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

Most readers are aware by now that the Bulletin is going through a period of transition. This was precipitated in part by the retirement of Jean-Jacques Rivard, who had assumed the lion's share of the production of the Bulletin for so many years, but is also a response to the many new technological options for journal preparation and printing that have become available in the last few years. Transition period problems are largely responsible for the lateness of the last issue of the Bulletin, despite the herculean and much appreciated efforts of Kathy Fairbanks, Curt and Tobi Hoffman, and Phil Brady. We are looking for ways to produce the Bulletin promptly, attractively, and inexpensively, but it may take a few issues before our new procedures are firmly in place. Meanwhile, we welcome your advice and suggestions, but we hope you will also give us your patience.

This issue's articles deal with many parts of the region and with time periods ranging throughout prehistory and into the historic period. However, they have one common theme; all were made possible by the fact that someone took care to preserve evidence of the past. In the case of the first article, it was Mr. Burt who took extraordinary pains to recover and conserve a prehistoric vessel, thus making one of the few whole pots from Massachusetts available for study. In the second article, John Pretola is able to produce a preliminary outline of the prehistory of Agawam because Charles Hull collected and saved artifacts from many sites, and his daughters wisely donated his collection to the Springfield Science Museum so that it could be analyzed and taken care of properly. In the case of the third article, it was documents and records of sites that were preserved for future analysts. As many sources of information as possible must be used to interpret the Contact period, with its dramatic events and rapid changes. Finally, Floyd Painter presents an alternative interpretation of the Satucket Cache, a group of artifacts discovered decades ago and carefully preserved by Mr. Buzarewicz. (By the way, Fred Carty plans to respond to Mr. Painter in a later issue of the Bulletin.)

Thus this issue celebrates people who have saved things, ranging from artifacts to field notes, maps, and documents, and who have made them available for study, rather than hiding them in a shoebox under the bed or distributing them to the grandchildren. We should thank them heartily, and follow their good example.

* * * * * * * * * * * * * * * * * * * * * * * * *

AN ABORIGINAL CERAMIC VESSEL
FROM CHILMARK, DUKES COUNTY, MASSACHUSETTS
James B. Petersen and Richard L. Burt

INTRODUCTION

In 1981 the Carnegie Museum of Natural History began a long-term research project concerned with prehistoric human adaptations to the paleoenvironments of Martha's Vineyard (Bouck et al. 1983; Richardson 1983a, 1983b). One aspect of this broad-based research is the reconstruction of aboriginal technological developments and evolving cultural systems, using data derived from recent excavations, past research and collections analyses. The present paper represents one such reconstruction using data from an existing artifact collection on Martha's Vineyard.

Copyright 1985 by James B. Petersen and Richard L. Burt
BACKGROUND

In 1952 Richard L. Burt of West Tisbury, Massachusetts, recovered a nearly intact prehistoric ceramic vessel during the course of house construction on Abel's Hill just south of South Road in the town of Chilmark, Dukes County, Massachusetts (Fig. 1). A bulldozer had disturbed the uppermost portion of an aboriginal pit feature which contained an inverted and tilted whole ceramic vessel. Unfortunately, the uppermost portion of the vessel, a wall and basal section, was pulverized by the bulldozer. Once Dick Burt chanced on the construction site, he recognized the importance of the still largely in situ ceramic vessel and convinced the construction crew to postpone further disturbance of the immediate area. He then acted to effectively maintain the integrity of the fragmented, but still largely intact ceramic vessel by digging downward inside of the broken portion of the vessel, taking care to leave all articulating sherds and supporting feature fill in place. Next, he applied flour paste-soaked strips of paper all across the interior surface, let them dry in place and then was able to dig away the surrounding soil and remove the greatest portion of the ceramic vessel in one large section (Fig. 2). No other cultural debris was apparently noted in the feature fill or surrounding area, possibly due to the extent of construction activities.

Figure 1. Location of Chilmark Ceramic Vessel Find Spot on Martha's Vineyard.

Although various archaeologists visiting Martha's Vineyard over the past 30 years have examined this vessel through the courtesy of Dick Burt, none has previously published a detailed description of it. We have chosen to do so since this is the only intact or nearly intact aboriginal ceramic vessel we know of from Martha's Vineyard and one of a relatively small number of intact or reconstructed vessels from southeastern New England (i.e. Brewer 1961; Dodge 1962; Greene 1961; Holmes 1963; Johnson 1962; Mrozowski 1980; Simmons 1970; Vidal et al. 1951). Moreover, we suspect that even one vessel can provide
a wealth of technological, stylistic and temporal data as regards the aboriginal occupation of this region.

This ceramic vessel was analyzed using methods meant to maximize attribute variability as employed in other New England ceramic studies (i.e. Dincauze 1975; Hamilton & Yesner 1983; Kenyon 1983; Petersen 1980; Petersen & Power 1983). Definitions of ceramic attributes can be found in several of these previous studies (Petersen 1980; Petersen & Power 1983) and discussion of perishable fiber attributes can be found in these and other studies (Adovasio 1977; Doyle et al. 1982; Hurley 1979; Petersen & Power 1983).

Color determinations were made with Munsell Soil Color Charts and Moh's hardness was determined with a standard scratch test using a set of minerals (2 - gypsum; 2.5 - cryolite; 3 - calcite; 3.5 - barite; 4 - fluorite). In addition, a binocular microscope (10-25X) was utilized in the examination of decoration and perishable fiber impressions.

Figure 2. Chilmark Ceramic Vessel

DESCRIPTION

CONSTRUCTION AND FORM

Clay

No detailed mineralogical analysis has been conducted, but it is probably safe to assume that the clay was derived from one of many locally available sources on Martha's Vineyard such as that known from the recent ethnographic record (i.e. Fewkes 1941).
Temper

Shell temper is quite obvious in this vessel, having left small pits on surfaces where it has been leached away as well as being directly observable in broken cross-sections. The source of the shell temper seems to have been shells of the bay scallop (Pectens irradians), which were highly oxidized through burning before inclusion and then finely broken up.

The largest observable fragment of shell is 3.9mm in maximum dimension, but most fragments are about 1.0-2.0mm in size and thus classifiable as medium sized (cf. Petersen 1980). Although difficult to estimate, shell apparently represents a relatively high percentage of the total paste, about 30%. A very small amount of possible sand temper was also noted in the paste, but it seems likely that these sand grains were constituents of the source clay rather than an intentional inclusion in the paste.

Texture

The paste was originally very well consolidated, with little extrusive temper, but leaching of the shell temper has left the vessel somewhat friable. Correspondingly, platey, irregular edges are often present on broken edges.

Method of Manufacture

The mode of construction was not readily observable due to the largely intact condition of the vessel and the well consolidated nature of the paste. However, parallel coil fractures did seem evident on several detached sherds, including at least one rim sherd, possibly indicative of coil construction.

Surface Treatment

The interior, lip and exterior surfaces were differentially treated in final shaping and consolidation procedures. Although largely obscured by the stabilizing paper strips and to a lesser degree by carbon (burned food?) deposits, the interior surface was apparently uniformly smoothed, probably with a yielding tool (cf. Shepard 1965). This tool, possibly a piece of leather, was applied while the vessel was still plastic on the basis of characteristic fine striations over the surface. Uniform smoothing was also applied on the lip and uppermost portion of exterior rim and neck, again partially obscured by extensive carbon deposits (boiled over food?) extending down to about the maximum diameter of the vessel (see Fig. 2).

A distinct and different form of exterior surface treatment was evident across the body and base of the vessel. These portions of the vessel are covered with somewhat obscure perishable fiber impressions left as the result of surface paddling in surface treatment and then light smoothing. Close examination of positive plasticine casts of the negative perishable fiber impressions revealed relatively fine Z-twist cordage (unknown spin and plies), 1.40-1.50mm in diameter, which may have been the weft elements of a form of close twined basketry (or fabric). However, no warp elements were observable and thus, it is also possible that simple cordage, rather than close twining, was wrapped around a paddling implement, such as has been recovered from other contemporaneous archaeological contexts (i.e. Kent 1980:37).
Overall vessel form is cylindrical with a slightly incurvate rim in relation to the vertical axis of the vessel, a moderately constricted neck, semiglobular body and rounded base. This vessel appears rather squat, with a width/height ratio of about 0.80, which puts it at the lower end of the range of cooking vessels as known from a recent ethnographic survey (Henrickson & McDonald 1983: 631).

