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Manuscripts and communications for the Bulletin may be sent to Elizabeth A. Little, 37 Conant Road, Lincoln, MA 01773 (phone: 617-259-9397; fax: 617-259-0709; e-mail: eal@flash.bu.edu).
EDITOR'S NOTE

Elizabeth A. Little

The Bulletin of the Massachusetts Archaeological Society reaches a wide range of professional and avocational archaeologists. Our readers consist of men and women with varied archaeological interests, including teachers, historians, linguists, anthropologists, editors, artists, construction workers, doctors, business people, librarians, farmers, students and housewives, to name just a few categories. Bulletin editors have always supported the publication of archaeologically relevant articles in addition to our major focus on site reports.

This issue contains an especially broad selection of subjects. It includes a piece by Russell Gardner on a historic Martha's Vineyard Indian pendant and the families who treasured it and passed it on to their heirs. Mr. Gardner is the Wampanoag Tribal Historian.

Patrick Robblee, a senior at the University of Massachusetts, Amherst, offers a thought-provoking report on a classroom project, in which he discusses the trials and rewards of an attempt to reconstruct a prehistoric New England pot from archaeologically derived sherds.

Alan Leveillee, known to readers of recent issues of the Bulletin as a writer with an eye for interesting archaeological topics, brings us up to date on the progress of the study of canine burials at the Lambert Farm site, Warwick, RI.

Alan Strauss and Robert Goodby contribute context, ceramic analysis, and a radiocarbon date from a site at a contract project on Cape Cod. This is a nice example of important and useful data in the grey (hard-to-locate) literature being published in a widely available form (the Bulletin).

Jerome Dunn, whose special interest is events and people in Massachusetts in the years before the Pilgrims came, has, with great care, searched the literature of the time for details about the life of Squanto, the Indian who greeted the Pilgrims at Plymouth in 1621.

For those of our readers who have an interest in Native American languages, Professor George Aubin, a linguist with a specialty in Algonquian languages, reviews a newly published English/Mahican dictionary that is based on a mid-18th century German/Mahican manuscript dictionary. Mahican is a language once spoken in western Massachusetts, western Connecticut, eastern New York and parts of western Vermont.

Note to Authors:
To facilitate future calibrations of radiocarbon ages published in the Bulletin, please supply not only the conventional (δ^{13}C-corrected) ^{14}C age ± σ and the lab number, but also the material tested and the δ^{13}C value, if it is known. If you don't know whether the age was δ^{13}C-corrected or not, please so indicate.
CONTRIBUTORS

GEORGE AUBIN is professor of French and Linguistics at Assumption College in Worcester. He has published numerous articles on various Algonquian languages.

JEROME PHILLIP DUNN lives in Weymouth. He has written a book called *Massachusetts Before 1620*.

RUSSELL H. GARDNER was named Great Moose (Mogke-moose) in 1956 by the Reverend LeRoy C. Perry (Ousa-Mequin), who was Supreme Chief Sachem of the Wampanoag from 1923 to 1960. The Rev. Perry also, at that time, appointed Mr. Gardner as Tribal Historian, a role he has filled for Wampanoag descendants ever since.

ROBERT GOODBY received his M.A. in anthropology from Brown University, where he is currently a doctoral student. He has taught at Wheaton College in Norton, MA, and is presently instructor of anthropology at the University of New Hampshire.

ALAN LEVEILLEE is a senior archaeologist and principal investigator at the Public Archaeology Laboratory, Inc. He is currently the research team leader for the Millbury III Cremation Complex, and serves on the Warwick Historic District Commission. He is best known in Warwick as a basketball and Little League coach.

PATRICK ROBBLEE is a senior undergraduate anthropology major at the University of Massachusetts at Amherst. He is planning to apply to graduate schools.

ALAN STRAUSS graduated with honors from the University of Massachusetts (Amherst) in 1977, and received an MA (1977) from the State University of New York at Binghamton. Recently he has taught at Providence College and works as an independent archaeological consultant.

A BRIEF NOTE TO CONTRIBUTORS

The Editor solicits for publication original contributions related to the archaeology of Massachusetts. Manuscripts should be sent to the Editor for evaluation and comment. Authors of articles submitted to the Bulletin of the Massachusetts Archaeological Society are requested to follow the style guide for *American Antiquity* 48:429-442 (1983). Additional instructions for authors may be found in the Bulletin of the Massachusetts Archaeological Society, Volume 53, Number 2:76 (1992).
A RARE ABORIGINAL ARTIFACT FROM MARTHA'S VINEYARD ISLAND, WITH A LIVING FAMILY HISTORY

Russell Herbert Gardner

This is the story of a unique aboriginal pendant from Martha's Vineyard Island and of the family and individuals who originally owned and wore it. As these were my direct lineal maternal ancestors, this account has a strong personal ingredient. Though well-documented, our great unwritten book of oral tradition early instilled appreciation of my native Indian heritage, lending flavor to the interpretation.

Most archaeological assemblages in local collections have been unearthed from the soil in one manner or another. Some aboriginal artifacts have found their way into local collections as souvenirs kept by colonial families. I am aware of very few, however, that were passed down through generations of descendants of those who made and used them originally. This article deals with just such a case. First a description of the artifact itself.

The artifact in question is an aboriginal wooden pendant (Figure 1). Of very light weight, it is probably tupelo, called beetlebung on the Vineyard for its use by colonial barrel-makers or coopers. It measures two inches (5 cm) in diameter and half an inch (1.3 cm) in thickness, and is constructed from two separate disks with convex surfaces cemented together by a black colored material. This is probably a pitch and charcoal combination with animal fat, known to have been used by New England Indians for waterproofing vessels, baskets and canoes. A curious feature is a pin hole in the rim, apparently to allow for insertion of a reed or needle to guide a thong through the three holes in the back of the pendant. The surfaces are of natural wood finish with some polish.

INDIAN SAMUEL LOOK

The first person known traditionally to have owned and worn the pendulum was a

Figure 1. Pendant, photos slightly enlarged, L: front; R: rear. Size: 5 cm diameter, 1.3 cm thick.
quarter-blood Wampanoag named Samuel Look (Banks 1911, vol. 3, p. 141), who for the purposes of this chronicle will hereinafter be referred to as Indian Samuel. He was born in 1702 at Tisbury on Martha’s Vineyard Isle (Figure 2), the son of Alice (called Ellis) Daggett, a half-blood Wampanoag and Samuel Look, Sr., a white man. Though unwed, Ellis had three children: Black Henry Luce, Samuel Look and Patience Allen, each by a different father. White-eyed Henry Luce, father of Black Henry, was convicted of fathering Ellis Daggett’s child on March 3, 1696 (Dukes County Court Records), and Samuel Look, Sr., father of Indian Samuel, was convicted of fathering her second child by the Court of Common Pleas on October 8, 1702 (Dukes County Court Records).

In 1685, Hester and Ellis Daggett, sisters, were granted lands at Eastville on the north side of Ogkashkepbeh (Figure 2) by Puttuspaquin, "for the natural love and affection to them being of my near kindred." They are called "cousins" but were actually grandnieces of Puttuspaquin, last Sachem of Sanchakantacket, now Oak Bluffs and Edgartown (Dukes Country Deeds, 1685 Bk. 1, p. 251). Ellis Daggett, in her will of March 19, 1711 (Dukes County Probate Records 1663-1853) bequeathed her remaining Indian lands to Black Henry.

In the same 1711 will, Indian Samuel is described as, "my son, commonly called Samuel Look, now living with Zachary Horse (Hossueit, Howwaswee) of the Indian Town in Tisbury" (Christiantown). This Zachary Hossueit was the noted Indian minister, later of Gay Head, who wrote and preached in the native language. Many of the documents in Native Writings in Massachusett, by Ives Goddard and Kathleen Bragdon of the Smithsonian, are in his

Figure 2. Sketch map showing Indian places named in the text at Martha’s Vineyard (from Dukes County deeds; Banks 1911; Norton 1923:50; Old Map [Travers 1960]).
Once asked why he still preached in the native tongue when hardly a parishioner understood, he replied, "why to keep up my nation" (Burgess 1970, p.22). It is obvious that Indian Samuel Look, then but nine years of age, was raised as an Indian. It is also certain that they still lived in a wigwam, as at that time only Isaac Ompany, the magistrate, had an English house there. Indian Samuel remained with Hossueit until, by his mother's will, he received seven pounds in money at age twenty-one. At this point, before Indian Samuel leaves the site of his native roots, let us explore those roots.

**ANCESTORS OF INDIAN SAMUEL LOOK**

Tracing his native ancestry becomes a record of the aboriginal sachemry of Noepe (Nope) or Martha's Vineyard (Figures 2 & 3). From Towanquatuck, sachem of Nunne-pog, the eastern half of the island of Martha's Vineyard (Goddard and Bragdon 1988, Part 1, p. 238-241), Indian Samuel's lineage is a royal one indeed. The earliest known sachem there, the intrepid Epanow, was a predecessor and possibly the father of Towanquatuck. In 1611 Captain Edward Harlow captured Epanow and took him to London. By an ingenious ruse (he promised to show them gold mines) Epanow was returned in 1614 and escaped to his native village (Smith 1614, p. 205). Evidence indicates this village, before English settlement, stood at the head of the Lagoon near Wequatuck Spring and was said to number four hundred wigwams (Gookin 1947, p. 26; see also Huntington 1957). Four years later, he met with Captain Thomas Dermer at the Vineyard (Dermer 1619), and on September 13, 1621 he signed the "Treaty of Amity at Plymouth" (Morton 1669; Mather 1677). Thus, it is very likely that he was one of the ninety Indians who participated in the First Thanksgiving, which was celebrated at harvest time that year, not in November (Winslow 1622).

Towanquatuck was the first sachem converted to Christianity by Thomas Mayhew, Jr., the missionary. As a result, in a vicious attack by a jealous pow-wow as he slept, an arrow, glancing off his brow, sliced his nose from top to bottom. He survived, strengthening his faith and, in 1646, he initiated the very first meeting of a native congregation in the colony, three years before John Eliot of Roxbury (Mayhew 1647). The meetings were held at the Pulpit Rock at Pohquoque on Sanchakantacket Neck (Banks 1911, vol. 1, p. 223). The words of this articulate old sachem to Thomas Mayhew, Jr. are well worth noting: "A long time ago, they had wise men which in a grave manner taught the people knowlege; but they are dead, and their wisdom is buried with them; and now men live a giddy life in ignorance till they are white headed; and though ripe in years, yet then they go without wisdom unto their graves." He also said: "you will be to us as one who stands by a running river, filling many vessels, even so you may fill us with everlasting knowledge" (Mayhew 1647; Whitfield 1651, p. 5). This wise old sachem lived to a great age, dying in 1670.

