeth included the left I\textsuperscript{1}, the right C\textsuperscript{1}, and the right and left C\textsuperscript{2} and P\textsubscript{3} in situ plus six isolated upper teeth. The isolated teeth are definitely maxillary teeth, since all of the other mandibular teeth were lost ante-mortem. However, the isolated teeth are too worn to be conclusively identified. The right I\textsuperscript{1}, M\textsubscript{1} and M\textsubscript{2} and the left I\textsuperscript{2}, C\textsuperscript{1} and M\textsubscript{1} were lost ante-mortem. In addition, the alveoli around the remaining teeth were extensively resorbed, suggesting extensive periodontal inflammation. The presence of heavy calculus on some of the preserved teeth indicates the probable source of the inflammation. There are no caries on the preserved teeth, suggesting that the ante-mortem tooth loss was due to periodontal disease and subsequent alveolar resorption.

AXIAL SKELETON

Portions of all of the vertebrae are preserved. The cervical vertebrae are present without damage. The thoracic vertebrae suffered minor abrasions, but all are intact. The first four lumbar vertebrae are complete, but only the left inferior facet of L\textsubscript{5} is preserved. The sacrum is complete with minor abrasion to the articular margins, and the first two segments of the coccyx have survived. The vertebral column is exceptional for its lack of abnormalities; the only degeneration on them is some minor osteophytosis on the L\textsubscript{3} and L\textsubscript{4}. The only variants of note are the presence of foramina transversaria for the vertebral arteries on C\textsubscript{7} and a large sacral hiatus to the level of S\textsubscript{4}.

Most of the ribs are preserved, but all are fragmentary. None exhibits unusual morphology or abnormalities. The manubrium and the first segment of the sternal body remain; they were unfused, but the segments of the sternal body appear to have been fused to each other. All of the sternum appears normal.

UPPER LIMB SKELETON

From both of the upper limbs only one bone, a fourth distal hand phalanx, is missing, and only the scapulae suffered more than minimal damage. Morphologically, the arms are those of a large, robust individual, with large articular surfaces and strong markings for muscular and ligamentous attachments.

The remains imply right-handedness for the individual; the left humeral length is 97.5\% of the right one, and the left radial length is 98.1\% of the right one. This is supported by the presence of degenerative joint disease on the right distal ulna, lunate and scaphoid, and on the articular surfaces of the interphalangeal joint of the right thumb. This arthritis is undoubtedly the result of mechanical stress from activity. Since arthritis is present only on the right hand, it supports a conclusion of right-handedness.

LOWER LIMB SKELETON

The lower limbs are less complete than the upper limbs. The right innominate bone is largely intact, but the left one lacks most of the ischiopubic ramus and the symphysis. Both femora and patellae are complete, but the fibulae lack their proximal articulations, and the proximal epiphysis of the right tibia is fragmentary. Most of the foot bones are preserved; missing are the second right proximal phalanx, three lateral middle phalanges, six of the lateral distal phalanges, and a medial hallucial sesamoid bone. Those bones that are preserved exhibit minor damage, usually in the form of abrasion to the articular
margins. As with the upper limb, the bones suggest a large, strongly built individual. The femoral shafts are massive and are associated with relatively small pilasters, large gluteal tuberosities and large articular surfaces. The tibiae have strongly platycnemic shafts and the left condyles are moderately retroverted. These features are all indications of considerable postcranial robusticity.

The lower limbs show few abnormalities. There is evidence of an abscess in the base of the second left proximal pedal phalanx, which probably did not affect locomotion. In addition, the femora show Harris Lines in their distal medullary cavities. Harris Lines are considered to indicate periods of growth arrest during development, usually as a result of seasonal famine or severe illness (Steinbock, 1976). The presence of a series of them in the skeleton suggests severe seasonal food shortages over a period of several years.

SEX AND AGE

The large size and robustness of the individual suggests that it is a male. This conclusion is supported by the pronounced development of the superciliary arches and the mastoid processes on the cranium. It is confirmed by the morphology of the innominate bones; they exhibit short, robust superior pubic rami, a small sub-pubic angle, and sciatic notches that form closed semi-circles. These leave little doubt as to the sex of the individual.

The advanced state of cranial suture closure and dental occlusal wear suggest an advanced age at death, but they do not permit any degree of precision. The right pubic symphysis is largely intact, and it exhibits the secondary formation of transverse ridges which follow the obliteration of the symphyseal morphology in old age. Together these data suggest an age at death greater than 40 years and probably more than 50 years.

STATURE

It is possible to estimate the individual's stature from the lengths of the long bones using regressions determined from recent Mexican males (Trotter and Gleser, 1958). Using maximum lengths from the humeri (325 and 318mm), radii (265 and 260mm), femora (465 and 468mm) and the left tibia (394mm), a mean stature estimate of 172.0 cm (5 feet 7.7 inches) is obtained.

SUMMARY

The Nantucket Field Station burial yielded the largely complete remains of an elderly adult male Amerindian. The individual endured periods of growth arrest during development, and he suffered periodontal inflammation, ante-mortem tooth loss and severe dental occlusal wear. However, these are relatively insignificant problems and are noteworthy primarily because the rest of the skeleton is remarkably disease-free for an elderly Amerindian. There is no evidence of trauma, and the only other significant abnormality is some minor arthritis of the right wrist and thumb. He was a large, robust individual who died at a relatively advanced age.

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THE TAYLOR FARM SITE

William B. Taylor

Along the remote western edge of Plymouth County lies the Taylor Farm site. This section is known as Titicut, the Indian meaning of which is "The Place of a Great River." Located along the Taunton River in North Middleboro, the 82-acre Taylor Farm has been lived on for some 8000 years, since Early Archaic times. Across the Taunton River to the north lies the noted Titicut site, the subject of several past articles in the Bulletin of the Massachusetts Archaeological Society (for example, Robbins 1967).

Selection of this spot by prehistoric people must have been prompted by its vast hunting and fishing potential, plus the presence of a water route to the ocean. Each spring, herring pass upstream by the thousands to spawn at Assawompsett and Nippenicket Lakes. This phenomenon must have fascinated early man and drawn him like a magnet to this beautiful area. Probably other large fish such as salmon, shad, pike, and sturgeon also migrated up the Taunton River to spawn, and the possibility that seal followed the annual fish run upstream should not be overlooked. Early settlers must have noted the area's deer hunting potential, and the river also yielded fur-bearing animals and freshwater fish.

EARLY HISTORIC REFERENCES

The first white settlement at Titicut was made in 1637 by Miss Elizabeth Poole and several associates. She was the daughter of Sir William Poole, a Knight of Colcombe in the parish of Coliton, Devon, England. Her purchase was between the bounds of Cohannet (Taunton) and the Titicut weir above Pratt's Bridge. She came for the purpose of forming a settlement and converting the Indians to Christianity (Weston 1906:28), and is credited with being one of the chief promoters of Taunton, which was incorporated as a town on September 3, 1639.

At Pratt's Bridge, David Charles, Isaac Wanno, and several other Indians owned the land with an old mill privilege in 1707. It was used for some years until 1725, when iron works were established and a company was formed for the manufacture of hollow-ware. In 1730 Ebenezer Robinson had a sawmill and a furnace on what became the Taylor Farm, near the south side of the valley (Weston 1906:407).

Other early white settlers at this site developed many small industries. William Pratt owned a large farm and built a grist mill, a sawmill, a fulling mill for processing wool, a gun shop, and a linseed oil mill. He also had a blacksmith shop and a shoemaking shop. His father, Benjamin Pratt, built ships of 40 to 50 tons during the late 1700's and the early 1800's just across the river from the Taylor Farm near the Titicut site (Emery 1876:91).

