

A Summary of Previous Archaeological Testing at the Oak Ridge Prehistoric Site and Surrounding Town-Owned Property

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The Oak Ridge Site was discovered during a Phase I (Intensive) archaeological survey conducted by the Museum African American History on the 26 acres where a wastewater/ sewage treatment plant (today referred to as the Tri-town sewage treatment plant) was proposed to be built. The Phase I survey was carried out in June and July of 1982 under a permit issued by the Office of the State Archaeologist (permit 504) with Beth Bower as the Principal Archaeologist and Leonard Loparto as the prehistoric consultant. Testing consisted of three stages: a walkover reconnaissance of the entire property; random soil auger testing; and the excavation of shovel test pits. The walkover reconnaissance was carried out along seven north to south oriented swatches that paralleled Route 6 to the east. Each swath was 200' wide and spaced 200' from its neighbor. The purpose of this phase was to identify foundations, dumps, or vegetative changes indicative of buried archaeological resources.

The auger survey was carried out along transect lines spaced 200' apart with a total of 20 random and three systematic soil auger transects (**Figure 1**). Soil augers extended to a depth of 40 cmbs

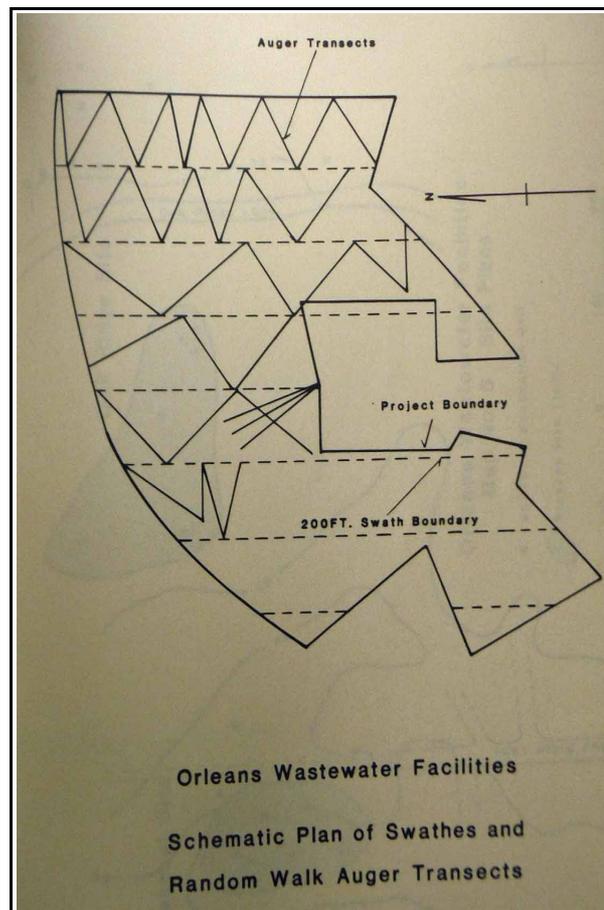


Figure 1. The Phase I auger survey transects

(12") at distances between 10 and 20 m. (32.5 and 65') from each other. Anomalies such as charcoal, oxidized soil, and rock were noted for each auger test. Testing was not conducted in swampy, eroded, or areas with standing water. Auger survey holes containing anomalies were flagged for further testing. The final stage of testing consisted of the excavation of 50 cm (19") square shovel test pits at both auger locations with anomalies and a random location matching the systematic location. A total of 30 shovel test pits were excavated to sterile glacial subsoil (**Figure 2**).