Towanquatuck's daughter, Adomas, called the Queen (Banks 1911, vol. 1, p. 40), became the wife of Autumsquin, sachem of Sanchakantacket (Dukes County Deeds, Bk. I, pp. 15, 289). Autumsquin, it is said, once served young Thomas Mayhew, Jr. a feast of snakes, for eels, and his favorite dog, killed for the occasion, for venison, much to Mayhew's chagrin (Norton 1947, p. 13). Adomas was probably Ahoma, as her granddaughter's Indian name was Ahoma (Banks 1911, vol. 1, p. 43; Norton 1947, p. 50). Autumsquin was dead by 1660 and his son and heir, Wampamog, variously called Wabamuck, Sam Wapa, Mr. Sam
and Samuel, was his successor as sachem. He also became an Indian minister and co-signed deeds as late as 1669 with his grandfather, old Towanquatuck (Dukes County Deeds 1669, Bk. 3, p. 467). A cane presented to Nicholas Norton by Wampamog, now preserved by the Edgartown D.A.R. (Norton 1947, p. 51), and sales of land by both Wampamog and his son-in-law, Thomas Sestom, to Norton, whose descendants also intermarried with this Indian line, may indicate a possible earlier source for the pendant later worn by Indian Samuel Look. In 1664 Thomas Mayhew at the request of John Eliot sent Wampamog as a teacher to Nantucket where he remained until 1689. This can explain why his son, Puttuspaquin, was acting sachem in 1685, during his father’s absence. Just prior to his death in 1689, Wampamog, in an Indian language deed, granted lands at Eastville on the Lagoon, the site of today’s state lobster hatchery, to his granddaughters Ales (Alice) and Keziah, daughters of Thomas Sestom (Dukes County Deeds 1689, Bk. 6., p. 412). This Thomas Sestom, Setom or Setomuck, was a petty sachem and Indian minister, son of a praying Indian named Sissetome and a religious woman named Momchequanum, "who went from Martha’s Vineyard to preach the Gospel on the mainland at a place called Nammasohket" or Nemasket, now Middleboro, and

FIGURE 3. MATERNAL FAMILY LINE OF RUSSELL GARDNER

Generation #:
1. Towanquatuck, sachem of Nunne-pog, d.1670.
2. (dau of T) Adomas (Ahoma) & Autumsquin, sachem of Sanchakantackett.
3. (son of A & A) Wampamog (Mr. Sam), 1669 Sachem, d.1689.
4. (dau of W) Ahoma & Thomas Sestom, d. 1694, son of Sissetome & Momchaquanum, d. 1715.
6. (dau of AS & JD and grand-niece of Puttuspaquin, son of Wampamog & last sachem of Sanchakantackett) Alice (Ellis) Daggett, 1675-1711, & Samuel Look, Sr.
8. (son of SL & RS) Adam Look, 1726-1778, & Sarah Freemove, m.1758.
10.(son of JL & SR) Isaac Weston Look, b.1799, & Susannah Bartlett Hawks, b. 1799, m. 1823.
12.(son of JCL & LAB) Herbert Eugene Look, 1857-1901, & Emma F. Gurney, d.1950, m. 1884.
14.(son of HTG & MGL) Russell Herbert Gardner, b.1925, & Thelma Hicks, m.1946.

10'.(second son of JL & SR) James Hervey Look, 1801-1883, & Thankfull Stevens, d. 1875, m. 1830.
13'.(dau of GWS & HP) Nellie W. Stevens, b.1884, & Edmund F. Peck, b. 1879.
14'.(dau of EFP & NWS) Anna L. Peck, b. 1912, & Franklin S. Harlow.
Lakeville (Mayhew 1727, p. 161). Thomas replaced the noted John Sassamon as preacher at Nemasket after the King Phillip War. Sassamon, of course, had been murdered at Assawompsett Pond in 1675 (Peirce 1878, p. 60). Thomas Sestom preached there until his death in 1694. There were Setoms at Gay Head (Howwaswee 1792) and Mashpee until 1861, according to the State Indian Census (Earle 1861).

Following a romantic courtship (Norton 1947, p. 50), Ahoma or Alice, Thomas Sestom's daughter, became the wife of Joseph Daggett, Oak Bluff's first white settler, in 1667, founding the colorfully named: "Bow and Arrow Daggetts," as they were known to their contemporaries. Dr. Charles E. Banks, in his 1911 History of Martha's Vineyard, calls Alice Sestom, "the Pocahontas of our Island;" obviously this union appealed to his romantic imagination (Banks 1911, vol. 2, p. 94). Ahoma Spring, which bore her name, was destroyed when Hart Haven was built at Oak Bluffs. The union may not have been sanctified by clergy, as she retained the name Sestom thereafter. They had three children, the first and second at Sanchakantackett, and the third, Alice or Ellis, in 1675 after their removal to Takemmy, now West Tisbury, in 1673 (Banks 1911, vol. 2, p. 141.). Here Joseph became interpreter for the Christiantown Indians, helping in English and Indian disputes.

INDIAN SAMUEL LOOK, AND HIS DESCENDANTS

Here also, we return to Indian Samuel Look. As previously stated, at age twenty-one he received his mother, Ellis Daggett's bequest. This was in 1724, when he left Martha's Vineyard never to return, but wearing about his neck a thong from which, suspended on his breast, was the pendant representing his native Indian heritage (Nellie Peck 1966, personal communication), and what a heritage it was! Fine old sachems and preachers, a dying language and culture, this was Indian Samuel's world and he wore his pendant proudly to a different world.

Arriving on the mainland at Old Rochester, that portion now Marion, he soon met and married Ruth, the daughter of Anthony Savery, and by September 26, 1725, the first of eight children was born (Banks 1911, vol. 2, p. 141). We next hear of him when he offers four gallons of rum for the raising of the minister Mr. Hovey's house in the second precinct (Ryder 1975, p. 195). His home lot of one acre and a dwelling house was not confirmed to him until September 30, 1778 by Anthony Savery, "for love and affection to Samuel Look," a gift not a sale (Plymouth County Deeds, Bk. 59, p. 173). This was located "on the westerly side of the road from James Stewart's dwelling house, leading to Charles Neck." Today, this is Dexter Lane, Parlowtown Road, then across Route 6, to Converse Road. Indian Samuel Look's place was then down a side lane to Benjamin Hiller's Mill, but now Route 6, still named Mill Street, to the Mattapoisett line. In the above deed he is called "husbandman." On January 9, 1782, the year of his death, Indian Samuel deeded the above real and personal property in equal shares to his remaining unmarried daughters, Ruth and Alice Look (Plymouth County Deeds, Bk. 61, p. 170). Proof of his pride in his native Indian heritage and immediate forebears is borne out by the naming of his youngest daughter, Alice, for her half-blood Indian grandmother and full-blood Indian great-grandmother, Alice or Ahoma Sestom. Indian Samuel's mainland homesite was reminiscent of those with which he was familiar at Christiantown on the Vineyard and doubtless was a reason for its choice. By 1852
the town was named Marion, and by 1879, Caleb Handy lived at the old Indian Samuel Look place.

But what of the aboriginal pendant? Look family tradition and actual known physical possession must pick up the trail from here on. It is certain that the pendant was passed down from Indian Samuel's second son Adam Look, born November 2, 1726. He married Sarah Freelove of Freetown on November 23, 1758. This Freelove family was purported to be also of Wampanoag Indian descent from three brothers who came to Rhode Island, took the name Freelove and married three Indian women. Ancestor Morris Freelove of Newport and his business partner, John Borden of Portsmouth, were friends of King Phillip, lending credence to this tradition (Peirce 1878, p. 236-237; Travers 1957/1961, p. 138). Adam served in the Revolution as a mariner, remaining in service until his death in 1778. Adam and Sarah had two sons; Joseph, the second son, born January 25, 1776, who married Susanna Rider of Middleboro, April 22, 1797, was the next to possess the ancient pendant. The photograph (Figure 4) of Joseph Look, the grandson of Indian Samuel, was taken the year of Joseph's death on October 11, 1857.

Joseph and Susanna had five children. They built a home and mill on the west branch of the Sippican River in Rochester at Walnut Plain. In his will, September 19, 1857, Joseph
named James Hervey Look, his second son, executor and left him all his real and personal property, his wife to have half of the "movables" (Plymouth County Probate Records, Bk. 99, p. 456). This must have included the pendant, as it followed James' line down to his great-granddaughter, Nellie W. (Stevens) Peck, who, in 1966, presented our common ancestor's aboriginal pendant to me. I assure you, it is one of my most treasured possessions. Nellie Peck and my mother, Marion G. (Look) Gardner, second cousins (Fig. 3), had never met before 1966, yet the tradition they recounted of their Wampanoag Indian descent from Martha's Vineyard was, almost word for word, the same. And this meeting took place after five divergent generations with no direct contact whatsoever in the interim.

My mother's line was through the brother of James Hervey, Isaac Weston Look, who moved to Halifax, MA. Her name, Marion, was from the Town of Marion, where her dad, Herbert E. Look, still had property when she was born in 1898. Other paternal lines of native Wampanoag descent in my family are traceable to Cape Cod and Nantucket sachems (Nickerson 1958, 1961).

Of possible interest to anthropologists, the following physical traits in my family may be noted. My mother's blood type was O positive. My mother's grandfather, Jacob C. Look, was seven feet tall and had epicanthic eye-folds (Coon, 1964), as did his daughter, Susan M. (Look) Ryder.

Ancient practices have also survived in my family, such as the curing of spring-run herring by thrusting an arrowwood stick through the eye sockets and drying on racks; the planting of corn, beans and squash in separate raised hills instead of regular rows; utilization of wild native foods from the woods and waters, the use of healing plants, herbs, barks and roots, and even the dropping of a single feather in the open grave as a final gesture at burial, a variation of the use of a green bough by other Wampanoag descendants to this day.

I have an observation regarding the transmission of oral tradition in families such as this one. I knew my grandaunt, Susan M. (Look) Ryder, personally. She knew her great-grandfather, Joseph Look, personally, and Joseph remembered his grandfather, Indian Samuel. This leapfrogging over generations has a telescoping effect that brings the generations and traditions close together, shortening the distance in time and allowing for more accurate transmission of such oral tradition, too often scorned as hearsay.

Yes, Indian Samuel, after the passage of two and three-quarter centuries, your descendants still live, acutely conscious of our native Indian heritage. We have not forgotten all of the old ways, nor every word of our native language, and we still have your ancient aboriginal pendant as a token from the past, to remind us always whence we came.

Acknowledgements: Some of this material, including a photo of the pendant and of Joseph Look, has been published (Gardner 1970) and is reproduced with permission of the Dukes County Historical Society, Edgartown MA.

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1651 The Light Appearing More and More Towards the Perfect Day.... The author, Boston.

Winslow, Edward
What can you do with a handful of sherds? For a class project in "Analysis of Material Culture" (Anthropology 325) at the University of Massachusetts at Amherst, I undertook to learn what I could about the manufacture, shape, and function of a vessel represented by 42 sherds accounting for less than a reconstructable pot. The sherds had been sorted out of a larger number from a single area of a site using sherd lot criteria defined by Dincauze (1975). Specifically, I was interested in the relation of temper particles to vessel function, a relationship well established in archeological literature (Rice 1987).

Temper refers to the non-clay additives contained in a paste and experimentally has been shown to modify certain characteristics of clay prior to, during, and after firing. These modified characteristics can profoundly alter the workability, firing characteristics, thermal behavior, and resistance to mechanical stress of the clay (Braun 1982; Bronitsky and Hamer 1986; Rice 1987; Rye 1976). The various types of material used to temper prehistoric ceramics differ in their ability to influence the properties of clay. Therefore, in creating a vessel for a particular function, potters generally select those temper particles that strengthen their pots with respect to the desired function. Archaeologists can thus make inferences between temper and function in prehistoric assemblages. Rye explains:

> Each pottery vessel reflects decisions made about materials and techniques as well as cultural choices, and thus represents a combination of many variables which may be useful in archaeological interpretation (Rye 1976: 106).