The farm was purchased by the Taylor family in 1914, and 25 acres were planted to apple orchards. Through the last 30 years the orchards were gradually cut down and planted to hay fields. This process has turned up many of the artifacts we found, plus some of the burials. This farm has not been cultivated in the usual manner for corn or vegetables, and thus much archaeological material lies still buried in these fields.

ARTIFACTS

During the course of Taylor farming operations, four main concentrated aboriginal occupation areas of about 1 acre apiece have been continually surface-hunted during the past 40 years (Figure 9). Four distinct periods of occupation have been identified on the basis of the recovered projectile points, which can be compared with similar points found at other well-stratified or dated sites.
The earliest occupation at the site is Early Archaic and may be identified by Parallel Stem and Bifurcated points of the early phase. They are followed by the Corner-Removed #5, #8 and #9 points of the Middle Archaic (Figure 10). This is followed by the Late Archaic period with its Corner-Removed #7, Tapered Stem, Eared, Small Stem, and Small Triangular #3 and #4 points (Figure 11).

The next period is the Ceramic or Woodland, represented by Large Triangular, Small Triangular #5, Corner-Notched, Small Stem, and Side-Notched #3, #6, and #7 points (Figure 12). The last period, the Contact or Historic period, may be identified by gun flints, kaolin pipe fragments, clay marbles, iron hoes, copper kettles, and glass beads (Figure 13).

Besides projectile points, other large stone artifacts were recovered on the Taylor Farm, including gouges, grooved weights, celts, pestles, plummetts, axes, hatchets, hammerstones, clubs, hoes and spades. In addition there were knives, spear points, drills, pendants and gorgets.

Figure 9. Map showing Taylor Farm site in center (numbers 1 through 4). Other important sites in Titicut area are also shown. 1, pasture site; 2, river site; 3, orchard site--burials 1 thru 5; 4, hillside site--burials 6 thru 21; 5, Titicut site, Bridgewater; 6, Seaver Farm site, Bridgewater; 7, Fort Hill field site, North Middleboro; 8, Fort Hill bluff site, North Middleboro.
Numerous imported projectile points, probably from New York and Pennsylvania, have also been recovered at this site. Since this is a "closed site", or a site that has been collected only by the landowner, it was possible to study the total assemblage from the site and to identify both locally made and imported points. Using Ritchie's nomenclature (Ritchie 1971), Genesee, Brewerton Side-Notched, Snook Kill, Susquehanna Broad, Meadowood, Rossville, Jack's Reef Corner-Notched, and Jack's Reef Pentagonal points can be recognized.
The Taylor Farm site has one of the largest aboriginal burial areas in Plymouth County. The vast majority of the 21 burials found date from the Contact period (A.D. 1500-1750). These burials and some of their most interesting grave goods are described below.

Burial No. 1 was discovered in the spring of 1947, on a sandy hillside near the center of the farm. Remains of an old orchard were cleared and the land plowed for the first time in many years. Deep plowing exposed the grave outline, which was then excavated. The remains of an adult female in a flexed position were found, but no grave goods were present. Upon expanding the grave shaft, the outline of another burial was encountered.

Burial No. 2 then was carefully removed. Here were discovered the remains of an adult male in a flexed position. Lying beside the pelvis was an unusual ceremonial discoidal stone (See M.A.S. Bulletin, Vol. 41(2):59). It measures 4 inches (10 cm) in diameter, is 1 1/4 inches (4 cm) thick, and is made of finely polished black slate. Both sides have a 2-inch (5 cm) hollowed-out face which tapers to a 1/4-inch (6mm) hole through the center. Ceremonial stones such as this are quite common throughout the Southeast and the Midwest, where they were used in games similar to the Cherokee Chunkey game. While a few examples have been found in New England, this is one of the finest specimens ever recovered locally.

Burial No. 3 was located about 100 yards (90 m) to the west of the other two, and was the only red paint burial found. The grave shaft was heavily impregnated with red ochre, but no skeletal remains were noted. It seems quite reasonable to assume that this was a cremation burial of Late Archaic times. No artifacts were present to definitely place this burial in time.

Burial No. 4 was discovered by accident in 1951, when pieces of human bone were found lying on top of a newly dug woodchuck hole. Upon careful examination, an adult burial, probably a female, judging from the grave goods, was uncovered. Included in the grave were 2 Colonial iron hoes, one small copper kettle, a broken mirror, one pair of scissors, 3 cape buttons, 2 iron tool fragments, a beaver-skin cap of some kind (partially preserved by copper salts from the kettle that lay nearby), plus hundreds of glass trade beads, mostly blue and a few grey in color (Figure 14). A plaster cast was made of the mold of a large necklace, and the beads were restrung to resemble what the necklace might have looked like. In addition, the grave produced an 11 3/4-inch (30 cm) smoothly ground stone pestle and two small, finely made ceramic pots of the late Stage 4 period (A.D. 1600-1675 (Figure 15). One measured 5 inches (13 cm) across its castellated top, while the other smaller one was only 2 inches (5 cm) in diameter across its similarly castellated mouth. These pots exhibit Shantok pottery traits similar to those from southern Connecticut, and will be discussed in more detail in the conclusion.

It is only in burials of Colonial times, in which completed disintegration of organic material has not yet taken place, that traces of the weaver's art will be found. In this grave the remains of a basket were found on top of a layer of bark that covered the body. Another woven fabric was used as a covering around the two iron hoes. Finally, a woven rush matting of some kind surrounded the grave shaft (Fowler 1966:67).

Burial No. 5 was discovered lying about 20 feet (6 m) away from burial No. 4. It was small in size and contained infant remains in poor condition. The grave goods consisted of numerous glass beads of blue, red and white, as well as a number of tiny shell beads. However, what attracted the greatest attention were 41 contiguous sherds from a small ceramic pot. After its restoration was completed it was found to be another Shantock-type pot with 4 high castellations and prominent lobes surrounding the base of its collar. This grave also had a woven mat lining about its grave shaft, which seemed significant and was perhaps intended to ward off evil spirits.
Figure 12. Woodland points, scrapers and drill. Materials are felsite, quartzite and flint.

Figure 13. Artifacts from the Historic period, including glass beads, kaolin pipe fragments, clay marbles, gun flints and a shell button.
Figure 14. Burial No. 4, showing grave goods in situ. Above the skull is a copper kettle and a style C Shantok pot. Beside the right knee lies the smaller pot. Near the right shoulder are 2 Colonial iron hoes, still showing a woven fabric used to cover them.

Figure 15. Three Shantok pots from an adult and infant burials on the Taylor Farm site. Pot on left, from Burial No. 4, is 6 inches (15 cm) in height and 4 inches (10 cm) across the mouth. Center pot, from Burial No. 5, is 4 3/8 inches (11 cm) in height and 3 1/2 inches (8 cm) across the mouth. Small pot on left, from Burial No. 4, is 2 1/2 inches (6 cm) tall and measures 2 inches (5 cm) across the top.
In October 1957, while digging the well for my house, I encountered 6 more skeletons. These included 5 adults and 1 infant, and no grave goods were present. The discovery of copper pins and nails points to the late 1600's as the probable interment date. It was the custom of this later period to wrap bodies in heavy bark in an extended position, and to secure the wrappings with pins or nails. The child was buried in a wooden coffin with nails which had corroded. Traces of charcoal were found, particularly over the grave of the child. This may perhaps indicate the practice of burning fires over a grave to destroy human scent, which might attract marauding wolves or other predatory animals. The lack of grave goods and the manner of burial lead to the suggestion that these Indians were members of the "Praying Indians" of Titicut.