The incurvate rim has a squarish lip with slightly rounded interior and exterior edges. The incurvate rim was apparently produced by a slight extrusion of the rim area, which, following regional convention, represents a form of simple collaring.

Color and Hardness

Color and hardness attributes were apparently affected by conditions of firing and usage and particularly for hardness, conditions of preservation. Much of the exterior vessel surface is best characterized as very dark grey in color, Munsell 10YR 3/1, where carbon deposits are present, while the balance of the exterior is characterized as light yellowish brown, Munsell 10YR 6/4. The interior surface is typically dark grey, Munsell 10YR 4/1, to very dark grey, Munsell 10YR 3/1, where carbon is present on the upper portion. The interior color is more typically brown, Munsell 10YR 5/3, where carbon is not present on the lower body and basal portions. A uniformly darker, sharply demarcated core is observable in all cross-sections, very dark grey to black in color, Munsell 7.5YR 2/0, which seems indicative of a reducing environment and rapid cooling at the time of vessel firing (Rye 1981:115-116).
Vessel hardness is about Moh's 3.0 on interior and exterior surfaces. This relatively soft condition is probably due to weathering which leached away most of the shell temper.

**Metric Data**

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</tr>
<tr>
<td>1 cm below lip thickness</td>
<td>6.0 to 7.0 mm</td>
</tr>
<tr>
<td>Neck thickness</td>
<td>4.8 to 5.0 mm</td>
</tr>
<tr>
<td>Body thickness</td>
<td>5.5 to 7.8 mm</td>
</tr>
<tr>
<td>Oral diameter</td>
<td>26 to 27 cm (warped)</td>
</tr>
<tr>
<td>Vessel height</td>
<td>32 to 34 cm (fragmentary)</td>
</tr>
</tbody>
</table>

**DECORATION**

*Decoration Tool*

Only one tool, a shell edge, was employed in the decoration of this vessel. Although a very similar shell has been elsewhere labelled as a scallop shell (Ritchie 1969:29), the curvature, relatively short length, 7.8-11.0 mm, and sharp but regular crenulations in the tool edge all indicate that some other as yet unknown, form of shell was employed in the process of decoration. The other shell tool cited above from Martha's Vineyard was apparently about 10.0 mm in length and still another, possibly similar shell tool from the Charles River drainage was 9.0 mm in length (Dincauze 1975:8).

*Technique of Application*

A series of approximately linear elements was produced with a form of simple vertical stamping, which, in this case, was applied with a slightly oblique, rather than absolutely perpendicular, angle in relation to the vessel surface. Work direction seems to have been from left to right or counterclockwise for all stamped elements, as noted for the shell stamped decoration in the Charles River drainage (Dincauze 1975:8).

*Motif*

A shell tool was employed with simple vertical stamping to produce a series of four roughly parallel, annular, horizontal design units around the uppermost portion of the exterior rim (Fig. 3). A fifth set of shell stamped elements, with a perpendicular orientation to the annular units, was used to terminate the decoration at about 32-33 mm below the lip edge. Each of these five units was composed of numerous stamped elements. No other decoration was applied on the exterior and no decoration of any kind was applied on the lip and interior surfaces.

**EXTERNAL CORRELATIONS**

Although the relationships of a single ceramic vessel are difficult to determine with much certainty, the possibilities bear some consideration, especially in the case of such a complete vessel.
In terms of the broad Massachusetts ceramic "stage" terminology, this vessel seems best attributable to the earliest portion of "stage 4", when extruded collars appeared along with the confinement of most decoration to the upper rim area and a predominant semi-globular cylindrical vessel form (Fowler 1966). In this scheme, the absence of castellations is unusual, but not unknown in "stage 4" contexts, especially in the earliest developments (i.e. Greene 1961) and such a vessel might be cross-dated to about A.D. 1400 (Fowler 1966; Snow 1978:66, 1980:329).

More detailed comparison of the Chilmark vessel revealed that it is certainly not attributable to protohistoric/ethnohistoric contexts (after about A.D. 1600) on the basis of other such ceramics in southern New England and Long Island (i.e. Mrozowski 1980; Rouse 1947; Salwen 1969; Simmons 1970; Solecki 1950). The Chilmark vessel further appears distinct from a variety of dated and undated late prehistoric ceramics in the same region (i.e. Dodge 1962; Gramly & Gwynn 1979; Greene 1961; Luedtke 1980; Rouse 1947; Salwen 1968; Salwen & Ottesen 1972; Smith 1950), including a few good examples in relative proximity to Martha's Vineyard on Cape Cod (Brewer 1961; Johnson 1962). One possible exception was noted, however, a ceramic vessel from Hyannis on Cape Cod (Vidal et al. 1951: Fig. 6; Snow 1980: Fig. 8.10). Although more elongate, smaller and decorated with incision rather than shell stamping, the Hyannis vessel appears quite similar to the Chilmark vessel on the basis of vessel form. Parenthetically, the Hyannis vessel was related in a general way by its reporters to Niantic phase ceramics of the Windsor tradition, a late prehistoric manifestation on both sides of Long Island Sound (Vidal et al. 1951:8-9; see Lavin 1980; Rouse 1947; Salwen & Ottesen 1972; Smith 1950).

Late Woodland ceramics from Martha's Vineyard have been also related to ceramics of the Windsor tradition by Ritchie (1969:54), but only to the Sebonac phase since he apparently believes that Niantic phase diagnostics need better definition (Ritchie 1965:265; Snow 1980:325). In any case, Ritchie related Late Woodland ceramics from Martha's Vineyard to late Windsor ceramics on the basis of common usage of cord or "scallop shell" stamping, incision, "corded" exterior surfaces, shell temper, constricted necks and collaring in latest contexts. In point of fact, one of his better examples from stratum 1A at the Hornblower II site on Martha's Vineyard seems to be a nearly precise replica of the Chilmark vessel on the basis of lip form and decoration tool, but with a slightly different motif (Ritchie 1969:29, Plate 10: 3 and 9). Stratum 1A at the Hornblower II site was dated to A.D. 1380± 80 (Ritchie 1969:52).

The general description of the available ceramic sample from strata 1A and 1B at Hornblower II, including unarguable scallop shell and other shell stamped decoration, would seem to easily subsume the Chilmark vessel, although attributes of overall vessel form were poorly presented in the highly fragmented Hornblower sample. Comparable small samples were also represented in undated stratum 1 at the Howland No. 1 site and stratum 1 at the Peterson site, with the latter dated at A.D. 1565± 90 (Ritchie 1969:210). This later portion of the Late Woodland period was designated Late Woodland 2 by Moffet (1959, 1962) in his research on Cape Cod, and again, the Chilmark vessel can be related to ceramics of this period and locale.

In sum, we directly relate the Chilmark ceramic vessel to the latest centuries of the prehistoric Late Woodland period on Martha's Vineyard, after about A.D. 1300 or A.D. 1350. It can be broadly related to other Late Woodland ceramics in southeastern New England, sharing stylistic and technological attributes on a general level. However, we believe that the Chilmark vessel provides a clear example from Martha's Vineyard of what Dincauze (1975:14) has labelled "local traditions and preferences" in the development of aboriginal ceramics in southeastern New England (cf. Fowler various; Dincauze 1976:83-84; Luedtke 1980:49; Snow 1978:66). While Ritchie (1969:53-54) has suggested that Late Woodland material remains on Martha's Vineyard, including ceramics like the Chilmark vessel,
represent direct antecedents of the ethnographic Wampanoag, the nature of this intriguing relationship awaits further investigation.

ACKNOWLEDGEMENTS

We would like to express our gratitude to Dr. James B. Richardson III, Curator, Section of Man, Carnegie Museum of Natural History, who has made possible our continued participation in various aspects of his archaeological research on Martha's Vineyard. We also owe a note of thanks to Stephen Bicknell, Department of Anthropology, University of Maine-Orono, who kindly printed the accompanying photographs and Margo Boyd, who typed the manuscript in a timely manner.