In the study reported here, attributes of the vessel lot, representing an Early Woodland pot of unknown function from a Connecticut River Valley site in Massachusetts, were analyzed to determine and compare temper and function. Initial attribute analysis began in the fall semester of 1990 at UMass by undergraduate anthropology students in Prof. Dena Dincauze’s Anthropology 325 course. Analysis and interpretations were completed by the author in the fall semester of 1991 in the same course. The site’s name and the vessel’s corresponding provenience are not included here in order to protect the sensitive nature of the site. The pot is currently part of the UMass collection (KBB 2.8-2.12, 2.14-2.17, 2.19-2.21, 2.23-2.31, 2.33-2.36, 2.38-2.50, 2.52, 2.54).

**METHODS**

The 1991 analysis began with a simple inventory of the entire vessel lot. In all, 33 body, 6 rim, and 2 bottom sherds were recorded, most measuring approximately 3-6cm across by 3-6cm up and down. An analysis of temper type, range, and size was then conducted in order to insure that all the sherds belonged in the same lot. Observations were made with a binocular microscope at a magnification of 10x with a high intensity lamp.

Temper inclusions in all but one sherd, a
TABLE 1: (Key: F: fine; M: medium; C: coarse; * Conant [1990])

<table>
<thead>
<tr>
<th>Sherd #</th>
<th>Type</th>
<th>Thickness</th>
<th>Temper</th>
<th>Size</th>
<th>Anomalies</th>
<th>Breaks:</th>
<th>Treatment</th>
<th>Food Residue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.8</td>
<td>body</td>
<td>8.9 mm</td>
<td>M</td>
<td></td>
<td></td>
<td>yes*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.9</td>
<td>rim</td>
<td>6.2 mm</td>
<td>M-F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.10</td>
<td>body</td>
<td>8.0 mm</td>
<td>M-F</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>M</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
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<td>yes*</td>
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<td>M</td>
<td></td>
<td></td>
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<td>M</td>
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<td>M</td>
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</tr>
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<td>6.0 mm quartz</td>
<td></td>
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<td>yes</td>
<td></td>
<td>yes</td>
<td></td>
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<tr>
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<td>6.6 mm</td>
<td>M</td>
<td></td>
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<td>M</td>
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<td>body</td>
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<td>M</td>
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<tr>
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<td>M</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.47</td>
<td>body</td>
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<td></td>
</tr>
<tr>
<td>2.48</td>
<td>body</td>
<td>8.0 mm</td>
<td>M</td>
<td>5.0, 5.0mm quartz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.49</td>
<td>body</td>
<td>10.2 mm</td>
<td>M</td>
<td></td>
<td></td>
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<td></td>
</tr>
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<td>*</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.52</td>
<td>body</td>
<td>10.9 mm</td>
<td>M</td>
<td>7.4 mm quartz</td>
<td></td>
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<tr>
<td>2.53</td>
<td>bottom</td>
<td>9.5 mm</td>
<td>M</td>
<td></td>
<td></td>
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</table>

Mean Thickness: 8.5 mm
Total Weight For The Vessel Lot: 538 grams
rim (2.51), include quartz and feldspar in roughly equal quantities, and a somewhat lesser amount of mica. Three sherds (2.26, 2.44, 2.45) contained one visible grog particle each. Grog is a temper inclusion composed of crushed pottery. In addition, small amounts of similar but unidentified material were present in most sherds, particularly the thinner ones and the rims. All sherds did contain, however, the quartz, feldspar, mica combination in similar concentrations, with the sole exception of the aforementioned rim which was consequently eliminated from the lot. No attempt was made to quantify relative densities for each type of particle because it cannot be done well using simple observation.

Temper sizes for each sherd were recorded according to one of five possible designations where the variable x is defined as the width of the majority of temper particles per sherd: fine (x = 0-1.5 mm), medium-fine (x = 1.5-3 mm), medium (x = 1.5-4 mm, medium-coarse (x = 3-4 mm), with an even distribution between the extremes), and coarse (x = 4 mm or greater). All sherds contained some particles from each category, particularly the first. Designations were based on the majority of the particles per sherd as observed on each sherd surface.

Temper sizes were measured under the microscope for clarity. A sheet of 1 mm graph paper was placed under the microscope and the temper particles compared to the scale of the graph. This worked well for the smaller sherds because the lens of the microscope could be positioned close enough to the paper so that its scale was in focus. The larger sherds, however, required the use of calipers for accurate measurement because the lens was raised away from the graph paper, pulling its scale out of focus.

Twenty-seven of the sherds contained medium size temper, eleven, medium-fine, and two, medium-coarse. All rim sherds but one (2.42, medium) had medium-fine particles and both bottoms contained predominantly medium particles. The wide range of temper sizes within most of the sherds indicates little attempt by the potter to control for temper sizes.

In addition to the measured temper classes, I recorded anomalies such as extremely large particle sizes (Table 1). The thickness of each sherd was also obtained with calipers; the mean value was 8.5 mm (Table 1).

Sherd curvature was measured in order to estimate the diameter of the orifice and general size of the vessel. Sherds measuring approximately 3 cm across or greater were selected and individually pressed, interior side first, into a contour gauge to obtain an arc. Each arc was traced onto a sheet of polar coordinate graph paper. The approximate radius for each sherd was measured in cm with a metric ruler from the center of the graph to the arc of the sherd. In all, 16 sherds (including the two bottoms) were measured and recorded (Table 2 and Figure 1).

Only sherds measuring at least 3 cm across were selected due to the difficulty in accurately assessing the smaller sizes. Although only one rim sherd (2.42) met this criterion, the value obtained (10.0 cm) was considered to be representative of the vessel orifice radius. The widest point of the vessel (from sherd 2.16) measured 12.6 cm in radius. These data may be biased, however, as the sherds actually measured constitute less than half the vessel lot, which itself represents only a portion of an entire pot. It is useful nonetheless because it provides an estimate or approximation of the dimensions of the vessel.

An attempt to draw the estimated shape of the pot resulted in Figure 2. The available measurements for radii (r) were grouped into six categories, and the number of sherds (N) in each was counted. N is 1 for r = 12.0-12.9 cm; N is 2 for r = 11.0-11.9 cm; N is 5 for r
These categories were considered to represent different horizontal sections of the vessel. Because the orifice was determined not to be the widest point of the pot, some of the categories occur twice—once from the bottom to the point of maximum diameter, and again from that point to the orifice. In the absence of any large rim sherd containing an indication of a neck, it was assumed that the transition from the point of maximum diameter to the orifice was gradual. The height of the vessel was assumed to be at least the size of the orifice in order to complete the drawing.

The 1990 attribute analyses provided crucial information on manufacturing technique, surface treatment, and the presence/absence of food residue and soot. In all three

TABLE 2. Sherd radii and diameters.

<table>
<thead>
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<th>#:</th>
<th>Type</th>
<th>Radius:</th>
<th>Diameter:</th>
</tr>
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<td>22.2cm</td>
</tr>
<tr>
<td>2.10</td>
<td>body</td>
<td>12.1cm</td>
<td>24.2cm</td>
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<td>body</td>
<td>10.1cm</td>
<td>20.2cm</td>
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<td>2.16</td>
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<td>12.6cm</td>
<td>25.2cm</td>
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<td>21.6cm</td>
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<td>2.31</td>
<td>body</td>
<td>12.2cm</td>
<td>24.4cm</td>
</tr>
<tr>
<td>2.41</td>
<td>body</td>
<td>4.8cm</td>
<td>9.6cm</td>
</tr>
<tr>
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<td>rim</td>
<td>10.0cm</td>
<td>20.0cm</td>
</tr>
<tr>
<td>2.43</td>
<td>body</td>
<td>10.8cm</td>
<td>21.6cm</td>
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<tr>
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<td>body</td>
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<td>20.0cm</td>
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</tbody>
</table>
instances, results were confirmed with my own observations (Table 1).

Coil breaks, defined as a concave or convex surface across the edge of a sherd (Nassaney, 1991 personal communication), were identified on at least five sherds (three by Conant [1990] and two by the author).

The surface treatment of each sherd included two distinct processes applied in the following order: interior and exterior cord-wrapped paddling and interior and exterior wet wiping (Figure 3). Although Tessier (1990) discerned this pattern on only four sherds, it was easily recognized on most. One body sherd (2.32) was eliminated from the lot by the author because it possessed a fabric impression of five twines per cm rather than the aforementioned pattern.

Food residue, identified as a "...carbon-black, distinct surface layer on the vessel interior," was discerned on four body sherds. Soot was not detected on any sherd in the lot (Madore 1990; Table 1).

INTERPRETATIONS/DISCUSSION

Several unique characteristics emerge from the preceding analysis. The coil breaks on several sherds indicate that the vessel was manufactured by a coiling technique. The general shape of the vessel consists of a rounded bottom sloping outward to a point of maximum diameter and then in to a somewhat constricted but large orifice. The use of a cord-wrapped paddle undoubtedly contributed as much to the construction of the vessel as it did to decoration, the action of the paddling bonding the coils together. In addition, interior/exterior cord-markings are a stylistic marker of the Early Woodland (Luedtke 1986: 120-121) as is the lack of a well developed neck (Dincauze 1991, personal communication); we can be confident, therefore, of the vessel’s assignment to that period.

The existence of the two bottoms (Figure 4) within the vessel lot may at first seem an anomaly. Neither base could be separated from the lot on the basis of temper characteristics. The possibility of a dual-bottomed pot (the lower part of the vessel consisting of two spaces, side by side) can not be dismissed, as we have seen this phenomenon in basketry (Dincauze 1991, personal communication). But it is highly unlikely here due to the nearly 2 mm difference in thickness between the two sherds (Table 1). Obviously, two pots are represented, but in light of my inability to separate them, they were considered part of the same vessel for analysis. Perhaps the two vessels were made from the same body of clay, explaining their structural similarities. Research with more advanced analytical techniques, Braun’s (1982) radiographic analysis for example, would undoubtedly shed a great deal more light on the problem.

The presence of food residue on several sherds indicates that the vessel was used as a cooking pot. The lack of soot, normally expected on cooking vessels, may be explained by the simple fact that the entire pot is not represented in the lot. Those sherds that accumulated soot are probably missing from the collection (Hally 1986).

The general shape of the vessel is also in line with its interpretation as a cooking pot. Vessels lacking corners or "sharp changes of direction" best absorb and distribute heat (Rye 1976: 114). In addition, the large diameter of the orifice (nearly 20 cm across) and lack of a substantially constricted neck would allow for easy manipulation of the contents (Hally 1986: 279).

But for a cooking vessel, how do its temper particles—quartz, feldspar, mica, and grog—relate to the function? An important characteristic of any cooking vessel is its ability to withstand the thermal stresses of the cycles of heating and cooling normally associated with cooking. When a vessel is heated, its structural constituents expand. Thermal expansion, expressed as a per-
Figure 3. The largest body (2.44) and rim (2.42) sherds from the vessel lot. Note the cord-wrapped padding on each sherd.

Figure 4. The two bottom sherds. Due to my inability to separate either bottom from the vessel lot on the basis of temper characteristics, they were considered to be part of the same vessel for analysis.

The percentage of volume at 800°C, for different types of clay can vary but generally ranges between 1.5 and 2.0%. If the thermal expansion of temper particles exceeds that of the clay, heating can result in cracks or shatter of the pot. Pots exhibiting the highest degrees of thermal shock resistance have, therefore, temper with thermal expansion characteristics similar to the clay (Braun 1982:184; Rice 1987:114,229; Rye 1976: 113-116).

