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EDITOR'S NOTE

I would like to encourage potential contributors to submit their work to me as soon as possible, or notify me of their intent to send a manuscript, as at present I am lacking enough material for a Fall issue. The existence of this publication depends on you, the readers, and your willingness to publish your work, and I am happy to give assistance to anyone unsure of his or her writing skills.

Once again this issue contains varied and interesting topics: the symbolic importance of chiastolites on archaeological sites, the discovery of a jasper quarry site, a discussion of two "King Philip's War Clubs," the definition of a hybrid Orient Stemmed point type, and the strange story of a plummet where nature imitates culture.

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SYMBOLS IN STONE: CHIASTOLITES IN NEW ENGLAND ARCHAEOLOGY

Curtiss Hoffman, Maryanne MacLeod, and Alan Smith

Introduction

On page 44 of his 1966 guide to the ceremonial and domestic products of aboriginal New England, William S. Fowler illustrated several movable pictographs from the Attleboro area, which show the sign of the cross (Figure 1). It was his opinion that these indicated "Christian conversion attempts of pagan natives in early colonial times." He suggested that on one pendant showing a cross on one face and three crosses surmounting box-like structures on the other, "the cross and altar may indicate that the conversion was a success." However, of another specimen he stated, "the implication is different. Here is shown a cross on one face and a bird on the other, which seems to convey a duplication of interests. The probability is that conversion was accepted with reservations, i.e., the cross or Christian guarantee is supplemented by a pagan tribal spirit symbol, as a double surety of salvation." (Fowler 1966:45)

We suggest that Fowler's speculations about these pendants themselves should also be accepted only with reservations. The cross was regarded by the Puritans as the chief among the symbols of Catholicism which, as "thinly concealed mutations of earlier pagan practices" (Thomas 1971:53), they certainly wished to avoid. Their churches did not display crucifixes either inside or outside, nor did individuals wear them in the fashion of the French Catholics in Canada. As an example of the New England Puritan attitude toward the cross, John Endecott, the governor of the Massachusetts Bay Colony, publicly cut the red cross out of the military flag at Salem in November of 1634 (Morgan 1958:103). The General Court feared that Endecott's action would be construed as an act of rebellion against King Charles I, whose private sympathies with Rome were demonstrated by the Pope having given him the red cross as his royal standard. Charles had already revoked the Massachusetts Bay charter and appointed a general governor to oversee the colony. Although the colonists feared the king's wrath, they considered the cross "so superstitious a thing," a symbol of the Catholicism they despised (Savage 1826:1:146-147). The General Court appointed a commission to decide how Endecott should be punished. It found that Endecott had acted rashly and offensively, but, "judging the cross to be a sin," had done so out of "conscience and not of evil intent" (Savage 1826:1:156). As his punishment, he was censured and barred from bearing any office in the Commonwealth for one year (Shurtleff 1853:1:146). In another incident in 1636, ten English ship captains requested that the king's colors be flown at the fort on Castle Island at the entrance to Boston Harbor. This request sparked another controversy. The Colonial government protested that the "cross [was] idolatrous". Since it was the king's fort and the king's colors, they agreed that the flag could be flown, but that the cross would not be allowed on any colonial flag (Savage 1826:1:344).

The Puritans also had a deep aversion for the medals and talismans Catholics wore around their necks. A popular and scornful verse of the day declared that:

*About these Catholics' necks and hands are always hanging charms,*

*That serve against all miseries and all unhappy harms.*

(Thomas 1971:30)

The Puritans did not approve of such personal ornaments and their use was strongly discouraged.
They certainly would have considered the emblem of a cross worn as a pendant by a Native American as a sign of pagan idolatry.

There is a little evidence that the Algonquian peoples of southern New England were exposed to Catholic religious influences during the Contact period. Several Jesuit rings were recovered from mid-17th Century Native burials at RI 1000 in Wickford, Rhode Island, and one burial contained a mica pendant with an icon of Jesus from a missal encased within it (Robinson 1990). Willoughby (1935:181) regarded the pendant with three crosses mentioned in the first paragraph of this article to have been brought to the Attleboro area by an Indian neophyte from the French missions on the Kennebec River. However, he did not impute any diffused religious symbolism to another pendant which has a cross incised on one side: diagonal lines descend from the lower half of the upright cross and a half circle or half moon appears atop it. Certainly, a devout Protestant such as John Eliot could hardly consider the wearing of a pendant showing any form of the cross by one of his Praying Indian charges to constitute a "successful" conversion!

Therefore, we wish to offer an alternative hypothesis to Fowler’s: that the symbol of the cross had meaning within a Native context, and was in use long before Europeans ever sailed into New England’s harbors. To illustrate this, we draw the reader’s attention to chiastolite, a form of the mineral andalusite that outcrops in a limited area of central Massachusetts. In the ensuing sections, we will discuss the mineralogy (Smith) and natural distribution (Smith and MacLeod) of chiastolite; traditions concerning this stone (Smith), and recoveries from archaeological sites both within (MacLeod) and outside (Hoffman) of its source area (Figure 2, after MHC 1979). Finally, we will suggest what these symbols in stone may have meant to the Native people (MacLeod and Hoffman).

**Mineralogy**

The name andalusite comes from its first recorded occurrence in the Spanish province of
Figure 2. Massachusetts Towns with Chiastolite-Bearing Sites (after Massachusetts Historical Commission 1979).
Andalusia. Chiastolite is named from the Greek *chias
tos*, meaning "arranged crosswise or
diagonally," because its pattern of carbonaceous
inclusions resembles the Greek letter Chi, written as an X (Arem 1987:42). Andalusite occurs naturally
in two radically different forms: *viridine*, whose
clear, hard, and tough crystals are suitable for
faceted gems of fine color and brilliance; and
*chiastolite*, whose dull, earthy crystals are attractive
only because of the characteristic cruciform shapes
and interesting cross-like patterns or tesselations that
are displayed in cross section. The gem quality
andalusite has a hardness of 7.5 (Dana 1958:615),
while chiastolite has a hardness of only 3.5 - 4.5.
This makes chiastolite unsuitable as a gemstone, but
because of the symbolism of the cross it is highly
favored as an amulet, charm, and talisman (Kunz
1913:270).

Chiastolite occurs in elongated crystals with
a square cross-section, which show a dark cross
formed by the crystallographic arrangement of
carbonaceous inclusions. Pure andalusite has the
chemical formula $\text{Al}_2\text{SiO}_5$, but in chiastolite the
carbon impurities, which have been forced into
regular patterns by the structure of the crystal,
render the above formula only approximate.
Andalusite is one of three minerals sharing this
formula, the others being sillimanite and kyanite. All
are formed from chains of aluminum atoms lying in
the centers of groups of six oxygen atoms, parallel to
the vertical axis. These vertical chains are linked
together by the remaining atoms of aluminum,
silicon, and oxygen. Differences in the arrangements
of these give rise to the different forms. In
andalusite, the remaining aluminum atom is
supposed to lie between five oxygen atoms (Dana
1958:612). In chiastolite, some of the surrounding
oxygen atoms have been replaced by carbon atoms,
resulting in bilaterally symmetrical dark inclusions
around the pale central sectors (vanes). Crystallizing
in the orthorhombic system, crystals of andalusite
and chiastolite assume long, prismatic forms. In
chiastolite, these have a rough exterior without a
trace of crystal faces.

The color of chiastolite ranges from various
shades of creamy white, pink, and grey to yellow for
the vanes of the internal crystalline pattern, and from
dark red or deep brown to black for the
carbonaceous inclusions. The relative width of the
vanes and the inclusions varies continuously along
the long axis of the crystal, so that different cuts will
produce different patterns (Figure 3). North
American chiastolite crystals vary in length from 1/2
inch (1 cm) to as much as 7 inches (18 cm), and in

Figure 3. Schematic Cross-Section of a Chiastolite Crystal (after Dana 1958:615).
width from 1/4 inch (0.5 cm) to 1 1/2 inches (4 cm). In natural specimens, the exterior is usually rough, pitted, and frequently covered with flecks of mica from the schistose metamorphic rocks from which crystals are derived. In some specimens, only cigar-shaped irregularities observable on the surface of the schist matrix betray their presence (Figure 4). Being more resistant to decay than the matrix, they are often found loose in the soil in sizes ranging from pea size up to that of a golf ball.