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A PRELIMINARY PREHISTORY OF AGAWAM: 
ANALYSIS OF THE CHARLES W. HULL COLLECTION

John P. Pretola

INTRODUCTION

In the mid 1970's, the Institute for Conservation Archaeology while assessing archaeological resources in the town of Agawam, identified the Charles W. Hull Collection as a significant local archaeological resource (Bawden 1976). Mr. Hull, a life-long resident of Agawam, Massachusetts and an avid collector of Indian artifacts, had died in 1962. His collection was passed on to his daughters Emily Hutchinson, Edith LaFrancis and Amy Ferry, who recognized its significance and donated it to the Springfield Science Museum in February, 1982. With the intention of serving as a permanent repository and in order to recover as much information about Agawam's archaeological resources as possible, the Science Museum began an intensive study of the objects and the accompanying provenience data.

The goals of this study were twofold: first to carry out a preliminary spatial analysis of site locations alluded to in the notebooks and second, to make temporal inferences for each collecting locus through analysis of the diagnostic artifacts present. Although there are a number of methodological problems in using diagnostic artifacts, especially projectile point types, as "index fossils" it was considered the best way to organize the data.
ENVIRONMENTAL DESCRIPTION

The study area lies within the central lowland of the Connecticut River Valley in western Massachusetts. This lowland is underlain by soft Triassic rocks and is characterized by uneven relief. The valley is surrounded by highland on either side consisting of hard, erosion-resistant Paleozoic rocks. This Triassic basin expands from five to 15 miles and reaches its greatest width of 20 miles at the Connecticut/Massachusetts state border. The Triassic lowland continues southwesterly to New Haven, Connecticut but the Connecticut River changes course south of Hartford at Middletown, flowing southeast through the uplands until it enters Long Island Sound in a broad estuary at Saybrook, Connecticut.

Relief within the lowland is dominated by a flood plain and river terraces several miles in width. The terraces are dissected by numerous small streams and dotted with small glacial drumlins. A series of basalt ridges rise several hundred feet above the valley floor in a general north-south trend and represent the only major topographic features in the lowland. Valley soils are generally light textured, well drained and extremely fertile. Precipitation is well distributed, providing excellent ground water supplies. The climate is characterized by long, cold winters and relatively short humid summers. In summer the valley retains heat, causing plants to mature more rapidly than in the surrounding uplands. This is a region where the more southern oak-chestnut forest merges with the northern hardwood forest of the surrounding uplands. Agawam itself lies almost entirely within this oak-chestnut forest zone and completely within the Triassic basin of the Connecticut River Valley.

Agawam is located on the west bank of the Connecticut River opposite Springfield, Massachusetts (Fig. 4). The Westfield River forms the northern boundary while Agawam's southern boundary is fixed by the Massachusetts/Connecticut State Line. Provin Mountain, a basalt ridge, forms the western boundary with the City of Westfield and the town of Southwick, Massachusetts. From the standpoint of surficial geology and topography, Agawam can be divided into roughly four zones. (Hartshorn & Koteff 1967; Colton & Hartshorn 1970). Immediately east of Provin Mountain is a complex series of glacial outwash and till deposits. These are bordered on the east and south by glacial delta deposits built up of sediments deposited directly into glacial Lake Hitchcock. Glacial lake deposits in the form of varve clay underly the eastern half of the town with an extensive surface occurrence in the south central part of the town. The eastern third of Agawam consists of postglacial stream terrace sediments, the oldest of which were deposited by the Connecticut and Westfield Rivers shortly after Glacial Lake Hitchcock drained. These sediments occur as a veneer of yellow-grey silt, sand, and gravel. In some places lake deposits have been stripped, exposing till and small drumlins that were well below lake level. Terrace remnants are located at an elevation of about 140 feet in the southern border of the town while north of the town they occur at about 170 feet, giving some indication of the effects of postglacial rebound in the area. A layer of wind-deposited silt and sand as much as three feet thick blankets the glacial deposits and the upper terraces, occasionally with scattered sand dunes up to 20 feet thick.

The history of land use in the town indicates that the first colonial agricultural centers were on the flood plains and terrace lands of the Connecticut and Westfield rivers. Later, farming spread inland so that by the mid-nineteenth century almost all arable land in Agawam was cleared. Early agriculture consisted of general farming in conjunction with livestock. Crops included corn, hay, wheat, rye, oats, hemp, potatoes, home vegetables and fruits. Cattle and sheep were the principal livestock. Farming began to decline in the latter part of the nineteenth century, and the emphasis on cash crops such as tobacco, onions, and potatoes increased (Latimer and Smith 1934). Agriculture has declined further, and today much of the land that was previously farmed is being converted into suburbs and condominiums.
Figure 4. Surficial Geology, Agawam, Massachusetts
HULL COLLECTION DESCRIPTION

The bulk of this surface collection was made between 1921 and 1946. Mr. Hull personally collected most of the material, although Amy, Emily and Edith also contributed. He also purchased and received gifts of artifacts. During this time, Agawam was a farming community that provided important cash crops of shade-grown tobacco, onions and potatoes. Farms devoted to those crops, as well as nurseries, were visited in the course of collection activities. Mr. Hull's collecting sites appear to be readily accessible from the major roads that crisscross the town in a circulation pattern that has not significantly changed since 1799. Find locations are recorded for Agawam, Longmeadow and Southwick, Massachusetts as well as for Suffield and Enfield, Connecticut. Since the bulk of the information is from Agawam, the material contained in this report is restricted to those items of Agawam provenience with the exception of two sites adjacent to the Agawam border at Risings Corners and State Line, Suffield, Connecticut. The Hull Collection consists of 2559 ground stone and chipped stone objects. Four hundred forty-seven, or 18.4% have provenience data associated with them. One hundred twenty-seven specimens are non-Northeastern and represent objects obtained by Mr. Hull through trade or purchase. The remainder of the collection could be identified as local on the basis of material or morphology but no specific provenience data were provided. A bias toward collecting projectile points, quartz endscrapers, large blades and ground stone axes, adzes and gouges is evident (Table 1). Chipped stone and small ground stone objects were commonly traced into a notebook, with entries consisting of the lot location or the land owner's name along with the date and sometimes the time of day that the site was visited. Rarely, a sketch map of the site location would be made. Large ground stone tools were given a number that was painted on the object with red enamel paint. That number and all associated data were entered in a separate notebook from that used to record chipped stone objects.

COLLECTION ANALYSIS

Collection analysis involved three steps. The first was the most tedious and involved matching the objects to the tracings and other descriptions in the notebooks. A part-time team of ten volunteers, students, interns and staff worked very carefully. The cataloging and quantification of the artifacts become step two. Step three involved typing the projectile points using published typologies (Dincauze 1968, 1972, 1976; Ritchie 1961, 1969) and correlation of types with site locational designations. The findings are presented in Table 2. The collecting loci listed represent an attempt to identify approximate collection areas based upon descriptions provided in the Hull notebooks correlated with old atlases, directories and maps. Local geographical terms are used to define these loci, which often contain more than one possible site. In some cases, these loci identify sites now destroyed by construction and so constitute the only information left concerning those areas. As with many surface collections, these loci appear to be large multi-component sites or a cluster of small sites representing different time periods located on fertile agricultural soils where artifacts were uncovered during plowing or other economic pursuits. Such sites are often discovered close to existing roads or dirt trails. Small sites that were difficult to reach and sites located on less economically useful ground are under-represented in the Hull notebooks.

Based upon typology, all archaeological time periods are represented except Paleoindian. The Small Stemmed Point Tradition is the most heavily represented. There are numerous Late Archaic triangles, as well as Wading River, Squibnocket, Bar Island, and Poplar Island points. Middle Archaic Neville, Stark and Merrimack Stemmed Points are also in evidence. Broad Spear or Susquehanna Tradition material is strongly represented by a number of broad blades and projectile point types, including Atlantic/Snook Kill, Wayland Notched/Susquehanna Broad forms, and Orient Fishtails.
## TABLE 1
**HULL COLLECTION**  
**ARTIFACT CATEGORIES AND QUANTITIES**

### SUMMARY

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### NORTHEAST CULTURE AREA

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Percent of Northeast collection 18.4% 81.6% 100%

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* Materials were considered to have provenience if data included a specific collection locus such as a property owner's name or a certain local geographical designation.

** Items were considered to have no provenience if there were no accompanying data or if only a city or state designation were given.

*** Ground stone objects include: axes, adzes, celts, pestles, grinding stones, hammer stones, pitted stones, chisels, gouges, picks, hoes, etc.