Although two of the tempers contained within our pot (feldspar at 1.8% and grog at 1.5 to 2.0%) have expansions at 800°C comparable to clay, quartz at 4.5%, over two times that of clay, does not (Rice 1987:229; Rye 1976:115116). Neither Rice nor Rye report the rate for mica.

In addition, the relatively large size of the average temper particles, generally between 1.5 and 4.0 mm, would not be conducive to thermal...
shock resistance. In general, the larger the temper particles the greater the amount of expansion and therefore the increased likelihood that any differential expansion will result in a crack (Braun 1982:185). In light of these circumstances, it seems highly unlikely that the tempering materials were selected for their thermal behavior characteristics and functional potential.

It must be kept in mind, however, that the vessel dates to the Early Woodland, a period that began with the inception of pottery-making (Feder 1984). The technology in southern New England was still in its infancy, and it therefore seems plausible that the presence of several types of temper particles in the vessel represents an initial period of diversification where the properties of various tempering materials were not well understood. This is also supported by the apparent lack of control for the size of the various temper particles. The vessel may in fact derive from the very beginning of the Early Woodland period as interior/exterior cord-marked pots are among the earliest known in New England (Dincauze 1991, personal communication; Luedtke 1986:125).

A correlation does exist, however, between temper particles and the mechanical strength of the pot. Although large temper particles function as points of crack initiation because they become points of focus for various stresses, these cracks are cut short by the large particles and tend not to propagate (Braun 1982:184; Bronitsky and Hamer 1986:97; Luedtke 1986:120). In addition, thick vessel walls have been shown to be highly resistant to mechanical stresses (Rice 1987:227). At 8.5 mm, the mean value of sherd thickness undoubtedly increased its durability and strength. The capacity of the vessel to excel in mechanical strength is also within character for the time period. The southern New England peoples of the Early Woodland were mobile and thus their pots were probably subjected to a number of incidental stresses as they were carried from one site to another.

In addition, the apparent lack of control for temper particle sizes seems to indicate that the selection of materials for inclusion was more important than the consistency of the paste.

Perhaps this pot, like its predecessor, the steatite bowl, was used over a low flame to simmer rather than boil its contents. Such a situation would not require a high degree of thermal shock resistance because the heat would not be as intense. The thick, strong walls of the vessel may also mimic those of the steatite bowl. This hypothesis, however, cannot be proved, as very little experimental archaeology has been conducted for or with prehistoric New England pots (Dincauze 1991, personal communication). In any case, the thermal expansion rate and size of the quartz tempering particles would eventually have caught up with the pot and possibly resulted in its destruction.

CONCLUSIONS

The preceding study demonstrates the utility of a detailed attribute analysis for interpretation of a single vessel lot, particularly in the absence of well defined types or classes for southern New England pottery. Such an analysis also illustrates the utility of temper/function comparisons and provides the researcher an opportunity to discover the personality of the pot and its implications for the study of the technology, in our case for example, the recognition of grog tempering particles in an Early Woodland pot, a rarity in southern New England.

Acknowledgements: The author is indebted to Dena Dincauze and Michael Nassaney for their guidance and advice, and to Judy Leboff for a critique of an early draft.
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EASTERN WOODLAND MORTUARY PRACTICES
AS REFLECTED IN CANINE BURIAL FEATURES AT THE LAMBERT FARM SITE
WARWICK, RHODE ISLAND

Alan Leveillee

Ephemerality is the common denominator for all life which has been, which is now, and which will be, hosted by our planet. The finite nature of existence cannot be excluded from the equation of life. Hamlet's query is perhaps among our species' most eloquently worded expressions of the knowledge of our own mortality. As far as we know, we are unique among living things in our ability to realize the prophecy reflected in the death of others. It is a critical part of what makes us human and it is fundamental to the science of anthropology.

Anthropological approaches to mortuary practice are dynamic and interactive. The subject is entirely cross-cultural and unbounded temporally. As we consider mortuary practices, those of us who are archaeologists seldom find more fertile opportunities to link material remains with their meanings. We are challenged in these instances to go beyond applications of field technique and descriptive analysis, into our larger anthropological fold in order to transcend the tangible. We are afforded the opportunity to gain insight into ideas, symbolism, spirituality, and ceremonialism, the binding threads of culture.

In the undulating topography two kilometers inland from Narragansett bay (Figure 1), well-drained sandy soil interlaced with fresh water springs made the Cowessett hills attractive farmland in the 18th and 19th centuries. Among the subsistence farms scattered across these hills was that of the Lambert family. As was common to all the farms in the area, arrowheads were often collected from plowed fields here. In 1981 archaeologists from Rhode Island College conducted limited sub-surface testing at the farm as part of a larger regional survey and planning study. Sufficient data were collected to indicate a significant prehistoric site was present, and a national register nomination was prepared (Morrenon 1981). In 1984, during a relative boom in the housing industry, the farm was purchased by a development partnership. Because of the funding structure of 17 proposed house lots, the archaeological site on the property was unprotected by federal, state, and local CRM regulations.

In an attempt to mitigate the inevitable adverse effects to the site, the developers, the Rhode Island Historical Preservation Commission, the Warwick Historic District Commission, and The Public Archaeology Laboratory, Inc. entered into an unprecedented agreement. Working through the Educational Programs Department of the Lab, Jordan Kerber and I agreed to serve as co-principal investigators for a 3-1/2 year field program of data recovery. The project was to be conducted under permit with no direct cost to the developer. We agreed that if the development could progress in phased stages, allowing excavation of selected areas prior to construction impacts, we would conduct an archaeological study through field schools, weekend workshops, and with professional staff funded by grants. In November 1990 fieldwork was completed. Cataloguing and preliminary analysis are now ongoing. Through the course of the program, over 300 individuals have participated in the tightly con-
trolled excavation of the two acre site. By all measures, the program has been a successful one.

Over 500 50x50 cm$^2$ test pits and 125 1x1 m$^2$ excavation units have been dug across Lambert Farm (Kerber et al. 1989; Kerber 1990).

Based upon diagnostic projectile points, ceramics, and radio-carbon dates, it appears that the Lambert Farm site was occupied intermittently during the Terminal Late Archaic and more intensively in the Middle and Late Woodland periods. Uncalibrated (and uncorrected for $\delta^{13}$C or reservoir effect) radiocarbon dates on shell cluster around 850 $^{14}$C years before the present. Below the 25 cm plowzone, approximately 50 truncated features and activity areas have been identified.

Of particular interest was feature #2. Excavated in two contiguous 1 x 1 m$^2$ units in 5 cm levels, the feature became obvious at the plowzone terminus as a generally circular, dense concentration of shellfish remains. The diameter of the feature was approximately 1 meter. The feature had been constructed as follows. Initially a pit was dug, then filled with layers of shell. It appears that shell was then moulded over the pit. The shellfish consisted primarily of quahog, softshell clam, oyster, bay scallop, knobbed whelk, razor clam, and ribbed mussel. Many of the shells were whole, and their distribution within the feature appeared stratified, scallop shells in particular located at the bottom levels with oyster and quahog above. Mixed within the shell layers were burnt rocks, aboriginal ceramics, local and exotic lithic debitage, deer and bird bone fragments, mica fragments, and a steatite platform pipe. The shell extended to a depth of 73 cm below the surface, where the articulated skeletal remains of two canines were encountered. Both had been buried in an extended position. One skeleton was situated on its right side, facing north, the other had been placed on its left side facing south. An uncalibrated, uncorrected radiocarbon date of 870+/−80 $^{14}$C years B.P. (Beta #27937) was obtained from shell in association with the remains.

Both dogs were immature. Although one of the individuals was slightly larger than the other, they are both estimated to have been between five and six months old at the time of death, based upon the sequence of tooth eruption. It was not possible to determine the sex of either individual (Kerber et al. 1989). The cause of death could not be ascertained, nor were there any visible post mortem injuries or cut marks (Kerber et al. 1989).

A second occurrence of a canine burial was encountered in feature #22, in excavation unit 5, and subsequent contiguous units 62 through 64.
This burial was located approximately 50 meters northeast of the first. As before, a dense shell feature was observed below the plowzone. Mixed shell, with some degree of stratification, occurred to a depth of 85 cm beneath which an adult male dog had been carefully buried (Figure 2). The dog had been placed on its left side facing southeast. The immediate feature fill was darkened by a mix of soil and charcoal. Several large softshell clam shells were placed beside the remains. Again -- lithic debitage, deer bone fragments, and occasional bifaces, including a Levanna projectile point were recovered from within the feature. A shell from the feature has been radiocarbon dated to an uncalibrated, uncorrected $610 \pm 70 \text{^14C years ago (Beta 43486)}$. The Levanna point supports a Late Woodland temporal affiliation, culturally contemporaneous with the initial find (although several hundred years more recent). As in the first instance, examination of the bones found no evidence of trauma. However, the severe angle of the spinal column attests that the body was folded to accommodate placing it in the pit. The positioning of the skeleton confirms that death had preceded burial. This was less clear in the case of the immature pair due to the lack of bone fusion and the fragile nature of the remains.

It is certain that careful burial of canines took place at Lambert Farm in the prehistoric Woodland period. In recent decades, similar features have been noted regionally. In the Northeastern United States, the inventory includes burial features in which dogs accompany humans as well as those in which dogs are interred exclusively (Lopez and Wisniewski 1958). Notable among the later are Kipp Island, New York (Ritchie 1965), Squantum, Massachusetts (Nelson 1989) and Grannis Island, Connecticut (D. Thom-
pson [1989] cited in Kerber et al. [1989]). Additionally, two sites within five kilometers of Lambert Farm, Sweet Meadow Brook (Fowler 1956) and Potowamut (Kerber 1984) contained dog burials. Outstanding examples of features containing humans accompanied by canines included Frontenac Island, New York (Ritchie 1965) and Sweet Meadow Brook in Rhode Island (Fowler 1956). It should be noted here that the total inventory of human skeletal remains from Lambert Farm consists of two teeth. Both were recovered from a plowzone context that was not in proximity to the canine burials.

A cursory review of the ethnographic literature indicates that the role of canines in Eastern Woodland Native American cultures ranged from hunting aids to themselves being a food source, and from protective camp guards to symbolic companion spirits.

Among the Delaware a newborn child was given a pet dog. The dog’s role was to serve as a guardian of the health of its master. If sickness was prevalent the Delaware believed that the dog would contract the illness instead of the child. If indeed the child’s dog became ill and died, it was buried and the child was given another pet. If the child fell ill and died, the dog was released unharmed (Tantaquidgeon 1942; Kerber et al. 1989).

Among the Micmac of the Canadian Maritime Provinces dogs were held in high regard as hunting companions and symbols of wealth. Each hunter was said to possess seven or eight dogs. One missionary ethnographer in 1612 referred to the slaughter of dogs on the eve of the death of a man that he might have their assistance in the next world (cited in Wallis and Wallis 1955; Kerber et al. 1989).

The Iroquois of the early historic period viewed dogs not as companions but utilized them in elaborate ceremonies. Dog flesh was consumed on special and ritual occasions, such as in preparation for war. The ritual burning of a white dog was practiced at the Mid-Winter Festival into the 20th century (Morgan 1901; Kerber et al. 1989).

