

**Analysis and Cataloging
of the
Prehistoric Archaeological Collection
of the Mattapoisett Historical Society**

Prepared for
The Mattapoisett Historical Society

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December 2004

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Introduction

The archaeological collections represented at the Mattapoisett Historical Society consist of five assemblages from known locations and one large mounted assemblage with absolutely no known proveniences. The five documented assemblages were surface collected from the following locations (Figure 1):

Mattapoisett (general)- Alice Ordway collection

Aptucxet Trading Post Bourne, Massachusetts- Mrs. Ruzicka collection

North Rochester Indian Camp Site on Wallen Place- Mrs. Ruzicka collection

North Rochester- Wallen Collection

Aucoot Cove

A total of 567 items (both artifacts and natural pieces) are present. The number of pieces in each collection can be broken down as follows:

Ordway Collection	5
Aptucxet Trading Post	6
Wallen Collection North Rochester	163
Wallen Place Indian Camp Site	21
Aucoot Cove	153
Collection on boards	219
	567 total artifacts in collection

The entire collection was analyzed with the following objectives:

- 1) identify the sites present in the collection
- 2) identify the types of artifacts
- 3) identify the temporal associations
- 4) identify the materials
- 5) identify any significant trends in the collection



Figure 1. Location of archaeological sites represented at the Mattapoisett Historical Society

- 6) evaluate research/ educational potential of collection
- 7) place the collection within a larger framework of the town archaeological record and
New England prehistory

As each artifact was analyzed, the following characteristics were noted where applicable: completeness, size, type, color, material, unusual wear/characteristics. Flakes, cores and shatter were counted, and the characteristics of color, material, and the stage of lithic reduction represented by the artifact (decortification, primary, secondary) were noted.

It was known that these individual collections were the result of unsystematic collection procedures which probably were carried out in much the same way that most surface collections are. That is, the sites were walked over after rains, storms or ground disturbance (erosion, construction) and the artifacts that caught the collector's eye were recovered. Collection practices such as these result in what the MHC has identified as quantitative and qualitative biases in the collection contents, essentially meaning that every site represented in a collection is represented by only a sample of the entire amount of artifacts possibly present (MHC 1980). These samples are formed by the collectors using both conscious and unconscious selection criteria such as the where the sites originate from, raw materials, the fragility of the artifact, the collector's hunting territory, access to the site, the size of the site and collector bias. .

The origin of the collection, surface collection versus excavation, will affect the types, sizes and numbers of artifacts present in a collection. Surface collections are usually from disturbed sites and are exposed as the result of plowing, construction or erosion. They represent incomplete samples due to the fact that they were collected only because they happened to be visible on the particular day(s) that the site was collected. They are dramatically affected by collector bias, their unsystematic collection nature and the fact that no features are normally represented in the collection only artifacts.

Specific individual collector bias is probably the greatest factor affecting the materials represented in a collection. Collectors often tend to focus on large, durable, easy to recognize items with exotic items being more sought after and collected. Artifacts that the professional archaeologist views as integral to interpreting and understanding a site such as broken bifaces,

chipping debris, pottery and faunal remains are usually underrepresented due to the fact that collectors often do not know the value of these artifact classes and because of differential breakage. This results in projectile points and lithic artifacts being over represented in a collection. As most collections are from disturbed contexts, the most fragile artifacts, shell, bone, pottery, tend to be easily destroyed and be poorly represented for the collector. Some collectors go to the extreme of only keeping whole artifacts and one will never find a broken point in their collections. Collector bias includes the collecting territories of the individual collector. Collectors may return to the same site over again or they may be the type of collector who moves around to many locations. The collector's site location criteria are related to this as well. Each collector has a different set of conscious or unconscious criteria they use when deciding where to hunt. Some may favor hills, or the coast or sand pits while others favor flat open areas or stream banks..

The raw material that the artifacts are made of can have an important impact on the make up of the collection. The visibility of material leads to collections having the tendency to be overrepresentative in the presence of materials such as quartz and exotic lithics like chert, jasper or chalcedony. The more that a lithic material contrasts with the surrounding soil, the more likely it is that it will be collected.

Other factors affecting where and why collectors collect are site access with readily accessible sites more often hunted than more remote ones. The general preference for plowed fields due to the high visibility in these areas. This results in an overrepresentation of material from fertile lowlands and floodplains of major rivers. The site size as large sites with wide horizontal distribution tend to be hunted more than small centralized sites.

All of these collector biases and factors affecting what was collected and where it was collected from, result in problems with interpreting the value of a collection to contribute to our understanding of a town's prehistory. Some of the problems that result from unsystematic collection are chronological because collections often only represent a fraction of the sites occupational sequence some components are usually absent due to differential exposure or small sample size. The lack of specific provenience information because often collections are simply labelled as whatever town they came from with no site data or if site data is present it is usually of a vague sort. Finally, because there was no systematic manner in which the site was collected and no way to really be sure that what is present in a collection represents a valid random sample of what was at the site, then we have to watch for the danger of negative information. Just

because it isn't in the collection doesn't mean that it wasn't there. Many sites contain small components of a wide variety of time periods due to the fact that if the areas was attractive 10,000 years ago, it was probably attractive 9000 years ago, 8000 years ago and so on. The very nature of sites from some time periods, like those of the Paleoindian period or specialized activity sites, tend to be small and short term resulting in a low degree of visibility but a high degree of focus. Sites such as these occupy a small discrete area and contain a low number of artifacts, a scenario resulting in them being easily missed even during systematic testing and especially during surface hunting.

The sites present in the Mattapoissett Historical Society collection can be characterized as representing collections made with a high degree of collector bias. Very little chipping debris is present, no faunal material, no shellfish remains and no pottery. On the other hand, there are broken projectile points and biface fragments, so the collectors were not just looking for whole pieces. This is especially true for the material collected eroding onto the shore of Aucoot Cove. The Wallen and Ordway collections are without hard collection area information, although it is believed that the Ordway material is local, as she is a local resident, and the Wallen material is believed to have been found at the southern end of Great Quitticus Pond where it is known he often collected. This can not be accepted at face value though, due to the occurrence of barnacles on the full grooved stone axe believed to be from this site. Barnacles are only found in salt water, this piece must have been found on the shore somewhere, possibly in Mattapoissett as there is no salt water in Rochester.

It is believed that the collection from the Mattapoissett Historical Society can be used to test the following hypothesis:

- 1) Certain lithic materials were preferred or more often used at certain periods than other materials
- 2) There is a difference in the occurrence of sites of different time periods between Rochester and Mattapoissett
- 3) Comparison of the collections with those on file at the Massachusetts Historical Commission will help to determine if these collections fit in with the information provided by the site files or if they are at odds with it.

This report begins with a brief description of the prehistory of the Mattapoissett area as it relates to New England prehistory including settlement trends, the common types of projectile points and

artifacts recovered and the types of raw materials commonly used.. A description of each collection follows and then a tabulation and comparison of the Mattapoisett and Rochester collections between each and with the MHC site files.

New England Prehistory

New England has a rich and extremely interesting prehistoric period. Archaeologists call it the prehistoric period only because it is a time before any written records were made of or by the Native people who live here. This does not mean that these people do not have a history of their own. On the contrary, they have an oral history that extends back in time possibly thousands of years. This introduction to the prehistory of New England and specifically of what later became Plymouth Colony relies primarily on the archaeological record, although we do talk about the oral history that has survived where it is pertinent. Archaeology has contributed a great deal to our understanding of the Native history of New England, without it our picture of the past would, unfortunately be only a sketch. Unfortunately, archaeology can only give us only a bare bones look at the lives of the people who have lived in New England in the prehistoric past. We can never answer questions like what was a man thinking when he made a certain projectile point style, or what did a woman think about when she made a pot. We can only theorize and guess at these sort of details. But through archaeology, we have been able to learn when people first arrived in Southeastern Massachusetts and how they made a living.

Because archaeology relies on the material that is recovered from the soil, we are limited to how much we can ever really know about the most ancient people. So we must try to say something archaeologically meaningful from the scant bits of evidence that have survived. Unfortunately, the farther back in time we travel, the more scarce our evidence becomes. This is due to the fact that there were less people in the area in the past and some sites have been flooded by rising sea levels. Bearing this in mind, the following is a sketch of what happened in the past, always being added to and never complete.

Paleo Period (13,000-10,000 Years Ago)

Although there is new research being conducted all the time, the present theory is that the people who first settled in New England arrived in the New World during the end of the **Wisconsin ice age**, approximately 13,000 years ago. Before this time, New England and much of the northern half of the United States was covered by a mile and a half thick sheets of ice

called **glaciers**. Ice ages are part of the Earth's natural warming and cooling cycle. Approximately 60,000 years ago for some unknown reason, the temperature dropped on Earth just a few degrees, just enough to cause the glaciers and ice caps located at the north and south poles to begin removing water from the oceans and growing. By approximately 20,000 years ago the edges of the northern ice sheet had reached its maximum extent, present day Martha's Vineyard and Nantucket, and began to recede. As the glaciers melted, they dropped millions of tons of sand, gravel and boulders that had accumulated during their journey southward. All this material, the **moraine** and **outwash** soils, became the sandy hills, the **drumlins**, **eskers** and **kames**, and basically all the lower layers of soil that make up our landscape today. Mixed in with the moraine and outwash were **glacial erratics**, these are the large boulders, like Plymouth Rock, that dot our landscape today.