**** Non-provenience ground stone objects were generally not accepted for donation, making this figure an under-enumeration.
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The Laurentian Tradition is present, including Brewerton Side-Notched triangles and Vosburg forms. Woodland periods are represented by Adena, Jack's Reef and Levanna types. In addition there are several examples of pottery sherds and steatite bowl fragments. All listed point types, pottery and gunflints of questionable aboriginal association also exist in the unprovenienced material.

PREHISTORIC RECONSTRUCTION

Using the Hull collection analysis, it is possible to sketch a tentative culture history of Agawam. This sketch is synthesized from the generalized cultural sequence for New England combined with specifics provided by the Hull collection.

Ice Age hunters, or Paleoindians, occupied the central Connecticut Valley sometime shortly after Glacial Lake Hitchcock drained. There are not enough data to suggest settlement/subsistence patterns, but Paleoindian manifestations consists of stray surface finds from the following locations: Chicopee, Montague, Deerfield, Hampden, Glastonbury, (Jordan 1969:13), Hadley, Greenfield (Curren & Dincauze 1977:334-335). Most of the finds occur on the highest, oldest river terraces or on glacial deltas. A single Paleoindian fluted point in the collection of Amherst College is attributed to Agawam (Dincauze personal communication). Made of a green chert, the Agawam fluted point lacks specific locational data but probably follows a similar pattern as other finds throughout the valley. Generalized pollen diagrams for the Paleoindian time period (Ogden 1977: 23-26) suggest a Boreal Parkland forest. Specific reconstructions for this time period (Curren and Dincauze 1977) indicate that the Connecticut Valley would have been attractive to Ice Age hunters. Large valleys tend to provide a sheltered environment, causing climatic gradients to extend further northward than upland areas in the same latitude.

Reconstructions of the regional Archaic cultural ecological situation (Dincauze & Mulholland 1974:451) indicate that the Agawam area could have contained established Early Archaic foraging groups as early as the 9th millennium BP. Find spots/sites yielding the characteristic bifurcated base projectile points have been identified immediately south and northeast of the study area. Pollen analysis (Ogden 1977:27-31) has demonstrated the area was covered in an oak-hemlock forest, and that the climate was continuing to moderate.

The Hull collection confirms the presence of Early Archaic hunters, as it contains bifurcated base projectile points from loci in the southwest quarter of the town. The Mt. Pisgah and Hart's Gap loci appear to be located on glacial delta and outwash deposits. This is to be expected in a past-glacial situation containing poorly defined drainage patterns.

Pollen diagrams after 8,000 BP suggest a warming, moist environment. Human cultural patterns included Middle Archaic foragers following established seasonal rounds that utilized sites along the falls of rivers, lakes and ponds (Dincauze 1976). Characteristic Neville and Stark points have been identified in surface collections from southeastern Agawam along Three Mile Brook, White Brook and Philo Brook (Zeitlin & Zeitlin 1978:10).

The Hull collection does not contain any provenienced Neville point forms. Stark and Merrimack points are identified for Three Mile Brook. LaFleur, Grasso Farm and Hart's Gap. They are not strongly represented at any of the loci and so paint a vague picture for the Middle Archaic in Agawam. The LaFleur, Grasso Farm and Three Mile Brook loci do suggest occupation of the first terrace of the Connecticut River and may indicate when that terrace became inhabitable. None of the points exhibit a great deal of weathering as one would expect if they were placed there through secondary deposition, although that cannot be ruled out.
Regionally, after 6,000 BP, the warm dry climatic maximum coincided with the florescence of Late Archaic sites. The Laurentian, Small-Stemmed Point and Susquehanna traditions are all represented. Hull collection Laurentian point types include Brewerton Side-Notched, Vosburg, and Brewerton-Eared Triangle that are identical in material and form to those found in the Ames Rock-shelter near Old Lyme, Connecticut (John Pfeiffer personal communication). Similarly, the Susquehanna forms display a number of similarities to those reported from the southern Connecticut River Valley. The Small Stemmed Point tradition comprised the bulk of the Hull collection. Since it appears that these point forms can no longer be considered as strictly Late Archaic time markers, as Ritchie (1969) had suggested, there remain many unanswered questions about the tradition.

The Early Woodland Period began approximately 3,000 years ago and is characterized by the wide use of Vinette I pottery. Characteristic projectile point types are Adena, Lagoon and Meadowood. The Early Woodland artifact inventory also includes trapezoidal gorgets, ovate cache blades, birdstones, boatstones, bar amulets and tubular pipes. Blocked-end tubular pipes, copper and shell ornaments identified in Adena-related burial deposits are known from the Holyoke Depot Site and the Tobbin Site within the central Connecticut River drainage. The Hull collection contains Adena, Lagoon and Meadowood points from Agawam's first terrace of the Connecticut River. There are no examples of Vinette I pottery in the collection. A single boatstone lacks provenience but the steatite it is made from appears to be local material.

The Middle Woodland dates to approximately 1,800 years ago and is characterized by the development of Vinette II pottery decorated by various stamping techniques as well as corded stick ornamentation. The elbow pipe is also introduced at this time and projectile point forms include Greene, Fox Creek, Jack's Reef Corner-Notched and Jack's Reef Pentagonal. Little else is known about the Middle Woodland and it remains poorly defined in New England. The Hull collection contains a Fox Creek Stemmed point from the river floodplain and a Jack's Reef Corner-Notched point from the Feeding Hills area in soil built up upon glacial outwash deposits. This area also yielded an elbow pipe of carved steatite that may date to this period but could be later.

Approximately 1,000 years ago, the Late Woodland Period began with the appearance of finely made ceramics that include paddle and anvil construction, and cord marked exterior surfaces with decorated shoulders, rims, lips and inner rim areas. Also at this time, the triangular Levanna point became the preferred projectile point in a wide range of sizes that makes it difficult to distinguish in the smaller ranges from Late Archaic triangular point forms. In the Late Woodland there is ample evidence of the use of maize, beans and squash in addition to wild game and wild plant food in the diet. The Hull collection includes Levanna forms from a number of different topographic locations in Agawam, suggesting that not only the river floodplains were inhabited at this time.

CONCLUSIONS

Only rarely does the opportunity to recover site location data occur with nineteenth and early twentieth century surface collections. In this respect, the Hull collection provides a powerful research tool useful in studying the prehistory of Agawam. At the same time, it points out most effectively the problems encountered in using museum collections. The heavy dependence upon using projectile points as time markers to indicate the age of sites can produce erroneous assumptions. For example, the most recent findings in southeastern Massachusetts and southern Connecticut (Simon 1981:696; John Pfeiffer and Kevin McBride, personal communication) indicate that Early Woodland pottery is sometimes associated with Small Stemmed Points, suggesting that the manufacture and use of such point types may not be restricted to the Late Archaic. Museum collections can only function to
suggest time periods represented and indicate possible site locations. Only systematic sur­
vey, excavation and radiocarbon dating can provide the temporal information and cultural
definition needed by the modern archaeologist.

The Hull collection can also suggest which archaeological problems can best be ad­
dressed using a problem oriented approach to field work. For example, the preponderance
of Small Stemmed and Susquehanna Tradition items in the assemblage suggests that Agawam
may be a good place to study the relationships, ecological adaptation and cultural dynamics
of these traditions. The Hull collection does not answer many questions; rather, it raises
them.

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THE DYNAMICS OF SEVENTEENTH CENTURY
WAMPANOAG LAND RELATIONS:
THE ETHNOHISTORICAL EVIDENCE
FOR LOCATIONAL CHANGE

Laurie Lee Weinstein

INTRODUCTION

The Wampanoag are no strangers to most readers of the Bulletin. Indeed, the Society's museum, The Bronson Museum, is largely devoted to the history of the Wampanoag. In spite of the seeming plethora of information about these Indians, there is actually very little concrete data about them. The Wampanoag's settlement patterns, socio-political and economic systems are still poorly understood.

The following paper integrates a variety of documentary and archaeological information concerning the Wampanoag's settlement locations during the seventeenth century. The research is based upon a three year investigation of land competition between the Wampanoag and the Plymouth colonists (Weinstein 1983a). This competition culminated in 1675 with King Philip's War, which removed the Indian barrier to the colonial settlement of southern New England. Archaeological data from the Massachusetts Archaeological Society, the Rhode Island Historic Preservation Commission and the Public Archaeological Laboratory, Incorporated, plus town histories and documentary reports of the seventeenth century explorers, traders and colonists were all researched for settlement information.