Seasonality studies now being conducted on the Lambert Farm data may provide insights into the canine mortuary practices there. We are in the process of sectioning quahog shells and microscopically examining growth patterns in an attempt to determine their season of harvest, and subsequent deposition. While the analysis is preliminary, and the small sample size limits the statistical reliability of the results, it appears that the two immature specimens were buried in the summer months while the mature male was interred sometime between mid summer and early fall, based upon shells in immediate association (R. Greenspan, pers. comm. 1990).

The nature of the canine mortuary features at Lambert Farm suggests that they were not spontaneous, independent individual events but were constructed within a cultural template which dictated form and function. Importance, either in esteem, affection, or symbolic association is reflected in the care with which these animals were placed in their graves. Beyond shellfish, grave offerings do not appear to have been seen as necessary. While we noted the steatite pipe, mica, lithic debitage, and deer bone in the feature fill of the immature dogs, these items were mixed in fill lenses above the bodies. In all cases these artifacts were broken or exhausted, with no further utility to their human owners. Nor did items appear to have been ritually killed. In the case of the mature male burial, utilitarian items were located next to, but not within the feature.

It is logical to assume that the principal activity indicated by the presence of shellfish on the site was human consumption of their meats. Numerous non-burial features attest to this. Consequently, the raw materials for the shell layers over the burials were a by-product of dietary practices and may not have been collected specifically for use in ceremonial burial. However, an interesting point can be raised here. My colleague, Jordan Kerber, is intrigued by a nag-
ging question. He asks why would anyone carry relatively heavy baskets or bundles of shellfish, uphill, two kilometers inland (Kerber 1990)? It is a valid question. Certainly, it would have been less work to extract the meats along the shore eliminating more than half the weight. Nonetheless, literally tons of shells were transported to the site. From this we deduce that it was either practical or desirable to bring the shells, as well as their meats to Lambert Farm. It is also interesting to note that no evidence of shell bead or wampum industry exists in the archaeological record at the site. Is it possible that the use of the shell in the mortuary features at Lambert Farm reflects a point when it had taken on importance beyond that of simply a container for its meat? The burial features at Lambert Farm suggested that by 850 14C years B.P. shell itself had assumed some symbolic significance in Native American Eastern Woodland cultures.

Whether or not the dogs at Lambert Farm were ceremonially sacrificed is, as yet, a matter of speculation. To date there is only circumstantial evidence to support a sacrifice hypothesis. I would caution anyone against looking too hard for a dramatic, singular ritual, the stuff of television and movies. I prefer to think that we are here afforded a glimpse of everyday life in a culture and the compassionate ways in which the people dealt with ephemerality.

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THE SLOUGH POND SITE, BREWSTER, MASS.

Alan E. Strauss and Robert Goodby

INTRODUCTION

A Phase I (intensive) archaeological survey was conducted in January 1991 at the Slough Pond Site (19-BN-658), a houselot in Brewster, Massachusetts on Cape Cod. The project area consists of a wooded slope on a low knoll above Slough Pond and is located about 1 and 1/2 miles (2.4 km) south of the coast (Figure 1). The general area is surrounded by numerous freshwater ponds. The Phase I field investigations included a surface inspection of the area followed by the excavation of 10 shovel test pits. A rim sherd of pottery tempered with crushed rock was found on the surface adjacent to an access road that enters the property where erosion had occurred. No other surface cultural remains were identified. The ten shovel test pits (TP 1-10) were placed at 10-meter intervals within the proposed driveway and house foundation (Figure 2). One test pit was excavated within the proposed septic system. Twenty-two prehistoric artifacts were recovered during the intensive survey including, a projectile point midsection (felsite), cord impressed, grit-tempered pottery, and chipping debris (Strauss 1991: Appendix). In addition, two pieces of calcined bone and six fire-cracked rocks were recovered. Numerous small fragments of charcoal were found associated with the fire-cracked rocks.

Additional testing was recommended for the site in order to investigate the potential subsurface feature found during the Phase I survey and to determine the nature and extent of the site. This paper provides the results of the additional archaeological work conducted at the Slough Pond Site in May of 1991 under the Massachusetts Historical Commission (MHC) permit number 1155 in accordance with state and local legislation. Mr. Robert Goodby served as field assistant for the project and wrote and conducted the ceramic descriptive analysis and Mrs. Tonya Largy analyzed and identified the organic remains.

Figure 1. Project location on Cape Cod in the southern New England region.

FIELD AND LABORATORY PROCEDURE

Subsurface testing at the site consisted of the excavation of two 1 x 1-meter units (EU's 1 & 3), a 50 cm x 1-meter unit (EU 2), and nine 50 cm square shovel test pits (TP 4N, 4E, 4S, 11-16). All soils were sifted through 1/4-inch (0.6 cm) wire mesh and excavation
was done in natural horizons, each being sifted separately. The meter units were excavated by trowel within each natural horizon. The B-horizon denotes the subsoil, below the topsoil or plowzone, and was excavated in 10 cm increments.

Soil samples from cultural horizons or features were dry sifted through 0.075-inch screens in order to recover microflakes, seeds, fish scales, calcined bone, carbonized nut fragments, or other faunal and floral remains. The sifted samples were examined under 10x-200x magnification using a binocular dissecting microscope (Wild M3 Zoom).

The charcoal samples were sent to Geochron Laboratories-Krueger Enterprises in Cambridge, Massachusetts for radiocarbon age determination.

RESULTS OF FIELD INVESTIGATIONS

50 x 50 cm Shovel Test Pits (Fig. 2)

Three shovel test pits were excavated to the north, south, and east of TP 4 where a single felsite retouch flake was found during the Phase I survey. Test pits 11 through 16 were excavated in order to further define the horizontal boundaries of the site and activity area. Test pits 11 and 12 were excavated to the north
and south of TP 10 (where artifacts were found during Phase I). No cultural remains were found in these test pits.

The lack of artifacts across the site suggested that the prehistoric activity area was restricted to a small cultural locus in the vicinity of Test pits 3 and 10 in the western portion of the impact area. Consequently, the remaining test pits (TP 13-16) were excavated within this area in order to define the extent of the cultural material. One quartzite flake was recovered in TP 13. One chalcedony-like flake was found in TP 14. One quartz flake, one red and gray felsite biface fragment, and six pieces of pottery were recovered between 20 and 30 cm below the surface in TP 15. The pottery ranges in color from light to dark brown, and it is tempered with sparse fine crushed rock. No artifacts were recovered from TP 16.

Excavation Units (Fig. 2)

Excavation Unit 1 was excavated in order to investigate the potential fire hearth found during the intensive survey. Soil stratigraphy in EU 1 exhibited under the duff two basic horizons: a dark brown fine silty sand (topsoil, level 1), and a dark yellow-brown medium sand (B-horizon or subsoil, levels 2-5). A thin layer of grey, sandy slope-wash covered the topsoil. Levels 1 and 2 appeared orange-brown in the field and the transition between them was gradual and indistinct.

A stemmed projectile point made of mottled pink and maroon felsite was recovered in the grey sand at 12 cm below the ground surface (Figure 3, A). The projectile point, which lacks the tip, is roughly flaked and does not appear to be finished. It exhibits a thick area near the base. Level 1 (6-15 cm) contained two quartzite retouch flakes and three sherds of pottery tempered with crushed rock. One of the sherds exhibits a scallop-shell or pseudo-scallop impression. Level 2 (15-25 cm, B-horizon) contained 13 pieces of pottery, 3 quartz flakes, 2 red quartzite flakes, and one unidentified fine-grained flake. Several granitic (possibly fire-cracked) rocks were also found scattered in a haphazard fashion in this level. The rocks may have been part of a feature at one time. Very few pieces of charcoal were found associated with the rocks. Six pieces of calcined bone were, however, recovered from this level. Level 3 (25-35 cm) contained a felsite projectile point tip, two quartzite retouch flakes, two quartz flakes, and four pieces of pottery tempered with crushed rock. One charred hickory nutshell was also recovered. Level 4 (35-45 cm) contained one quartzite retouch flake, two quartz flakes, and two pieces of pottery. No artifacts were found in level 5 (45-55 cm).

Excavation Unit 2 exhibited two basic horizons under the duff: a dark gray-brown sand (topsoil, level 1), and yellow-brown medium sand (B-horizon, levels 2-4).

One piece of pottery tempered with crushed rock was recovered from within the duff and a second piece, with linear incised lines, was found in level 1 (5-15 cm). One quartzite flake and one maroon felsite flake were found in level 2 (B-horizon, 15-25 cm). Thirty-two ceramic sherds were also found in this level (see ceramic descriptions). In addition to artifacts, one piece of charred hickory nut and one fragment of calcined mammal bone were also recovered.

Level 3 (25-35 cm) contained one quartzite retouch flake and 18 pieces of prehistoric pottery, consisting of two rim sherds and 16 body sherds. The majority of pottery sherds from this unit exhibited coarse, crushed rock tempering and a decorative motif of horizontal and oblique incising (see ceramic descriptions).
Numerous fragments of charcoal were observed in this level in direct association with the pottery, but the sample was not large enough to be dated.

Level 4 (35-45 cm) contained no prehistoric artifacts but did have one piece of calcined mammal bone similar to the proximal articular surface of the second phalange of a deer.

Excavation Unit 3 exhibited two basic soil horizons under the duff: dark brown fine silty sand (topsoil, level 1), and yellow-brown medium sand (subsoil, B-horizon, levels 2-4). A layer of gray-brown sandy slopewash covered the topsoil.

No artifacts were recovered from the duff or level 1 (5-20 cm). A red and maroon mottled biface fragment and a blocky fragment of similar material were found at a depth of 30 cm below the surface. Three quartzite, one felsite, and one chalcedony-like flake were recovered from level 2 (20-30 cm, B-horizon). Forty-nine sherds of prehistoric pottery, consisting of eight rim and 41 body pieces, were also recovered (see ceramic description). Many of the ceramics exhibited coarse, crushed-rock temper and linear incised lines.

Numerous pieces of charcoal and calcined bone were observed in level 2 in direct association with the prehistoric pottery. Sample GX-16799 from Excavation Unit 3, level 2, produced a date of 2,435 ± 160 C-14 years B.P. (C-13 corrected). The delta C-13 value was -25.9 0/00, which is close to the standard value for deciduous wood -25.0 0/00 (David Drucker, personal communication 1991). The analysis of charred wood samples from level 2 indicated the presence of oak (Quercus); hickory is represented by two nutshell fragments. Four pieces of calcined bone (two identified as mammal) were also recovered. Eleven naturally occurring uncarbonized nodules, called sclerotia, were also identified (McWeeney 1989).

A quartzite stemmed projectile point was recovered from level 3 at a depth of 34 cm below the surface from EU 3 (Figure 3, B). No artifacts were found in level 4 at a depth of 40 to 50 cm.

CULTURAL MATERIAL RECOVERED

Diagnostic Stone Artifacts

Two broken projectile points were recovered from the site during this field study. A stemmed point of mottled red and maroon felsite (Fig. 3, A) was found in EU 1 at 12 cm below the surface. This point is similar to the Rossville type (Early Woodland) but is somewhat more stemmed. Rossville "stemmed points", usually considered diagnostic of the Early Woodland period, have been found on Cape Cod and may continue into the Middle Woodland period (Shaw 1989:37; Moffett 1957).