Following the retreat of the glaciers, the climate in southern New England was a southern **tundra**. It was cold, windy and barren and covered with large areas of wetlands. Scattered intermittently across the landscape were patches of grasses, shrubs such as sedge, alder and willow, and small stunted trees including spruce followed by birch and pine. There was also a lot more landscape than there is today because the oceans were approximately 300-400' feet lower than they are today. In New England, this meant that the coastline was up to 50 miles to the east of its present position. This left exposed large portions of land, like George's Banks, that are today underwater. The islands that we see today in many coastal harbors, were at this time hills on a barren landscape and many of the rivers that we know today were nothing more than springs or small streams.

The types of animals that were present at this time included some of the smaller species such as foxes and rabbits, but **megafauna** were also present. Megafauna is a term that describes the large breeds of animals that were present in New England after the last ice age. These included the mammoth, which existed on the tundra, the mastodon, which lived in the early forests, the horse, which later became extinct and was reintroduced by the Spanish in the 1500s, bears like the large Kodiak variety, beavers up to 6' long, bison, elk, caribou and musk ox, which disappeared fairly early.

In southeastern Massachusetts, sites that date to this period have been encountered in Plymouth on the Eel River, on the coast in Marshfield,xxxx. At these sites, the evidence of people living here after the last ice age has consisted predominantly of stone projectile points of a variety called the **Paleo** or **fluted point**. These points were generally made from exotic

materials that were carried in by the inhabitants as they travelled from the west. These materials predominately very fine grained stones including cherts from New York and Maine and jaspers from Pennsylvania. Population densities have been estimated at approximately 5-12 people per 100 square kilometers. These people made their living by hunting and possibly scavenging the carcasses of the megafauna. They also hunted smaller game such as rabbits and they may have fished on the coast. The populations in New England at this time may have numbered no more than a few hundred. These people lived in small groups and travelled seasonally. They probably were not nomadic, but were following seasonally migrating herds. Paleo sites are often located on hilltops overlooking plains or were high on the shores of glacial lakes.

By the end of the Paleo Period the environment in New England was stabilizing and lifeways were becoming fairly distinct. The megafauna were extinct by 10,000 years ago, probably due to a combination of hunting by the first settlers and climactic change. The forests were beginning to change to more pine and nut bearing hardwoods which created new habitats for animals and new food sources for people. While the Paleo Period can be seen as a time of initial colonization, the next period, the Early Archaic, can be viewed as a time of settling in and accommodation to life in New England.

Early Archaic 10,000-8,000 Years Ago

The extinction of the megafauna and the changing climate led to a revamping of the Paleo-Native way of life around 10,000 years ago. The environment in the Early Archaic had warmed slightly and as a result, trees such as oaks, pitch pines, beeches and hazel began to flourish. It was during this time that the major rivers that are around today began to form as well and into these rivers **anadromous** fish species like salmon and herring began to run. This would have provided another food source for the inhabitants of New England. As New England began to become more forested, new mammalian species also would have moved into the area. These species would have included black bear, deer and moose.

The Early Archaic is one of the little understood periods of New England prehistory. Early Archaic sites tend to occur on a wide range of settings including hillsides with slopes over 15 degrees and hill tops. Some sites are situated on the same locations as Paleo sites while others appear alone in the landscape. Homes at this time have been theorized as being either of a longhouse shape, as have been identified in Taunton, Massachusetts at the Titicut site, or as

small pits dug into the sides of hills as have been identified in Connecticut and northern Massachusetts. It is unknown if the two forms of houses occurred simultaneously, were seasonally determined or represent different building traditions by different populations.

Evidence of the Early Archaic peoples' process of "settling in" is evidenced in their use of local volcanic materials such as **rhyolite** and **felsite** for tools and **projectile points** and their possible use of quartz for quick, expendable tools. Hunting during this period may have taken the form of spear throwing with the use of the atlatl, a weighted stick that was held in the hand onto which a long spear was placed and launched from. The atlatl was basically an extension of the thrower's arm and it effectively increased the distance, force and accuracy of the throw.

Evidence for the Early Archaic has been recovered from Marshfield, Taunton and Carver, Massachusetts with an especially large concentration of sites in Taunton on the Taunton River.

Middle Archaic (8,000-6,000 Years Ago)

While the Early Archaic was a time of transition from the paleoindian nomadic way of life to a more sedentary and permanent situation, the Middle Archaic can be seen as a time of more normality and permanence. It still was a time of many changes though. Oceans remained approximately 29 feet lower than they are today but the rate of rise had slowed enough for estuaries to begin forming. The formation of estuaries led to the establishment and proliferation of shellfish beds. Shellfish first settled in the warmer southern waters and eventually moved northward as the sea level rise slowed and waters warmed.

By 7000 years ago, forests with the same basic composition as today began to be established. The use of heavy stone woodworking tools such as axes, adzes and gouges increased during this period, possibly indicating the construction of log canoes or at least an increase in woodworking. Evidence for hunting using atlatls first appears at this time as well. In fact, the oldest burial in New England, 7500 years ago, was located in Carver, Massachusetts and contained two atlatl weights of the whale-tail variety.

Sites from this period are fairly common, indicating that people had begun to spread out over larger areas. It also indicates that there may have been more people in Massachusetts than before.

Late Archaic (6,000-3000 Years Ago)

The Late Archaic represents the period with the most identified and recorded

archaeological sites in Massachusetts. This has been interpreted by many as indicating a very large number of people living in our area during this period, although archaeologists are not sure why this happened. The case may also be made that this proliferation of stone tools and sites may be more related to a wider variety of stone tools being manufactured for specific purposes and a wide variety of habitats being exploited as opposed to a population boom. The Late Archaic is also a time of greater diversification and specialization than was evident in the earlier periods. The tool kits of the people living on the south coast and its coastal forests differed from that of the people in Maine and further north. This in turn was similar but distinct from the inhabitants of the strictly boreal forests such as those in New York and inland Massachusetts.

Along coastal Massachusetts, the combination of stabilizing sea levels and estuary formation led to significant runs of anadromous fish by the Late Archaic. As a way of taking maximum advantage of these fish runs, Native people began using **weirs** in the rivers, streams and bays. In fact, one of the largest weirs found anywhere in the world was encountered in what was once Boston harbor. The Boylston Street fish weir was encountered when the foundation for an office building in Boston. It is believed that the weir was constructed approximately 5000 years ago and covered several acres. Weirs of a smaller scale were undoubtedly employed in most of the bays, rivers and larger streams in southeastern Massachusetts.

Another significant development in the Late Archaic was the use of bowls carved out of **soapstone (steatite)**. The actual carving of the bowls was probably not a significant development in itself, but what these bowls represented is. The raw material for the bowls, soapstone, is found only in certain deposits Rhode Island and Massachusetts. As a result, the recovery of soapstone fragments on the east coast indicates either that these items were being traded for, or that people were travelling fairly significant distances to quarry this stone. From the east coast, the quarries could have been reached in approximately 2-3 days. The stone would then have to be quarried, worked into shape and carried back to the homesite. These bowls are not small affairs by any means, some weigh up to 60 pounds. It is believed that the effort expended to acquire these bowls as well as their weightiness must mean that they were fairly important to the people. Before these bowls were used, food was probably either roasted or boiled in skin lined pits in the ground through the use of hot stones. The soapstone bowls allowed for cooking directly on the fire, an change in cooking technology which eventually led to the use of pottery in southern New England. These appear to have been used only in the Late Archaic and do not appear in more recent periods. These bowls were also special enough to have

often been buried with people after being ceremonially killed with a hole in the base.

As the Late Archaic is the best represented period in the Mattapoissett Historical Society collections, a more in depth discussion of it is presented here. Beginning with the end of the Late Archaic and continuing through the Late Woodland period, sites tend to appear more frequently on the coast and the banks of rivers, and especially near river estuaries. The Woodland period is marked by basic technological and economic changes, notably the production and use of pottery and a gradual shift to food production (maize, beans, squash, sunflower and other vegetables). The Late Archaic to Early Woodland periods will be discussed in more detail under the section on research design.

Small Stemmed and Squibnocket Triangle points have often been considered to be temporally diagnostic of the Late Archaic period in New England prehistory. The earliest dates for the presence of Small Stemmed points have been pushed back into the second or third millennium before present by work in the 1980s (PAL 1982 a, 1982b, 1983). Small Stemmed points have been characterized by four varieties (Small Stemmed I-IV) which can be lumped together into two categories- squared to rectangular stems and rounded stems. The first category includes Small Stemmed I and II. These are characterized by narrow isosceles triangular blades, a steeply angled cross section with hard hammer percussion flaking, a short roughly rectangular to square stem that is wide in relation to the maximum blade width (1:1.5) and length to width ratios of 1.5:1 to 3:1 (MHC 1984: 86-91). These generally date from 6000-3000 B.P. The second category includes Small Stemmed III and IV. These are characterized by narrow isosceles triangular blades, a steeply angled cross section with hard hammer percussion flaking, a bluntly pointed to rounded base that may be thinned, ground or rubbed and length to width ratios of 2.5:1 to 4:1 (MHC 1984: 92-95). These have been roughly dated from 5000-3000 years B.P. The predominant raw material used to produce these points is locally available quartz gathered in cobble form from the coast, river edges and glacial drift. The second most common material is argillite either originating in the Taunton River drainage or from glacial drift cobbles. A wider variety of materials was utilized to the north and west of the Boston Basin where rhyolite and argillites were the predominate local materials.