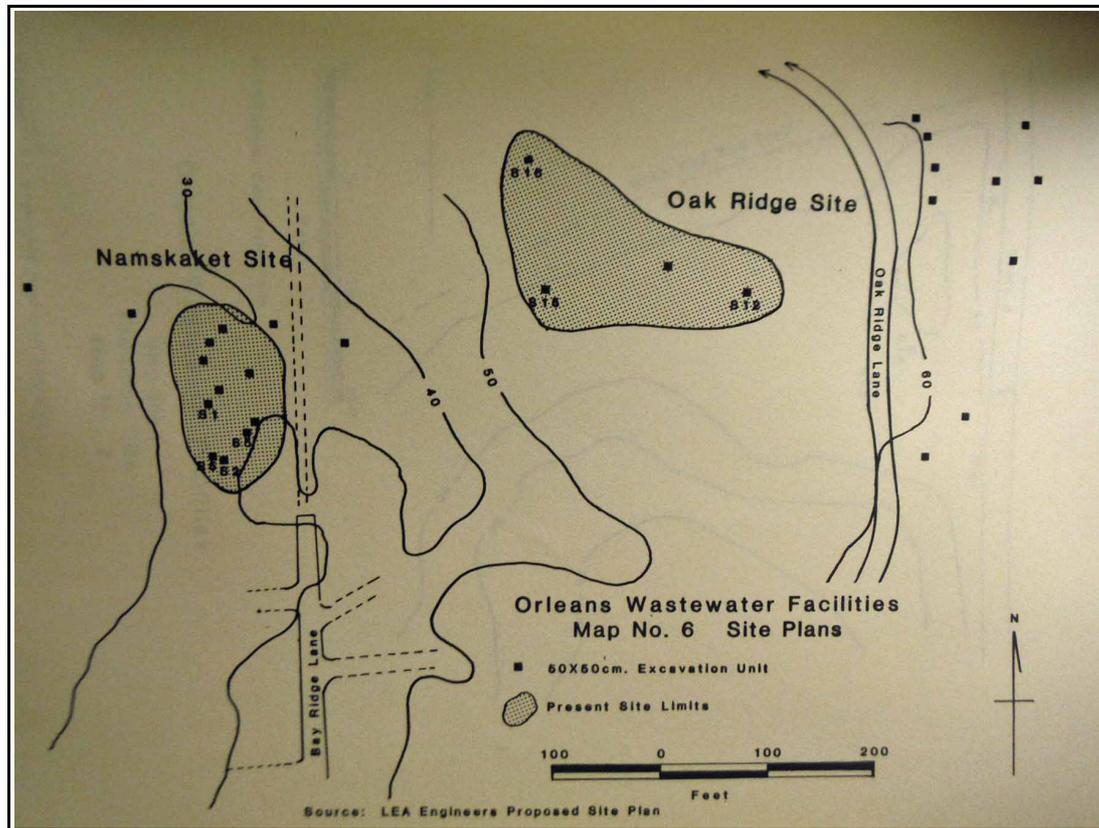


Figure 2. Phase I testing at the Oak Ridge and Namskaket Sites

The initial walkover identified a late nineteenth to early twentieth century surface trash dump in the northeast corner of the property (designated the Freeman Site) and stone walls running upslope east/west and to the immediate east of the parcel at Bay Ridge Lane. Two shovel test pits were excavated at the dump. The random soil auger transects identified 14 charcoal anomalies in the top and sub soils. Five of these anomalies were located at the extreme southeast corner immediately east of the first 500' of Oak Ridge Lane; one was west of Oak Ridge lane ~250' after it enters the property; and seven were in the vicinity of a sandy knoll at the end of Bay Ridge Road. I think, although it is not explicitly stated in the report, that the first five anomalies were tested with shovel test pits but yielded no material. These pits would have been located where the new filtration beds are proposed, to the east of the Oak Ridge Site. The single anomaly west of Oak Ridge Lane was tested with shovel test pits and eventually designated the Oak Ridge Site. The seven anomalies at the end of Bay Ridge Lane was also tested with shovel test pits and designated the Namskaket Site.

The historic Freeman Site was found to extend to 13 cmbs and contained domestic debris- ceramics, window and bottle glass, coal slag, and flower pot fragments. It is not known if this dump is associated with an unknown historic structure on the property, possibly one associated with the

stone walls, or not. Further background research (historic maps and deeds) would need to be done to determine this.

At the Oak Ridge Site, 26 pieces of felsite/ rhyolite chipping debris and one felsite/ rhyolite possible Atlantic style projectile point base were found between 20 and 40 cmbs. The site was located on a relatively flat terrace overlooking Namskaket Creek and the marshlands that border it ~500-600' to the west.

Testing at the Namskaket Site yielded 9 felsite/ rhyolite chipping debris and two pieces of quartzite chipping debris.

Both sites were initially identified due to the presence of charcoal flecks in the soil augers, possibly indicating a positive association between charcoal flecks and prehistoric occupation (but not necessarily an association between no charcoal and no artifacts since testing in the areas where no charcoal was found was not carried out).