The natural distribution of chiastolite is limited to a small number of locations in the Western Hemisphere: the Northwest Territories, British Columbia, New Brunswick, Quebec, and Nova Scotia, Canada; Sonora, Mexico; Mono, California; Cumberland County, Maine; and along the Clinton-Newbury fault in Massachusetts, where outcrops occur in Westford, Sterling, Clinton, Boylston, and Lancaster. Eastern Hemisphere occurrences are in the Pyrenees, the Urals, the northern Alps, Transbaikal, and Australia (Dana 1958:616). None of the sources are exactly alike, and the particular type found in central Massachusetts is similar only to those in Spain and Australia (O'Malley 1937). Most of the Massachusetts chiastolites are found in a corridor beginning on George Hill in Lancaster and extending through Sterling and Clinton. It is about four miles (ca. 6.2 km) wide and six miles (ca. 9.6 km) long, and is bounded on both the east and west by fault lines (Zen et al. 1983).

To understand the origin of chiastolite, it is necessary to discuss the metamorphic rocks in which this mineral usually forms. Igneous and sedimentary rocks may be changed by geological processes that transform their mineral content when subjected to high pressures and temperature. These processes are known as "metamorphism" (from the Greek \textit{metamorphosis} = "transformation") and the products are known as metamorphic rocks (Wilk 1986:134-136). The minerals that occur frequently in igneous and sedimentary rocks, such as feldspar, mica, quartz, and hornblende, are also commonly found in metamorphic rocks. In addition to these minerals, the high temperature and pressure under which the metamorphic rocks formed produced several interesting minerals as inclusions, including andalusite and its variety, chiastolite.

Most metamorphic rocks are characterized by a banded or layered structure called foliation. The individual bands or folia vary in thickness, color, and texture, reflecting the difference in
mineral content. Coarsely foliated rock is called gneiss, and finely laminated rock is called schist. Gneisses tend not to be easily broken, but schists cleave along what are called planes of schistosity because of the high content of platy minerals such as mica, chlorite, and talc. The parallel orientation of these platy minerals, along with their excellent cleavage, allows them to be broken more easily than gneisses (Hurlbut 1968:54). Because of these properties, schists often contain crystals of aluminum silicates (andalusite, sillimanite, and kyanite) as well as staurolites and certain types of garnets arranged as inclusions along the planes of schistosity.

Metamorphism occurs most commonly in the vicinity of tectonic plate boundaries, where shear forces produce sufficient friction for igneous and sedimentary plate rocks to be deformed. This is the reason for the unusual world-wide distribution of chiastolites: all occurrences appear to be at major plate boundaries. The Clinton-Newbury fault is the major boundary between the North American and North African plates (Bailey 1984), so it is not surprising to find chiastolites in schist outcrops along it.

Uses of Chiastolites

A search of the literature for references to the use of chiastolites has found that many writers failed to provide good descriptions of the types of stone objects worn as amulets and charms. There were some references to people wearing chiastolites as talismans, but no definitive link to chiastolites being worn by the Native peoples of New England. We are left to rely upon the physical evidence from archaeological sites for tangible proof of what can only be described as a local folk tradition of the use of these stones. It should be kept in mind that the authors of the mineralogical texts were not trained as anthropologists, and were more interested in the use of the materials than in the people who used them. This has resulted in a frustrating lack of specificity on their part as to the cultural identification of the users of chiastolites, even as to the right continent.

For example, Hurlbut (1968:54, citing Kunz 1913) states that "some peoples believe that such crystals have magic powers and sections cut from them are frequently worn as amulets," but does not specify which peoples he means. Kunz (1913:270) writes that "...the crystal was naturally regarded as having a mystical and religious significance. It was said to stanch the flow of blood from any part of the body if worn so as to touch the skin, and it was also believed to increase the secretion of milk. All kinds of fevers were cured by this mineral if it were worn suspended from the neck, and the divine symbol it bore served to drive away evil spirits from the wearer," all without reference to any particular group of people. Bauer (1968:416) is more geographically specific; he writes that "it is on the appearance presented by the cross sections of the prism that the value, such as it is, of chiastolite is due, for, in certain places, especially in the Pyrenees, such sections are worn as amulets and charms." The earliest description we have found is that of Anselmus de Boodt (1609), the court physician to Rudolph II of Germany, who describes a "cross stone" (lapis crucifer) used in a baptismal font. Kunz (1913:271) interprets this as a chiastolite. Unfortunately, we were unable to determine whether de Boodt was familiar with chiastolites from the New World through the contemporary trading voyages of his Dutch countrymen to New England.

Chiastolites from Sites in the Source Area

(Table 1)

Legends from the Sterling-Lancaster source area inform us that the Nashaway band of the Nipmuck people, who had their base camps in this area, wore chiastolites around their necks to inspire the spirit of bravery and to bring good luck both in fishing and hunting (Tymeson 1967:56). To date,
However, these claims for their use have not been substantiated by either artifactual evidence or direct reference in Native folklore. As we will show below, some specimens appear to have been modified for use as pendants, but we do not have strong evidence as to the reasons why this was done.

Chiastolites are so common in the source area that they are locally referred to as "Sterling rock" or "Lancaster rock". The 17th century English settlers certainly must have known of this rock. In 1641, the General Court passed legislation to encourage the exploration of interior lands in hope of discovering precious minerals, iron, silver, and gold (Shurtleff 1853:1:327). John Winthrop, then governor of the Massachusetts Bay Colony, hired Stephen Day and Thomas King to explore the lands of the Nipmuck, including the Nashaway band (Haynes 1902:475). Both Day and King made several exploratory trips to the Nashaway's lands in search of precious metals and iron. In a letter to William Pynchon, a trader in Springfield, Day requested supplies enough to sustain him for several weeks while he engaged in one such trip to the area east and north of Quaboag plantation (Littlefield 1907:112), while he elsewhere recorded another venture to gather "mineral stone" in Nipmuck country (Littlefield 1907:100, 128). John Winthrop, Jr. also recorded a similar trip he made in 1641-42 to gather samples of stones and iron ore to take with him to England (Winthrop 1894:13-14). Recently, his collection has been located in the British Museum in London by David Kennedy, a personal friend of MacLeod's, and it includes chiastolites labeled as having been found by him and Thomas King at Nashaway (personal communication).

Chiastolites are found in abundance on Redstone Hill in Sterling. This location is about 1 mile (1.6 km) east of Sterling Center and is named

<table>
<thead>
<tr>
<th>SITE NAME</th>
<th># OF VANES</th>
<th>VANE COLOR</th>
<th>INCLUSIONS</th>
<th>LENGTH (mm)</th>
<th>WIDTH (mm)</th>
<th>THICKNESS (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Waushacum</td>
<td>4</td>
<td>light yellow</td>
<td>dark brown</td>
<td>83</td>
<td>57</td>
<td>32</td>
</tr>
<tr>
<td>Sweat Hill</td>
<td>4</td>
<td>white</td>
<td>dark grey</td>
<td>60</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>George Hill</td>
<td>4</td>
<td>white</td>
<td>black</td>
<td>23</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>George Hill</td>
<td>4</td>
<td>olive green</td>
<td>reddish</td>
<td>35</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>George Hill</td>
<td>4</td>
<td>olive green</td>
<td>reddish</td>
<td>33</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>George Hill</td>
<td>4</td>
<td>light grey</td>
<td>dark grey</td>
<td>40</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Astra-3</td>
<td>1</td>
<td>white</td>
<td>green-grey</td>
<td>30</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Astra-3</td>
<td>4</td>
<td>light yellow</td>
<td>dark brown</td>
<td>21</td>
<td>11</td>
<td>9.5</td>
</tr>
<tr>
<td>Astra-3</td>
<td>3</td>
<td>yellow</td>
<td>black</td>
<td>7</td>
<td>7.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Astra-10</td>
<td>3</td>
<td>yellow</td>
<td>black</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Astra-10</td>
<td>4</td>
<td>pinkish</td>
<td>black</td>
<td>13.5</td>
<td>9.5</td>
<td>9</td>
</tr>
<tr>
<td>Charles. Meadows</td>
<td>4?</td>
<td>light yellow</td>
<td>brown-red</td>
<td>ca 12</td>
<td>ca 6</td>
<td>ca 6</td>
</tr>
<tr>
<td>Cedar Swamp-4</td>
<td>4</td>
<td>yellow</td>
<td>red-brown</td>
<td>ca 33</td>
<td>ca 22</td>
<td>ca 10</td>
</tr>
<tr>
<td>Chick</td>
<td>4</td>
<td>white</td>
<td>black</td>
<td>13</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Little League Field</td>
<td>2</td>
<td>light yellow</td>
<td>dark grey</td>
<td>36.5</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>
for the color of the bedrock, an argillaceous slate impregnated with iron sulfate (Goodwin 1826) which, when exposed to the elements, oxidizes to a reddish brown. Though it is not a high quality material, it was extensively used by local Native peoples for making tools (Hoffman 1989:13-14). Chiastolites are often found in close proximity to Sterling argillite deposits, which are also found on Sweat Hill and Kendall Hill in Sterling. The English may have considered chiastolite an indicator for the presence of iron and other metals, even if their Puritan beliefs did not permit them to value it for its symbolic or aesthetic properties. Most of the smaller chiastolite-bearing surface rocks are now gone, since rock-hounds have scoured the area and shipped much of this rock to Europe for manufacture into buttons, jewelry, and other ornaments (Marvin 1879:32). Throughout the 19th and early 20th centuries, farmers piled chiastolite-bearing rock into huge piles in their fields, or incorporated them into the many stone walls that cross the hills of the towns. Many chiastolites still remain in the underlying bedrock of the area.