Some researchers see Small Stemmed points as a backwards extension of the Orient and Susquehanna Broad spear traditions into early 5th millennium essentially making them an early intrusive element of this tradition (Hoffman 1985: 59; Ritchie 1969:214; Snow 1980:228). Ritchie sees this as "unquestionably happening" as he believed this quartz pebble-based

technology move into New England from somewhere to the south, probably the Mid-Atlantic, along coastal plains and via large river valleys. Snow states that this tradition may have been intrusive from the lower Susquehanna into southern and eastern New York, New Jersey and New England. Dincauze feels that this may have happened but favors an indigenous development in southern New England that evolved out of the Neville/ Stark/ Merrimack sequence (Dincauze 1975, 1976). The later may be likely as the Small Stemmed of the points appear to generally resemble these antecedent forms.

The earliest dates for Small Stemmed Points are from the Bear Swamp 1 site (4600-4500 BP) located on the Taunton River estuary and the Kirby Brook site (4400-4000 BP) located in middle Shepaug (Hoffman 1985:59). Many sites in southeastern Massachusetts have a higher number of these points than anywhere else in the state which has lead Dincauze to speculate that the Narragansett drainage basin was an important focus for this tradition (Dincauze 1975). These points remained very popular and widespread in the Late Archaic, eventually declining in occurrence from 3800 BP forward. The most recent most recent dates for them are 955 +/- 155 BP from the Black Bear site (PAL 1982b) and 850 +/-205 BP from the G. B. Crane site Taunton (PAL 1983). Current research indicates that these points continued in use after the Late Archaic and well into the Early Woodland and possibly Middle Woodland (Mahlstedt 1986:9; Moffet 1957; McBride 1983; PAL 1982a, 1982b, 1983 (American Antiquity Current Research 1981: 696).

Also occurring with Small Stemmed points are small cordiform triangular points generally called Small Triangles or more commonly Squibnocket Triangles (Figure 9). Squibnocket Triangles have bases that are usually concave but occasionally strait with and equilateral to isosceles triangle blade. Width ranges from 1.3-2.5 centimeters and length ranges from 2-4 centimeters with a length to width ration of 1:1 to 2.5:1 (MHC 1984: 98-99). The temporal range for these points is generally the same as the second category of Small Stemmed points, 5000-3000 years B.P. The most common materials for these points is the same as for Small Stemmed, quartz and argillite with some quartzite and volcanics being used.

Other tools utilized by this culture were rough and ground stone choppers, plummets, unpitted hammerstones, plano-convex adzes, shallow-groove adzes, polished splinter awls, barbed antler harpoon heads and graphite and hematite paint stones but apparently not many scrapers, drills or knives (Ritchie 1969:215). Pestles and weirs also appear in the tool kits for the first time. These tools indicate that the Small Stemmed (or Mast Forest tradition as Snow (1980)

identified them) utilized a wide variety of resources. In fact, sites associated with the Small Stemmed Tradition occur in micro-environments that show great diversity in their hunting and gathering strategies. Coastal shell middens, estuarine fish weirs, estuarine shore sites, and sites on lakes, ponds, springs, streams, brooks, river shores and quarries all show how wide their procurement strategies reached. Fishing was accomplished by hand with hooks, lines and stone plummets as well as weirs such as the Boylston Street Fish weir(s) which has been directly associated with the Small Stemmed Tradition (Dincauze 1974: 48). It has been found that the inhabitants of southern New England at this time utilized more of the lower links on the food chain at this time as well such as shellfish, seeds, nuts, and small game, all resources that were not used to the same extent by their predecessors (Dincauze 1974: 48). This may have been a response to an increased population in the area at this time. As a way of coping with a higher population, a wider variety of more marginal resources had to be exploited to feed the greater number of people. This led to a well-balanced adaptation by a people who were very familiar with their surroundings.

Possibly, at this time, people were living in small open communities of only a few families on or near the sea coast in the spring to fall, moving to more permanent lakeside communities which formed the core of their territorial identity in the fall and winter (Ritchie 1969:219; Dincauze 1974: 48.) They may have had a river basin territoriality with a focus that thus would have constrained their communication and trade networks by being so watershed focused. This interpretation is similar to Snow's and Pagoulatos' who see the Small Stemmed traditions resource utilization system as a central based wandering one with winter camps in the back country or uplands and summer camps on the coast. Sites in this sort of system would not be large but they would be numerous and occurring in a wide variety of settings with a broad range of fish, mammals, birds, plants and mast producing trees being exploited (Snow 1980:230; Pagoulatos 1988). Pagoulatos sees the Small Stemmed Tradition, called the Tinkam Phase in Connecticut, as having a resource systems like the Micmac that was essentially mobile. He sees them as always moving to specific resource zones at specific times of year. This results in a high number of residential camps and locations and few task camps. Residential camps are found away from the Connecticut River in areas of high wetland potential such as the interior swamps, marshes and lakes (Pagoulatos 1988: 85). This interpretation appears somewhat different than that for southeastern Massachusetts where Small Stemmed populations appear to have exploited the coast and inland. It is also interesting to note that it was at this time that shellfish were first

exploited in much of the northeast. Ritchie viewed the initial exploitation of quahog and oysters over soft shell clams in the Late Archaic as evidence of immigrants moving into an area, being unfamiliar with shellfishing and basically collecting what they could see, the oysters and quahogs, and not what lay below the mud, the clams (Snow 1980:229).

It appears that by 3700 B.P. the cultural system of the people who were using Small Stemmed points in southern New England had begun to change. This period, from 3700-2700 B.P, has variously been called the Terminal or Transitional Archaic. During this time there appears to have been an immigration into southern New England of people using tools of the Broad spear or Susquehanna tradition. Projectile points of the Susquehanna style characterize the early part of this period while those of the Orient Fishtail style, a possible merging of indigenous Small Stemmed and Susquehanna styles, dominate the latter half (Snow 1980:237; Dincauze 1975: 27). The Orient point tradition appears to have remained in New England and eventually evolved into the Rossville and Lagoon points of the Early Woodland Period.

Points of the Susquehanna/ Broad spear style include the Susquehanna Broad, Wayland Notched and Atlantic points. Susquehanna Broad points are a corner notched point what has diamond-shaped blade and shoulders with obtuse shoulder angles and generally strait or concave bases with a basal width less than the maximum blade width. The bases often show basal grinding or rubbing and the cross section is flat with soft hammer percussion flaking evident. These points can range from 2.5 to 20 centimeters long, making them a generally large point with a length to width ration of 2:1 to 3:1 (MHC 1984:108-109). These points were produced from 4000-3500 years B.P. Unlike the Small Stemmed points, these are often made of exotic cherts and local volcanics with quartz, quartzite and argillite rarely used.

Atlantic points are triangular bladed stemmed points with strait-bottomed parallel-sided squared bases whose basal width is greater than or equal to 1.5 cm. The shoulders are well defined and approach a 90-degree angle with the stem the junction of which is formed by indirect percussion with a punch. These points can range from 5 to 15 centimeters long, making them another large point with a length to width ration of 1.5:1 to 2:1 (MHC 1984:106-107). These points were produced from 4100-3600 years B.P. Local volcanics are common as raw materials with quartzites, argillites and cherts also used. Quartz is a raw material for Atlantic points, again, like the Susquehanna Broad, showing a sharp break in technology from the Small Stemmed Tradition.

Wayland Notched points are a side-notched point that has a triangular shaped blade with

a strait to slightly concave base that is often less than the maximum blade width. The bases often show basal grinding or rubbing and the cross section is flat with soft hammer percussion flaking evident. These points can range from 3.5 to 11 centimeters long, making them a medium-sized point with a length to width ration of 2:1 to 3:1 (MHC 1984:110-111). These points were produced from 3600-3000 years B.P. Local volcanics are common with chert and argillite also used.

Orient Fishtail points are a side-notched point with a narrow lanceolate blade shape reminiscent of Small Stemmed points (Figure 10). The stem is expanding and the base is usually strait to concave and occasionally angled with a basal width less than or equal to the maximum blade width. The shoulders are rounded and 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). These points were produced from 3000-2000 years B.P. Common raw materials include local volcanics quartz and quartzite. The blade shape, poorly defined shoulders and raw material choice hints that these points are a blending of Susquehanna and Small Stemmed traditions.

The Susquehanna Tradition created a sharp change in the archaeological continuity of the Small Stemmed Tradition as far north as Maine (Dincauze 1975:27). This is probably the result of an infiltration or migration of peoples from the southwest. There appears to be a distinct difference in cultural and industrial traditions from the indigenous populations but no evidence of assimilation of populations. Various researchers have attempted to determine if there was a large migration of people associated with the Susquehanna Tradition or if it was merely a small influx with a new specialized tool, the Broad spear, that was adapted as an adaptation by local populations to exploit marine fish resources (Turnbaugh 1975: 57).