Both sites were also determined to be in areas that would be potentially impacted by the proposed road and wastewater treatment plant construction. It was recommended by the archaeologists that a Phase II survey, designed to determine the extent of the site, its internal configuration and complexity, research potential, how intact it was, and its eligibility for inclusion on the National Register of Historic Places, be conducted.

Phase II testing was carried out in April 1984, again under a permit obtained from the Office of the State Archaeologist. Beth Bower was again the principal investigator with Leonard Loparto serving as the project archaeologist. Work was focused on the Oak Ridge and Namskaket sites.

Phase II testing at the Oak Ridge Site determined that the majority of it was in excellent condition, never having been plowed. A total of 84 50-cm-square shovel test pits were excavated on systematically located grid transects (**Figure 3**). In addition, eight 1-x-1 meter units were also excavated, four in areas with high artifact densities and four in randomly determined locations. The extent of the site was determined by sterile shovel test pits and the site was found to cover 3.73 acres, an area measuring 600' SE to NW by 300' SW to NE. A total of 1642 pieces of chipping debris, 3 pieces of fire cracked rock, and 16 tools or tool fragments were found. No soil anomalies (pits, postholes, or hearths) were found, but four artifact concentrations, referred to as "workshops" in the report, were identified.

Workshop 1 (Test trench 1) (N=67 artifacts) (Size: 50 square meters)

This workshop yielded 64 pieces of gray-colored felsite/ rhyolite chipping debris, one felsite/ rhyolite projectile point tip, and one piece of fire cracked rock. Fifteen meters away in Test pit 64 an additional piece of gray felsite/ rhyolite chipping debris was found.

Workshop 2 (Test trench 2) (N=207) (Size: 100 square meters)

A total of 200 gray felsite/ rhyolite piece of chipping debris, one felsite/ rhyolite core, one felsite/ rhyolite bifacial blade midsection fragment, and one felsite/ rhyolite Orient Fishtail point. Several surrounding test pits also yielded cultural material: Test pit 97 had one piece of gray felsite/ rhyolite chipping debris; Test pit 99 had 2 pieces of fire cracked rock; and test pit 69 two pieces of gray felsite/ rhyolite chipping debris were recovered.