A projectile point tip made of a gray-brown fine-grained felsite was recovered from between 25 and 35 cm below the surface in EU 1. This point can not be assigned to a temporal affiliation.

A quartzite stemmed point was recovered at 34 cm in depth in EU 3 (Figure 3, B). The very base of this projectile is missing, but based on its overall morphology one would classify it as a Stark-like point (Dincauze 1976). This point was recovered in close association with the ceramics recovered from the site. Further analysis indicates that similar stemmed points have been recovered in association with pottery on Cape Cod (Moffett 1957; Shaw 1989; Fred Dunford, personal communication 1991). In fact, Shaw recovered two almost identical points with matching lithic chipping debris within Middle Woodland stratigraphic levels at the Willowbend site in Mashpee (Shaw
Figure 3. Selected diagnostic artifacts recovered during the additional testing study. Key: A) Stemmed Rossville-like point, mottled red & gray felsite; B) Stemmed projectile point, rose & gray quartzite; C) Rim sherd, coarse crushed rock temper, exterior, Vessel Lot 1; D) Rim sherd, coarse crushed rock temper, exterior, Vessel Lot 1; E) Body sherd with incised decoration, exterior, Vessel Lot 1; F) Sherd with incised lines, exterior, Vessel Lot 1; G) Sherd with oblique & parallel lines, exterior, Vessel Lot 1; H) Sherd with wiped cord impression & incising, Vessel Lot 1; I) Two sherds with wide incised lines, Vessel Lot 1.
Neville- and Stark-like points from the Middle Archaic may have been picked up and used during the Early or Middle Woodland periods (D.F. Dincauze, personal communication 1992), or Early Woodland people were manufacturing stemmed points similar to Stark and Neville varieties.

A red-maroon mottled felsite biface fragment was recovered from a depth of 30 cm in EU 3. A cobble fragment of a similar material was also recovered at the site.

**Lithic Debitage**

A total of 39 pieces of lithic debitage was recovered from the Slough Pond Site. Five types of raw material were found at the site: quartzite, felsic volcanics, quartz, chalcedony, and argillite. A brief description of these materials is provided below.

**Quartzite.** Twenty-four quartzite flakes were found at the site, which account for 62 percent of the lithic material. The quartzite consists of three varieties: gray to tan, white, and black. The stone was fine-grained and sugary in texture and one flake exhibited cobble cortex. Five of the flakes were one centimeter or smaller in size and had complete platforms (these are retouch flakes). One piece of quartzite shatter was also found. It is likely that the quartz was obtained in cobble form from the local area. Cobble quartzite was commonly used prehistorically throughout the Cape Cod region especially at coastal localities (Strauss 1986:18).

**Felsic volcanics (felsite).** Fine-grained volcanics were the next most abundant raw materials found at the site. Seven pieces of felsic volcanic (felsite) debitage were recovered, accounting for 18 percent of the lithic debris. Two basic types of felsite were recovered: a red-brown, fine-grained aporphyritic type, and a mottled red and maroon coarse textured material with white phenocrysts. One cobble fragment and one blocky fragment of the coarse felsite similar to the biface fragment from EU 3 were also found. It appears that locally available cobbles of felsite were also used at the site to manufacture stone tools.

**Quartz.** White quartz is represented at the site by only five flakes; 13 percent of the total debitage. No large blocky pieces or cobble cortical surfaces were found. Quartz is also readily available in the local area.

**Chalcedony-like material.** Two tertiary flakes of a translucent buff colored rock were found. This material is very fine-grained and waxy to the touch. The exact origin of this material is unknown but may indicate long distance trade.

**Argillite.** One piece of blue-gray argillite was recovered from the site. Similar material has been reported from the Cambridge slate series in the Boston area (Nelson 1975) and from Barrington, Rhode Island (Anthony et. al. 1980: 44). The argillite is very gray and not similar to that of the Narragansett Basin studied by the author (Strauss 1989).

**Ceramic Analysis.** Analysis of the prehistoric ceramics from the site was undertaken by Robert Goodby and Dr. Victoria Bunker.

Dr. Bunker examined sherds from Vessel Lot 1. These sherds were brown in interior color (7.5 YR 5.1/3), reddish yellow on the exterior (7.5 YR 6/6) and dark brown on the core (Y.5 YR 4/2) (Munsell 1974). The red and brown color indicates an oxygen rich atmosphere such as an open camp fire during firing. These sherds were very hard and scored "5" on the Moh's hardness scale. This indicates either a very hot fire or firing for a long duration. The temperature of the fire was in excess of 500 degrees centigrade (Victoria Bunker, personal communication 1991).
Summary of the vessel lot descriptions of the pottery from the Slough Pond site, by Robert Goodby:

**Vessel Lot 1** includes the bulk of sherds from the site, both by number and weight. Over 120 sherds from this vessel were recovered, largely from Excavation Unit 2 and the southern portion of EU 3. While a few sherds from this vessel were recovered from the duff, and a few from level 4, the vast majority came from levels 2 and 3. Attributes of this vessel were recorded exclusively from 18 rim sherds (Figure 3, C and D). Both surfaces of this vessel appear to have been smoothed. Exterior surfaces are cord impressed but smoothed over. Decoration consisted of horizontal and oblique incising, and was restricted to the exterior surface (Figures 3, C,D,E,F,G,H,I). Incised lines varied in thickness and depth, although most appear to have been applied with a square-tipped tool (Figure 4). These lines were not applied uniformly across the vessel surface; some rim sherds exhibit oblique lines descending from the rim, others a deep horizontal line with oblique lines beneath it, and one sherd has three horizontal lines immediately below the rim which appear to intersect with oblique lines (Figure 4). All oblique lines on rim sherds descend in the same direction. Interior surfaces were undecorated, but faint fingernail impressions were noted on a few sherds.

The lip of this vessel was roughly square, and in profile it appears that the rim was slightly everted. There is no indication of a constricted neck or a collar. The temper used in this vessel was perhaps its most distinguishing attribute. The ratio of temper to clay was unusually high for prehistoric ceramic vessels in New England, and the temper, while a roughly even mixture of medium-to-coarse angular...
feldspar and quartz particles, included some exceptionally large pieces (>6mm) which protruded through both walls of the vessel. Exterior color ranged from light brown to reddish-yellow, suggestive of an oxygen-rich atmosphere during firing. Interior color ranged from pale brown to light yellow-brown, suggesting more of an oxygen-depleted atmosphere during firing.

Numerous coil fractures were observed on sherds from this vessel. A number of conjoining sherds were identified and glued together prior to analysis, but not enough to permit estimation of overall vessel size or form. In general, the coarse temper did not allow for clean fractures and easy reconstruction. Dr. Bunker suggests that corded surfaces with incisions and coarse temper may indicate Vinette I, Early Woodland pottery. Vinette I however, is generally softer, thicker, and fired at a lower temperature. While Late Woodland pottery is hard, fired at higher temperatures, and also often has corded surfaces with incised lines, it usually has fine sand or shell temper. Therefore, while some aspects of the technology suggest Late Woodland, the style and context suggest Early Woodland (Victoria Bunker: personal communication 1991).

**Vessel Lot 2** consists of one rim sherd and approximately 30 body sherds, almost entirely from EU 1, Test Pit 3, and Test Pit 10. Sherds are generally small (<4 cm), and were recovered from all four levels of EU 1. Interior and exterior surfaces were smoothed, and one sherd exhibits faint S-twist cord impressions that can be seen with magnification (Figure 5-A). One sherd has a cord-wrapped stick impression (Figure 5-B), and two sherds have...
scallop-shell or pseudo-scallop-shell-like impressions (Figure 5-C). Lips and interior surfaces are undecorated. The lip is square, and straight in profile. This vessel was tempered with fine angular quartz and feldspar particles, with feldspar predominating. Exterior surfaces were a very pale brown, and interior surfaces were pale brown. A single sherd has an obvious coil fracture. No conjoining sherds were identified. Vessel Lot 2 probably dates to the Middle Woodland period based on technological and stylistic attributes. Middle Woodland vessels on Cape Cod often exhibit more than one decorative technique (Childs 1984b: 253-259).

Vessel Lot 3 consisted of a single rim sherd, discovered on the surface in an eroding area of the site approximately 20 meters south of the excavation units. Interior and exterior surfaces were smooth, and a single faint cord-wrapped stick impression was visible (Figure 5-D). Two deep grooves left by the potter's fingers were present on the interior surface, as were fingernail impressions. The rim was markedly thicker than the rim sherds present in the other vessel lots. Temper consisted of fine and medium angular chunks of quartz and feldspar; in contrast to other vessel lots, very few pieces of temper were visible. The exterior surface was light brown, and the interior surface was light greyish brown. A coil fracture was present on the portion of the sherd parallel to the rim. Vessel Lot 3 probably dates to the Middle Woodland period.

Vessel Lot 4 was represented by two small (1-2 cm.) body sherds recovered from Test Pit 7, approximately 70 cm. below surface. A single cord impression was apparent on the sherd surface. Only medium sized angular particles of feldspar were used as temper. The core, and interior and exterior surfaces were very dark grey. No coil fractures were visible. The unusual color of these sherds (suggesting an oxygen-reduced atmosphere during firing) was the primary basis for distinguishing this vessel lot. The vertical and horizontal separation of these sherds from those of Vessel Lots 1 and 2 and the use of a single temper type (feldspar) supports assigning these sherds to a separate vessel lot.

Ceramic Summary. None of these vessels are consistent with the fabric-impressed Vinette I pottery characteristic of the Early Woodland period (c. 3000-2000 B.P.); and none are typical of the elaborately decorated, collared vessels found in the last centuries of prehistory. While incising is a predominant decorative feature of late prehistoric vessels, it is typically confined to vessel collars during this period. The use of cord-wrapped stick, incised, and scallop-shell designs is generally associated with Middle and Late Woodland ceramic vessels in a time range from 1800 to 600 B.P. (Ritchie 1969; Childs 1984a: 189). That crushed rock and not shell temper is associated with these design elements suggests a Middle Woodland (1800-1100 B.P.) temporal affiliation (Childs 1984a: 188-190). This time period is tentatively offered as a date for Vessel Lots 2, 3, and 4.

Vessel Lot 1 may date to the end of the Early Woodland period as it contains sherds with both a cord-textured surface treatment (Early Woodland), incised decoration (Middle and Late Woodland), and coarse, crushed rock temper, the latter being another typical characteristic of Early Woodland ceramics (Peterson and Hamilton 1984:415). In general, most dated associations of Vinette I ceramics in New England are between 3,000 and 2,000 B.P. (Snow 1980; Childs 1984a: 188; Hamilton and Yesner 1985).

Early Woodland ceramics are not, however, limited to the classic Vinette I type. A number of Early Woodland sites contain
ceramics with fabric or textile impressions combined with other decorative attributes, such as incising or simple dentate impressions similar to Vessel Lot 1 from the Slough Pond site. Peterson and Hamilton suggest the existence of a "closely associated form to Vinette I (which) exhibits smoothing over the interior and/or exterior perishable impressed surface" (1984: 416). This form has been reported from both Connecticut (Lavin 1980) and Long Island (Salwen 1968), as well as other states throughout the northeast. One crushed complete vessel with dense coarse temper (2-6mm), coil construction, and smoothed interior and exterior surfaces from Cape Cod has recently been dated to 2,400 ± 150 B.P. (Shaw 1989:45). Incised Vinette I pottery has also been reported from the Boucher site in Vermont (Snow 1980:297).