David Sanger used six criteria to examine the Susquehanna Tradition and determine if it met these criteria for migration. The criteria were 1) identify the migrating people as an intrusive unit in the region it has penetrated, 2) trace this unit back to a homeland, 3) determine that all occurrences of this unit are contemporaneous, 4) establish the existence of favorable conditions for migration, 5) demonstrate that some other hypothesis, such as independent invention or diffusion of traits, does not better fit the facts of the situation, 6) establish the presence of all cultural subsystems and not an isolated one such as the mortuary subsystem (Snow 1980:245). Sanger concluded that all of these criteria were met in Northern New England, thus lending

support to an immigration hypothesis. Work by Pagoulatos (1988) reached much the same conclusion about the Susquehanna in the Connecticut River Valley. He looked at the chronological setting, site types and settlement patterns and determined that the users of the Susquehanna tools represented a complete cultural system focused on the riverine areas that displaced the local Small Stemmed populations (Pagoulatos 1988: 85). Small Stemmed populations practiced different subsistence and procurement strategies than the Susquehanna users and thus allowed two different cultural systems to coexist.

Susquehanna populations in the Connecticut River Valley had relatively stable residences that allowed the exploitation of specific resource zones throughout much of the year. Organized task groups left a central base camp to establish temporary fishing and hunting camps, thus they moved less frequently, had a lower number of large residential camps and a high number of field camps (Pagoulatos 1988:86-89). Susquehanna populations appear to have practiced a resource procurement strategy similar to what Binford found for stable hunter-gatherer groups. In Binford's work he found that communities were situated along the river courses for much of the year with the organized task groups leaving the camp to procure and process mammal resources by setting up temporary field camps. In this case aggregation would be expected on the riverine and terrace locations with smaller field camps in the uplands. The few larger residential camps found within a territory would show high intrasite and low intersite variability (Binford 1980:18) Basically many of the tasks, stone knapping, skin processing, cooking, plant processing, etc., would be done at this central residential base camp and the structure and evidence of activities would not vary much between different residential camps.

The later half of the Terminal Archaic was dominated by people who used the Orient Fishtail Point Tradition. This appears to have been a time of great change in New England with new technologies appearing and by 3000 years B.P. an interrelated series of climatic, environmental, cultural and social changes that is seen as 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 B.P. a breakdown of reliable trade networks (Ritchie 1969:164; Dincauze 1974: 49). Work on the I-495 corridor in the by the Public Archaeology Laboratory, Inc. in the 1980s suggests that favorable habitats were reduced at this time due to a lower availability of open water. As a result, the margins of the largest and deepest wetlands were extensively used as well as an intensification of the use of

riparian locations (PAL 1982, 1982a). 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 are 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). Interior sites along major wetland margins, such as those identified by the I-495 work may represent these winter quarters or were the locations of special purpose resource procurement locations. Funk (1976) proposed that camps located on bluffs were occupied in the winter while riverside sites probably represent spring to fall fishing sites where anadromous species such as alewife, herring and shad were collected through the use of weirs. There appears to be a clear separation of activities by season and site location, possibly a result of a change in settlement and procurement strategies similar to what Pagoulatos (1988) found in the Connecticut River Valley. By the end of the Orient phase, the elaborate burial ceremonialism that characterized the Susquehanna phase also appears to have come to an end (Dincauze 1974:49). The ultimate cause of all these changes and the general terminal Archaic cultural readaptation are unknown or unrecognized but it may be related to the climatic deterioration and the changing forest composition that could have led to a lessening of the reliance on inland sites (Dincauze 1974: 49).

The Orient Tradition is characterized by resurgence in the acquisition and use of non-local cherts and jaspers from New York and Pennsylvania (Ritchie and Leveilee 1982) as well as the use of steatite for bowls. The pattern of long-distance exchange suggests a reestablishment of expanded exchange system that contrasts with the earlier Late Archaic system (MHC 1982: 25). 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 for from New England (Ritchie 1963: 196). This was later proved not be the case as habitation sites were identified.

Foods used by Orient Tradition users appear to possibly include an appreciable amount of shellfish and fish as well as deer, turtle, turkey and duck species, and small mammals such as woodchuck, gray fox, and mink. Features associated with the processing of these resources include earth ovens where foods were baked, stone platforms for roasting and the use of boiling stones. The tool kit of the Orient Tradition is characterized by the Orient Fishtail point, which make up about 88% of the point type used, and many of the same tools used earlier in the period such as atlatl weights, full-grooved axes, rectangular celts, plano-convex and grooved back

adzes, small gouges, ovate and triangular knives, straight, stemmed and fishtail point drills of quartz and chert with few scrapers and anvil stones (Ritchie 1969:170). Also included in this inventory are ellipsoidal and rectangular stone gorgets, lots of graphite and hematite paint stones and steatite bowls and some of the earliest occurrences of locally made pottery.

Steatite (aka soapstone) vessels have come to be one of the hallmarks of the later half of the Terminal Archaic in New England. These vessels are oval, rectangular or nearly circular or trough-like, generally with rounded corners, rims and bases with slightly out sloping to vertical walls and squarish lobate lugs on the exterior. The range in size from 14 to 46 centimeters long and 5 to 8 centimeters high and are sometimes found smoke stained and soot encrusted, possibly indicating direct use on fires for cooking. Their general shape suggests that they were originally modeled on wooden bowl prototypes. This technology does not seem to represent an independent invention in New England, but appears to have spread north from the as far south as the Virginia to North Carolina Piedmont area, eventually splitting with one northern production center being in Pennsylvania (possibly associated with the Broadpoint/ Susquehanna Tradition) and another in New England (possibly associated with the Small Stemmed Tradition)(Ritchie 1963: 170). Few sources appear to have been exploited for soapstone bowls in New England with the known ones being in Rhode Island, Connecticut and central Massachusetts. Soapstone bowls are generally found at camp sites along major streams and not in remote inland sites where the lack of canoe transport made moving the heavy objects more difficult (Snow 1980:240). Alternately, Funk (1976) sees the presence of steatite more often on the coast as a result of seasonality.

Steatite vessels represent the first imperishable vessel form in the northeast. It does not appear in New England before 4000 years B.P. with earliest date reported by Hoffman being 3655 +/- 85 years B.P. (Hoffman 1998:48). Steatite may have been found at the Wapanucket 6 site in association with Squibnocket Triangles and radiocarbon dated at 4355 +/- 185 years B.P. possibly making this the earliest occurrence in New England (Fiedel 2001:104). Steatite achieved its chief popularity between 3000-2500 years B.P. and disappeared after 2500 years B.P. There does not seem to have been a clear transgression from steatite to clay pottery and their occurrences appear to overlap at some sites. This may indicate separate but complimentary uses for these vessels.

The original reason why any sort of imperishable vessel was made or used in New England may lay in the social changes occurring in the Terminal Archaic. These reasons include

an indigenous response to the increasing population densities in floodplain environs with durable vessels being a way to process resources more efficiently (Pagoulatos 1988: 85-91). These resources may have included chenopodium and wetland grass seeds. The environmental changes that were occurring at the time that may have changed the available resources and led to an increase in reliance on anadromous fish (Turnbaugh 1975). Finally a diffusion or migration of peoples or ideas from the southeast (Snow 1980: 242; Tuck 1978).

Steatite may have had a more ceremonial place in Terminal Archaic culture as well. The makers of the steatite vessels are assumed to have been men, possibly ones who were engaged in ceremonial exchange with the steatite being the exchanged item (Snow 1980: 250). This may account for more centralized distribution of steatite and the mortuary associations of it. Sites where steatite occur may be central ceremonial sites where males gathered for inter and intra regional trade or to participate in mortuary ceremonies (Hoffman 1998: 52). This may be related to the use recorded ethnographically from the southeast of large vessels by males for the consumption of ritual "black drink" (Sassaman 1993:170, Stewart 1997; Klein 1997: 146). This ceremony may have been similar to that recorded in southeastern Massachusetts where young men undergoing ritual purification in preparation to become *pnieseuk* consumed a drink of white *hellabore*. Edward Winslow, prominent Plymouth Colony settler, described the *pnieseuk* as

"men of great courage and wisdom, and to these also the Devil appeareth more familiarly then to others, and as we conceive maketh covenant with them to preserve them from death, by wounds, with arrows, knives, hatchets, etc. or at least both themselves and especially the people think themselves to be freed from the same. And though against their batters all of them by painting disfigure themselves, yet they are known by their cottage and boldness, by reason whereof one of them will chase almost an hundred men, for they account it death for whomsoever stand in their way. These are highly esteemed of all sorts of people, and are of the Sachems Council, without whom they will not war or undertake any weighty business. In war their Sachems for their more safety go in the midst of them. They are commonly men of the greatest stature and strength, and such as will endure most hardness, and yet are more discreet, courteous, and humane in their carriages then any amongst them scorning theft, lying, and the like base dealings, and stand as much upon their reputation as any men.