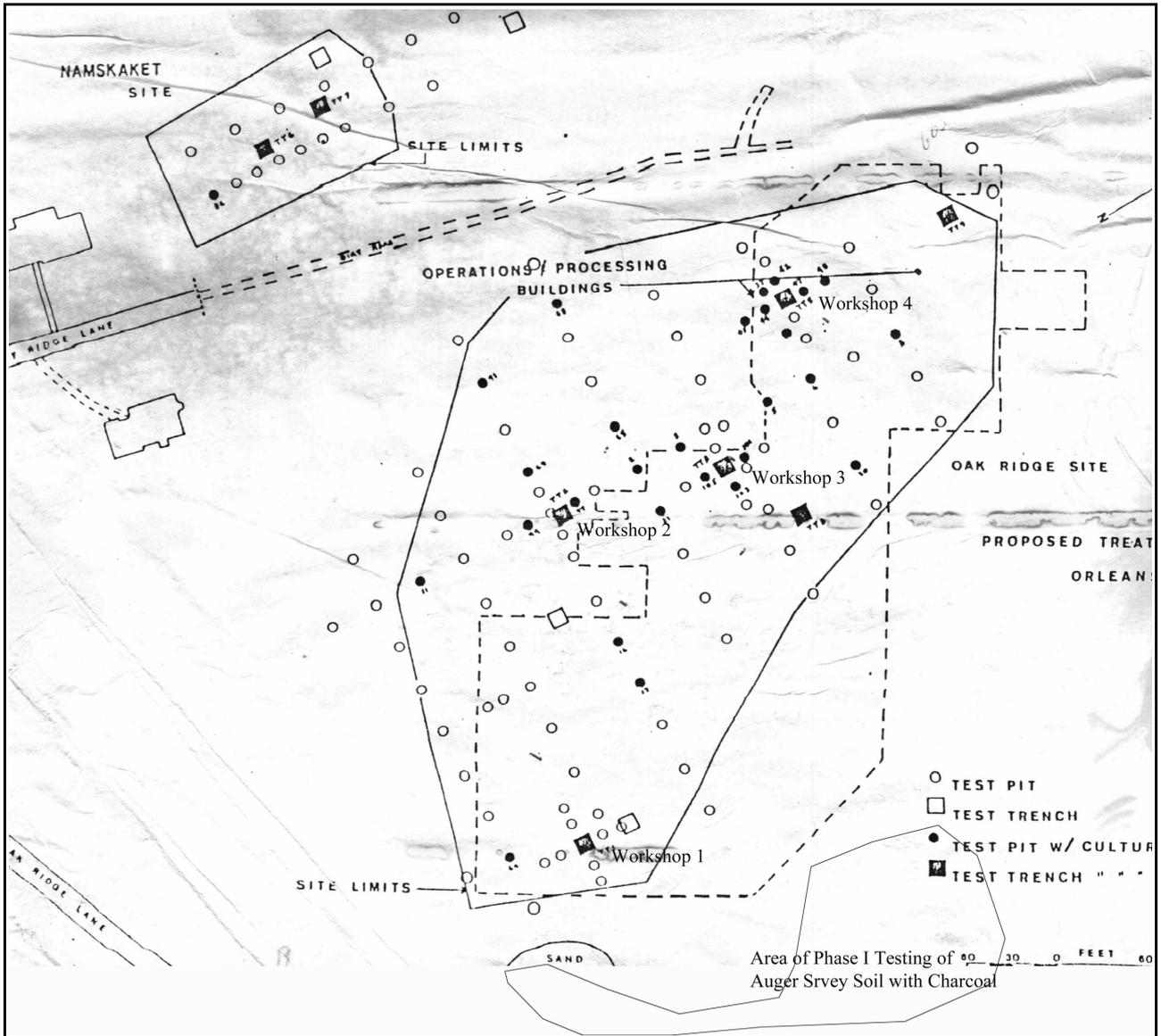


Figure 3. Phase II testing at the Oak Ridge and Namskeket Sites

Workshop 3 (Test trench 3) (N=90) (Size: 100 square meters)

Seventy-nine pieces of gray felsite/ rhyolite chipping debris (five with cortex), one gray felsite/ rhyolite core fragment, and five pieces of purple felsite/ rhyolite chipping debris were found in Test trench 3). Three of the surrounding test pits also yielded material: Test pit 101 contained one piece of purple colored felsite/ rhyolite and one piece of quartz chipping debris; Test pit 103 yielded two pieces of gray felsite/ rhyolite chipping debris, as did Test pit 105.

Workshop 4 (Test trench 5) (N=1163) (Size: 100 square meters)

This workshop was the largest of the four identified at the site yielding 981 pieces of gray, 22 pieces of purple, 33 pieces of blackish, and 21 pieces of reddish colored felsite/ rhyolite chipping debris, as well as 74 pieces of green argillite chipping debris. Twenty of the gray felsite/ rhyolite pieces (2%) bore cortex on their surface. Two gray colored biface blade base and three midsection fragments, and one gray colored (with a light tan patina) utilized flake was also found. Five of the surrounding test pits yielded cultural material: Test pit 42 two pieces of gray colored felsite/ rhyolite, and one piece of green argillite chipping debris were found along with one green argillite biface blade base fragment; Test pit 44 six pieces of gray and one piece of purple felsite/ rhyolite chipping debris; Test pit 45 four pieces of gray colored felsite/ rhyolite chipping debris; Test pit 47 five pieces of gray colored felsite/ rhyolite chipping debris; Test pit 48 three pieces of gray colored felsite/ rhyolite chipping debris.

The site was interpreted as representing two cultural components: the Coburn Phase (3600-3000 BP) and the Orient (3000-2000 BP). The Coburn Phase was represented by bifacial blades that Loparto interpreted as representing bifacial preforms for Wayland Notched (Coburn variety) points. Workshop 4 appears associated with the Coburn preforms, Workshop 2 with the Orient point, with the remaining two workshops containing material that could date to either period (or to another one altogether).