The initial purchase of land from the Nashaways in 1643 included most of the area in which chiastolites are found (MacLeod 1985:14). Several of the first colonists to settle in the Lancaster-Sterling area were ironworkers from Watertown. A tract of land in Sterling approximately 500 acres in size on present day Kendall Hill was formally granted to the town of Charlestown for its use in 1663. On it were located deposits of iron, silver, and one of the most abundant sources of chiastolites in Sterling. Iron ore of good quality was extracted from this area by the settlers. Over the years, several attempts were made to mine the silver, but the silver ore was of poor quality (Goodwin 1826:19). Stone artifacts have also been recovered from the surface of this hill, including an axe, hammerstones, and a projectile point base, which were viewed by MacLeod. Unfortunately, these disappeared after the death of their owner.

A chiastolite was found by MacLeod embedded in a schist cobble on the surface approximately a half mile (0.4 km) east of East Lake Waushacum. This is the location of a proposed landfill, on the southwest side of a site where the topsoil had been scraped off. Just adjacent to the east is a kame delta of the Clinton sub-stage of glacial Lake Nashaway (Kirkpatrick 1971:53), which has been mined for sand and gravel. The cobble was highly polished, and when it was first discovered, it had red ochre on it. This is often indicative of ceremonial or even burial association. The cross shows clearly on its surface and has light yellow vanes against a dark brown background. Another similar chiastolite from this site was also polished. It was gifted to the late John Peters (Slow Turtle) as a pendant. Several local residents report finding artifacts at this site as children, but these have since been lost. MacLeod and Smith recovered a felsite Larnoka-like point from the surface, near where the chiastolites were found.

Sweat Hill, a high hill just to the southeast of Kendall Hill in the southeastern quadrant of Sterling, is another location at which chiastolites are very commonly found in bedrock outcrops. It overlooks East Lake Waushacum and Mount Wachusett to the west. To the east, before the Wachusett Reservoir was constructed, it overlooked the Nashaway River valley. On Sweat Hill is the oldest known site in Sterling; surface recoveries from the slopes overlooking the lake include three Early Archaic Kirk Stemmed points. Local legend has long claimed that Native burial sites are to be found on the southwest slope of the hill overlooking the lake. One chiastolite from this site was worked into a triangular shape. It is embedded in a schist matrix and shows the characteristic cross on one edge in white vanes against a dark grey background. It was found near a very large boulder that shows signs of
burning on its overhanging north face, and may have served as a small rockshelter. Around the rock, a Kirk Stemmed point of Onondaga chert, a felsite Orient Fishtail point, and a felsite knife were also recovered.

A fourth site in Sterling at which chiastolites and other artifacts have been recovered in archaeological context is on the shore of West Lake Waushacum. An excavation conducted by the Sterling Historical Society and the W. Elmer Ekblaw Chapter of the Massachusetts Archaeological Society in 1973 (MacLeod 1990) recovered three chiastolites, which were in the possession of the late Lillian Harding, and are now curated by the Westborough Historical Commission. They are embedded in a schist matrix and have white vanes against a grey background. Mrs. Harding informed MacLeod that she had had the chiastolite crystals polished using modern grinding equipment subsequent to the excavation, and striations are visible under magnification on their surfaces that are too fine to have been produced by pre-Contact grinding processes. The diagnostic artifacts from this site range in expected age from Middle Archaic (Neville and Stark points) through Early Woodland (Orient Fishtail).

Another site where both chiastolites and artifacts have been found is the southeast side of George Hill in Lancaster. This is the location of the first colonial trading house in central Massachusetts, built in 1642 (MacLeod 1986). Several of the artifacts on display at the Lancaster Public Library are attributed to this site, and include gouges and pestles (Henry Nourse, unpublished notes). Four chiastolites were found very near this location, at the edge of the field known as the Indian Camp Pasture. They were found in the same cache by a local resident, who wishes to remain anonymous, but who lent them to MacLeod for study. All of them have been polished, and two have been very highly polished and all of the matrix rock has been removed. One chiastolite is not of a local material. Instead of a cross shape it has a diamond pattern. It is similar to chiastolites MacLeod has seen in Quebec. The end where the cross is visible was cut at approximately a 90 degree angle. Incised marks indicate that it could have been worn as a pendant. Its color is mostly speckled light grey, with the diamond-shaped center being a darker grey with four thin arms of the same color extending to the edge of the stone. The most unusual of the four is a small, almost disk-shaped stone. It is white with flecks of black. It has been carefully incised around the circumference, so that a small cord could be wrapped around it. This suggests that it was worn as an amulet. What is highly unusual about this chiastolite is that the incision marks on both sides of the stone are in the form of a swastika. Within each corner between the arms of the swastika is a small and very clear chiastolite. Such a stone with a chiastolite at each corner could well have been considered a powerful shamanic talisman. The other two local chiastolites were cut lengthwise from their matrices, so that the cross pattern is only visible at each end. Both are a mottled reddish brown in color with flecks of olive green in the vanes. They appear to have been cut from the same rock, so closely do the colors and patterns match.

These are but a few of the known sites within the source area at which there is evidence for both chiastolites and Native occupation. All of this land lay within the boundaries of the territory occupied by the Nashaway, who were the local and, at the time of the Contact period, politically dominant sub-tribe of the Nipmucks (MacLeod 1985:5). The English certainly considered them an important tribe, and this could be a reflection of their status among other Native groups. Could this status be in part due to the presence of chiastolites on their lands? Given the paucity of the historical record, we may never know, but we will see in the next section
that chiastolites were traded out of the source area and used by other tribes.

**Chiastolites from Other Sites**

Glacial action transported chiastolite-bearing rocks from their source area at least as far south as Westborough, where we have found both andalusites and chiastolites in schist cobbles in the glacial drift. Thus, it is not surprising that we have found chiastolites at several sites in Westborough.

The Astra-3 Site, on the north side of Hoccomonco Pond, has yielded three chiastolites. One, which was cut so that the cross is not displayed, was recovered by Raymond LeMire in the course of his unsystematic excavations during the early 1970's (Hoffman 1991b:8, where it is erroneously listed as a "basalt ground stone fragment"; at that time the site was referred to as Hoccomonco #3). Its attribution to the site is based upon LeMire's recollection, and since he also dug in Sterling we cannot be absolutely certain of it. Also, he does not recall where on the extensive Astra campus he found it. It shows distinct scratch marks on the longitudinal surface. Its outer color is dark greenish grey, with white vanes. The second specimen derives from an intensive survey undertaken during the spring of 1992 under the direction of Hoffman, and in advance of planned construction at Astra. It was in the lowest level of the plowed topsoil of a 50 x 50 cm unit (Hoffman 1992). No other cultural materials were recovered from this unit, but in the woods 20 m to the west an intensive occupation area, probably of Late Archaic age, was discovered. This specimen is dark brown in color with light yellow vanes. It has been deliberately scraped from its matrix: under microscopic enlargement, scratch marks appear on the longitudinal surface of the crystal (Figure 5). It has also been highly polished, and shows a cross at the termination. The third specimen was recovered by wet-screening feature soils from the 1992 site examination at the site. It was nearly at the bottom of a culturally stained subsoil horizon, 25-30 cm below the base of the unplowed topsoil horizon. It is black in color with yellowish vanes. It is within 3 m of a deep pit feature containing large quantities of crystal quartz, coarse-grained quartzite, and Attleboro red felsite debitage and flake tools which yielded a radiocarbon age of 7850±90 14C yrs B.P. (Beta-67373, corrected for δ13C) (Smith 1994:84).