A word about the sources should be mentioned. Some of the references, such as Roger Williams', John Josselyn's and Samuel deChamplain's descriptions of native New England, are general, regional sources and do not specifically pertain to the Wampanoag. These, and other regional sources, do not always address cultural variations which undoubtedly existed between southern New England's indigenous societies. However, since very little specific information exists on the seventeenth century Wampanoag, we are forced to use the comparative data.

The locational information presented in this paper serves two purposes. It provides a data bank for other regional researchers, and it may also illuminate the dynamics of seventeenth century Wampanoag land relations. The Wampanoag were forced to modify their traditional settlement patterns because European colonists were quickly usurping the Indians' lands. Whereas the Wampanoag still had access to many of their interior southeastern Massachusetts lands during the early seventeenth century, the Indians had been pushed to the periphery of colonial settlement by 1674.

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This paper will help to document this land shift. The discussion is divided into two time periods: 1600-1650 and 1650-1674. Each period includes a brief ethnographic description, followed by a detailed appendix of site locations. Wherever possible, data from the lists are incorporated into the text.

1600-1650

The Wampanoag spoke the Massachusett language, one of the five Eastern Algonkian languages spoken in southern New England (Salwen 1978:160). The Wampanoag inhabited present-day southeastern Massachusetts and eastern Rhode Island, plus the Cape and the off-shore islands. Their lands coincided with the boundaries of the Plymouth Colony.

Recent scholars (e.g., Cook 1976; Jennings 1975; Snow 1980; and Salisbury 1982) have reworked seventeenth century population estimates for indigenous southern New England. Their figures range from 60,000-144,000. The Wampanoag, according to Salisbury (1982:28), had a population of 21,000-24,000 scattered throughout mainland southeast Massachusetts, the Cape and the offshore islands.

Beginning in 1616, a series of epidemics began to take their toll on indigenous New England populations. The net effect of these epidemics was a severe population decline of 90% or more by 1674. The Wampanoag Village of Patuxet (#9) was just one of the victims of the epidemics. This dramatic decline is documented by Daniel Gookin's seventeenth century population estimates and is comparable to data from other contact situations (e.g., Cook and Borah 1971 for Mexico, and Dobyns 1966 for native North America).

Daniel Gookin was a Massachusetts Bay magistrate as well as a supervisor of Massachusetts Bay's Indian "reservations." He interviewed "old Indians" of the tribes of southern New England about their pre- and post-plague populations (Jennings 1975:26). They told him, for example, that the Wampanoag and the Massachusetts could have formerly raised armies of 3,000 men each, but by 1674, the Massachusetts Indians were reduced to 300 men (Gookin 1972b:8-9). Gookin failed to offer a post-plague figure for the Wampanoag. However, Jennings (1975:26) suggests they declined similarly.

Wampanoag economy was somewhat "broad-spectrum" (Flannery 1971:90) in the sense that a variety of resources were tapped for food. Indians practiced farming, fishing, hunting and gathering. Each activity was scheduled according to the agricultural cycle and to the seasonal abundances of certain foodstuffs, such as the herring runs or the ripening of acorns and strawberries.

Indians lived in their coastal farming villages or hamlets spring through early fall. Champlain's (Dexter 1979:53) picture of one such village near Port St. Louis or Plymouth (locational listings #9 and #10 on Figure 5 and Appendix) suggest that the family wigwams were dispersed along the coast. Each one was surrounded by its planting fields. Several large coastal settlements were located on the fertile lands of Mount Hope (#8), Sowams (#12) and Pocasset (#11). The villages of Kickamuit and Montaup on Mount Hope (#4), Pokanoket in Sowams (#12) and Mattapoisett in Pocasset (#11) were just a few of the documented Wampanoag settlements located in these areas.

Not all farming villages were coastal, however. According to the Plymouth colonist Edward Winslow (1969:466), the vast interior areas along the Taunton River were cultivated by their former Indian occupants (#15). Archaeological evidence from the Wapanucket (#5) and Titicut (#16) sites corroborates Winslow's statements. Both of these sites are located within the Taunton River drainage and both have Late Woodland and Early Historic period components. Titicut was more extensively occupied during these time periods than was the
Figure 5. Indian Locations 1600-1650

Key
- Northern & Western Boundary of Plymouth Colony
- area not included

Indian Locations
- Indian Locations (assumed since area not controlled by Colony)

Legend:
- Key to areas

Miles
0 5 10
Wapanucket site; it also contained carbonized corn and many European trade goods (Robbins 1967, 1980).

During late April or early May, the Wampanoag began to prepare their fields: corn and beans were planted together in Indian "corn hills" while squashes were planted in between the hills (Champlain 1922:327-328). Harvesting took place the fourth month after planting, when the green corn, plus the first squashes and beans, were fit to eat (Russell 1980:165).

From the coastal villages, the Wampanoag departed on short one or two day excursions to local resource stations. Some of these stations were only as far away as the seashore where natives harvested lobster, clams and mussels. Other stations, such as the "wading place" at Nemasket (#16), were located inland along the many lakes and rivers. A variety of resources, including fish, water fowl and small game were captured at the inland sites.

Late spring and early summer was an especially good time to harvest the region's native berries. Strawberries, huckleberries, raspberries and currants were all fit to eat then, according to Roger Williams (1973:168-169) and wild leeks and onions ripened then too.

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By fall, the roots of the ground nut, the long edible tubers of the Jerusalem artichoke, plus the walnuts and acorns were ready for picking. Fall was also the time when the Wampanoag finished harvesting their cornfields and prepared to move to their inland villages.

The winter settlements were much more consolidated than the summer residences. Several extended families probably shared the "winter wigwam" (Verrazano 1905:19; Williams 1973:33). Indian men, sometimes with their nuclear families, departed from their winter wigwams for short hunting trips (Williams 1973:224). One favorite hunting spot of the Wampanoag sachems, Massasoit and his sons, was located in present day Raynham (#13) (Weeks 1920:133).

During the course of the year, a Wampanoag family probably traveled over 100 miles on its seasonal rounds between the coastal village and the winter wigwam, and between the temporary resource stations and the main summer/winter settlements. John Josselyn (1833:302), for example, was impressed with the distance covered on the hunting trips: "When the snow will bear them...go forth to hunt...30 or 40 miles up into the country."

The Wampanoag's access to all the land's resources was guaranteed by both a flexible land tenure system and the norms of reciprocity which cross-cut cultural boundaries. Wampanoag land tenure was based upon the premise of "community"-wide land ownership and use. That is, the community (such as the village or summer farming hamlet) was the ultimate land authority. Land could not be alienated from the community without its approval (Bragdon 1981:105; Snyderman 1951; Brasser 1971). Implications for community land control are that all members were entitled to use the land to set wigwams, to plant, hunt, fish, obtain firewood, and the like. Further, land could not be owned individually by community members. Rather, individuals could only use the land as needed (usufruct). When someone finished harvesting his resources, the land was free for the next individual to use.

The Wampanoag's sachem ensured the community's usufructory land rights and protected the land from usurpation. The sachem was the highest ranking Wampanoag official. He or she monitored all land-related activities from allocating planting lands and supervising planting and harvesting to representing Indian land rights in all dealings with the colonists (Williams 1973:167; Bragdon 1981:106-107, 119-130; Thomas 1979:40-43).

Massasoit and his sons, Alexander and King Philip, were the supreme sachems during the seventeenth century. These men wielded power from their homes in Sowams (#12) and Mount Hope (#18).
The supreme sachem's territorial domain was known as a sachemship, and it included control over several lesser or petty sachems who governed regions within the larger Wampanoag domain (Gibson 1980:32). Some of these regions included Pocasset (#11), which was governed by Weetamoe, Sakonnet (#14), home of Awashonks, Mattapoisett, Corbitant's domain and Manomet (#6), which was governed by Coneconan or Quachattasett.

Wampanoag beliefs about reciprocity formed other kinds of guarantees to unrestricted resource use. Reciprocity also worked in conjunction with political office and the land tenure system. For example, the sachem received "tribute" in the form of "wrecks of the sea, the skins of beasts killed in their dominions, and many like things, as first fruits, etc." (Mayhew 1694:38-39). Such tribute was a community gift to the sachem in exchange for the sachem's services.

Reciprocity worked on the intra-community level as well, to ensure that no one went hungry:

"They are much given to hospitality in their way. If any strangers come to their houses, they will give the bestlodgings and diet they have." (Gookin 1972b:13).