Overall the following artifacts were reported as having been recovered from the site:

Material	Chipping Debris Count
Gray Felsite/ Rhyolite	1459
Purple felsite/ Rhyolite	42
Blackish Felsite/ Rhyolite	40
Reddish Felsite/ Rhyolite	21
Green Argillite	77
White Quartz	3
Fire cracked rock	3
Total	1645

Tool	
Biface Bases	3
Biface Midsections	4
Biface Tips	5
Biface preform Fragments	2
Orient Fishtail point	1
Utilized Flake	1
Total	16

The large quantity of small versus large flakes (small flakes indicating that the tools were in the process of being finished) indicate that while all stages of manufacture are present, the final finishing of the tools was the principle activity. While Coburn blades are found in burial contexts, these tools were most probably not ceremonial objects, but represented tool blanks that people used as multi-tools for scraping, cutting, and reducing further to make projectile points when their hunting points broke. Because of the co-occurrence of Coburn and Orient tools at this site, there is the possibility that it dates to a period of transition ca. 3000 BP when the older Coburn Phase was being replaced by the later Orient one. Loparto felt that “further delineation of the Coburn/ Orient development would be of extreme local and regional importance” (Loparto 1984: 32).

The site was determined to be very significant and was recommended for inclusion on the National Register of Historic Places. It was determined to be fairly large with highly localized, potentially single-component, workshop areas. The site was basically in excellent, undisturbed condition with a high research potential, possibly as a specialized tool-making site and not a habitation site.

The Namskaket Site is located on a small, gently sloping terrace overlooking Namskaket Creek 100 to 200' to the west and approximately 200' west of the Oak Ridge Site. It was also found to be in excellent condition with no evidence of plowing or farming. Phase II testing consisted of the excavation of 16 shovel test pits along five and ten meter grid intervals on grid transects. Two judgmentally placed and two randomly placed 1-x-1 meter square test units were also placed at this site.

Phase II testing yielded only three pieces of gray colored felsite/ rhyolite chipping debris and no diagnostic features or artifacts. The extremely low density at the site indicated that there was a low potential that further excavation would yield significant results. The site was not recommended for more testing and was determined to be ineligible for inclusion on the National Register of Historic Places.

Because the site would have been destroyed during the subsequent construction of the wastewater plant, a Phase III/ Data Recovery plan was recommended for the Oak Ridge Site. The Phase III testing was proposed to test the possibility that the site represented a location where craft specialization- in this case the manufacture of Coburn blades (interpreted by Loparto as possibly for use in cremation burial rites), as well as further investigating the relationship between the Coburn and Orient phases.

The proposed excavation plan (as represented in the Phase II report and Loparto's Master's thesis) would have included an extensive excavation program that would further systematically sample the site to locate any additional workshop or activity areas. This would include sampling between the Phase II units. Phase II test pits were spaced 10 m apart and were placed on transects located 20 m apart. Loparto proposed that the first phase of Phase III testing would consist of the excavation of 60-80 additional test pits on transects located midway between the Phase II transects (10 m. between each transect for the Phase III) and several 50 cm square test pits on random transects across the site. Following this testing it was recommended that 24 1-x-1 m. square units (12 randomly placed and 12 judgmentally placed) would be placed across the site. Complete excavation of each of the workshops was also recommended using approximately 20 2-x-2 m. square blocks for each of the four workshops. It was hypothesized that four new workshops would be identified during the Phase III testing, making a total of 160 2-x-2 m squares needed to excavate them all. It was recommended that soil samples be taken for flotation to recover charcoal, floral, and faunal

remains. Cores from the adjacent wetlands were also planned to examine how the wetland developed over time. Finally, a public exhibit and report was also recommended. Loparto's Master's thesis research design for the Phase III recommended that all the artifacts be stored at the Museum of African American History in Roxbury. It was expected that fieldwork would take four months to finish with a report being delivered one year after the completion of fieldwork.

It is not known for sure, but is suspected that, the Phase III fieldwork was at least started in 1985. An article on the project appeared in the Friday June 7, 1985 issue of the Cape Codder. In it it was stated that fieldwork at the site had begun on the previous Monday (June 3, 1985) and was expected to last two months, to be completed by the end of July. Paperwork on file at the Massachusetts Historical Commission indicates that the site was determined eligible for inclusion on the National Register of Historic Places in January of 1985.

What was Found

Below is some background to what was found tool wise and how we interpret these artifacts today.

Wayland Notched/ Coburn Points Preforms

Wayland Notched points are a side-notched point that has a triangular-shaped blade with a straight to slightly concave base that is often less than the maximum blade width. Local volcanics are common with chert and argillite also used.