Two chiastolites were recovered during 1995 data recovery operations at the nearby Astra-10 site under the direction of Hoffman and Smith. This
site is on a relatively flat terrace overlooking a feeder stream into Hoccomonco Pond. The first chiastolite was recovered from the base of the plow zone from an otherwise unproductive unit. It is very similar in appearance to the third example from Astra-3. The second derived from the eastern edge of a large flaking station, mostly of Westborough quartzite with a minority representation of Mattapan volcanics, crystal quartz, and local granite. The chiastolite is more angular than the others considered in this study, and has pinkish vanes with a very thin black cross. It has striations running perpendicular to the long axis, which suggests modification for hanging by a cord as a pendant. A Vosburg base and a Brewerton Eared Triangle have been recovered from within the flake scatter, along with a large number of flake tools and a few bifaces. An age of $4420 \pm 130$ yrs B.P. has been obtained on charcoal-bearing soil from the scatter using the oxidizable carbon ratio (OCR) dating method (ACT-1427) (Frink 1992). This age is satisfactory for the Laurentian period diagnostics. However, three other OCR assays from the scatter and associated deposits gave ages of $8980 \pm 270$, $10,615 \pm 320$, and $19,395 \pm 580$ yrs B.P., while a sample from the base of the plow zone gave a mean residence time of $1090$ yrs B.P. (respectively ACT-1426, -1577, -1728, and -1576; all but -1728 matching-funded by the W. Elmer Ekblaw Chapter and the Board of Trustees of the Massachusetts Archaeological Society). A radio-carbon assay from the scatter, close to the Vosburg base, gave an age of $9240 \pm 60$ $^{14}$C yrs B.P. (Beta-79097, corrected for $\delta^{13}$C), while another from an adjacent feature gave an age of $2940 \pm 80$ $^{14}$C yrs B.P. (Beta-94812, corrected for $\delta^{13}$C). This disparity of dates is certainly confusing, and has not been resolved by subsequent excavation, but the general impression of Hoffman and Smith is that the quartzite scatter is of Laurentian age, given its similarity to scatters of this age at the Charlestown Meadows site (Hoffman 1991a:117), just 1.5 km west of Astra-10 on the southern face of a low moraine which separates it from Hoccomonco Pond.

The next specimen was recovered in 1988 from the lower topsoil of Area II at Charlestown Meadows. While the site had been deeply plowed, the underlying subsoil in this part of the site contained the remains of three house floors radiocarbon dated to the last centuries of the Late Archaic period (Hoffman 1991a:145-147). Studies of plowing patterns and their effect upon the underlying components at this site indicate that lower topsoil recoveries were not moved far from their original positions (Hoffman 1982:298-301). Thus, it is reasonably likely that the chiastolite specimen derived from the Narrow-point Late Archaic component in this area of the site. Smith identified it as a relatively small crystal, squarish in cross-section, brownish-red in color with light yellow vanes, showing the characteristic cross at the ends. No trace of matrix was observed. Unfortunately, while it was recorded in the field, Hoffman did not check it under magnification to see whether it was a natural crystal, and it was apparently discarded during laboratory processing of the Charlestown Meadows material. No measurements were taken.

Another polished chiastolite recovered from the 1986 intensive survey of the Cedar Swamp-4 site met a similar fate. It was recovered by MacLeod from the unplowed topsoil of a unit whose subsoil contained a feature with a radiocarbon age of $1090 \pm 110$ $^{14}$C yrs B.P. (Beta-19922, uncorrected for $\delta^{13}$C) (Hoffman 1987:6). It was reddish brown in color with yellow vanes. The cross was visible on one end only. It was discarded by Hoffman, who at the time did not recognize the use of chiastolites as artifacts in this region.

We mention the last two examples because it is our view that the same may have happened to many other chiastolites found at sites in southern New England, which may be the reason that so little
has been published on the pre-Contact use of this material. We urge archaeologists to conserve all chiastolites which have been separated from their matrix rocks, since this is probably not the result of the natural weathering process but more likely denotes cultural alteration. It is especially likely that chiastolites which show polishing or striations on their surfaces, and/or complete removal of the schist matrix, have been altered for use within cultural systems. Chiastolites found in archaeological contexts out of their matrices should be checked under magnification for signs of polishing or scratching.

A beautiful specimen was recently acquired by the Massachusetts Archaeological Society as part of the Anne Chick Collection (Figure 6). According to information supplied by Dena Dincauze and John Silvernail (personal communications), most of the Chick Collection derives from large, multi-component sites in the floodplain of the Charles River in Medfield. This area is far enough to the east of Sterling that it is unlikely that glacial transport from that source can account for its presence there. It could conceivably have been transported from either the Westford source or from further to the north, but its form is more similar to chiastolites from the Sterling-Lancaster area. We suggest that it was probably traded from the source area to the site. Like the specimens from East Waushacum, this item retains part of its schist matrix. The entire specimen measures 68 mm in length, 30 mm in width, and 8 mm in thickness; the matrix is dark grey or black in color. The chiastolite crystal at one end is black with white vanes. A note accompanying it from Mrs. Chick describes it as representing an Indian woman in her shawl. The chiastolite crystal, which is highly polished on both ends, would represent her head. It is certainly possible to see what Mrs. Chick saw in this specimen, but other interpretations are equally possible.

Finally, recent intensive survey operations at the Little League Field Site (19-PL-520) in Middleborough have yielded a chiastolite. It is dark grey and only displays two light yellow vanes. The crystal is cone-shaped and has been polished on the conical surface. It was found by Smith in the lower plow zone in an area of the site which has yielded Early to Transitional Archaic artifacts (Hoffman 1996). The site overlooks the Nemasket River, a major trade and transportation corridor with access to Narragansett Bay and Buzzards Bay to the south.
and, via the North River and Weymouth Back River, to Boston Harbor to the north. This site is definitely within Wampanoag territory, and is part of a larger complex of sites which was one of three major seasonal camps in the Middleborough area throughout the pre-Contact period. It is unlikely that this item reached the site by any mechanism other than trade. We should keep in mind that Ousamequin, the great sachem (Massasoit) of the Wampanoags during the first half of the 17th century, often visited the Sterling area, where he maintained close family ties (MacLeod 1986:13).

Conclusions

Based upon our evidence, chiastolites may have been used as early as Early Archaic times, and certainly well before European contact. The bedrock source area in Lancaster/Sterling has yielded the largest number of worked chiastolites, but they were also part of the cultural repertoire in other areas, either recovered from glacial drift or by trade from the source area. The effort undertaken by the Native people to extract chiastolites from their matrices (in clear preference to untesselated andalusites) and to polish them attests to the importance they attached to these objects. They may have been considered shamans' stones, along with such oddments as clay concretions, terminated quartz crystals, gastroliths, etc. (Fowler 1975). Their ceremonial or ritual importance is strongly suggested by the association of at least one specimen with red ochre. None of the chiastolites we have seen have perforations, but three have been modified so that they might have been worn visibly as pendants, as alleged by local historians. The chiastolites that have not been so altered might have been retained in medicine bags for use in ceremonies.

Many Native beliefs throughout the North American continent emphasize the importance of the number four as basic to the constituency of the universe. There are four directions: east, west, north, and south. There are four divisions of time: day, night, moon, and year. There are four seasons of the year: spring, summer, fall, and winter. All plants grow in a configuration of four: roots, stem or trunk, leaves, flower or fruit. Four kinds of creatures inhabit the earth: those that walk, those that swim, those that fly, and those that crawl. There are four phases of human life: infancy, childhood, adulthood, and old age. There are four things in the heavens above: the sun, the moon, the clouds, and the sky (Fire & Erdoes 1972:103-105). Many local Native activities were carried out in a multiple of four: e.g., four corn seeds were planted in a hill, and four bean seeds were then planted, one at the base of each growing stalk of corn. Most Native rituals and ceremonies are still performed today in a pattern of four repetitions. For instance, the sweat lodge ceremony is carried out in four stages, and some actions in it are performed four times.

This emphasis is by no means limited to this continent. Claude Levi-Strauss (1966:135-160) and C. G. Jung (1969:234-235) have demonstrated the near universality of such fourfold conceptual structures, and Jung has even suggested that they are a reflection of the inherent structure of the human psyche (Jacobi 1943:16). The cross is an obvious, easily drawn fourfold figure, and crosses of various types are often depicted in Native sacred representations: on Mississippian shell gorgets (Snow 1976:73, Hultkrantz 1980:28); on Plains drums (Miles 1963:195), rattles (Miles 1963:198), and hide drawings (Snow 1976:92); in Navajo sand paintings (Keegan 1974:96); on Hohokam pottery (Snow 1976:124); on Pueblo rock art (Pike 1974:149, Schafasma 1989:235); on Pueblo basketry (Miles 1963:110); and on Iroquois decorative art (Lyford 1989:70, 85). Nanepashemet, the late director of the Wampanoag program at Plimoth Plantation, suggested that the frequent quadruple
castellations on Late Woodland pottery from New England might be a local example of this emphasis (personal communication).