"Whomsoever commeth in when they are eating, they offer them to eat of that which they have, though but little enough prepar'd for themselves. If any provision of fish or flesh come in, they make their neighbours partakers with them." (Williams 1973:97).

1650-1674

The European "invasion" (Jennings 1975) of New England left its indelible mark on the Wampanoag, and especially impacted the Indians' land relations. The Wampanoags owned only a fraction of their traditional territories by 1650. Evidence for the Indians' dramatic land loss is based upon examination of seventeenth century Indian land holdings (Weinstein 1983a, 1982). These data indicate that the Indians were either pushed to the perimeters of Plymouth Colony's settlements (Assonet #18; Cape Cod #2, #19, #6; Mount Hope #8; Mattapoissett #21; Pocasset #11; and Sepican #23), or to the isolated interior peninsulas of land (Betty's Neck #5 and Towser's Neck #24).

Not only were the Wampanoag pushed to the corners of colonial settlement, but the land remaining to them was only a fraction of the size of their former territory (Fig. 6). Many of their remaining lands were small land grants deeded from one Indian to his heirs and registered in the Plymouth courts (Weinstein 1983b). For example, Charles or Pum-pumunet received numerous land grants in the Manomet region from Quachattasett (#19). Other Indian land grants included those in the Assawampsett (#5), Sampson's Pond (#22), Titicut (#16) and Sepican (#23) areas.

The Wampanoag had only "squatters' rights" to certain of their former territories. Chachucust Neck (#3) and Wannamoisett Neck (#17) were two such areas where Indians were allowed to use their alienated lands until colonists required them.

Land loss was not without major economic and political ramifications. The Indians' seasonal economic rounds were spatially restricted. Such restriction occasionally led to starvation, as indicated by court records from Taunton, where Indians were prevented from hunting, fishing and planting corn on their former lands (Plymouth Court Records Vol. IV:34-35).
Figure 6: Indian Locations 1650-1674

Key
- Northern & Western Boundary of Plymouth Colony
- Area not included
- Indian Locations

Miles
In spite of the Wampanoag's population decline, there simply was not enough good land to go around; the colonists seized the best farmlands, meadows and seaports, and lands adjacent to the region's trade and communication routes (Weinstein 1983a). A hypothetical model of Wampanoag economic change during the seventeenth century is presented in Figures 7-9. It suggests how the population responded to the colonial invasion.

Adding to the problems of areal restriction were new forms of land tenure. Land, which had once been a community resource, was now purchased and privately owned. Several examples of this kind of ownership include Sandwich (#19), Manomet (#6), Mattapoisett (#21), Sampson's Pond (#22), Sepican (#23), and Titicut (#16).

The new land tenure policies fomented many problems between Indians as they attempted to redefine their rights. One such problem concerned the Sampson's Pond lands (#22). George Wampy's wife contested her husband for ownership of the lands there in 1672, and the Plymouth General Court ruled in her favor.

Intra-Indian conflicts over land undermined the norms of reciprocity as suggested by the case cited above. Whereas prior to European contact Indians freely shared the earth's resources, by the 1660's and 1670's, there was competition for the land. Indians began to register titles to it in the European courts in order to protect it from any kind of encroachment (Weinstein 1983b).

Indian registrations, deeds and the court cases suggest that the immediate or nuclear family won precedence over the community. No longer was land a common resource; rather, it was purchased, controlled and transferred by individuals. Tispaquin's purchase of the Betty's Neck lands (#5) and Watuchpoo's registration of the Sepican lands (#23) are evidence of this new individual orientation. Not all Indians, however, subscribed to this new orientation. The Massachusetts sachem, Chickatubut, purchased a tract along the Taunton River in order to set aside some lands for his people's future (#16) with the condition that the Indians shall never "give, sell or any way make over any part or parcell of ye said lands unto the English" (Plymouth Court Records Vol. I:234).

Reciprocity did not just fail to operate on the community level; the new land policy also undermined the reciprocal relations between the sachem and his/her people. The encroachment of Europeans upon Wampanoag land seriously impaired the sachems' powers. The territorial domain for both the lesser and the supreme sachems shrank in size as more and more land was alienated to colonists. Not only did the sachems sign over the deeds of sale, but individual Indians also bartered with the colonists. When individuals either signed the deeds or testified in Plymouth Court to the ownership of certain lands (e.g., Sepican #23; Sampson's Pond #22; and Mattapoisett #7), they were behaving in non-traditional ways. Their autonomy overstepped the sachems' right to both authorize all land-related transactions as well as represent the Wampanoag in all interactions with the colonists.

Lastly, the new land tenure policies struck at the heart of Wampanoag beliefs. Reciprocity with the land implied that no one had the right to "own" or alienate it. The land's resources were sacred "gifts" from the Creator. After an individual finished harvesting his/her resources and gave thanks to the earth, the land was free for the next individual to use. Individual ownership removed land from this sacred context and gave it a "Europeanized" materialistic value.

**SUMMARY AND CONCLUSIONS**

The Wampanoag's relationship to the land changed dramatically during the seventeenth century. Their seasonal subsistence rounds, as well as their land tenure policies and
Figure 7. Wampanoag Economy: Baseline

"Hypothetical seasonal movements of a Massachusetts family. The inner core represents the main village, the inner ring farmstead residence, and the outer ring temporary camps. Trips to fishing and fowling camps (1) and to shell-fishing and plant gathering camps (2) were made from the farmstead, whereas trips to winter hunting camps (3) were made from the main village." (Snow 1980:79)

Figure 8. Wampanoag Economy: 1650

During this period the Wampanoag emphasized agriculture and hunting at the expense of fishing, fowling, plant gathering, and shell-fishing. Beaver pelts and corn were traded to the colonists in exchange for European tools, clothing, and money. The colonial population was still low and colonial purchases of Indian lands were just beginning. Because colonists had not yet put severe pressure upon land resources, and because the Indian population was drastically reduced by epidemics, the Wampanoag could expand their economic activities and plant new fields, hunt new territories, etc. New European technologies abetted resource use. Metal tools, for instance, enabled the Wampanoag to reap surplus crops to trade with the colonists.

Figure 9. Wampanoag Economy: 1674

All Wampanoag economic activities were greatly restricted because colonists had purchased most of their lands and pushed them to the periphery of European settlement. Some Wampanoags began to register their lands in court and claim individual ownership of them. Inheritance patterns also began to reflect private ownership of land.
political organization, all changed in accordance with colonist-introduced pressures. These land pressures pushed the Wampanoag to the edge of Plymouth Colony's settlements during the second half of the seventeenth century.

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APPENDIX:

INDIAN LOCATIONS 1600-1650

AQUIDNECK OR RHODE ISLAND (1)

Speck (1928:35-37) indicates that ownership of this island passed back and forth between the Wampanoag and Narragansett, with the Wampanoag being the last owners. Potter (1835:2), on the other hand, suggests that the Narragansett were the ultimate owners after they enlarged their territory and subjugated all the Massachusetts speaking Indians.

CAPE COD (2)

Gosnold sailed around Cape Cod in 1602 and noted that the land was low and full of woods, but in some places "plaine" (Brereton 1905:36). Champlain entered the Cape at Nauset Harbor and reported seeing many little houses with their surrounding gardens (1905:85). The tribal affiliations of the Cape Cod Indians is problematical. Speck (1928:118) ascribes them to a separate Nauset group. However, he notes that there are strong linguistic similarities between the groups (1928:120), as well as a great deal of intermarriage between them. The dotted lines on Figures 5 and 6 east of the shaded areas represents the Nauset's territory.

CHACHACUST NECK (3)

The Sowams' deed of 1653 indicated that the land here would belong to the Pilgrims but only after the Indians "remove from the Necke" (Plymouth Court Records Vol. 2: 7-8 [hereinafter PCR]; Bowen 1945:30).

A fence, known as the "5 Rayle Fence," was built across the neck in 1653. It was unique to the long-standing land debates between the Wampanoag and the Pilgrims. The fence ran directly above the heartland of Wampanoag power at Sowams. Massasoit's village of Pokanoket was less than five miles south of it, while Philip later settled less than nine miles south and west of it (Weinstein 1983b:183-184) (see also Bicknell 1980).