During April of 1958, while excavating the foundation for my house by bulldozer, 10 more burials were uncovered, bringing the total to 21. These also were of the same Contact period era as the 6 burials found near the well. One skeleton in this group was of unusual size; both arm and leg bones were over 2 inches (5 cm) longer that those of the average man. This Indian must have been an exceptionally large man, well over 6 feet, 6 inches (2 m) in height. All bones were gathered together and reinterred.

The writer has asked the research director of the Narragansett Archaeological Society, William S. Fowler, to accompany this report with a suitable conclusion which will provide an evaluation of the evidence found.

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A DISCUSSION OF TWO BURIALS FROM TAYLOR FARM

William S. Fowler

Evidence accumulated at the Taylor Farm site indicates millennia of occupation from Early Archaic down to contact times, with the earlier Paleo hunting period the only major period missing. But the burials are without doubt the most intriguing finds from this site, since for the most part they contain evidence of a kind that can be understood more fully because it relates to early historic times. Burials No. 4 and 5 are certainly the most interesting because they contain grave goods of an exceptional nature. Here we are dealing with a woman and a very young child, buried separately in graves only about 20 feet (6 m) apart, with similar woven mat lining of the grave shaft, suggesting that the burials are closely associated.

What more can be deduced from the Shantok ceramic pots found in both graves? This pottery takes its name from Fort Shantok in southern Connecticut, where it was first discovered, and it is believed to have been made by the historic Pequots of that region (Rouse 1945). The ceramic vessels in these graves at Taylor Farm have characteristics...
that are of distinctly Shantok styling.

The larger pot in Burial No. 4 conforms to Shantok style C. Around the neck below its high collar with 4 castellations are 3 raised bands or rings formed by extrusion, a characteristic trait of this style. The tiny pot in this burial is similarly castellated, but with indistinct minor traits. However, the pot from the infant burial No. 5 is definitely Shantok style B, with 4 high castellations below which, surrounding the neck, are pinched-out lobes, each decorated with a single vertical impressed line. All 3 pots have full globular rounded bottoms, a typical Shantok trait (Fowler 1974:14-18).

With this Pequot association in mind, we might go a step further and consider what happened to the Pequots. It is of interest to try to discover what caused these unusual pots to be present in these 2 burials, since Shantok pottery is not known to have been found before so far away from its source.

De Forest gives a vivid account of the Pequot War of 1637, during which 2 Pequot stockades were burned with great loss of life. However, some Pequots escaped to the swamps, where a group was surrounded. De Forest's history, derived from the Journal of John Winthrop, 1630-1649, relates "...that of this group, the remainder of the men...were massacred in cold blood...of the eighty women...thirty were given to the Narragansetts, three to the Massachusetts Indians, and the remainder sent to the Bay as slaves" (De Forest 1851), presumably slaves of the whites.

Might it not be just possible that burial No. 4 was one of the 3 Pequot women who were given to the Massachusetts Indians? According to the custom of the day, she might have been taken into the tribe as a respected member, married some Indian of high standing (to judge from the richly furnished grave), and had a child. If the 2 graves were made at the same time, death might have come to both mother and child in childbirth. The pots would have been the products of the mother, who had learned how to make them according to Pequot techniques. The pots probably were not imported, since they are the only ones known to have been found in this area.

Thus our archaeological discoveries sometimes are linked closely with historical happenings, which makes their interpretation so much more interesting.

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THE INDIAN NECK OSSUARY: A PRELIMINARY REPORT

James W. Bradley, Francis P. McManamon, Thomas F. Mahlstedt and Ann L. Magennis

INTRODUCTION

Late in the summer of 1979, human bones were unexpectedly uncovered during the construction of a septic system for summer cottages on Indian Neck, Wellfleet, Massachusetts (Figure 16). National Park Service archeologists, who were conducting a survey of the
Cape Cod National Seashore, were contacted and the skeletal remains were identified as Native American. Construction had been halted when the bones were first noticed and it was determined that completion of the septic system would destroy the remaining area in which skeletal remains appeared to be present. Following consultation with the property owner, who could not modify plans in order to avoid the burial area, a decision was made to salvage the archeological deposits, including burials, which were observed. This decision was made in conjunction with Valerie Talmage, State Archeologist, and John Peters, Executive Director of the Massachusetts Commission on Indian Affairs. The property owner granted permission for the salvage excavation and delayed completion of his work for three days so that the archeological work could be done. With the concurrence of the Superintendent of Cape Cod National Seashore and with Native American observers present, a crew from the Cape Cod National Seashore Archeological Survey undertook the excavation.

Fieldwork began on September 4th in a 3 m x 3 m area divided into four 1.5 m x 1.5 m excavation units. A fifth unit was added later to check the extent of the shell midden that formed the uppermost archeological deposit (Figure 17). The midden, a deposit of dark soil containing organic material and shell, was uncovered in all of the excavation units below the surface layers of vegetation, roots and light brown sand. No vertical stratigraphy could be detected from the color, texture, or contents of the midden layer. Most of the first day was devoted to excavating this layer in arbitrary 10 cm levels and carefully uncovering the tops of the few human bones encountered just below the base of the organic and shell layer.

During the second day of excavation the remainder of the soil that overlay the burial feature was removed. As the day proceeded and the soil matrix was carefully scraped away from the skeletal material, it became apparent that the burial was not a series of individual interments as had initially been thought but rather a single, large feature. By the end of the day it was possible to identify this feature as an ossuary—a form of burial in which the disarticulated remains of a number of people are interred together (Figure 18). During the day, approximately half of the backdirt pile was screened by volunteers from the Cape Cod National Seashore and the North Atlantic Regional Office, National Park Service, in an effort to recover some of the material which had been disturbed by backhoe. Through these efforts a considerable amount of bone was collected.

The final day of excavation was devoted to removing the skeletal material and recording provenience information as precisely as possible. Crania and other prominent bones were assigned numbers and recorded initially by excavation unit. As the disassembling proceeded, a spatial pattern of bone placement became clear and three new "collection units" were designated based upon it. Bones removed subsequent to this were assigned to one of these units.

Late in the day an additional feature was discovered as the bones were being removed. This was a cremation beneath the unburned portion of the ossuary. All of the unburned bone was excavated from atop and alongside the cremation so that it could be photographed in situ. It was then removed in large blocks and all the material assigned a single "cremation" provenience.

The entire field effort was limited by a variety of circumstances to three full days. Despite the pace of excavation required by this time limit, substantial and important data were salvaged. Unfortunately, it was not possible to number each bone or...
artifact individually and record its location precisely prior to removal or to make detailed, carefully measured maps of the feature. A detailed photographic record was kept, however, and supplements the field notes made during the excavation.

SITE DESCRIPTION

As can be seen from the north-south and east-west profile drawings (Figures 19 and 20), four archaeological deposits were present: (1) the overlying shell midden, (2) a mottled level between the midden and the ossuary, (3) the unburned portion of the ossuary itself, and (4) the deepest deposit, the cremation level of the ossuary.

SHELL MIDDEN. The term "shell midden" is used to describe the refuse layer which covered the burial feature. It was composed of an organic, greasy feeling, black sandy soil and contained considerable shell and artifactual remains. The midden was encountered at between 18.5 and 35 cm below the surface, or at an average depth of 26.4 cm. It ranged in thickness from 14.5 cm to 29 cm with an average thickness of about 22 cm. It extended to

Figure 17. Indian Neck Ossuary: Plan View.
depths of 43.5 cm to 52 cm with an average depth of approximately 47 cm.