Vinette I ceramics have been recovered on Cape Cod and the offshore islands at a number of sites although few have securely dated contexts, i.e. Small’s Swamp, Holden, Rose, and Warren’s Field, all in Truro (Moffet 1946,1951,1957,1959). Similar ceramics were also recovered at High Head in the 1980s (Childs 1984b:253-259). Pottery that is very similar to Vessel Lot 1 at Slough Pond, with wide incised lines and what appears to be wiped over cording, was recovered from the Holden site on Cape Cod (Moffett 1957:Plate 3).

To summarize, the prehistoric pottery at the Slough Pond site appears to represent two time periods. Vessel Lot 1 may date to the end of the Early Woodland period and Vessel Lots 2, 3, and 4 may date to the Middle Woodland period.

CONCLUSIONS

During the additional subsurface testing at the Slough Pond site, two stemmed points have been found, one of which is identified as belonging to the Early or Middle Woodland periods. The other resembles points of the Middle Archaic (Dincauze 1976). There appear to be a number of these Stark or Neville-like stemmed points in Woodland contexts on Cape Cod.

The prehistoric ceramics at the site have been identified as representing four separate vessels. Vessel 1 was recovered from EU 2 and 3 in the same stratigraphic levels as charcoal dated to 2,435 ± 160 B.P. and would therefore date to the Early Woodland period. A quartzite stemmed point, classified as an Early Woodland form was also recovered from EU 3. Vessel 2, recovered from TP 3, 10, and EU 1 has been classified as Middle Woodland. Sherds from this vessel were clearly distinct from Vessel 1 and exhibited cord-wrapped stick, scallop shell, and cord impressions. None of these sherds were found associated with Vessel 1. Vessel 3 has been identified from a single rim which was found on the surface about 20 meters south of the other vessels. This sherd is cord-wrapped stick impressed and may date to the Middle Woodland period. The fourth pot is represented by two sherds from Test Pit 7. This pot has a cord impression and is assigned to the Middle Woodland period.

While each of the four vessel lots were found in discrete clusters, it is interesting to note that all of the pottery, with the exception of the surface find, was found in an area about 5 x 5 meters in size. In fact, almost all of the artifacts were recovered from this small area, except for one flake found in TP 4. The fact that all of the artifacts were found in such a small area makes the interpretation of the site difficult. It would seem very coincidental that people during the Early Woodland period and then again during the Middle Woodland period would leave pottery in exactly the same 5 by 5 meter area. The topography of the area that was tested is homogeneous and provides no
good reason that only this one small 25 square meter portion of the project area should have been utilized. This may suggest that only one group of people made all four pots, or, that the site is Early Woodland and its inhabitants manufactured pottery with a variety of types of temper and decorative techniques. This interpretation is in contrast to our traditional belief that distinct types of pottery were made during specific time periods. One must remember however, that on Cape Cod, some sites have pottery that exhibit multiple decorative styles on single vessels.

A second interpretation of the ceramics is that the site represents occupation during the Early Woodland period and then again during the Middle Woodland period. Perhaps the part of the site excavated which contained Vessel 1, the two stemmed points, and the carbon date of 2,435 +/- 160 B.P. is indeed Early Woodland. The remaining small amounts of Middle Woodland pottery could be from a portion of a larger site locus that has since been destroyed or eroded away from the construction of Slough Road, or by the access road that runs along the western edge of the project area. In this case, spatially, the Middle Woodland locus may have just marginally overlapped the Early Woodland locus leaving only a few remaining Middle Woodland sherds. Unfortunately, it is not possible to determine which of these two situations actually occurred.

While no distinct fire hearths or refuse pits were identified at the site, scattered pieces of fire-cracked and fire-reddened rock were found. The charcoal recovered from the site, at least in part, has been identified as oak. The site is presently vegetated with scrub oak. Charred hickory nutshells found in the same stratigraphic levels as the pottery and lithic artifacts indicate that these items were available as a food source. Hickory nuts are high in protein and fat and were an important prehistoric food source. Hickory nut gathering is limited to September and October, but nuts can also be stored for winter use. Their presence suggests that the site was used during the fall or winter. Fragments of burned animal bone indicate that the site’s inhabitants exploited large mammals, possibly including deer. This would indicate that hunting or trapping for food and furs took place in the vicinity of the site most likely also during the fall when animal pelts are thickest.

Lithic debitage at the site consisted of locally available rocks such as quartzite, quartz, and felsite. These rocks were reduced from cobbles to manufacture the stone tools as evidenced by a few flakes with cortical surfaces. Quartzite flakes of an almost identical type to the stemmed point recovered in EU 3 suggest that this projectile was manufactured at the site. For the most part however, most of the lithic debris was of a tertiary nature and represents the finishing stages of tool production. Very few large blocky pieces were recovered, which suggests that primary reduction occurred elsewhere.

The limited amount of chipping debris and prehistoric artifacts coupled with the restricted spatial distribution of the cultural remains indicates that the site was either occupied for a very short period of time or by a small group of people. No scraping, woodworking, or cutting tools were recovered at the site. The low variety of tool types recovered (projectile points) may also be indicative of a temporary encampment.

This prehistoric site is very important for our understanding of New England prehistory, because it provides an absolute date in association with ceramics and diagnostic points. The Slough Pond site provides another Cape Cod site where stemmed points (similar to Stark and Neville) have been found in a dated Woodland context. Furthermore, the site raises
important questions about the validity of using exclusive pottery types to date each subperiod of the Woodland period. If indeed the site represents one group of people manufacturing several different forms of ceramic vessel, we may have to rethink our traditional views of prehistoric behavior and ceramic typology.

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SQUANTO BEFORE HE MET THE PILGRIMS

Jerome P. Dunn

Squanto, or Tasquantum, taught the Pilgrims about fertilizing maize plants with herring. He showed them where to fish, and helped the Pilgrims gather otter and beaver pelts from the aboriginal inhabitants of eastern Massachusetts and Rhode Island (Bradford 1912, i:235; Mourt 1622:471). He showed the English some of the ancient trails of Massachusetts and Rhode Island. He piloted their boats into Boston Harbor and around Cape Cod in search of natives with furs, maize and beans to trade for English beads and knives (Bradford 1912,i:277).

In 1622, just before his death, Squanto tried to show the English a way to bring the SWAN, a Wessagusset ship capable of carrying thirty tons, through the shoals south of Chatham. Squanto claimed that he had been through the passage twice, once with the English and once with the French (Winslow 1624:535).

Many English had never seen a beaver’s pelt before they met Squanto (Bradford 1912, i:235). Many Wompanoag had never heard of the Virginia settlement before Squanto told them (Winslow 1624:593). Although there may have been other natives who could speak some English, William Bradford, the second governor of New Plymouth, told Massasoit’s ambassadors that without Squanto he would have been unable to understand Massasoit or any other Pokanoket (Winslow 1624:526). Conbitant, the sachem at Gardner’s Neck in Swansea, said if Squanto “were dead: the English had lost their tongue” (Mourt 1622:479).

Squanto’s contemporaries never described his physical appearance or clothing. He must have been physically able and retained his Wompanoag habits and skills throughout his life. The Pilgrims wrote:

“Squanto went, at noon, to fish for eels. At night, he came home with as many as he could well lift in one hand; which our people were glad of. They were fat and sweet. He trod them out with his feet; and so caught them with his hands, without any other instrument” (Mourt 1622:461).

Squanto and Waymouth.

In 1658 Sir Ferdinando Gorges, a President of the Council for New England, wrote that Tasquantum was kidnapped in 1605 at Pemaquid in Maine by George Waymouth, the commander of the ARCHANGELL (Gorges 1658:8). Three of Waymouth’s captives went to live with Gorges and two went to live at the estate of Sir John Popham (Baxter 1890:68). Nevertheless, many doubt Gorges’ assertion (Salisbury 1982:265), because James Rosier, Waymouth’s diarist, does not list Squanto among the names of the five captives (Purchas 1905, xviii:359).

Tantum and John Smith.

There are a puzzling number of similarities between Squanto and a man called Tantum, who was brought from England to Cape Cod in 1614 by Captain John Smith (Smith 1895:732; 1986,ii:428). Smith had traveled in a small boat with eight other men from Monhegan to Cape Cod. With Tantum’s aid he traded for 1100 beaver, 100 marten and 100 otter pelts (Smith 1895:698; 1986,i:426).
"Then come you to Accomacke...after much kindnesse, wee fought also with them, though some were hurt, some slaine, yet within an houre after they became friends" (Smith 1895:719; 1986,ii:418).

Tantum was probably at this battle at Plymouth. With our evidence, similarities between Squanto and Tantum are only speculation.

**Squanto and Thomas Hunt.**

Smith, the Pilgrims and even Gorges (Purchas 1905,xix:274) all agree that Squanto was kidnapped in 1614 at Patuxet (Plymouth) by Captain Thomas Hunt, captain of another ship in Smith's fleet. Before leaving Monhegan to sail to Europe, Smith ordered Hunt to stay behind and dry fish. The dried fish was to be taken immediately to Spain, but after Smith left, Hunt sailed instead to Patuxet (Smith 1986,i:433; ii:401) and captured twenty natives by inviting them to come aboard his ship and trade with him. Then he went to Nauset and kidnapped seven natives (Mourt 1622:453,475). Hunt went next to Malaga in Spain with the prisoners kept below hatches (Gorges 1622:209,210). There he sold whom he could for rials of eight (Smith 1895:699) or twenty lire per slave (Mourt 1622:453). Those whom Hunt could not sell were confiscated by Catholic friars (Gorges 1622:209,210).

Hunt got the same monetary return per slave as per 1200 pounds of dried fish (Smith 1986). Smith and Hunt returned to Europe with over sixty tons of fish. At that time the average English sailor earned twenty lire after nearly two years of work, although he could earn the same amount in seven months by purchasing one share in a voyage to America (Smith 1986,i:428).

In the 1620s the Pilgrims were met by: us because she never saw English: yet could not behold us, without breaking forth into great passion, weeping and crying excessively. We demanding the reason of it; they told us, She had three sons, who, when Master HUNT was in these parts, went aboard his ship to trade with him; and he carried them captives into Spain, for TISQUANTUM at that time was carried away also: by which means, she was deprived of the comfort of her children in her old age" (Mourt 1622:475).

It is not clear how Squanto got from Spain to England, although Gorges wrote that it was by "a Ship of Bristol" (Gorges 1658:24). By 1617 (Salisbury 1982:107) Squanto was living at Cornhill in London with John Slany, a treasurer of the Newfoundland Company (Mourt 1622:456). In 1618 (Salisbury 1982:107) Squanto was in Newfoundland assisting Governor John Mason (Purchas 1905,xix:274). One archaeologist has suggested that Squanto learned to fertilize with herring while he lived in Newfoundland (Ceci 1975:26-30).

**Squanto and Thomas Dermer.**

In 1618 Captain Thomas Dermer wrote to Sir Ferdinando Gorges and the Council for New England, informing them that one of their slaves, Tisquantum, was in Newfoundland (Purchas 1905,xix:274). Dermer met Squanto at the village of Cupids in Cuperts Cove at Conception Bay (Prowse 1896:104; Ceci 1975:26,27; Mason 1625). He then took Squanto to Plymouth, England (Gorges 1658:27; Purchas 1905, xix:277), where Squanto gave Gorges and Dermer information about New England (Gorges 1658:8,26,27).