KICKAMUIT (4)

Kickamuit is one of several historic Wampanoag villages in Bristol, Rhode Island. It is located by the spring of the same name (see discussion under Mount Hope) (Church 1865; Fessenden 1845).
LAKEVILLE/ASSAWAMPSETT (5)

This area has a long tradition of Indian occupation, as evidenced by data from the Wapanucket site. The site has components from all major time periods, from Paleo through Historic times. The Woodland and Historic period components contain burials, pottery and a variety of European trade goods (Robbins 1980) (see also Speck 1928; Church 1865; and Robbins 1967).

MANOMET (6)

The Manomet region was the domain of Quachattasett, sachem of the region during the mid-seventeenth century. The name Manomet was a general term which referred to the region from Buzzards Bay to the present town of Manomet (Kinnicutt 1909:23-24).

The Pilgrims Edward Winslow and William Bradford each described their travels to this Indian area to acquire corn during the 1620s (Kinnicutt 1909:26; Bradford 1981:230).

MATTAPOISSETT AT GARDNER'S NECK (7)

Corbitant, an undersachem of Massasoit, resided in Mattapoisett. Edward Winslow stopped here on his way to and from Sowams in 1623 and he spent the night at Corbitant's lodge (Winslow 1969:547-549). Mattapoisett is not to be confused with the Mattapoisett in Marion, Massachusetts. (See also Cook 1976; Weeks 1920; Kinnicutt 1909; and Fessenden 1845).

MT. HOPE (8)

Mt. Hope was located in present-day Bristol, Rhode Island. This region was the famous seat of King Philip's power. According to Church (1865:7), there were several Indian villages here: Montaup (near the hill), and Kickamuit (near the spring).

Bristol was also called Causumsit Neck, "which is the cheefe habitacon of the Indians and reserved for them to dwell upon..." (PCR 2:5; Bicknell 1908:160). Archaeological investigations of this area have attempted to locate the historic villages. These attempts have been somewhat successful (Paul Robinson 1981:personal communication). The Rhode Island Historic Preservation Commission site files indicate a number of historic sites here, including a large shell midden, the famous Burr's Hill site, and the Kickamuit Spring site. Burr's Hill is an historic burial ground which contains many European trade goods, as well as native goods. The elaborate nature of the burials may be due to the site's location near to Massasoit's Sowams and Philip's Mt. Hope.

The Public Archaeology Laboratory, Inc. tested the Kickamuit Springs area in 1980. Some historic artifacts, as well as a shell midden, were found. Peter Thorbahn (1980:personal communication) said that the survey and test results were highly "questionable" in terms of locating the Wampanoag Kickamuit village. (See also Fessenden 1845).

PATUXET (9)

According to Cook (1976:39), there was a village here until 1617. The name means "at or near the little falls." The village was the home of the Patuxet group of Wampanoag to which Squanto belonged. The epidemics of the early seventeenth century devastated this village.
PLYMOUTH HARBOR (10)

Plymouth Harbor was called Port St. Louis by Champlain and it was the home of the Patuxet Indians. When Champlain toured the area in 1605, he reported seeing many "cabins" and "gardens." When he anchored, 15 canoes came out to greet him, along with "Chief Monabetha" (Champlain 1905:83-85).

Martin Pring sailed in Plymouth waters two years before Champlain. He, too, indicated that the area was well populated and inhabited by farming peoples (Pring 1905:51).

POCASSET (11)

The Pocasset region extended from Fall River to Tiverton and included the village of Pocasset. Cook (1976:39) indicates that the village was quite large and was inhabited by several hundred Wampanoag. Weetamoe was the squaw sachem of this large region. (See also Speck 1928; Dexter 1979).

POKANOKET (12)

The English explorer Thomas Dermer dispatched a messenger to "Pocanackit which bordereth on the sea" in 1615. Two "kings" with fifty men met with him. One of these kings was probably Massasoit (Salwen 1978:171).

Cook (1976:39) and Maurice Robbins (1982:personal communication) mention a village called Pokanoket. This village name may have also been a synonym for Massasoit's village of Sowams, since both names were used interchangeably in the records (Bicknell 1908:159).

RAYNHAM (13)

Alexander and King Philip, as well as Massasoit, all had hunting grounds here (Weeks 1921:133).

SAKONNET (14)

This area was home of the Sakonnet Indians, a Wampanoag affiliate, under squaw sachem Awashonks. Most of the information about her concerns her role in King Philip's War. She waivered in her support of King Philip (Chuch 1865:6-7).

SOWAMS (12)

Sowams refers to both the general territory and the heartland of Massasoit's domain. It also refers to the village of Sowams or Pokanoket (see Pokanoket above). The specific location of the village is disputed; it may be near either Warren or Barrington, Rhode Island (Bicknell 1908:159-179). Robbins (1982:personal communication) locates Sowams at the confluence of the Warren and Barrington Rivers, between the towns of the same name (and not in either one). Sowams was much coveted by the English. Myles Standish called it the "Flour of the Garden" (Bicknell 1908:157).

TAUNTON RIVER (15)

Winslow, in June of 1621, followed along the Taunton to Massasoit's residence at Sowams. He stated that the land was formerly cleared and that "thousands" used to live here (1969:466). This area fell victim to the epidemics which destroyed coastal Indian populations in the early seventeenth century.
TITICUT (16)

The name Titicut was associated with the name of the Taunton River and it was the name of one of the settlements near Nemasket, with its fishing place along the falls of the River (Emery 1893:26). Robbins (1982:personal communication) believes that the village is associated with the Massachusetts and not the Wampanoag Indians. Territories of both groups overlapped in this area. Titicut is also the name of a site excavated by the Massachusetts Archaeological Society (Robbins 1967). The site is one of the few known sites with carbonized corn. Additionally, the site contained several burials, post holes, plus Dutch trade beads. (See also Gookin 1772; Cook 1976; and Conkey et al 1978).

WANNAMOISTETT NECK (17)

Bicknell (1898:80) discussed how Rehoboth voted to build a fence here in 1653 to protect Indians lands (see Chachacust Neck 3). (See also Bowen 1945).

INDIAN LOCATIONS 1650-1674

ASSONET NECK (18)

Indian owners were reluctant to sell this land (Kinnicutt 1909:42-43; PCR 1:242; Bowen 1945:80-83). The Colony finally seized it after King Philip's War (Emery 1893:121). The Massachusetts Archaeological Society surveyed the area and reported finding some 80,000 corn hills plus some "mortars" and "hoes" (MAS site record #M-39-13). (See also Delabarre 1925).

CAPE COD (2)

Many Indians continued to live in this region throughout the seventeenth century. These Indians were heavily missionized by Richard Bourne who was instrumental in organizing them into "praying towns," or Christian communities (Speck 1928; Gookin 1972; and Salwen 1978).

SANDWICH (19)

The Sandwich/Cape Cod region was called Ashimuit. It was home of Charles or Pumpumunett. The name appears repeatedly in the Book of Indian Records (PCR 1). Charles received numerous land grants in the Manomet region from Quachattasett and other Indians near Pocasset and Sandwich.

CHACHACUST NECK (3)

Indians were probably still here for a short time after 1653 when the Sowams deed was signed. The deed specified that the land here would belong to the English only after Indians had removed from the Neck (Bicknell 1908:37).

KICKAMUIT (4)

Kickamuit was one of the major Indian villages on Consumpsom Neck. Benjamin Church mentions it during the war campaigns of the King Philip's War (1865:23).

LAKEVILLE/ASSAWAMPSETT (5)

Pamontacksk, the "Pond Sachem," willed his land at Assawampsett to his son Tispaquin, the "Black Sachem," and his son Soquontamonk, alias "William," forever (PCR 1:229). Tispaquin later sold much of this land to the colonists during the 1660s and 1670s. However, he deeded land about Masquomoh Swamp and Sasonkususett and Chuppinoquitt ponds to his...
daughter Betty. This latter gift was referred to as "Betty's Neck" (Speck 1928:69-70). Two other Indians, Harry and his son Sam, claimed land in Assawampsett. Both of these Indians appeared in Plymouth Court to register their titles in 1668. "Harry desires that neither Tispaquin nor his son be prest to sell said lands...the lands which Tispaquin posseth" (PCR:229).

MANOMET (6)

The lands here were still under the domain of Manomet sachem Quachattasett. He deeded some of his land to Charles Pompmunet. The transactions were recorded in Plymouth Court (PCR 1:235-236).