And to the end they may have store of these, they train up the most forward and likeliest boys from their childhood in great hardness, and make them abstain from dainty meat, observing divers orders prescribed, *to the end that when they are of age the Devil may appear to them, causing to drink the juice of Sentry and other bitter herbs till they cast, which they must disgorge into the platter, and drink again, and again, till at length through extraordinary oppressing of nature it will seem to be all blood, and this the boys will do with eagerness at the first, and so continue till by reason of faintness they can scarce stand on their legs, and then must go forth into the cold: also they beat their shins with sticks, and cause them to run through bushes, stumps, and brambles, to make them hardy and*

acceptable to the Devil, that in time he may appear unto them. " (*Italics mine*) (Young 1974: 340)

This ceremony that helped to create the pniiese may be a descended from an earlier one in the Terminal Archaic that utilized the steatite vessels. The rise of the elite fighting class of the pniiese may have been a response to increased population pressure in the area and a need to defend resources. If steatite bowls were associated with males and male ceremonies, one would expect to find them in male graves as opposed to female ones. Unfortunately, the majority of the graves of he Terminal Archaic consist of cremation burials that have produced bone that was in such a fragmented and calcined state that assignment of sex was impossible. One Terminal Archaic burial and two possible burial caches from Jamestown, Rhode Island again could not be assigned to sex, but the items included may point towards male having been interred in the grave that contained steatite bowls and the other internments being assignable to male tool kits. In the single grave that contained calcined bone as well as steatite, other objects interred with the individual included a small grooved axe blade, a perforated black pebble, a clutch of graphite pebbles, a slate drill blade, a chert flake, six projectile points including one of Pennsylvania Jasper, lumps of red ocher a red pigment stone and a 35.5 cm long pestle, a perforated and incised steatite pendant, a flat incised stone "tablet" and an incised quahog shell fragment (Simmons 1970: 17-27). The caches containing steatite also had graphite pebbles, a rhyolite drill, two side-notched points of slate, a chert Orient Fishtail point, two "crude" pebble choppers a side-notched rhyolite point and two small quartz pebbles (Simmons 1970:27-32). Unfortunately it is difficult to assign sex of a burial based on grave goods alone due to the fact that grave contents may not reflect items actually used by the person interred there. They may be items placed in the grave by friends and relatives of either sex as gifts to them and thus a mixture of male items may be in a female grave or female items in a male grave. This could be a topic that needs to be researched more in the future.

After steatite bowls ceased to be present in the archaeological record, other vessels such as wood may have taken the place of the stone vessels. The use of a wooden vessel as opposed to a pottery one may have continued the association of a male created vessel used for a strictly male ceremony. Steatite bowls exclusively used by males may also have been replaced by chlorite and later steatite and pottery smoking pipes and pipe ceremony that went along with them. This too seemed to have been an almost exclusively male pursuit with some ritual significance. Pipes first make their appearance after steatite bowls ceased to be found archaeologically in New England. Like the association of steatite with male graves, the decline

of the steatite bowl industry and rise of the smoking pipe and smoking ceremony is another avenue of future research.

Other research questions related to steatite were proposed by Sassaman (1999). These include the following: Did soapstone vessel production and exchange in southern New England emerge in the context of the expanding broadpoint cultural front as one of several means of alliance building with central New York groups? Did successful ties with such groups efficiently preclude or thwart assimilation between indigenous and immigrant populations in southern New England? Was the burial ceremonialism of southern New England a context of mediating ethnic distinctions between indigenous and immigrant populations as suggested by Dincauze (1975b:31)? Did the growing technological contrasts in the third millennium B.P.-notably the exclusive use of Vinette I by Meadowood groups of New York and the coexistence of both soapstone and pottery in Orient contexts of southern New England and Long Island-signify an end to traditional alliances?

Most researchers see the use of steatite as being antecedent to the use of clay pottery, although Hoffman has attempted to make the case for pottery having been used prior to the introduction of steatite (Hoffman 1998). The shift from steatite to pottery probably occurred gradually over time with both technologies being in use for at the same time. Funk (1976) sees the coeval existence of pottery and steatite and their relative occurrence in inland and coastal sites as being a result of seasonality. In this situation, steatite was used on the coast in the spring to early fall and pottery was used at inland winter sites. Pottery dates as far back as 3600 years B.P. in southeastern New England and 3300 to 3100 years B.P. in southern New Hampshire (Sassaman 1999: 75). The eventual usurping of pottery over steatite may be related to a decreasing need in the Terminal Archaic for far-flung alliances (Fiedel 2001:106). Early pottery has been termed Vinette I and it is generally believed that at least the gross technological ideas of pottery production spread to the north from the south, possibly from the same general areas as steatite bowl production. This pottery type has been recovered in Connecticut in association with Susquehanna points (Levin 1984:15; McBride 1984:123; Pfeiffer 1984:79). The earliest pots were straight sided with pointed, concoidal bases and some archaeologists believe that these resemble basket styles common in these earlier periods (Braun 1994:63). This type was first identified in New York State but it is not confined to there. Vinette I pottery has been recovered from all of New England, New York and New Jersey. This type of pottery can be identified by its thick, straight wall and the use of abundant grit and sand as a tempering medium. Walls of

Vinette I pottery range from .6-1.1 cm (Luedtke 240). The exterior and interior of Transitional Archaic to Early Woodland ceramics were commonly cord marked, a possible decorative technique resulting from the patting of the vessel with a cord wrapped paddle to help bond the coils together. Some smooth surfaces may also occur in some vessels either intentionally or accidentally.

Vinette I pottery has been found to be heavily tempered with grit composed of coarse, poorly-sorted crushed-rock and sands with a general decrease in the size of the grit over time (Bunker 208; Luedtke 229). Native pottery may also be shell tempered and although this is generally believed to be a temper used in the Middle Woodland to Contact periods, Lavin, in her work on Cape Cod ceramics postulates that the type of temper may not be temporally related but may be more closely linked to where the vessel was made. Temper type on coastal sites may more often be shell tempered while those on inland sites may be more often grit tempered. This has to do with the temper resources available to Native potters. Rim shapes for Vinette I ceramics are round, with some decoration consisting of incised lines possibly being present (Luedtke 244). Decoration of the vessel itself takes the form of the cord marking, which was applied in a horizontal direction on interior and multiple directions on exterior and some incised lines (Bunker 208). The similarity of Vinette I pottery throughout the Northeast suggests a local center of invention or adoption from which the technology spread out. Ozker sees this similarity in form and structure as reflecting a similarity in function. He sees these vessels as only being used in a fall context and were not in daily use (Ozker 1982: 210).

Early Woodland (3000-2000 Years Ago)

Following the Terminal Archaic is an ill-defined time labeled the Early Woodland by New England archaeologists. In the face of the date for the start of pottery production being back into the Late to Terminal Archaic and the absence of horticulture possibly until after 1000 A.D, some archaeologists, like Snow, do not view the designation of Early Woodland as a valid one (1980). They see no real change occurring that could be used to differentiate the Terminal Archaic and the next 1000 years. They merely see a continuation of tumultuous times that began after 3000 to 4000 years ago. In the words of Filios "... the chronological picture (for the Early Woodland) is more murky than previously suspected. ...the horizon markers (of this period) need to be reevaluated." (Filios 1989:87). Traditional horizon markers for the Early Woodland have included Vinette I pottery, which has been shown to have been produced before the Early

Woodland, an absence of Small Stemmed points, which have been shown to have continued in use into the Early Woodland, and increased sedentism, which appears to have begun before the Early Woodland, and horticulture, which in New England was not intensively practiced until after 1000 A.D.

Some of the trends identified above, the decreased population and fragmentation, are based on the small number of Early Woodland sites that have been identified. This may be more a product of the criteria used to identify the sites, such as the presence of pottery and absence of Small Stemmed points, and number of Early Woodland sites may not be as small as thought. If one includes sites yielding Small Stemmed points but no pottery, as these may represent special purpose floral or faunal resource procurement task camps and not residential locations, the number of sites *possibly* attributable to the Early Woodland increases. Due to the increasingly long temporal use range for Small Stemmed points, their presence or absence can no longer be used as valid "datable" criteria to assign the site to one period or another. What is needed is more radiocarbon dates associated with specific materials. Until this occurs the Early Woodland will remain obscure and ill defined.

A dramatic population collapse has traditionally been one of the defining characteristics of the Early Woodland and while Hoffman (1985) does not see evidence of any break. Filios (1989) came to a similar conclusion although her data shows a break in radiocarbon dates from 2700-2400 years B.P. possibly showing a population decline after 3800 years B.P. and a greater decline after 2800 years B.P. (Fiedel 2001: 117). If there was in fact a population collapse, reasons for it have included climatic and environmental change, epidemics, the effects of plant and animal die-offs and socio-cultural factors (Fiedel 2001: 118). One of the main causes may have been if nut bearing trees, already in decline in the Terminal Archaic, were hit hard by plant disease or environmental change, then this may have caused a population reliant on this resource to die off. This would account for the drop in inland sites in the period. Alternately the populations living on the coast that focused their procurement strategies on river valley, estuarine and inshore resources may have remained relatively unscathed. These would be the Rossville and Lagoon point users, point styles that show a high concentration in coastal areas especially Cape Cod.

Middle Woodland 1700-1200 years BP (300-800 AD)

This period is marked by a decrease in the number of exotic finished goods indicative of

long-distance trade, and by changes in mortuary practice (increase in secondary interments, less use of ocher, fewer grave goods, more variation in preparation of the dead). While the roots of ceramic and lithic variability are found in the preceding periods, more rapid variation in sequence through time and more regional variation characterize this period. Ceramics vary more in decoration and form. Lithic projectile points are less important in the tool kit, and bone and antler tools are preserved at some sites where matrix conditions are appropriate (Shaw 1996b:84-87). By the end of the period there is evidence of maize horticulture (Thorbahn 1982).

Fox Creek and Steubenville bifaces characterize this part of the period (Moore 1997). There is some overlap in time between the Fox Creek and Jack's Reef points during this part of the Middle Woodland. Jack's Reef points continue to be used into the Late Woodland. Exotic lithic materials increase in the Middle Woodland, except in the Champlain drainage. Jack's Reef points are often made of non-local chert (Shaw 1996b:92-93). Some lithic tool types, such as Rossville (Shaw 1996b:90) and Small Stemmed (Hasenstab et al. 1990) continue into the Middle Woodland.