In 1619 Squanto returned to Plymouth, Massachusetts. From Monhegan, Maine, he sailed in a pinnace of five tons of carrying capacity, with Dermer (Purchas 1905,xix:129) and five or six other Englishmen (Smith 1986, i:428;ii:441). Dermer wrote the following excerpt in a letter to the Reverend Samuel
Purchas from Captain Martyn's Plantation in Virginia on December 27, 1619. "Nummastaquyt" refers to Nemasket or Middleboro; "Poconakit" refers to Mount Hope in Bristol, Rhode Island; "Savage" refers to Squanto; and "Mastachusit" refers to Great Blue Hill, Milton, or perhaps to the Neponset River.

"It was the nineteenth of May... when from Monahiggan I set sayle... I passed amongst the Coast where I found some antient Plantations, not long since populous now utterly void; in other places a remnant remains, but not free of sickness. Their disease the Plague, for we might perceive the sores of some that had escaped, who described the spots of such as usually die. When I arrived at my Savages native Country (finding all dead) I travelled amongst a daies journey Westward, to a place called Nummastaquyt, where finding Inhabitants, I dispatched a Messenger a daies journey further West, to Poconakit which bordereth on the Sea; whence came to see me two Kings, attended with a guard of fiftie armed men.... Here I redeemed a Frenchman, and afterwards another at Mastachusit, who three yeeres since escaped shipwracke..." (Purchas 1905,xix:129).

The messenger who was sent to Poconakit was probably Squanto. The two "Kings" were almost certainly Massasoit and his brother Quadequina.

On June 30, 1620 Dermer wrote a letter to his "honored" or "honourable" friend (Bradford 1912,i:206). Unfortunately, we only have a paraphrase of it by William Bradford. Some of Bradford's version follows:

"I will first begine (saith he) with that place from whence Squanto, or Tisquantem, was taken away; which in Captains Smiths mape is called Plimoth;...I would that the first plantation might hear be seated, if ther come to the number of 50 persons, or upward. Otherwise at Charlton, because ther the savages are lese to be feared. The Pocanawkits, which live to the west of Plimoth, bear an invetrate malice to the English, and are of more strengt then all the savages from thence to Penobscote. Their desire of revenge was occasioned by an English man, who having many of them on bord, made a great slaughter with their murderers and smale shot, when as (they say) they offered no injurie on their parts. Whether they were English or no, it may be douted; yet they beleve they were, for the Frenche have so posset them; for which cause Squanto cannot deny but they would have kild me when I was at Namasket, had he not entreated hard for me..." (Bradford 1912,i:206-208).

Charlton refers to a village on the southern side of the Charles River near its mouth (Bradford 1912,i:207,fnl; Smith 1986,i:319). Murderers were small cannons used to clear the decks of a ship when an enemy boarded (Bradford 1912,i:207,fn3).

Later in 1619 Squanto went to "Sawahquatooke" (Purchas 1905,xix:131) or Saco, Maine (Purchas 1905,xix:276). In 1619, without Squanto, Dermer battled with the Nauseuk or Nauset at Pleasant Bay in the Chatham area (Purchas 1905,xix:131). He then went to Martha's Vineyard for the first of his two visits with Epanow. The first visit was peaceful. They spoke to each other in English (Purchas 1905,xix:129). Dermer, following Gorges' instruction, was looking for a gold mine (Purchas 1905,xix:130; Winsor 1889,iii:183).

Epanow had been kidnapped in 1611 and was publicly displayed in London for a fee, because of his huge size (Smith 1986,ii:403). Epanow would welcome his audience (Gorges 1658:20), just as Samoset welcomed the Pilgrims (Mourt 1622:450). Epanow lived with Gorges, and with tales of gold he fooled Gorges into sending him back to Martha's Vineyard in 1614 (Gorges 1658:21; Smith 1895:701; Winsor 1889,iii:180,181). Even though he had warned Gorges that he would attempt an escape, Epanow succeeded in doing so after a fierce battle at Martha's Vineyard between the natives in twenty canoes and the English in their ship. The natives used arrows (Gorges 1658:22,23).
The English thought they had killed Epanow as he swam. While trying to recover his supposed corpse, the Master of the ship and many of the crew were wounded (Gorges 1622; Smith 1895: 701; 1986, ii:403). The English, including Captain Nicholas Hobson, returned to England with a false report that Epanow and several of his tribe had been killed (Purchas 1905,xix:132).

After his first conference with Epanow in 1619, Dermer sailed to Virginia for the winter without Squanto (Purchas 1905,xix:129-134).

Edward Winslow and Bradford were told by Samoset that the Nausets slew three of Sir Ferdinando Gorges’ employees in 1620. Two other Englishmen just barely escaped by fleeing to Monhegan (Mourt 1622:452). Some historians associate Dermer with the 1620 battle, but the year is wrong, and, more importantly, Dermer wrote that the Nausetk in 1619 attempted to kill his men, but failed, and no one had to flee to Monhegan after Dermer’s fight.

In 1620 Dermer returned to New England according to Gorges (1658:26), stopping at Nautican or Nantucket, and Martha’s Vineyard, where Epanow spoke about his escape in English and laughed. Then, after questioning Dermer about Gorges’ intent, Epanow lost faith, and he and his companions attacked Dermer and his crew. Dermer received fourteen or fifteen wounds (Purchas 1905,xix:279). All of Dermer’s men were slain except for one who had stayed in the boat. While Dermer tried to get into the boat, Epanow and company would have cut off Dermer’s head upon a small cabin in the boat, if Dermer’s man had not rescued Dermer with a sword and escaped with him to Virginia, where Dermer died from his wounds or from a disease (Bradford 1912,i:209; Purchas 1905,xix:279; Winslow 1624:593).

The Pilgrims wrote (Mourt 1622:452-455) that Squanto was the only survivor of the plague of 1616-1619 to have been a native of Patuxet. Both Bradford and Winslow describe a male relative of Squanto who was alive in 1622 (Bradford 1912,i:252,253; Winslow 1624:523,524), who may not have been from Patuxet.

Squanto met the Pilgrims in the spring of 1621 and provided invaluable guide services to the newcomers (see Mourt 1622; see Bradford 1912). He died of sickness at Pleasant Bay on Cape Cod in 1622 (Bradford 1912:283). Frederick J. Dockstader wrote that Tisquantum means the "door or entrance" (Dockstader 1977). Indeed, Squanto was the door through which the English entered New England.

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Mahican is a now-extinct Eastern Algonquian language that was originally spoken in the upper Hudson River area, i.e., in parts of western Vermont, western Massachusetts, western Connecticut, and eastern New York state. By the mid-eighteenth century, some Mahicans had moved out of this original territory for various reasons, and white missionary activity had become increasingly important. As a result, there were two major groupings of Mahicans: one centered around Stockbridge, Massachusetts, and the Reverend John Sergeant, the other around Bethlehem, Pennsylvania, and the Moravian missionaries. Eventually, this situation gave rise to the two major dialects of Mahican --- Stockbridge Mahican and Moravian Mahican. One of these Moravian missionaries, Johann Jacob Schmick (1714-1778), working from perhaps 1753 to about 1755, compiled the bulk of a 378-page manuscript of the Moravian dialect of Mahican, to which he may have added for several more years. Although scholars have long been aware of the existence of the Schmick manuscript --- it is cited in Pilling (1891:444), for example --- it has never been published. In the case at hand, it is important to point out that, although Masthay's title is somewhat ambiguous, his book is a reworking of the Schmick manuscript rather than a faithful reproduction of the original.

After a brief Preface (page ix) and a miniature reproduction of the entire Schmick manuscript (pages x-xi), Masthay begins with a section entitled, Background and Explanatory Description For This Mahican Dictionary, which contains a discussion of several relevant topics: the Moravian missions (pages 2-3); an outline of Schmick's life, work, and probable language background (pages 3-6); some historical and linguistic considerations (pages 6-10); a description of the manuscript itself (pages 10-12); and, finally, a brief discussion of the spelling system used by Schmick (pages 12-13).

The next section is devoted to an extended and detailed study of Mahican historical phonology by David Pentland (pages 15-27), preceded by an outline of Pentland's discussion and a key to the various Schmick spellings treated therein (page 14). Pentland first considers the general Eastern Algonquian linguistic situation, pointing out that Mahican shows many similarities with Munsee and Unami Delaware, comments next on the dialectal situation within Mahican itself, and then proceeds to his analysis. Although non-linguists will no doubt find this paper to be quite demanding, it is a solid, up-to-date piece of work, showing both depth and breadth, and those who persevere will not go unrewarded.

Following Pentland's paper is the Mahican dictionary proper (pages 29-154). It is here that Masthay makes clear just how far he has deviated from the original manuscript: rather than follow Schmick's order (or lack thereof), he has added English glosses to the original German glosses and has alphabetized all entries by the English gloss. In addition, long sentences and texts in the manu-
Aubin: Review of Schmick’s Mahican Dictionary, Masthay, editor

Script are broken up into their constituent words. Two short sections follow, one for the long sentences and texts that were split up in the preceding dictionary examples (pages 154-155) and one for entries that do not have a German translation in the manuscript (page 155). Masthay then appends three facsimile pages of the Schmick manuscript, with his readings of the first page facing the first manuscript page (pages 156-159). The book closes with a Mahican-English glossary and index (pages 161-187) listing all of the Mahican words in alphabetical order along with an accompanying English gloss that enables the reader to find the Mahican examples in the dictionary.

Although much of what is presented by Masthay is unobjectionable, there are two issues that require some comment. First, the English glosses provided by Masthay as translations of Schmick’s German occasionally leave something to be desired. To cite just one example from the several I found, on page 55, ‘Vor 4 Tagen sind sie gegangen’ should be translated as, "They went four days ago", not "They have gone for four days." Secondly, on page 11, Masthay contends that his readings of Schmick are trustworthy, a claim which we can at least partially evaluate by looking at manuscript page 366, reproduced on page 157, and Masthay’s corresponding readings on page 156. To my mind, a close comparison of these two pages raises a number of questions that cast some doubt on Masthay’s assertion. For example, the word given as usāijakechnā by Masthay has a next-to-last letter in the facing manuscript that certainly appears to be very difficult to read, yet there is no indication of any problem in Masthay’s corresponding form (cf. also the first letter of anachemewe). Further, the manuscript clearly shows some sort of an accent over the final -u in the same word, but no accent at all is given in Masthay’s form (cf. also the fifth letter in assa-
náik). Finally, Masthay gives the form Kiáwu and suggests Kiáwa as a possible second reading, yet the manuscript here seems to indicate quite clearly that the form ends in -u, and Masthay offers no argument to support his second reading. Based as they are on a comparison of just one manuscript page with Masthay’s readings of it, these examples are difficult to assess in the context of the work as a whole, and I would not want to overstate their significance. A thorough discussion of this question is of necessity beyond the scope of the present review, but it is important to note what may be a problem area.

In conclusion, although it has various weaknesses, Masthay’s book is nevertheless a valuable addition to the literature on the Indian languages of the Northeast. It performs an important service by making available in an easy-to-use format, not only to linguists, but to a wide range of interested scholars, an extensive amount of hitherto unpublished data in an extinct Algonquian language.

1Given the extremely reduced format of the Schmick manuscript displayed on pages x-xi, I found it impossible using a hand lens to bring out the details necessary for a comparison of other manuscript pages to Masthay’s readings.

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