Thus, we should not be surprised to find that the natural symbolism observed in chiastolite crystals should have led them to be selected as charm stones or pendants by the pre-Contact Native peoples living near sources of this material, or that they should have been traded to people in adjacent territories. Chiastolite, a rock with four points so clearly and unmistakably outlined in its form, would have held great significance for Native peoples. It signified nature and the whole world, in a form that could easily be carried or worn. Far from being indications of Christian conversion, the ownership and display of such symbols in stone may have been a way that Native people could feel more in harmony with the universal forces that were (and still are) held to govern all aspects of Native life. We conclude by noting that chiastolites today are again being traded to and among Native peoples in this area as a medium of gift exchange, and deposited as grave offerings. We admit to having taken an active role in reintroducing them to local Native people who claim previously not to have known what they were. Because their symbolism has had such an obvious and undeniable appeal, as well as being such an intrinsic part of their cultural heritage, we feel entirely justified in doing so. We urge archaeologists to take note of and conserve chiastolites found at archaeological sites, because they may reveal more about this dimension of Native culture.

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THE CONKLIN JASPER QUARRY SITE (RI 1935): NATIVE EXPLOITATION OF A LOCAL JASPER SOURCE

Joseph N. Waller, Jr.

Introduction

Until recently there has been considerable speculation as to the availability of Lime Rock jasper to prehistoric populations. Recent archaeological investigations conducted in the town of Lincoln, Rhode Island, have resulted in the discovery of the Conklin Jasper Quarry Site (RI 1935) (Figure 1). Artifacts recovered from the Conklin Jasper Quarry Site included a variety of lithic tools and tool waste consistent with Native American manufacture. A predominance of jasper and chalcedony primary waste recovered from the site indicate that Conklin or Lime Rock Jasper was used in the manufacture of these artifacts. The recovery of Archaic and Woodland Period artifacts from within the site area suggests that the Conklin Jasper Quarry Site was re-occupied numerous times by Native American groups presumably for the extraction and/or initial stage working of the Conklin material for the manufacture of chipped stone tools. This article serves as a preliminary report on the discovery of this potentially significant pre-Contact Native American site situated in the vicinity of the Conklin Limestone Quarry in the village of Lime Rock, Rhode Island. It will also discuss the availability of Conklin “jasper” to Native American groups in the past.

Present Site Area Conditions

The topography of the Conklin Jasper Quarry Site is situated on the eastern edge of a small knoll that ranges in elevation from 180 to 214 ft above mean sea level. This knoll is surrounded by wetlands associated with the confluence of the Harris Brook and the Moshassuck River. Present conditions within the site area consist of a secondary growth of various deciduous and evergreen tree species, as well as brush. Occasional glacial erratics sporadically dot the gently sloping surface. The northern limit of the site is characterized by a severe drop of some 20-30 ft down to the Moshassuck River level and its associated wetlands.

Site integrity is fairly good with disturbances limited to southernmost reaches of the site resulting from leveling and filling episodes associated with the construction and recent modifications of a local access road. Additionally, a barely visible historic cart path traverses the center of the site area impacting the site minimally. Mining for lime at the Conklin Limestone Quarry and undercutting of the topography by the Moshassuck River have undoubtedly erased any additional archaeological deposits that would have been located in the immediate periphery of the site area.

Topography and Bedrock Geology

Geologically the Conklin Jasper Quarry Site is situated along the western edge of the Narragansett Basin Border Fault on a Late Proterozoic or older epidote and biotite schist formation known as the Blackstone Group (Hermes et al. 1994). This formation is green to gray in appearance and is composed of quartz, chlorite, muscovite, and/or biotite schist. The Blackstone Group is bounded to the east by the Rhode Island Formation of Pennsylvanian Age and to the west by the Scituate Igneous Suite alkali-feldspar granite of Devonian Age (Hermes et al. 1994). At the fault’s contact are
outcrops of Esmond Igneous Suite granite and Blackstone greenstone, amphibolite, and serpentinite formerly referred to as Hunting Hill Greenstone (Quinn 1971). The Conklin Jasper Quarry Site is situated upon a series of mafic/intermediate rocks known as the Esmond Igneous Suite of Late Proterozoic Age (Hermes et al. 1994). Hunting Hill Greenstone is largely composed of a dark-green, fine-grained greenstone that resulted from low-grade metamorphism of basaltic rock.

Soils and Stratigraphy

Soils within the site area are comprised of the Canton and Charlton soil series (CdE) (USDA 1981). These soils are composed of fine sandy loams and range in slope from 0-8 percent. The Canton/Charlton soil series are typically well-drained soils and occur in glacial upland hills and ridges on the crests and side of slopes (USDA 1981).

Results of the Archaeological Testing within the Conklin Jasper Quarry Site

Archaeological testing within the site area was limited to 50 x 50 cm shovel test pits. A total of fifty-three, 50 x 50 cm shovel test pits was excavated within the Conklin Jasper Quarry Site. Test pit stratigraphy was fairly uniform across the entire site area. Test pit profiles range from a well developed dark brown to relatively thin loamy topsoils (Figure 2). The combination of slope, presence of historic period artifacts and stone walls, and the varying thickness of the topsoil suggests that portions of the site area were plowed while other portions of the site were never intensively plowed. Across the site these dark brown topsoils overlay yellow brown and light yellow/olive brown fine sandy subsoils. Additionally,
some of the test pits terminated on granite bedrock deposits that are presumably associated with the large outcrop visible on the top of the knoll.

**Native American Artifacts**

Native American artifacts were recovered from a number of test pits during the fieldwork. Most of the recovered material was predominately in the form of lithic chipping debris primarily of jasper and chalcedony. These materials likely had their derivation from the local Lime Rock jasper source area. Inspection of the site area identified surface outcrops of parent Lime Rock "jasper" (Figure 3). Visible outcrops of Lime Rock jasper were identified on the surface of the site. This would suggest that this material was available for exploitation by Native American groups in the prehistoric past. These outcrops consisted of a highly mottled mixture of jaspers and chalcedonies within the stone matrix. For simplicity's sake the term "cryptocrystalline" was adopted to refer to all variations in color and translucency of jasper and chalcedony recovered from the Conklin Jasper Quarry Site. Other lithic materials recovered from the site in much lower frequencies included quartzite, quartz, hornfels, and materials morphologically similar to Attleboro Red Felsite.

Tools recovered from the site include a single quartz biface, quite possibly a broken point tip of some quartz projectile, two jasper biface fragments, and a single argillite projectile point of the Middle Archaic Stark variety. The relationship between the middle Archaic occupation and the lithic source is not yet known. Additional artifacts include a cryptocrystalline quarry blank and a possible groundstone tool fragment. Low densities of shell, calcined bone, and two small sherds of Native American pottery complete the artifact assemblage recovered from the Conklin Jasper Quarry Site. These pottery sherds were too small to conclusively type, but they appear to be an early form and are grit-tempered.

**Discussion**

**New England Cryptocrystalline Lithics**

Chert is a sedimentary rock that is primarily composed of microcrystalline quartz (Luedtke 1992). Lithic materials such as chalcedony, jasper, and flint, are forms within the broader spectrum of chert. Chert is often identifiable macroscopically by its physical characteristics. However, mineralogical studies and/or thin sectioning of these materials are necessary in order to conclusively source a lithic material to its true place of origin. Chert sources have been recorded throughout the Eastern Woodlands from Ontario, Arkansas, Michigan, Ohio, Missouri, Maine, Indiana, Pennsylvania, and most notably New York (Hammer 1976; Luedtke 1992). Due to an absence of
identified dark chert quarry sources from southern New England, chert from local archaeological sites is typically presumed to have had its introduction from outside the region.

Jasper is a fine-grained variety of chert that contains iron oxide impurities that color the material golden yellow, red, or brown (Luedtke 1992). Prehistoric mining of jasper is documented from a number of quarry localities in southeastern Pennsylvania (Hatch and Miller 1985). This Pennsylvania source produces red, golden, and brown jaspers that are typically opaque with tiny veins of translucent chalcedony (Luedtke 1987). Consequently, jaspers that conform to this range of variation that are recovered from southern New England sites are often assumed to have their derivation from one of the various Pennsylvanian sources. However, Conklin jasper is quite similar to the Pennsylvanian jaspers in physical appearance.