Considerable material was recovered from this midden. Large quantities of both hard-shell clam (*Mercenaria mercenaria*) and oyster (*Crassostrea virginica*) were present especially in the upper portion of the midden. Approximately 13.5 kilograms of shell were found. Of this, 84% came from the first 10 cm of the midden. Only 16% of the shell was located between 10-20 cm and less than 1% occurred deeper than 20 cm. The occurrence of shell was also greater in Excavation Units 1 and 4, the southern half of the excavation. These two units contained 10.02 kilograms of mixed shell, or 71% of the total amount recovered. These figures indicate that though the black, greasy soils of the midden extended more or less homogeneously over the ossuary, the shell concentrations within this layer were not evenly distributed. Instead, calculations suggest that the shell was concentrated to the south of the ossuary and that the excavation encountered only the northern end of a much larger shell deposit that extends south and possibly southwest of the ossuary.

In addition to shell, various cultural materials were found. Of particular interest was a small piece of European copper discovered 4 cm deep in the midden. This implement was probably made from a reused kettle fragment and showed the marks of cutting and folding as well as edge use. Its presence indicates that at least the upper portion of the midden post-dates European contact (Childs 1980). Also contained within the midden were 1430 lithic artifacts, predominantly waste flakes from stone tool manufacture and fire-cracked rock. A half-dozen bifacial implements were also found. Three of these were large triangular projectile points; two were felsite and the other quartz. A total of 22 ceramic sherds, all apparently shell tempered, were also recovered. Though most were small and without recognizable decoration, the pieces were typical of Late Woodland pottery from the Outer Cape area.

Figure 18. Midden removed and burial feature exposed. Note nail which marks intersection of grid lines. Extent of backhoe disturbance evident at right.
Like the shell, these cultural materials tended to be distributed unevenly throughout the midden with a higher frequency towards the southern and western sides of the excavation. Concentrations of shell and lithics also occurred at different levels within the midden. As noted above, the majority of shell occurred within the top 10 cm; the greatest frequency of lithics was between 10 and 20 cm. It is not clear whether this reflects some pattern of changing use over time or a natural process in which different materials settled at different rates. For example, small lithic flakes may have been carried downwards by water percolating through the unconsolidated soil of the midden.

MOTTLED LEVEL. A significant characteristic of the excavated area was the stratigraphic separation of the midden level from the burial layers. Lying below the midden and separating it from the top of the bone concentration was a thin, and in some places almost imperceptible, lens of dark brown/tan/orange/black mottled sand. This level was recorded as being between 0-8 cm thick. No artifacts were recovered from this mottled layer. This separation of the two major deposits suggests that they were not related in any way save spatially. The juxtaposition of the midden and the underlying ossuary may have occurred out of sheer coincidence. On the other hand, the time lapse between when the ossuary was deposited and when the midden began to accumulate need not have been great. Indeed, the thinness of the mottled layer suggests no great time difference.

Figure 19. Indian Neck Ossuary: North/South Profile.
THE UNBURNED BONE LEVEL OF THE OSSUARY. The ossuary itself consisted of two distinct levels representing separate though related activities. The upper and larger component was a concentration of disarticulated and semi-articulated skeletal remains. It lay at a depth of between 33.5 cm and 70 cm below the surface. The general appearance of this level was that of a mounded, semi-chaotic pile. Though the original shape had probably been oval with the long axis north-south, the deposit had been truncated by the backhoe. The remaining undisturbed portion, estimated to be half of the original feature, was roughly square and measured approximately 120 cm on both its east-west and north-south axes (Figure 17). The backhoe appeared to have cut through the bone concentration at or near its maximum thickness, which was about 30 cm.

Although this level had the appearance of a jumbled and disorganized mass of bone, there was some evidence of internal organization. Crania tended to be concentrated along the eastern and western margins of the feature while the post cranial bones were placed in between. Several of the long bones were clustered into bundles. After removal from the ground, the bones were taken to laboratory facilities for initial cleaning and bagging. This provided an opportunity for more detailed examination of the bundled remains. At least four long bone clusters were noted. Each appeared to contain bones relating to one individual (for example, 2 humeri, 2 femora and 2 tibiae) although other bones were often present as well. In the ground these clusters were fairly well defined, the bones tightly packed and oriented together.

Laboratory examination also provided an opportunity to document evidence of articulation. While most of the remains were disarticulated, indicating that the soft tissue had decomposed prior to burial, there were several exceptions. In three instances the mandible
as well as the first two or three cervical vertebrae remained articulated with the cranium. The only other examples of articulation were remnants of vertebral columns. Nine separate instances were noted usually involving no more than a half dozen vertebrae.

Given the evidence for a mortuary practice which involved the reburial of disarticulated or bundled remains, it seemed likely that some evidence of deliberate fleshing would be present. Despite careful examination, however, only one clear instance of cut marks was observed. These were found around the orbits (eye sockets) of one cranium, particularly on the zygomatic arches and frontal bone.

One final characteristic of the unburned bone layer was noted. Many of the bones from the lowest portion of the level were slightly charred on their lower surface. This indicates that the disarticulated portion of the ossuary was directly connected with the underlying cremation level. This relationship is discussed in greater detail below.

A detailed analysis of the unburned bones from this level was conducted by one of the authors [Magennis]. The results provide an estimate for the number of individuals interred as well as observations on the group member's age, sex and health.

A minimum of 47 individuals was present in the unburned bone level. For analytical purposes, the excavated and backdirt-provenienced bone were combined and considered as one population. Minimum number counts were established by sorting all the bone according to type and determining the frequency of the most commonly occurring elements. Once the initial sorting was completed, adults and subadults were separated. For adults, defined here as those individuals greater than 18 years of age, the highest count was provided by the mandibular symphysis, which indicated the presence of at least 25 individuals. The most commonly occurring element for the subadults was the femur, representing at least 22 individuals.

For analysis of skeletal remains, determination of age at death and sex provide the foundation upon which all subsequent analyses are based. Thus it is essential to select those criteria that will yield the most accurate estimates. A number of methods for determining skeletal age has been established, results of which appear in numerous summary works (cf. Bass 1971; Brothwell 1981; Krogman 1962; Ubelaker 1978). The accuracy of age estimation is increased when a number of indicators of age is considered simultaneously. Meindl, Lovejoy, and Mensforth (1980) and Mensforth and Lovejoy (1980) have demonstrated the superiority of multifactorial, seriated age determination, but its success depends, among other things, on having complete skeletons. Since complete skeletons are rare or nonexistent in ossuary burials, the various aging methods must be applied independently and the results checked for consistency.

Adult age at death was estimated on the basis of the degree of development of the pubic symphysis, the amount of dental attrition on the molars, and the osteon counts from microscopic examination of cross sections of femora. Age determination based on the pubic symphysis is generally considered to provide the most reliable estimates. Unfortunately this element is very fragile and tends to break or disintegrate easily. Only six pubes from the ossuary were preserved. These were aged using the standards of McKern and Stewart (1957) for males and Gilbert and McKern (1973) for the females. The resulting age estimations appear in Table 9.