The Late Woodland Period (1000-500 BP)

This is the period just prior to European contact and as a result, many of the historical reports written by the early explorers to New England (Verrazanno, Gosnold, Pring, Smith) present one way of understanding the late Late Woodland period. Some of their observations may be able to be extrapolated back into the prehistoric past through the use of ethnographic analogy. These analogies can be created with more confidence as pertaining to the culture of the Late Woodland period than any earlier one.

Ethnohistorically, it was recorded that the Native people lived within a community territory that for the most part supplied their needs. Being on the coast or within a coastal environment, the Native people of Cape Cod and southeastern Massachusetts participated in a seasonal migration that was probably very similar to that which they had done for centuries before. This seasonal system incorporates elements of both an intensive and an extensive subsistence system.

The seventeenth century Wampanoag were practicing what is well known to anthropologists as a mobile economy. these people were seasonally migrational so they moved from place to place throughout the year to coordinate the resources of their territory. To these people, the resources they are using are ill-distributed so, as a result, they had developed a specialized successful

economy that maintained higher population numbers than could be done if those resources were gathered in isolation by specialized groups (Higgs and Vita-Finzi 1982:28). Their system was not as unique among peoples as some researchers believe (Dunford 1992: 23). In Frederick Dunford's view, the Cape Cod and southeastern Massachusetts Natives practiced a unique human adaptation to the environment which he termed "conditional sedentism" (Bragdon 1996:58). This adaptation had the estuary as its primary focus with its human community "joining and splitting like quicksilver in a fluid pattern within its bounds." (Bragdon 1996:59).

Whatever settlement system one sees the Cape Cod Wampanoag having, these people exploited a diffuse range of plants and animals and coordinated their gathering so that as each species came into season it was intensively harvested and stored for the winter. In order to do this, the people would split up during the spring, summer and early fall and each family would venture out to their planting fields, which became their seasonal bases. They would then move out from these to exploit various resources. This is what the Sandy's Point site represents, a seasonally occupied site for the exploitation of resources, be it shellfish and or corn. In the fall they would all join up again and move as a community to a sheltered valley or into the woods and establish a winter seasonal base from which to venture out and exploit winter resources. Come spring the entire process would begin again.

The ceramics of the Late Woodland period are often shell-tempered or made with fine grit temper and have thinner bodies and a more globular form than the earlier ceramics. The diagnostic projectile point of the Late woodland period is the triangular Levanna points and occasionally the Madison. This period is marked by an increasing importance in food production (maize, beans, squash, sunflower and other vegetables) in coastal or riverine zones, which begins by ca. 1100 BP on Martha's Vineyard (Ritchie 1969).

These decrease in projectile point styles and the increase in the reliance on horticultural crops, may be attributed to increasing numbers and densities of population at larger sites. While the occurrence of the "village" in southeastern Massachusetts continues to be debated, the affect of an increased reliance on corn, beans, squash and to a lesser degree gourds, sunflowers and tobacco, definitely led to a degree of sedentism not seen prior to this time (Hasenstab 1999; Kerber 1988).

Ceramics are often shell-tempered or made with fine grit temper and thinner bodied; there is a shift to globular forms, and the addition of collars, sometimes decorated with human faces. Elaborate collars similar to those of Iroquois ceramics are found in the Merrimack and

Champlain drainages. Triangular projectile points (smaller Madison points or larger Levanna points) are diagnostic for this period. This period is marked by an increasing importance in food production (maize, beans, squash, sunflower and other vegetables) in coastal or riverine zones, which begins by ca. 1100 BP on Martha's Vineyard (Ritchie 1969).

These changes in assemblage, and by implication, adaptation, are attributed to increasing numbers and densities of population at larger sites. Research issues include the extent of permanency in Late Woodland settlements, the nature of such settlements (i.e., whether such settlements were villages; see Hasenstab 1999; Kerber 1988), the identification of horticulture with non-native plants and definition of the effects on humans. In addition, researchers might ask about the use of different ecozones, the reality of population growth, and whether or not climate change (e.g., the Little Ice Age), affected settlement and subsistence. There is some evidence of the development of long-distance exchange again, and some workers have suggested that a native beaver trade was developed before Contact. Regional differences are visible. In Vermont, there are fewer late Late Woodland sites than early Late Woodland. This may be a response to Iroquois settlement changes. In southern New England, horticulture did not replace existing gathering and hunting strategies, and large settlements did not replace small seasonal sites. Differential dependence on horticulture is likely to have affected society and politics. Cultural differentiation of the Iroquois from the Algonquin also presents research opportunities (Shaw 1996c).

Contact Period

The Contact period was a time a dramatic social, political and personal upheaval for southeastern Massachusetts Native populations. This period began with amiable trade relations with European explorers such as Verrazanno (1524) and Gosnold (1602), followed by a growing distrust of Europeans and an increase in hostility between the two, especially on Cape Cod (Pring 1603, Champlain 1605). This hostility was due primarily to the kidnaping of Native men by Europeans desirous of returning home with informants or curiosities from the New World (Weymouth 1607, Hunt under Smith 1614). By the time of the settling of the English at Plymouth, 1620, Natives in southeastern Massachusetts had been decimated by a European epidemic, 1616-1619, with mortality rates possibly reaching 100% in some communities.

The first recorded trading encounter in New England occurred in 1524 and involved the Florentine sailor Giovanni da Verrazano who was sailing for France. Verrazanno arrived in

Narragansett Bay in April of 1524 and traded with the natives (Parker1968f:14). He stated that the people were apparently unfamiliar with Europeans and were very willing to trade and host the visitors. The natives were first enticed to trade by tossing "some little bells, and glasses and many toys" (Parker1968f:14) to them as they came to Verrazano's ship in their own boats. The Europeans remained in the harbor until early May and Verrazano stated that of all of the goods they traded to the natives "...they prized most highly the bells, azure (blue) crystals, and other toys to hang in their ears and about their necks; they do not value or care to have silk or gold stuffs, or other kinds of cloth, nor implements of steel or iron." (Parker 1968f: 16). It was also noted that the natives here possessed ornaments of wrought copper which they prized greater than gold. The copper may have come indirectly through trade with natives to the north who traded them from European fishermen or it may have been native copper from the Great Lakes or Bay of Fundy regions.

The next explorer known to have visited southeastern Massachusetts was Bartholomew Gosnold who arrived at the Elizabeth Islands off Martha's Vineyard in May of 1602. There he traded with the first natives he encountered, giving them "certain trifles, as knives, points, and such like, which they much esteemed." (Parker1968b:38). Gosnold's crew, in return for the "trifles" received many different types of fur from animals such as beavers, luzernes, martens, otters, wild-cats, black foxes, conie (rabbit) skins, deer and seals as well as cedar and sassafras, the later which was prized as a cure-all in Europe. Of particular note is his description of the great store of copper artifacts which he saw people wearing and using. He said that all of them had " chaines, earrings or collars of this metall; they head some of their

arrows here with (it), much like our broad arrowheads, very workmanly made. Their chaines are many hollow pieces semented together, ech piece of the bignesse of one of our reeds, a finger in length, ten or twelve of them together on a string, which they wear about their necks; their collars they weare about their bodies like bandoliers a handful broad, all hollow pieces, like the other but shorter, foure hundred pieces in a collar, very fine and evenly set together. Besides these they have large drinking cups, made like sculles, and other thinne plates of copper, made much like our boar head speares, all of which they little esteem, as they offered their fairest collars or chjaines for a knife or trifle....I was desirous to

understand where they had such store of this metall, and made signes to one of them....who taking a piece of copper in his hand, made a hole with his finger in the ground, and withall, pointed to the maine from whence they came." (Parker1968b:44).

The native informant asked by Gosnold as to where they received the copper from was probably either signing that it came from the mainland, possibly he meant through trade with natives or Europeans or he may have been referring to a native historical tale as to the origin of the copper. What is interesting is the great store of copper possessed by the natives and the desire that was present to trade for metal knives. It would appear that between 1524 and 1602 they had begun to see a value in steel knives and they had expanded their use of copper to create beads and arrowheads, whereas in 1524 they were noted as having only breastplates of copper.

The presence of so much copper and the desire by the Natives to trade with the Europeans highlights the early relations. Natives saw European goods as being different, special, in some ways technologically superior and spiritually empowering. Unfortunately, the power that the Natives felt could help them cope with the sometimes disturbing new relationship with these strangers could not preserve them from their diseases. Sometime around 1616, an epidemic swept south from Maine among the Native people. Various authors since the seventeenth century have sought to identify what this disease was with the most likely candidate being infectious hepatitis.