Typical Lime Rock Jasper is:

predominantly dark gold in color... ranging to dark brown... It is mostly opaque, but a translucent grey variety is also present. It has tiny veins of translucent chalcedony, much like the Pennsylvania jasper, and bears a marked resemblance to that more famous material. It would undoubtedly turn red if heat-treated (Luedtke 1987: 39).

The jasper materials recovered from the Conklin Jasper Quarry Site and those present in outcrops visible on the surface conform to Luedtke's description.

Still other jasper or "red chert" sources are known from the Northeast. Other sources include the Nittany dolomite of central Pennsylvania, the Newark Formation of New Jersey, the Monkton Chert of western Vermont, the Normanskill and Little Falls formations of eastern New York, and the Munsungan

Figure 3. Jasper and chalcedony outcrop visible on the surface of RI 1935. (View facing north. East-west dimensions c. 50 cm, north-south dimensions c. 30 cm.)
formation of northern Maine. However, most of these sources typically produce cherts of colors other than red, and are usually coarser, duller, and muddier than the Pennsylvania and Lime Rock jaspers (Luedtke 1987).

The Conklin Jasper Quarry Site (RI 1935)

The archaeological survey of the Conklin Jasper Quarry Site recovered artifacts consistent with Native American and EuroAmerican occupation of the site area. Native American finds were contiguous across the site area with 38 (72%) of the test pits containing artifacts resulting from stone tool manufacture. The recovered materials are consistent with primary and secondary reduction of raw materials for stone tool manufacture. Few thinning flakes associated with final stage bifacial thinning were recovered.

An examination of the lithic flake types from the site indicate that most of the chalcedony and jasper recovered from the site was in the form of large bashed cobbles (shatter) and primary flakes characteristic of initial raw material selection (Table 1). It appears as if large blocks and cobbles were being smashed open in order to examine the quality of materials from the interior of these blocks. Additionally, some degree of firing of the materials, perhaps associated with some technological processing of the material for biface reduction, was also evidenced through the reddening of some of the jasper and chalcedony material along with a low density of fire-cracked rock recovered from the site.

A preponderance of large quarry shatter and primary reduction of the lithic material is consistent with patterns witnessed at other quarry sources. Studies have shown that as sites are increasingly distant from identified lithic source areas, raw materials from these sources become increasingly scarce on sites and are more likely to be rejuvenated or recycled than discarded (Ricklis and Cox 1993). Rejuvenation and recycling of lithic materials far from their source of origin is typically demonstrated by more final stage thinning and bifacial retouch flakes and less core reduction wastes because the materials

Table 1. Identified Lithic Types Recovered from The Conklin Jasper Quarry Site (RI 1935).

<table>
<thead>
<tr>
<th>Lithic Material</th>
<th>Flakes</th>
<th>Shatter</th>
<th>Total</th>
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<tr>
<td>Argillite</td>
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</tr>
<tr>
<td>Attleboro Red Felsite</td>
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<td>3</td>
</tr>
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<td>2</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>121</td>
<td>153</td>
<td>274</td>
</tr>
</tbody>
</table>
become more scarce and need to be rationed. There is consequently an inverse relationship between the percentage of initial stage processing waste and distance from the source area of the material. If this pattern is indeed universal, then the sheer dominance of shatter and waste material recovered from the Conklin Jasper Site suggests that jasper and chalcedony were not scarce commodities that needed to be rationed. It seems likely that the cryptocrystalline material was easily acquired and therefore locally available.

Visual inspection of the site area led to the identification of jasper and chalcedony lithic outcrops visible on the surface. It is also apparent that eighteenth- and nineteenth-century farmers had incorporated jasper cobbles into the fieldstone walls in the site area (Figure 4). Additionally, a number of naturally occurring cobbles of jasper, which exhibit no evidence of working, was recovered from intact subsoils. The combination of this evidence suggests that the project area and its immediate vicinity did provide Native Americans with a source of locally available jasper and chalcedony in the form of small outcrops and natural talus. The recovery of artifact types from the site indicate that the Conklin Jasper Quarry Site may have been repeatedly occupied from as early as the Archaic Period for the extraction and/or initial stage working of jasper as a source material for the manufacture of stone tools.

**Conclusion**

It is somewhat of a misnomer to identify the site RI 1935 as a "quarry" site. In the strictest sense of the term the Conklin Jasper Quarry Site is not a true quarry site with outcrops of available lithic material and evidence for Native American quarrying activity. Neither is the site littered by a large talus field of wasted jasper or chalcedony. A single tool that may be a quarrying pick was the only potential quarrying artifact recovered from the site. The term "Quarry" was included in the RI 1935 site name to demonstrate that local jasper outcrops were available and initial stage processing of this lithic material for the production of chipped stone tools did in fact occur.

Figure 4. Large jasper and chalcedony cobbles incorporated into an agrarian fieldstone wall at RI 1935. (View facing south. Cobble at center c. 30 cm long by 25 cm high.)
at this site. Undoubtedly, other outcrops of jasper would have been available for Native American exploitation in the past. The location of these outcrops may possibly have been situated within the remains of the existing Conklin Limestone Quarry. Historic and modern quarrying activities at Lime Rock undoubtedly have erased such evidence.

Archaeological investigations conducted at RI 1935 were severely limited, but it was necessary to report on these findings. The site is much more important at a regional level than at a local level. Although, as yet not much is known concerning the RI 1935 occupation(s), the importance lies in the irrefutable association between a local jasper source and prehistoric exploitation of this material. The ramifications of this study may or may not impact previous investigations into the Middle Woodland Period of regional prehistory. Middle Woodland sites are typically thought to demonstrate a high correlation between settlements and the occurrence of "Pennsylvania" jasper (Luedtke 1987; Strauss 1992). Consequently, an extensive network of trade and exchange is hypothesized for the region during this period. It is now evident that one can no longer assume that all jaspers recovered from southern New England archaeological sites have their derivation from Pennsylvania. Petrological studies on these materials are therefore that much more important to conclusively demonstrate a clear association between a material and its parent source. The development of a collective data base for the region which lists jasper-bearing sites along with conclusive evidence associating a material with its parent source area may affect or even alter interpretations of prehistoric settlement, subsistence, and/or regional exchange patterns.

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THE HISTORY OF "KING PHILIP'S WAR CLUB"

Michael A. Volmar

Few authentic American icons survive from the seventeenth century. Recent experiences suggest that when they do, their power to capture the popular imagination remains intact across time. King Philip’s War Club is one such item. Or should I say two? For indeed, there are two items identified as King Philip’s War Club, one at Fruitlands Museums, Harvard, Massachusetts, and another well known at the Western Reserve Historical Society in Cleveland, Ohio. Historical records indicate that each was given its name in the nineteenth century, commemorating a seminal moment in America’s colonial past.

Fruitlands Museums received a fair amount of media attention concerning the return of “the club” in 1995. It was stolen from Fruitlands in 1970 and amazingly recovered from a tag sale in 1995 and returned. This article examines the history of this unique object for an explanation of its mystique.

An Overview of King Philip’s War

King Philip’s War 1675-6 was the last major campaign by the Native Americans against the English colonists in southern New England. Philip or Metacom was the son of Massasoit (Oussamequin) (see Horner 1995:21) sachem (leader) of the Wampanoag, the Native people who traditionally lived in the area we know today as southeastern Massachusetts and northern Rhode Island. In the war, these territories directly controlled by Oussamequin were augmented by the Nipmuck (country west of Boston) and also the Pocumtuck (middle Connecticut River valley).

Apparently, the Pokanoket were flanked to the north by the Pawtucket (Wamesit), to the southwest by the Narragansett, and further west by the Pequots and Mohegans.

The Pokanoket leader, his people weakened by European-borne epidemics a few years earlier, was under assault from Quaiapen’s band of Narragansetts. To strengthen his position, he approached the Pilgrims of Plimouth in 1621 to form an alliance. This event has long been heralded as a major factor in helping the fledgling colony survive its formative years. It can also be interpreted as the first time a Native group incorporated an English colony into their own socio-political system.

Oussamequin died in 1661, at which time his eldest son, Wamsutta (Alexander), became sachem of the Pokanoket. Alexander died under mysterious circumstances the following year (Leach 1963:23). When Philip became sachem in 1662, he renewed the treaties his father made with the English. The colonists, however, continually encroached on Native rights so much so that by 1675 there was a general uprising of many Native peoples in the region. This has come to be known as King Philip’s War. A higher percentage of the English colonial population suffered death or wounds during this conflict than in any subsequent American war (Washburn 1978:94). Estimates place the English losses at £100,000 (Leach 1958:244) with 600 English dead, 3000 Indian people dead, 1200 houses destroyed, along with 8000 cattle (Washburn 1978:94).