Subadult age was determined on the basis of dental calcification using the standards provided by Moorrees, Fanning, and Hunt (1963a, 1963b), and maximum length of the femur with standards provided by Ubelaker (1978). In an effort to overcome the problem of missing data due to fragmented bones, all the femora were seriated according to size. A number of complete femora was present at various places in the seriated assemblage and these were used to define five-year age intervals to which fragmented bones could be assigned. Although such a method would not be recommended as a means of assigning "exact" age to any one particular bone, it proved to be a valuable aid in assigning individuals to broad age categories.
The representation of subadults by five-year age intervals as determined by dental calcification and femoral length is presented in Table 9. As can be seen, these two methods of aging produced similar results. It is interesting to note that no infants aged birth to six months are included here. To ensure that this age category was simply not represented by dentition or femora, all other bones were examined to see if any newborns were present. The lack of representatives from this age group would suggest that newborns and individuals in their first six months of life were excluded from burial in the ossuary.

Determination of sex of the prepubescent individuals was not attempted. For this study, sex determination of adults is based on pelvic morphology. Of the 14 left innominate for which sex could be estimated, eight appeared to be male while six demonstrated female characteristics.

Examination of the bones also revealed that the population represented had been a remarkably healthy one. There was little evidence of disease-related pathology and no unusual incidence of trauma. Contrary to initial speculations that mass burial might have resulted from an epidemic or other catastrophic occurrence, the unburned bone level represents the mortuary practices of a particular group in which all those who died within a period of time were ceremonially buried together.

Two additional topics remain: artifacts associated with the unburned bone level, and radiocarbon dating. Very few artifacts were found in the unburned bone portion of the feature. One large triangular felsite point, the only potentially diagnostic artifact recovered, was found in situ at the edge of the feature. It was not clear whether its inclusion was intentional or accidental. The only other materials recovered were three small flakes (two felsite and one quartz) and three small fragments of shell. Two radiocarbon dates have been obtained from bone samples taken from this level. The bone collagen sample (GX-777-G) date was 915 ± 120 radiocarbon years B.P. The bone apatite sample (GX-777-A) dated 935 ± 125 B.P. Both dates are C13 corrected. These dates were earlier than anticipated and indicate that the ossuary dates from the beginning of the Late Woodland period.

THE CREMATION LEVEL OF THE OSSUARY. Beneath the unburned layer was a cremation. This level was a compact mass of densely packed calcined human bone (Figure 21). It measured 54 by 76 cm horizontally and was between 10 and 20 cm thick. Being slightly south of the center of the unburned portion of the feature, the cremation had not been visible in the initial backhoe cut (Figure 17). There was no initial patterning to this level or the associated artifacts.

A total of nine individuals was represented in the cremated remains. Minimum individual counts were determined for the cremation in the same manner as for the unburned individuals. The mandible, left temporal, and left scapula all suggest at least six adults are represented. At least three subadults are represented as indicated by both the left ulna and the occipital.

Determination of age at death and sex of the cremated individuals was difficult because the bones were warped, cracked, and fragmented. Based on approximate length of the ulnae, two of the subadults are in the 7-10 year age range. The other subadult is a newborn. Of the six adults, one is approximately 18-20 years of age based on the degree of fusion of the ischial tuberosity. Age cannot be estimated for the remainder of the adult sample. Pelvic morphology suggests that at least two of the individuals are female. The other innominate are too fragmentary to provide reliable sex estimates.

Although both the cremation and the unburned levels contained individuals of each sex and with widely different ages, there was one major difference between them. The cremation appeared to contain individuals who were "recently" deceased and had been burned in the flesh while the unburned portion was composed of disarticulated (therefore long deceased) remains. The cracks, splits and spiral fractures of the cremated bone suggest that they were green rather than dry when burned.
The soil underneath and around the immediate edges of the cremation was a dark, reddish-orange sand into which the ossuary pit had been dug. Though initial speculation suggested that the cremation had been performed in situ, two factors argue against this. No charcoal was evident in or recovered with the cremation. In addition, the discoloration of the underlying subsoil was rather limited considering the advanced degree to which the bones had been incinerated. This suggests that the individuals were cremated elsewhere, though undoubtedly nearby, and the still smoldering remains placed at the bottom of the excavated pit. At this point, the disarticulated and bundled remains were piled on top of the cremated bones. Enough heat remained to cause charring on the lowermost level of the dry bones.

PRELIMINARY INTERPRETATIONS

The Indian Neck ossuary is the first ossuary burial to be reported from New England. Because of its uniqueness, the site raises several interesting questions about both social organization and mortuary practices. We hope that the discovery and reporting of this site will have two results: first, a reappraisal of the changes (and continuities) that mark the transition from Middle Woodland to Late Woodland; and second, a greater awareness in those who inadvertently uncover prehistoric Native American burials of the importance of these remains.

At present, ossuaries are a well documented form of burial in two widely separate areas of eastern North America. The major geographical concentration is in the Great Lakes region. Anderson (1964) has recovered well over 200 ossuaries in the Province of Ontario alone. Many more are known from adjacent western New York. Unfortunately, only a few of these have been systematically excavated and reported. The second area where ossuaries are found is in the coastal portions of the Mid-Atlantic states, particularly Maryland and Virginia. Over 30 ossuaries are known from this area. Most were excavated in the 1930's.

Figure 21. Cremation level exposed after removal of the unburned bone. View faces south. Nail and clam knife provide orientation and scale.
and 40's although recent discoveries have been made at Governors' Land Archaeological Dis­
trict in Virginia (Outlaw 1982) and in coastal North Carolina (Phelps 1980).

A review of the available literature indicates that several characteristics are
shared by all these ossuaries. They are pits excavated to receive the remains of the de­
ceased. They are secondary burials composed primarily of disarticulated or semiarticulated
remains. Occasionally, complete and articulated skeletal remains are also present. With
the exception of Ubelaker ' s (1974) demographic study of the Juhle ossuaries in Maryland,
little detailed osteological analysis has been done. Despite this, the literature indi­
cates that ossuaries contain the remains of both sexes as well as the entire spectrum of
age groups.

Despite these similarities, ossuaries can be divided into subgroups which are indicative of different temporal and possibly developmental stages (Mahlstedt 1980). The two
principal categories of ossuaries are historic period and prehistoric period forms.

The historic period ossuaries are large mass graves that contain the remains or
partial remains of hundreds of individuals. At the Accokeek Creek site in Maryland four
ossuaries contained the remains of 288, 248, 618 and 254 individuals respectively (Stephenson and Ferguson 1963). Kidd (1953) estimated that approximately 1,000 individuals were
represented at the Ossossane ossuary in Ontario. These large ossuaries contain an ex­
tensive array of grave offerings, usually including European-made materials such as kettles,
axes and knives. Internal characteristics of these ossuaries often include lining of the
pit with skins, specifically located articulated individuals, and postmolds indicative of
some form of superstructure or scaffolding similar to those described in ethnohistoric
accounts. Many of these historic period ossuaries appear to be directly tied to the
"Feast of the Dead" (Kidd 1953). This somewhat misleading name refers to a ceremony for
honoring and communally reburying the dead which was practiced by several native groups
in the Northeast.

Prehistoric period ossuaries are noticeably smaller and have fewer individuals rep­
resented, sometimes less than 30 and generally under 100 (McPherron 1967; Stewart 1940;
Stewart and Wedel 1937; Graham 1935). Two, however, are larger and contain about 200
individuals (Ubelaker 1974; White 1966). Ossuaries in this category contain either no
artifactual material or, in a few cases, an occasional projectile point or sherd in

### TABLE 9: AGE DISTRIBUTION OF THE INDIAN NECK OSSUARY (Unburned Bone Level Only)

<table>
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<th>CRITERION</th>
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<tr>
<td>Most Likely Age Distribution (N=38)</td>
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questionable association with the burial (McPherron 1967; White 1966). In some of these there is evidence of differential burial or internal patterning in the form of a peripheral arrangement of skulls (Graham 1935; White 1966) or multiple layers or components separated by a lens of soil (Ridley 1961). Cremations of one or more individuals are often common components (Ubelaker 1974; Stewart 1940; Stewart and Wedel 1937; White 1966). Three ossuaries of this category have been tentatively dated. The Orchid site in New York has a date of around 900-1,000 B.P (White 1966:13). The two ossuaries at the Juhle Site, Maryland, occurred later in time but both are Late Woodland occurrences just prior to European Contact (Ubelaker 1974:40).