Dincauze interpreted Wayland Notched variety points as having been made from the Mansion Inn blade biface. The figure below shows Dincauze's idealized blades and the points that would have been made from them (**Figure 4**).

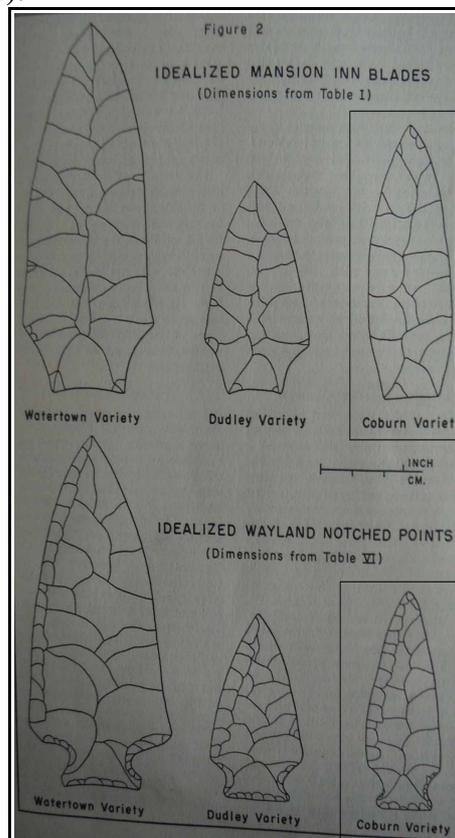


Figure 4. Dincauze's idealized forms of the Coburn bifaces and finished Coburn points

She named this point type for the town in which the Mansion Inn site is located, and identified three varieties, complimenting the Mansion Inn blade varieties: Watertown, Dudley and Coburn. Watertown variety points are large, broad and frequently asymmetrical in the blade shape (Dincauze 1968:24). Bases are straight or concave and never convex and the blade profile is excurvate to recurvate with a lenticular cross-section (Dincauze 1968: 24). These were common at the Watertown Arsenal and Mansion Inn sites, with only a minor occurrence at the Coburn site. Dudley variety points have straight to excurvate symmetrical blade edges with a lenticular cross-section (Dincauze 1968: 24). Archaeologists recovered these from the Watertown Arsenal and at the Boats site in South Dighton, Massachusetts. Coburn variety points were the predominant point style at the Coburn site and only minimally represented in the Mansion Inn assemblage (Dincauze 1968: 25). Dincauze described these points as "relatively rough-surfaced and carelessly finished" with crushed versus carefully pressure-flaked notches (Dincauze 1968: 25). The blade shape is the same as the other varieties as in the base shape. Dincauze noted the blade section as lense or lozenge-shaped versus lenticular with a more acute tip (Dincauze 1968: 25).

Dincauze's study of the Wayland Notched points from the cremation cemeteries in eastern Massachusetts also found rhyolite being the principal lithic raw material, with chert occasionally used for Dudley variety points, but not for Coburn variety (Dincauze 1968: 24-25). Dincauze did find argillite being used for the Coburn points secondarily to rhyolite (Dincauze 1968:25).

The Coburn Phase is named for the Coburn Site in Orleans, a cremation cemetery located on Little Pleasant Bay that was excavated in 1960. The site yielded gouges, axes, whetstones, pestles, plummets, and Wayland notched/ Coburn points and preforms.

At Taylor Bray Farm we found one Coburn point and two large blades that are somewhat similar in shape to the Coburns (**Figure 5**). We interpreted them as being from Atlantic points, a slightly



Figure 5. Life of a large bifacial blade at Taylor Bray Farm.
Left to right: Initial blade, knife blade, broken knife blade, broken knife blade reworked to a spear point, stubby spear point too small to use.

earlier phase (4,150 - 3,650 BP). This site is similar to the Oak Ridge Site except that we have large areas of fire-cracked rock associated with the Atlantic points. The chipping debris is very similar- gray and purple felsite/ rhyolite with argillite, quartz and quartzite. More quartz than at Oak Ridge though. We interpreted that people were arriving at the site with completed spear points as well as the large blades. The main activity we think was going on was hunting. The large blades were knives and as they broke, were reworked into scrapers, drills, and spear points, but the main spearpoint was the small quartz lanceolate point (called a Small Stemmed point). We had tip and bases and midsections from large blades as well and we think they resulted from people reducing the blades during resharpening (as they became dull) and putting stems on them, and sometimes, they broke.