MATTAPOISET (21)

In 1674, Papaumo, Machacome, and Achawanomett recorded their trace of land here in Plymouth Court (PCR 1:29-30). They stated the land extended from the eastern bounds of Dartmouth and along the waterside into the woods. This tract bordered upon the Middleboro purchases.

MT. HOPE (8)

The Mt. Hope region, with its three main Indian villages, was the last stronghold of King Philip and his Wampanoag in 1675 (for information about Mt. Hope, Pocasset, Sakonnet and Sowams during the King Philip's War, the reader is referred to Church 1865; Leach 1966; and Jennings 1975).

POCASSET (11)

This area was still Weetamoe's domain and stronghold during the war.

SAKONNET (14)

This region was Awashonk's domain and stronghold during the War. She signed a treaty with the English in 1671 and sold them some of her land. Her territory was the scene of military campaigns during King Philip's War. Awashonks had a "war dance" here and invited the English Captain Benjamin Church.

SAMPSONS POND (22)

The land near Sampsons Pond in south Carver belonged to George Wampy's wife, according to her testimony in the Plymouth Court (1672). She contested her husband for ownership here and the Court ruled in her favor (PCR 1:228).

SEPICAN OR SEPACONNET (23)

The Sepican area was around Rochester/Marion, Massachusetts. The Book of Indian Records (PCR 1) contains a testimony from Watuchpoo of Sepican for certain lands here. He states that he can trace his title back six generations (PCR 1:236).

SOWAMS (12)

Although Massasoit died in the 1650s, his village of Sowams was still in existence during King Philip's War.
Some of the land was an "Indian reservation." Chickatabut (sachem of the Massachusetts), deeded land to the Indians along the Taunton in 1664. This area was about three miles long (PCR 1:235-236). An Indian "praying town" was also established here, called "Cotunticut" (Gookin 1972a:60).

Portions of this region were probably still under Indian control during the 1650s and 1660s (e.g., Philip was reported to have had hunting grounds here) (Weeks 1920:133; Speck 1928).

Towser's Neck was an upland peninsula and the site of Totoson's village. He was an ally of King Philip. (See Church 1865; Leach 1966; and Speck 1928 for more information about Totoson during the 1670s).

The records are unclear as to whether or not Indians were allowed to remain here after it was sold to Rehoboth in 1645 (Bliss 1836:51). Plymouth colonist John Brown was given land here in compensation for arranging the Rehoboth purchase. Additionally, the area was later annexed as part of Swansea. These last two bits of evidence suggest that Indians may have been "squeezed" off the Neck.

Quachattasett of Manomet deeded land here to Will Hedge of "Webaquequaw" in 1674 (PCR 1:226). The transaction was recorded in Plymouth Court (PCR 1:226).

Wepoisett was at the narrow entrance to the Kickamuit River. Church (1865:91) mentioned this spot was a favorite clam digging area of the Indians.

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This is written in response to Frederick M. Carty's study entitled "Report Of A Cache Of Points Relating To The Susquehanna Tradition" in a recent issue of the Bulletin of the Massachusetts Archaeological Society (Carty 1983). Although I seldom take issue with the theories of others, I felt obliged to respond to Carty's classification of specimens one through 11 as belonging to the Late Archaic Susquehanna Tradition.
Figure 10. Early point types of the province. (After Bettye J. Broyles).
I particularly liked Carty's "transport wear" theory for the smoothing of the facial crests of these points and am greatly impressed by his knowledge of New England lithic materials and their possible quarry proveniences. My compliments to Frederick M. Carty; he did a commendable study and analysis of this cache of projectile points, up to a point.

Despite superficial resemblances to local Late Archaic projectile points, or points that have been erroneously designated as being of Late Archaic derivation, with a late date of 3,600 to 3,300 years B.P., the projectile points Carty describes and illustrates in praiseworthy detail are obviously related to (or are a local variant of) Joffre L. Coe's Palmer Corner-Notched Projectile point (Coe, 1964:67-69). The Palmer point, with an estimated age of 8,000 to 10,000 years B.P., is considered Late Paleo-Indian/Early Archaic in age. The points of the Satucket Cache match the Palmer point trait by trait and may very well be only slightly younger, comparatively speaking, than the Clovis Tradition fluted points of Bull Brook. The Satucket Cache may well include some of the oldest projectile points in New England. Concerning the Palmer point, Coe states:

"On the basis of excavated data, this type must have an antiquity of nearly 8,000 years. This is considerably older than any other comparable type so far reported. Points of this type do occur in Georgia, the Carolinas, Tennessee, and along the Atlantic Seaboard, however, in relatively greater numbers than the Hardaway types. This type (Palmer), however, does not appear to extend very deep into the South, but does have much stronger ties to the Northeast." (Coe 1964:67)

Joffre Coe's age estimates for the Hardaway Complex appear to be very conservative (and this applies to the Palmer also). Bettye Broyles, at the St. Albans Site in Kanawha County, West Virginia (Broyles 1971), has a radiocarbon date for her Charleston Corner Notched point of 9,900 years B.P. and she believes the Palmer point to be older than the Charleston. The Charleston Corner-Notched point, by the way, has the same trait list as the Palmer and the Satucket Cache points. The Palmer Corner-Notched point has many regional variants throughout its range, and is called by many different names. The variations are defined by slight differences in basal configuration, size, blade morphology, etc., but all share the same trait list regardless of slight differences due to time and space.

The Palmer Corner-Notched point is obviously a variant in the Hardaway Tradition (Painter 1983:17) for it shares all the same traits as the Hardaway Series. The Hardaway Tradition is a Paleo-Indian lithic tradition that is probably older than the Clovis Tradition, the lithic tradition to which the fluted points belong (Painter 1983:2-19). Both the Hardaway and Clovis lithic traditions were perfected, or reached their stage of prime somewhere in the Southeast, possibly in the area encompassed by Alabama on the west, Virginia in the north, and Florida to the south (Painter 1983:2-19). The Hardaway Lithic Tradition is characterized, in part, by distinctive projectile point morphological traits (Table 3).

Could any two or more projectile point groups share a like number of attributes and not be considered basically the same type and tradition? I think not!

Heretofore not considered is a non-diagnostic blade or preform that may or may not, in my opinion, have been originally included with the cache (Carty 1983:8). Its presence may be fortuitous. Had two or more been included with the cache, they could have been considered.

Also not considered here was a blade resembling a Meadowood point (Carty 1983:9). This blade could have been an advanced preform of the Satucket type in which the notching had been started but not finished. If indeed a Meadowood point it must have been a late
intrusion. Here again, had two or more been included with the cache they would, of course, have to be considered.

**TABLE 3**

**COMPARISON OF MORPHOLOGICAL TRAITS OF HARDAWAY, PALMER, AND SATUCKET CACHE POINTS**

<table>
<thead>
<tr>
<th>Hardaway Tradition, Paleo-Indian/Early Archaic Traits</th>
<th>Palmer</th>
<th>Satucket Cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal grinding</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Notch grinding</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Alternate beveling of blade edges</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Repeated resharpening of blade edges</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Serrated blade edges</td>
<td>X</td>
<td>?</td>
</tr>
<tr>
<td>Asymmetrical resharpened blade edges</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Altered and used as knives, saws, side scrapers, etc.</td>
<td>X</td>
<td>?</td>
</tr>
<tr>
<td>Wide variety of lithics used</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Finest quality of local lithics used</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Exotic lithics used</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lithics from far distant sources used</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Wide range of blade widths and lengths due to resharpening</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Uniform basal widths</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Both straight and convex blade edges due to resharpening</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Corner notching</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Too great a case has been made on the assumption that this is indeed a Meadowood point, and that it is indeed a part of the cache. One gets the feeling that the cache has been dated by the presence of this one controversial projectile point.

If Frederick M. Carty is correct in his Late Archaic classification of the Satucket Cache, this would mean that a Paleo-Indian lithic tradition, with all its traits intact, continued to exist in eastern Massachusetts for at least 6,000 years. This tradition would have continued on the perimeter of its type range 6,000 years after its prototypes ceased to exist in their region of origin, the "Middle Atlantic Region Culture Province" (Brennan 1981:89-104). If this were true, and these traits had existed so long, then projectile points of the Satucket Cache type would perhaps far outnumber all other point types found in Massachusetts.

On the other hand, the odds that a projectile point type would develop in the Late Archaic Period, exhibiting a complete and distinctive Paleo-Indian/Early Archaic trait list, is too great even to be considered.
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