As the personification of this devastating conflict, Philip was hunted relentlessly, while his wife and child were captured and sold into slavery.
in the West Indies (Lauber 1970[1913]:127). Captain Benjamin Church was sent with an armed contingent to quell the Indian uprising and kill Philip. With the help of an Indian traitor, during an early morning encounter near Mount Hope in Rhode Island, Philip's place of residence, Church and his men surprised Philip's band and Philip was killed, August 12, 1676. Ironically, he was killed by another Wampanoag, a man named Alderman, of the female sachem Weetamoe's Pocasset band. After being shot Philip's body was quartered and hung in nearby trees; his head was severed and placed on a stake in Plymouth for 20 years; and his hand was cut off and is supposedly to this day in a private collection.

Also, at the time of Philip's death, Captain Church reported that he received three of Philip's wampum (shell bead) belts, two horns of glazed powder, and a red cloth blanket; these were given to Captain Church by Philip's advisor Annawan who said that these were Philip's "royalties," which he had worn when he sat in state. There is no mention of a club in any of the historic records. However, there is a reference to Philip losing a staff in 1675 (Leach 1963:32).

**Documentary Evidence**

When and where "the club" (at Fruitlands), presently assumed to be Philip's, came from is something of a mystery. However, there is some information available.

In 1913 Dr. Warren King Moorehead was in contact with two elderly sisters living in Warren, Maine, who had "the club" in their possession and wanted to sell it. They had received it from a Mrs. Laura Anne Daniels (maiden name Fuller) of Union, Maine. Supposedly, it was handed down from person to person in the Fuller family. Apparently, Mrs. Daniels was descended from the Rev. John Checkley, a Church of England clergyman who became a missionary to the Indians in Providence. As the story goes, he secured the relic along with a pipe and a belt from the Indian who shot Philip in 1676. Moorehead purchased the club for Clara Endicott Sears, founder of the Fruitlands Museums, in 1930.

There is no doubt that Rev. John Checkley worked among the Indians of the Mount Hope area during the first half of the eighteenth century. There is also evidence that suggests he was in fact a collector of Indian relics and that he may have procured the club and handed it down to future generations of his family. He also may have had contact with an aged Benjamin Church who may have introduced him to Alderman. Church lived from 1639-1717. There is however no record which mentions these events or the club until the mid-nineteenth century at which time its authenticity as being King Philip's war club was already assumed. It is known that Rev. John Checkley was born in 1680 in Boston and died in Providence in 1754. Apparently Checkley was educated at Oxford, and thus lived abroad until around 1710. King Philip's war club was known to be in the possession of his descendants by 1842. Family tradition contends that Checkley traded a gold watch for Philip's war club, belt, and pipe (anonymous 1897:119).

Records at the Western Reserve Historical Society indicate that their club was given "many years ago" by a Daniel Punderson whose father, Lemuel (?) Punderson came to Cleveland, Ohio, from Connecticut. (Spence, personal communication 1995).

**Physical Characteristics (Figure 1)**

The Fruitlands club is made from the ball root of a Maple tree. The ball root develops when the root system of a tree hangs over a stream bank in such a way as to expose the roots and cause them to grow at an angle. The club is inlaid with white and purple wampum. White wampum
Figure 1. "King Philip's War Club" at the Fruitlands Museums, Harvard, Massachusetts. (Length = 22.5 in [c. 57 cm], width = 4 in [c. 10 cm]).
is made from the central column of a whelk shell. Purple wampum is made from quahog shell. There are also several triangular horn or dew claw pieces inlaid along one side of the club. The holes were made to fit individual beads. There are two lines of wampum along the adjacent surfaces of the handle, 44 beads to a side. Then on one side there are 15 triangular inlaid horn pieces, two of which are still there. Also, on the other side, there is a lower band of wampum beads, only partially completed. In fact, if you look at the club in the right light you can see two parallel lines made with something sharp to outline where the bead inlay should continue. It is evident that this line would have been continued. There are also three rectangular sections engraved into the club near the ball, perhaps for a brass or shell inlay.

**Conclusion**

Is this Philip’s club? There is no mention of a club in any of the historic records. Curiously, there is another identically named and similarly manufactured club in Ohio. The Western Reserve club is judged to be a genuine seventeenth century club no later than 1690 in date and probably Wampanoag (Figure 2) (Spence, personal communication 1995).

In her recent publication, Lepore (1998) documents the historical circumstances in which King Philip’s War gains its iconic placement in our American identity. She identifies a resurgence in memorializing King Philip’s war in the early nineteenth century. Another corroborating piece of evidence resides with a private collector in New Hampshire, who claims to own King Philip’s pipe. Further examination proved that it was in fact a Plains style t-shaped catlinite pipe, not a piece of seventeenth century New England material culture.

These various facts suggest that the attribution of “the club” as King Philip’s may be misleading. Naming something after a famous leader does have precedence. Recall the various bedrooms George Washington slept in, or the numerous Sitting Bull or Geronimo artifacts. Some of these artifact identifications are real and can be documented, while others cannot. In the case of King Philip’s War club, we have no good documentation that goes farther back than the 1840’s which positively identifies it as belonging to Philip. Therefore the popular belief that it is in fact his is based on faith or a sympathetic reading of the facts with respect to Checkley family history.

The object and its return can be seen as a metaphor for the resurgence of the visibility of Native American people in southern New England. For much of the historical period, they have hidden their identity. Recently, there has been a wide spread emergence of many local Native groups and people. Similarly, the club also emerged out of the shadows and has once again captured the popular imagination. This is an excellent opportunity to educate people about Native history in New England.
The club has that rare iconic value society places on particularly special things to elevate them. This is true for both Native and non-Native people. We celebrate its return and understand its messages on many levels.

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A HYBRID POINT TYPE IN THE NARRAGANSETT BASIN: ORIENT STEMMED

Alan Leveillee and Joseph N. Waller, Jr.

Abstract
Recent archaeological data recovery excavations at Native American site RI 2050, in Cranston, Rhode Island, have resulted in the recovery of projectile points that display a combination of characteristically Small Stemmed and Susquehanna morphological attributes. Similar points are also noted from the Joyner Site, on Conanicut Island, in Narragansett Bay. The authors suggest this point type, referred to as Orient Stemmed, represents the merge of the Susquehanna and Small Stemmed lithic technologies in the late Transitional Archaic Period.

Introduction
The recognition of stemmed projectile points of Late and Transitional Archaic affiliation along the southern New England and Long Island coastlines is far from being a new notion. The Poplar Island Complex, as described by Ritchie, citing Witthoft (1959:83), Kinsey (1959:115), and his own work (Ritchie 1961:44-45), in New York, on Staten Island, "has as its diagnostic trait a slender-bladed projectile point with rounded shoulders and a fairly long, constricted stem, tapering to a narrow, rounded base" (1980:145). He also notes, "Most such points are of siltstone or argillite, but rhyolite, quartz, quartzite and other materials including rarely flint, were employed" (Ritchie 1980:145). The point type is attributed to the Late Archaic and Ritchie reports that at the Kent-Hally Site, Bare Island, Pennsylvania, two specimens of the Poplar Island point type were found in direct association with a broken steatite vessel. One point was recovered from what would have been the inside of the vessel and the second was lying against the outside vessel wall (Ritchie 1961:44). Consequently the association of this point type with what we recognize as the Transitional Archaic Period, and likely the Orient Phase of the Susquehanna Tradition, is secure. Ritchie illustrated representative Poplar Island Points in Plates 24 and 25 of his Typology and Nomenclature for New York Projectile Points (1961:101-102).

Ritchie describes the Bare Island Point type as being contemporaneous with the Poplar Island type, noting that "There are intergrades between the Bare Island point and the Poplar Island point, but the rounded shoulder is conspicuous in the latter type" (1961:14). The shoulder element is described as "more crisp" within the Bare Island point type (Ritchie 1961:14). In 1980, Ritchie noted that the Bare Island Complex was defined primarily from data collected at the previously mentioned Kent-Hally Site, in Pennsylvania (1980:145), where Bare Island points "were found at all levels," and he assigns it to the Transitional stage of the Late Archaic (Ritchie 1961:14).

While the presence of Poplar Island and Bare Island points inland, along the New York coast, and coastal islands is established, their recovery on sites to the north, along southern New England, and specifically within greater Narragansett Basin, has rarely been reported. There are several possible reasons for this: the Poplar and Bare Island complexes may have been localized cultural manifestations, not reaching into
southern New England; the selective adoption of Ritchie's nomenclature for point types by New England archaeologists; a failure to recognize the point type in southern New England site assemblages; and/or the assignment of these points to the more inclusive and varied Small Stemmed types including those we have referred to as narrow stemmed, small stemmed, Wading River, Squibnocket stemmed, and so on. Whatever the reason we, in southern New England, have not recognized Ritchie's Poplar Island and Bare Island complexes in developing the greater Narragansett Basin cultural historical framework, nor have we adopted the associated point typologies.