Sippican in the Seventeenth Century

Plymouth Colony's dealings with the Natives and their land that is located in present day Rochester, Mattapoisett and Marion, began in 1649 when liberty was granted to the Town of Plymouth to begin herding, wintering and keeping cattle at place called Sepecan (PCR Vol 1: 30; Vol 2: 141). At this early date, there did not seem to have been any consultation or compensation to the Native people who were living in the area for the colony's use of their lands. It appears, from the records at least, that the colony may have felt that the lands they were using were empty lands and thus they did not need to initially certify their use of them. By 1651, the colony felt that it would disadvantageous to them to have people settling there and they voted to keep the lands at Sepecan exclusively for the town of Plymouth use for cattle and not allow settlement. At this date there probably were single men living on the lands to tend the colony's cattle, but no permanent settlements. The bounds of Sepecan were also outlined at this time. Unfortunately,

portions of the document did not survive the ravages of time and all we can read is that the bounds are "...eight miles by the sea side, and four miles into the land" (PCR Vol 2: 170). Looking at Map 1, it can be seen that the area delineated by this rough boundary is the entire coast of Mattapoissett, Marion, and part Wareham. When describing the lands or delineating the boundaries, the English may have used prominent features such as the rivers as bounds, although this is not explicitly stated in this case as this just seems to have been a rough estimate. If this was done in Sepecan then, along the coast, the bounds probably extended from the present Bristol and Plymouth County boundary, the Mattapoissett River in Mattapoissett, east to the Weweantic River in Wareham. Inland, four miles from the coast extends to New Bedford and Mary's Pond Roads, both originally Native trails. It can effectively stated that the lands that are described in the 1651 record have the ocean on the south side the Mattapoissett River, or possibly just to the east of it on the est side, the Weweantic River, or just to the west of it on the west side, and extended to New Bedford and Mary's Pond roads on the north side.

In 1651 it was decided that the lands in Sepecan that the colony had been using previously, should be formally purchased from the Natives and that the town of Plymouth should pay for it. This would be done "... when the true ppriators therof shalbe manifested." (PCR Vol 1:32). The colony essentially did not know which Natives to deal with when it came to purchasing these lands. By 1661, the question of who owned the land appears to have been settled, although it was not recorded in the colony records, because at this time the courts ordered George Watson, Nathaniell Warren and Joseph Warren to meet with Mr Hinkley and Nathaniell Bacon, the latter two were appointed by the court to set the bounds of the colony's lands at Sepecan (PCR Vol. 1:45). Land in Sepecan continued to be purchased in the 1660s from the Natives, possibly with the intent of the colony being to control the use and settlement of this area. Thirty acres were purchased in 1661 by to Nattaniell Warren and Joseph and Nathaniell Warren an William Harlow were granted permission to purchase any additional lands in the area (PCR Vol 1:77).

The year 1666 can be regarded as marking a definite acceleration in the interest of both Natives and English in the lands at Sepecan. The first incident appears to involve the possible or actual sale of lands by Watuchpoo, the sachem of Sepecan. It appears that either lands were sold that belonged to Watuchpoo without his knowledge and he wanted compensation or that Watuchpoo wanted to sell lands, but there was a question concerning whether he truly owned them (PCR vol deeds:236). As a result, testimony from "Amawekitt ...an old man" was taken

(PCR vol. deeds:236). Amawekitt stated that hee had heard from his father that these lands always belonged to the predecessors of Watuchpoo. He then went on to give Watuchpoo's family lineage back five generations, probably over 100 years. This lineage and the rights of Watuchpoo to the land was witnessed and approved by eight other Native leaders including "the black sachem" Tispaquin sachem of Middleboro, Josias Chickataubut son of Massachusetts sachem Chickataubut and Philip, sachem of Pokanoket. It appears that the dispute between Watuchpoo and some other unnamed party, either English or Native, precipitated the creation and declaration by Philip of what lands he, Watuchpoo and Sampson were willing to sell to the English.

The first recorded sale of Native lands in Sepecan that was certified by the Natives themselves occurred on the 24th day of the 12th month (because the colonists may have still considered May 1 to be the new year or may not have, then this month is either April or December) 1666. At this time Philip, son of Massiest and sachem of the Wampanoag at Pokanoket (Warren and Bristol, Rhode Island) drew a diagram and signed a deed with very specific details regarding lands that he and Watuchpoo the sachem of Sepecan would sell. Philip appears to have written this deed and drawn the map for the very specific purpose of telling the English **exactly** what could be sold and what would not be sold. This was done with the purpose of protecting the Native families living on the lands. He specifically stated that the "Indians" living on the lands would remain there; that only waste or extra lands could be sold; and that Wattachpoo was of the same mind. He then proceeded to draw a map showing the "principall names of the land wee are **not** willing should be sold." (Emphasis mine) (PCR Vol deeds 237). Philip concluded this deed with the statement that he had given the power to Watuchpoo and Sampson (possibly the sachem of the Lakeville area) and their brethren to be the only persons whom could sell the lands with his consent. This is probably the finest example from the seventeenth century of how the Native people were trying to control the sale of lands and the restrictions that would be put on the English.

Philip's detailed descriptions and the unique map, the only one recorded in the Plymouth Colony book of deeds, give an excellent view into how Natives viewed the land and described it. This map which may be oriented with north on the left and south on the right, Figure 2, shows a river, labeled as "this is a river", running from the center of the bottom line to the upper left corner, two semi-circular shapes on the left side, two paths, an upper and a lower one, an enigmatic square in the upper right corner and another possible path on the right side. Encircling

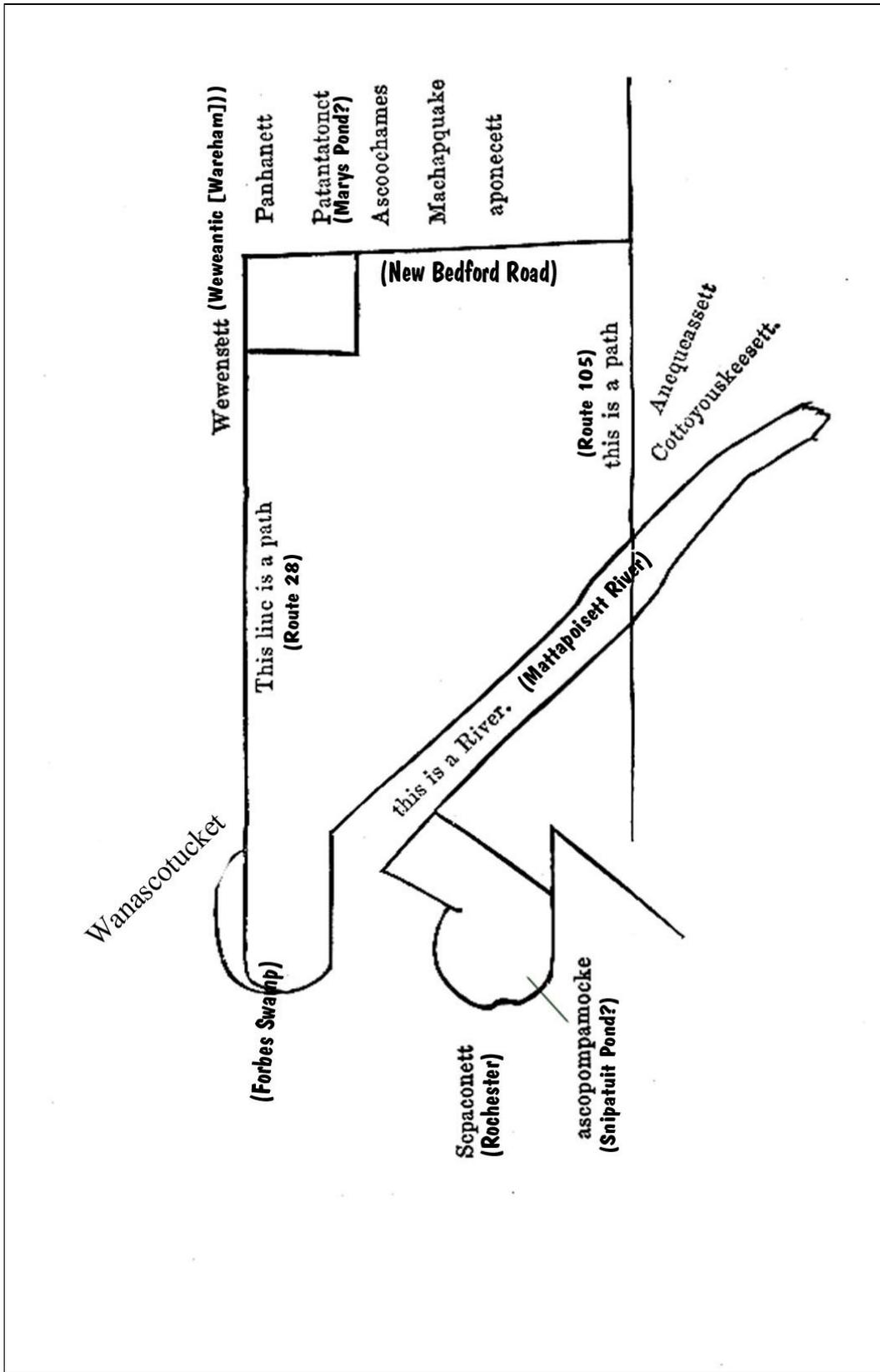


Figure 2. Philip's map with modern names

the map are eleven Native place names, the names of the places that the Natives would not sell. These names are as follows:

Ascopompacoke: Possibly Snipatuit pond

Sepaconett: Sippican, Rochester

Wanascohochett: Place on top of the hill

Weweensett: Weweantic River in Wareham

Panhanett: unknown location, the name comes from 'Panne' or 'the out of the way place'

Patantatonet: from Puhtahwhau and Tahannet, Place of the crane Traps

Ascoochames: from Asookekomau, place of the deceivers

Machapqauke: from *Machuck* bad and *paugau* water, place of the bad water

Anequeassett: from *Anaqushau* trade, place of trade

Cottoyouskeesett: planting area (?)