The salvaged portion of the Indian Neck ossuary contained a minimum of 56 individuals. This probably represents three-quarters of the total population originally buried in the feature. With fewer than 100 individuals, the inclusion of a cremation, and few or no grave goods, the Indian Neck ossuary clearly fits into the prehistoric category. This is in keeping with the early Late Woodland radiocarbon date of 915-935 B.P.

Since the Indian Neck ossuary is currently unique in New England, it is worth asking how it fits with what is known about the region's burial practices. In some ways it fits well. Mortuary ceremonialism, usually involving cremation as the major component, is well documented in southern New England. Late Archaic and perhaps Early Woodland examples have been reported in eastern and southeastern Massachusetts as well as on Cape Cod (Dincauze 1968; Robbins 1980). The Indian Neck ossuary suggests that cremation remained a part of native mortuary practice at least into the Late Woodland period.

In another way, however, the ossuary raises a problem. Current evidence indicates that Late Woodland burials in southeastern Massachusetts and Cape Cod are typically single individuals in flexed position, though some bundled remains have also been reported (Robbins 1959; Schambach and Bailet 1974; Torrey and Bullen 1946). The presence of an ossuary appears to represent a very different mortuary tradition. Three explanations are possible:

1. There were two differing mortuary traditions practiced during the Late Woodland period, possibly representing two different cultural groups.
2. A change in mortuary practice took place during the Late Woodland period with one form (ossuary interment for example) evolving into the other.
3. Single interments and ossuaries are really just different phases of the same tradition. In this case single burials are those which, for whatever reason, were not removed for reburial in an ossuary.

Until more information is available it will be difficult to determine which of these explanations is correct.

The Indian Neck ossuary also raises questions about social organization and late prehistoric settlement systems. The feature certainly implies organized group behavior. It took considerable physical effort to collect all the remains for reburial, excavate the pit and cremate the recently deceased. More than the labor involved, the ossuary represents a group's concern for its dead. While it may not be possible to reconstruct the specifics of what the ceremony meant, the ossuary process was clearly one in which the living both memorialized those who had died and reaffirmed the group's identity. In death as in life, membership in the group (tribe, band or whatever) was the central factor of one's life.

This expression of group behavior is particularly interesting because of the other changes occurring on the Outer Cape during roughly the same period. A marked increase in the number of Late Woodland sites suggests a change in settlement system. The increase is especially evident around the large protected bays such as Nauset and Wellfleet (McManamon 1981, 1982; Massachusetts Historical Commission 1981). The first evidence of agriculture, based on Ritchie's excavations on Martha's Vineyard, occurs about 800 B.P. or near the beginning of the Late Woodland (Ritchie 1969:32). Throughout the period there seems to be a gradual shift towards a more sedentary pattern of settlement. While it is not clear how the Indian Neck ossuary fits into this pattern of increasing sedentariness,
evidence from the Chesapeake Bay area suggests that the later prehistoric ossuaries correlate with a more sedentary population (Outlaw 1982).

Because of its uniqueness, the Indian Neck ossuary remains difficult to interpret. At this point, both in terms of mortuary practice and implications for social organization, the ossuary raises more questions than it answers.

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1981 Probability Sampling and Archaeological Survey in the Northeast: An Estimation


McPherron, Alan

Meindl, Richard S., C. Owen Lovejoy, and Robert P. Mensforth

Mensforth, Robert P. and C. Owen Lovejoy

Moore, Richard S., C. Owen Lovejoy, and Robert P. Mensforth

Mensforth, Robert P. and C. Owen Lovejoy

Oklaw, Alain C.

Phelps, David S.

Richie, Frank

Ritchie, William A.

Robbins, Maurice

Schambach, Frank and Howard L. Bailett

Stephenson, R. L. and Alice L. Ferguson

Stewart, T. D. and W. R. Wedell

Stewart, T. D.

Torrey, Howard and Ripley P. Bulleen

Ubelaker, Douglas H.

White, Marian E.
The discoveries of several human burials in Massachusetts have raised questions about the appropriateness of archaeological excavation and anthropological analysis of human skeletons. Archaeologists, Indians, project planners and the public have voiced concerns which echo similar issues raised in several other states.

Is it legal to excavate human skeletons? Is it appropriate to excavate burials? Does a construction project, such as a highway, or even an individual septic system, take precedence or is the sanctity of a burial place protected? Is it appropriate to rebury excavated skeletons and their associated artifacts? Are burials of Indians provided the same protection which the law affords burials of white people? When is excavation of human burials in the public interest? How should excavations be authorized and administered?

The ethical concerns about archaeological excavation have been articulated most clearly by the Native American community. In Massachusetts the state's Commission on Indian Affairs has been the spokesman for the native point of view. It has stated that Indians feel that burials of their ancestors should be assured equality under the law and should be treated with the same respect and dignity normally given to Anglo-American burial places. Many Indians feel that excavations of burials are actions which desecrate sacred grounds, and that archaeological work is simply another example of how the civil rights of American Indians are abused. Indians also feel that if a burial has been excavated, the remains should be reburied so that the ceremonial intent of the original interment can be recaptured and protected.

Most archaeologists feel they are conducting a scientific study which would be to the benefit of the modern Indian community. Archaeologists and physical anthropologists can provide otherwise unobtainable information about the lifeways of Indian ancestors. The physical skeleton holds little spiritual value to archaeologists, who see the bones they excavate as repositories of information.

The archaeologist's scientific attitude towards skeletal remains is not shared by the general public, which tends to view the excavation of human burials as ghoulish. For instance, a recent television report of vandalism at a Massachusetts cemetery condemned the action, not just for being illegal, but as being "sick". Many people feel uneasy about archaeological excavations of burials. Many archaeologists themselves are uncomfortable in excavating historic period skeletal remains. The ethical problems which confront any scientist involved in studies of human beings are directly posed for archaeologists in the context of investigations of human burial.

The discovery of a Woodland period single interment on Nantucket (Turchon, this issue) triggered a review of the legal bases of burial protection and excavation in Massachusetts. The Nantucket burial was soon followed by the discovery of an ossuary in Wellfleet (Bradley et al., this issue), which has been succeeded to date by eight additional reports of human burials, both native and non-native.

Only the Nantucket burial was located by archaeologists in the course of field work. Five of the discoveries, including the Wellfleet ossuary, were found accidentally during some kind of construction project. The remaining finds were made by private (non-archaeological) citizens and were discovered in erosional contexts. Only four of the burials were native, although one of these four was the ossuary, containing upwards of fifty individuals. Finally, in only three cases were the burials left in situ prior to contacting the State Archaeologist; other burials were excavated by non-archaeologists, including police, construction crews and children, and brought to the attention of archaeologists after the fact.

The Massachusetts Legislature has never directly addressed the legal and ethical questions raised by the discovery and recovery of ancient burials. The laws which apply are
confusing and in some parts contradictory. However, two sentiments are clearly expressed
in Massachusetts legislation: (1) the Massachusetts General Laws recognize the right of in­
dividuals to an undisturbed place of burial, and (2) the state Antiquities Act is designed
as much to regulate archaeologists behavior as to protect sites.