The Orient Phase of the Susquehanna Tradition

A relationship between the Susquehanna and Small Stemmed lithic traditions was recognized by Dena Dincauze, in 1975, particularly in reference to the Orient Phase of the Transitional Archaic, as manifested by Orient Fishtail projectile points (Dincauze 1975:23-24). Orient points are well-represented within the greater Narragansett Bay region and are often made of varying grades of green argillite, the source of which is suspected to be Aquidneck Island (Strauss 1989) or nearby Conanicut Island (Leveillee 1996).

The cremation complex at the West Ferry Site, on Conanicut Island, contained Orient Fishtail and Coburn point types in direct association with steatite vessels as grave goods in burial G-1, with a radiocarbon age of 3280±90 (Gx-0735) years before the present (BP)(Simmons 1970:16-21).

Recent cultural resource management studies, as well as others by archaeologists working in southern New England, have attempted to make distinctions between recovered point types including Orient Fishtail specimens and Small Stemmed specimens that often resemble them, except for the distinctive basal treatment of the former (Figure 1). These studies have not successfully addressed those points that appear to be morphologically intermediate between the two, instead addressing them as either/or Small Stemmed or Orient types.

This has led to ambiguity as noted by Robert Kingsley, when he wrote in reference to the illustrated figure of a rhyolite Orient point from the Jamestown Bridge Site, RI 711, that "the illustrated specimen seems questionable" (JMA 1990:56). The temporal affiliation of these "Orient-like" points is yet to be firmly established. Recent data recovery management studies, as well as others by archaeologists working in southern New England, have attempted to make distinctions between recovered point types including Orient Fishtail specimens and Small Stemmed specimens that often resemble them, except for the distinctive basal treatment of the former (Figure 1). These studies have not successfully addressed those points that appear to be morphologically intermediate between the two, instead addressing them as either/or Small Stemmed or Orient types.

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results from RI 2050 enable consideration of this localized, Narragansett Basin, research question.

**Site RI 2050**

RI 2050 is located along the Furnace Hill Brook, in Cranston, Providence County, Rhode Island. It was first discovered by an archaeological team from Rhode Island College, during a survey along Phenix Avenue conducted as an element of bridge replacement and road reconstruction planned by the Rhode Island Department of Transportation (RICPAP 1993). Subsequent site examination studies by the University of Rhode Island (Handsmn 1995), followed by supplemental site evaluation studies by The Public Archaeology Laboratory, Inc. resulted in nomination of the site to the National Register of Historic Places (Leveillee 1996), as an element of the Furnace Hill Brook Historic and Archaeological District. The site is a multi-component campsite and steatite workshop area occupied intermittently during the Late Archaic, Transitional Archaic, and Woodland periods. Based in part on the series of archaeological studies conducted there, and following consultation with the Narragansett Indian Tribal Historic Preservation Officer, redesign of the proposed road relocation resulted in the preservation of approximately 80% of the site area. A program of archaeological data recovery within the remaining 20% of the site, which will be impacted by proposed construction, was conducted in the fall of 1997 under the direction of the authors. Employment of a revised Harris Matrix (Harris 1989) recording system enabled precise documentation of spatial relationships and contexts.

The projectile point assemblage from RI 2050 includes a number of representative specimens conforming to the recognized parameters of a variety of point types including Vosburg, Brewerton eared and side-notched, Orient Fishtail, Small Stemmed, and Fox Creek. These artifacts, along with steatite bowl fragments, cup fragments, stone pipe fragments, and manufacturing waste, were recovered from within discrete activity and occupation areas of the site; some in direct association with radiocarbon dated features.

Two argillite projectile points, in particular, were considered to be Orient-like in that they have sublanceolate-shaped elongated triangular blade elements (Figure 2). In longitudinal cross section they are uniformly biconvex. In latitudinal cross section they are both generally bi-subconvex, and have convex tips, with angles less that 25°. These points are made of high-grade green argillite, suspected to have been quarried from a Narragansett Basin source area. The manufacturing technique of these specimens reflects a high degree of dexterity and consistency, with generally unidirectional percussion of flake blanks to shape preforms, and well-controlled pressure to sharpen edges and finish bases.
The base elements of the RI 2050 Orient-like points are atypical, however, to the type. They are more like those observed on small stemmed points in that their stems are contracting and either straight or slightly convex (Figure 2). The bases, unlike typically concave fishtails, are straight-oblique, and subconvex. The unmistakable side-notching that results in the characteristic Orient Fishtail stem is instead apparently replaced by the characteristic stem of the small stemmed types.

Put simply these appear to be Orient points with small stemmed bases. The overall craftsmanship, and the long blades of these points lead the authors to believe they are more reflective of the Susquehanna lithic Tradition than the Small Stemmed lithic Tradition.

The suspected Susquehanna affiliation for these points is supported by their association with feature 11 on the site. Feature 11 was situated in the northwestern limits of the excavated portion of RI 2050. It consisted of series of episodic fillings. Steatite waste, bowl fragments, and two Susquehanna Broad Points were recovered from the strata above, and in immediate vicinity to, the feature. A ring of rocks, some fire affected, lined the western edge of the pit. Feature 11 contained a total of 293 pieces of lithic debitage, the majority of which was argillite chipping debris. Tools and tool fragments recovered from within the feature included an argillite biface, one of the subject argillite Orient-like points, steatite manufacturing waste, and a single steatite vessel rim fragment. A charcoal sample recovered from within the feature fill has a radiocarbon age of $2,570 \pm 100$ (B-113786) years before present. The clearly demonstrated association of the point to the steatite, and the $^{14}C$ age, establish the affiliation of this hybrid type to the late Transitional Archaic, Orient Complex.

It is our contention that these projectile points are the product of the merging of the Susquehanna, Orient Complex, and Small Stemmed lithic technologies in the Narragansett Basin towards the end of the Transitional Archaic Period, approximately 2500 years ago. Consequently we are referring to these points as Orient Stemmed, recognizing them as a distinctive and reliably diagnostic type in the region.

Acknowledgments

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THE STRANGE EMERGENCE OF A DEEP SEA PLUMMET OFF PLYMOUTH’S GURNET HEAD

Bernard A. Otto

By Permission of Bob Po

This narrative should, more than any theory, verify that the knobbed stone weight, or plummet, is a fishing accessory weight.

My life long friend Bob Po, one of our Massasoit chapter members, was recently given a knobbed prehistoric stone weight that was found under the most unusual circumstances and provenience. The friend who gave him this plummet was cleaning off dried kelp and seaweed from lobster pots piled on a wharf at Plymouth, when he noticed a dry frond clinging to what he thought was a lead fishing sinker. Scraping off the clinging feet of the frond, he realized he had an Indian stone artifact that resembled a fishing sinker. Knowing that Bob was interested in Indian artifacts, he gave him this well-made plummet.

Plummets are usually well-made, and some have one side flattened to prevent rolling on the sea floor. Bob’s plummet did have one side flattened, and is two and one quarter inches (5.72 cm) in length, average for the length of a plummet (Figure 1).

The lobster fisherman that owned the pots usually strung his pots two to three miles (1.24km to 1.86km) off Plymouth’s Gurnet Head in seventy feet (12 fathoms) of water. It has been noted that foreign explorers and fishermen of early times observed Native Americans in dugout canoes also fishing far out to sea.

The reader with little knowledge of sea flora may not know that certain species of kelp and seaweed, Phylum Chlorophyta, in early stages of growth, attach themselves tenaciously to stones on the sea floor, and using these stones as anchors, continue their growth to maturity. The odds of a seaweed attaching itself to a lost Native American fishing weight are one in a million, not to mention the fact that the weed became entangled with a lobster pot that was brought ashore, and the artifact found by a man casually cleaning seaweed off a stack of pots.

Figure 1. Deep sea plummet off Gurnet Head, Plymouth, MA. (Length: 2 and 1/4in [5.72 cm])
In order to show the reader how sea grass and kelp anchor themselves to stones, I asked Bob to walk out on Plymouth Beach at a dead low tide and bring back examples of this phenomenon, which he did. One of the photos I took accompanies this article (Figure 2).

Somehow fate seemed to have had a hand in bringing this prehistoric fishing weight to light and hand in a most unusual way. I thought this incident and story was too good not to share.

Figure 2. *Chorda filum* attached to a stone.