Orient Fishtail Points

People who used tools associated with the Orient Fishtail Point Tradition dominated the later half of the Transitional Archaic. This appears to have been a time of great change in New England with new technologies appearing and by 3000 years BP an interrelated series of climatic, environmental, cultural and social changes dismantling the "finely balanced Archaic adaptive systems" (Dincauze 1974). Environmental changes included climate cooling with a possible regression of marine shorelines, a cessation of marine transgression, a change in the forest composition from oak and hickory to chestnut and by 2000 years BP a breakdown of reliable trade networks (Ritchie 1969:164; Dincauze 1974: 49). Orient Tradition sites are thus often found near the seashore or on major rivers, an occurrence that Dincauze attributes partially at least to the dissolution of trade networks, usually in locations that protected from the prevailing winds possibly with a move to interior camps in the winter, although again, Dincauze sees year round coastal settlement by Orient Tradition peoples (Dincauze 1974:49). Funk (1976) proposed that people occupied camps on bluffs in the winter while riverside sites probably represent spring to fall fishing sites where they collected anadromous species such as alewife, herring and shad with weirs.

The Orient Tradition was first identified by Ritchie on Long Island close to Orient New York and was initially characterized by the burial of dead upon high knolls. This led some to speculate that the Orient Tradition was nothing but a mortuary cult from New England (Ritchie 1963: 196). This was later proved not be the case as archaeologists later identified habitation sites.

Orient Fishtail points are a side-notched point with a narrow lanceolate blade shape reminiscent of Small Stemmed points. The stem is expanding and the base is usually straight to concave and occasionally angled with a basal width less than or equal to the maximum blade width. The points possess rounded shoulders that are often poorly defined with an obtuse shoulder angle. In cross-section these points range from flat to steeply angled and evidence of soft to hard hammer percussion is present. These points range from 2.5 to 10 centimeters long with a length to width ratio of 2.5:1 to 4:1 (MHC 1984: 112-113). Knappers produced these points from 3000-2000 years BP. Common raw materials include local volcanics quartz and quartzite.

We found two Orient Fishtail points at Taylor Bray (**Figure 6**). They, like the single Coburn point, seem to have been isolated lost points.



Figure 6. Orient Fishtail points from Taylor Bray Farm

Recommendations

The Oak Ridge Site is very important in terms of local and regional archaeology. The following recommendations are made for this project to bring it to completion and give it the respect it deserves:

- Determine if a Phase III investigation was conducted at the site
- If so, determine at what stage the analysis of the artifacts and completion of the final report is at
- Finish the analysis, including comparing what was found with other local sites (like Taylor Bray and the Coburn Site) and bringing it up to date in regards to what we know and suspect about Late Archaic cultures
- Submit the report to the Massachusetts Historical Commission
- Produce a popular report
- Exhibit the artifacts, even if on just a temporary basis, for everyone to appreciate
- Conduct Thermoluminescence dating on the fire-cracked/ burned rock recovered. A pilot study has been begun by the Taylor Bray Farm Preservation Association and analysis from the Oak Ridge Site would dovetail nicely with it (costs for Thermoluminescence dating is approximately \$300.00)
- Fill out the paperwork to get the Oak Ridge Site on the National Register of Historic Places
- Determine if the artifacts are currently stored in archival quality bags and boxes, if not, then they will need to be re-bagged/ boxed
- Move the artifacts and associated field notes to a secure, state approved curation facility
- Conduct further shovel testing in any areas to be impacted by new construction near the Oak Ridge Site. The previous testing appears to have relied on soil auger surveys, which may indicate the presence of features and charcoal but which do not locate artifacts. More recent work has shown that significant prehistoric sites are often found with no traces of the charcoal or discolored soil that auger surveys are designed to encounter (Figure 7)
- Conduct further shovel testing across the property area. Unless the town can guarantee that the remaining undeveloped portions of the property will be legally protected in perpetuity, the same reasons stated above for testing around the Oak Ridge Site go for the remainder of the property as well.



Figure 7. property bounds, Oak Ridge and Namskaket Site bounds and area that should be tested (shaded portion north and east of Oak Ridge Site/ Current Wastewater treatment plant)

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