Archaeologists should be aware that the legislature has not convincingly recognized
the scientific or archaeological interests in burials, although the public interest in pro­
tecting the spiritual values of burial places and interments is well founded in law. Fur­
thermore, the legislature has expressed concern that archaeological work needs regulation
to ensure that field investigations are in the public interest. Archaeological "rights"
to excavate burials are not legally recognized.

The following is a brief summary of the Massachusetts General Laws which apply to bur­
ial places and to the excavation of burials:

(I). M.G.L., Chapter 114, Section 17. **Ancient burial places to be preserved.**

This statute states that any place that has been a burial site for more than 100 years
cannot be taken for any other use without authority from the General Court. The case law
for this statute is interesting in that a test of the applicability of this statute to the
protection of a possible Indian burying ground was considered. In **Sudbury v. Department of
Public Utilities**, Benjamin Smith, a former president of the Massachusetts Archaeological So­
ciety, testified at a public hearing that an Indian burial had been excavated in 1931 or
1932 from a tract of land being considered for an Edison Company right of way. Smith's tes­
timony is recorded:

Smith testified that the utensils and implements unearthed indicated a large permanent
village of extreme age, and that "...here will be and are undoubtedly other skeletons
scattered here and there throughout the site and until it is properly and scientifically
dug, no man can say where they are or how many there are, but I am positive from my ex­
perience in the valley...that [it]is an important Indian burial site and should remain un­

The Department of Public Utilities concluded that the remains of one human being, and
possibly others scattered throughout the area, were not sufficient basis for designating
the area a burial ground under M.G.L., Chapter 114, Section 17, and agreed with Edison's
appeal that the section did not apply.

This finding does not indicate the inapplicability of the statute to protecting Indian
burials. The question at issue in **Sudbury v. Department of Public Utilities** was not whe­
ther the law protects only Anglo-American cemeteries, but rather was a question of evidence
that documented the use of the tract of land as a burial place. The Department did not
argue that the law was not intended to protect Indian burials. Rather, this finding indi­
cates that Chapter 114, Section 17 applies to protect Indian burial places so long as doc­
umentation is forthcoming confirming the existence of a burial ground.

(II). M.G.L. Chapter 272, Section 71-76. **Crimes against Chastity, Morality, etc.**

These series of laws prohibit the disinterment of human bodies, or remains thereof,
and protect burying places. Section 71 establishes a punishment of a jail sentence (up to
three years) or fine (not more than two thousand dollars) for disinterring burials.

The case law for this section, dating to the 19th century, explains that the removal
of a dead body is an offense under this section only when the disinterment is done for the
purposes of dissection (**Commonwealth v. Slack**, 36 Mass (19 Pick) 304). Thus, the section
may have been originally intended to prohibit the theft of cadavers for medical school re­
search.
However, a broad definition of dissection could be argued to extent to anthropological analysis; the statute does not distinguish the ancient dead from the remains of the more recently deceased. A case could be argued under this law that archaeological excavation and analysis of human burials are violations of the state's criminal code, and that the archaeologist who "willfully and knowingly digs up, disinters, removes or conveys away" the remains of a human body, and the physical anthropologist who "knowingly aids or is an accessory either before or after the fact," are subject to criminal penalties.

Subsequent sections of Chapter 272 prohibit the "buying and selling of dead bodies" (Section 72), and set penalties for "injuring or defacing tombs" (Section 73) or "desecrating a burial ground" (Section 74). Section 76 sets out the proper procedures for constructing a right of way through a burial ground. Highways or town ways, railroads, canals and "any other thing in the nature of a public easement" are covered by this section. Authority must be specially granted by law and the consent of the city, town, religious society or cemetery proprietors is required.


Section 26A of Chapter 9 lists the responsibilities of the State Archaeologist with regard to maintaining an inventory of archaeological sites, conducting field investigations and issuing permits. In Section 26B the definition of site included "remains," although the definition left ambiguous the question whether "remains" meant physical evidence of occupation or skeletal materials themselves. The definition of site was amended in the 1982 legislative session and the new definition drops reference to human remains (Chapter 152, Acts of 1982).

The jurisdiction of the Antiquities Act is limited to lands owned or controlled by the "Commonwealth, its agencies or its political subdivisions." The protection afforded sites under the Antiquities Act is not great: agencies in control of property are required to cooperate with the State Archaeologist and are asked to minimize harmful impacts to sites. However, the Act and its counterpart regulations (950CMR70:00) establish a comprehensive framework for setting standards for archaeological performance.

Under the regulations, excavation of burials is allowed only after securing a special permit from the State Archaeologist which will be issued only if remains are "imminently and irrevocably threatened by non-archaeological activities" (950CMR70:20). The regulations attempt to recognize the ethical concerns about archaeological excavation while also realizing that excavation of burials is sometimes in the public interest, especially when the burial would otherwise be destroyed.

(IV). M.G.L., Chapter 38, Section 6. Medical Examiners.

The only state law which explicitly covers the problem of an unexpected discovery of human remains is Chapter 38, which defines the duties and responsibilities of medical examiners. Section 6 requires any person having knowledge when any person is found dead to immediately notify the medical examiner. The medical examiner must record the appearance, condition and position of the body as well as circumstances which show the manner of death. If the medical examiner considers a further examination to be in the public interest, he has the authority to employ the services of a pathologist, chemist, or other expert [archaeologist?] in making his report.

Once again, although the statute is seemingly concerned with recently deceased persons, no legal distinction is made between ancient skeletons and the recent dead. Most medical examiners have at one time or another been called upon to assess an ancient burial. Upon deciding that the remains are ancient, most examiners lose interest in the event and have little time to devote to the proper recovery of the remains. Medical examiners have expressed an interest in continuing contact with the State Archaeologist and in cooperating with efforts to preserve and recover ancient remains.
The Commission on Indian Affairs is the single state agency authorized to assist the estimated 10,000-12,000 Indians living in Massachusetts. The present Commission is a legislative descendant of a 17th century commission established to regulate the Praying Indian Villages (Peters 1979). The Commission on Indian Affairs acts as an intercessor and advisor for Indian concerns in Massachusetts.

Although the enabling legislation does not define a role for the Commission in protecting Indian burials, the Commission's constituency has vocalized concerns. Accordingly, in 1978 the Commission on Indian Affairs sponsored a bill calling for a five-year moratorium on the excavation of burials. That bill died in committee, and since that time the Commission has cooperated with the State Archaeologist in seeking an administrative solution to the problem.

In 1982, the Commission on Indian Affairs resubmitted the moratorium bill, and also submitted a bill amending Chapter 114, Section 17 to clarify its protection of Indian burials. These bills again failed to be reported out of committee, although the Commission has interested several legislative staff members in the bills. The Commission plans to resubmit revised bills next year. If these bills are passed into law, the legislative framework affecting archaeological work will be changed.

This brief summary of applicable Massachusetts laws makes it clear that the legislature has not addressed the issue of protecting unmarked burial places, nor have legislators defined under what circumstances burial excavation would be in the public interest.

Given the obscurity of the laws governing the protection of burial places, it is not surprising that the unexpected discovery of human remains precipitates a field crisis. The discoverer is joined by police, medical examiners, archaeologists, Indians, construction crews, neighbors and the press. Few people have a clear understanding of the applicable laws; those who do understand the law know how unclear those statutes are. Field situations can rapidly disintegrate into chaos, with the result that skeletons are sometimes disinterred with neither the respect required by the Indian community nor the careful technique required by the archaeological community.

Massachusetts is not alone in having an obscure and confusing legislative framework governing protection of burials. In several states archaeologists or Indians or both have sponsored legislative changes to address the problems. The success of these legislative initiatives has been varied.

Chapter 22, Section 4732 of the Maine Health and Welfare statutes is the Maine "Indian bones" law. The law requires the transferral of all Indian skeletons to the "appropriate Indian Tribes in Maine for reburial," and allows for scientific study for a period not longer than one year from the time of discovery.

The law leaves several issues unclear. For instance, the law does not indicate how to distinguish which Indian tribe is the "appropriate" tribe. Nor does the law allow for flexibility in the scientific study where that analysis might take more than one year. The law does not address under what circumstances burials should be excavated, and does not give guidance on reburial. The Maine Indian bones law is unsatisfactory from an archaeological point of view, and seems similarly unworkable from the Indian point of view.

Amendments made to Iowa law in 1975 are more comprehensive. The existing statutes, similar to Massachusetts in that the existing statutes prohibit excavation of human remains, were amended in four ways (Anderson et al. 1978): (1) a contingency fund was established to provide for recovery of specimens; (2) the State Archaeologist was assigned a coordinating role; (3) a state cemetery for reinterment of ancient remains was established; and (4) ancient human remains were specifically included in Violation of Sepulchre law, clearly
affording ancient burials equal protection under the law.

The impacts of the new Iowa amendments have had mixed reviews from the archaeological community. The Iowa State Archaeologist feels that the changes have established a fair balance between concerns of archaeologists and concerns of Indians.

Many archaeologists, however, feel that law does not provide their scientific inquiry with sufficient flexibility. Underlying their concern is an objection to reburying remains when no ancestral link can be demonstrated between the ancient remains and surviving Indian communities. Some archaeologists feel that Indian groups should be required to have legal standing in the issue, based on a clear cultural link with the burials which have been discovered (Rosen 1980).

The Department of Interior has established a policy for administering burials found on federal lands. (An Interim Policy on Disposition of Human Remains. HCRS, DOI 1979.) Excavated remains from federal lands will be returned for reburial only after the modern native group demonstrates a cultural connection with the bones. Otherwise, the skeletal remains are treated as cultural material and are curated.

In Massachusetts, a policy of requiring demonstration of a cultural connection has no basis in law. Massachusetts law is explicit in its intent to provide for the protection of burial places, and does not distinguish native from non-native burials. Archaeologists themselves can demonstrate little standing or legal interest in ancient human remains, especially when those remains are located on private property. The Massachusetts Indian community can argue that sufficient protection of Indian burial sites already exists under the law, whereas archaeologists have little legal basis for supporting their scientific interests in human remains.

In 1980 the State Archaeologist joined with the public policy section of the John F. Kennedy School of Government to study the questions of public policy in recovery and reinterment of human remains. The study (Mattfeld 1980) concluded with several recommendations for setting up an adequate and effective policy. The study concluded that legislative initiatives were premature, and that so long as agencies continued to cooperate, sufficient authority was already established under existing statutes to develop an effective administrative policy. Amendments to existing legislation could be pursued after the administrative solutions had been worked through. In that way, legislation would confirm an already working system rather than establish a new structure which could be both inflexible and unfeasible.

Accordingly, the State Archaeologist has established and maintained an informal working relationship with the Commission on Indian Affairs and with medical examiners. The structure of the state's policy balances the concerns of archaeologist with other constituents.

The policy applies equally to ancient native and non-native remains. Within the jurisdiction of Chapter 9, Section 27, the State Archaeologist will not permit excavation of burials unless the remains are threatened by erosion, construction activities, or are in some other imminent danger. If excavation is necessary, and if the burial appears to be Indian, the State Archaeologist will contact the Commission on Indian Affairs.

The State Archaeologist will arrange for the archaeological recovery, making sure that excavators will treat skeletal remains with respect, and that field procedures will meet high scientific standards. The Commission on Indian Affairs may arrange for Indian supervision of the excavation.

After excavation, arrangements for prompt physical analysis will be coordinated through the State Archaeologist. To facilitate the analysis, the Department of Anthropology at the University of Massachusetts, Amherst, has volunteered to conduct physical anthropolog-
nal assessments as a part of a long-term research interest. Unless the burial is of unusual anthropological interest or complexity, the period allowed for study of the remains is one year. In an exceptional case, such as the Wellfleet ossuary, a more flexible schedule can be agreed upon.

After the analysis is complete, the State Archaeologist will notify the Commission on Indian Affairs, who may arrange for reburial. The Commission prefers to rebury the remains close to the original burial site, so long as the new burial place can be assured protection. If the burial is not native, then the field and laboratory procedures remain the same; however, in the absence of a constituent group concerned with reburial, the remains are curated rather than reburied.

Furthermore, the State Archaeologist has established cooperative ties with medical examiners, so that information about the discovery of ancient burials is conveyed to the archaeological community.

Finally, the State Archaeologist and the Commission on Indian Affairs continue their dialogue regarding the need for legislative amendments.

Several issues remain unresolved. Discovery of burials is still likely to provoke a field crisis, jeopardizing the quality of recovery of the remains. Also, identification of the ethnic affiliation of human remains is inexact, especially when the burial lacks associated cultural materials giving the skeleton a cultural context. A sample of one human being is insufficient to confidently determine cultural group.

Another problem is lack of funding. Support for the archaeological work, the physical analysis, and the reburial cost is generally unavailable.

Finally, the issue of reburial of artifacts along with the skeletal materials has not been addressed.

Despite these unresolved problems, the John F. Kennedy School of Government study concludes: "it is one of those rare problems that actually seems to have a solution, apparently at nobody's expense, dependent on good will with some evidence that good will is forthcoming, and with a minimum of legislative or other formal prerequisites that might be insuperable impediments (Mattfeld 1980)."

Although legislative authorities are unclear, the state officials representing Indians and archaeologists have been able to develop and articulate a public policy which respects each others goals and responsibilities. As a result, much of the confusion which previously characterized an unexpected discovery of a human burial has been reduced. Archaeologists can concentrate on the demands of the field situation, and Indians can be assured that their ancestors' remains will be treated with dignity and equality.

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THE CONTRIBUTORS

JAMES W. BRADLEY has a PhD in Anthropology from Syracuse University, and is now Survey Director for the Massachusetts Historical Commission.

WILLIAM S. FOWLER has spent many years studying and writing about various aspects of prehistoric tools and lifeways, and he is also a distinguished past editor of the Bulletin.

ANN L. MAGENNIS is a graduate student in Physical Anthropology at the University of Massachusetts, Amherst.

THOMAS F. MAHLSTEDT is a doctoral candidate in Archaeology at Boston University, and is currently working as a member of the Massachusetts Historical Commission Prehistoric Survey Team.

FRANCIS P. McMANAMON if the Chief, Division of Cultural Resources, North Atlantic Region of the National Park Service, and is a doctoral candidate in Archaeology at the State University of New York, Binghamton.

VALERIE TAIMAGE is the State Archaeologist for the Commonwealth of Massachusetts, and is also a Trustee of the Massachusetts Archaeological Society.

WILLIAM B. TAYLOR has been an ardent collector of Indian artifacts for 40 years. He found his first arrowhead at age 10 on his father's farm, and has spent many enjoyable hours since then surface collecting these fields. He is also a Trustee of the Massachusetts Archaeological Society.

ERIK TRINKAUS is an Associate Professor of Anthropology at Harvard University, specializing in Biological Anthropology and Human Paleontology.

FREDERIC H. TURCHON held a BS from Northern Arizona University and was active in conservation archaeology in Massachusetts until his tragic and untimely death in 1979 at the age of 25.