Comparing Philip's map to modern map of the area, Figure 3, it can be seen that the two paths that are labeled correspond with present day Route 28 for the upper path, New Bedford and Mary's Pond Road for the lower path. The line from Patantatonet to New Bedford Road may be Mary's Pond Road. The matching of Philip's map with a modern map is not perfect, but the interpretation presented here may fit the available information better than other locations. Either way, the bounds of the land that Philip specifically stated would not be sold, cover the lands to the north of Plymouth's original Sepeccan lands.

It appears that the bounds of the lands at Sepeccan, those to the south of the lands that Philip set aside, were still not established by the late 1660s. In 1668, the court appointed William Crow and Joseph Warren to run a boundary line for the grant at Sepeccan (PCR Vol 1:100). Soon after this, settlers had purchased leases of land at Sepeccan. For example by June 2, 1668 Experience Michell was granted land next to Hugh Coles grant which was located "betwixt Mattapoisett River and the easterly bounds of Acushena, on the western syde of the said river" (PCR 1668: Vol 4: 185). By 1669, leasers were paying rent to Plymouth. We know this because in this year, Joseph Bartlett owed the town 40 shillings for his rent of land at Sepeccan (PCR Vol. 1 114). Bartlett stated that the money was in the hands of William Clarke of Plymouth and that he, Bartlett, surrendered his lease to the Towne, who accepted it. In 1670 Plymouth, who appears to have a grant for lands at Sepeccan and "places adjacent", presumably Agawam and Weweantic as these three places are often mentioned together, but did not actually own all the lands in the grant, appointed , Leiftenant Morton, Sarjeant Harlow, Joseph Warren, and William

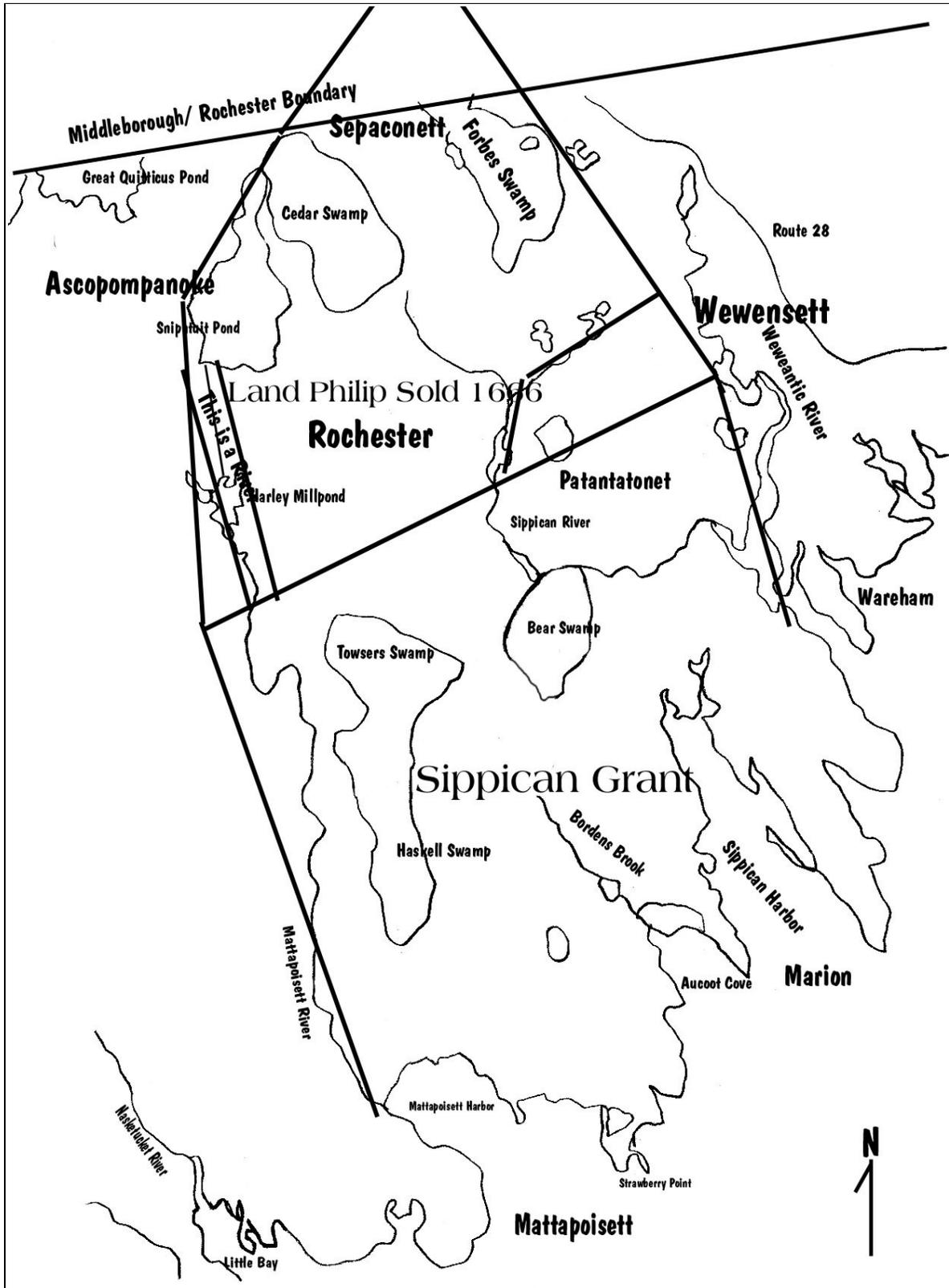


Figure 3. Philip's grant and the Sippican grant

Clarke, or any three of them, to purchase any of the lands in the Sepecan grant that were, as of March 4, 1670, unpurchased from the Natives in the area (PCR Vol 8:271). They were given specific instructions to make sure that the Natives in the area were notified when these purchases took place so that they knew the "right proprietors" of the lands. It can be assumed from the directives given by Philip in 1666 that the lands were to be purchased specifically from Watuchpoo, Sampson and their brethren and noone else.

In December of 1670, Nathaniel Morton, Leiftenant Morton and Joseph Warren were appointed by the Towne to agree with Tatoson about a psell of Land desired by him att Sepecan (PCR Vol: 1). Tatoson would later become an important Native leader during King Philip's war. Most significantly, he was identified as the leader of the attack on the house of one of the men who was continually involved in land negotiations in the Sippican area, William Clark's of Plymouth. This attack later became known as the Clark Garrison House Massacre. Tatoson's land has been identified as lying on Towser's Neck in the present day Haskell Swamp wildlife management area.

In 1671, one of the most important documents concerning the Native people in southeastern Massachusetts was entered into the Plymouth Colony Court Records. This document was a list of the names of the male heads of Native households in the Native communities of Sepeccan, Agawam (Wareham center) and Weweantic (West Wareham) who swore their fidelity to the colony (PCR Vol. 5:72). The identification of who these Native men were, which community they came from and what happened to them during and after King Philip's War is the subject of another report, but suffice it to say that several of them became very wanted men by the English during the course of the war. For example, Tautozen, a.k.a Tatoson was identified as the initiator of the attack on William Clarke's house in Plymouth, an event later described as the "Clarke Garrison Massacre". Keewenaan, Keeweenam, was also present at the attack on Clarke's house and he actually visited the house the day before the attack to assess its fortifications. This may indicate that Keeweenam entered the war around March of 1676 when the attack occurred and thus was able to freely visit Clarke without Clarke knowing where his loyalties lay or that the English had a difficult time telling which Natives were on which side in the conflict.

The towne of Plymouth decided in 1672, to sell of its lands at Sepecan, Agawam and places adjacent so that it could fund a free school in the town (PCR Vol 1: 124). To this end, the town ordered Leift. Morton, William Crow and Joseph Warren to measure out the land at

Sepecan (PCR Vol 1:136). It appears that even after decades of use, the colony still did not know exactly how much land there was and probably where exactly the bounds were at Sepecan. The issue of which lands were to be sold for the profit of the towne also appears to have remained unresolved until 1674 when, at town meeting held on June 15, it was determined that the lands that had been purchased before 1672 were the only ones whose profits would go towards the maintenance of the school. It appears that the purchasing of lands from the Natives was an ongoing process and one which was not always recorded in the colonial records. At this same court session, the courts authorized Captain Bradford who was the Secretary and the Selectmen William Clarke and Joseph Warren to do their best to improve the lands that were to be sold. It is possible that the colony wanted these men to clear lands and begin to encourage settlement in the area.

During King Philip's War there does not appear to have been any significant English settlement of Sepecan. The closest settlement was on the Acushnet River in present day Fairhaven. Sepecan appears to have remained as meadow and pasturage land as well as land for Natives. In fact, in 1676, the Natives from various areas who had appealed to the courts for mercy and protection possibly from the English and other Natives, were told to take up their abode " from the westernmost syde of Sepecan River, and soe westward to Dartmouth bounds" (PCR Vol 5:210). This placed the Natives within the bounds of lands that Philip had reserved from sale to the English in 1666. These Natives were ordered to remain on the lands and "attend to orders and directions from this goveronment" (PCR Vol 5:210). Three Natives, Numpus, Isacke, and Ben Petanuett, were given charge of these refugees and they in urn reported to Mr. Thomas Hinckley. It is unknown, but is suspected, that these three were local residents of Sepecan and it is wondered if they may have been Christian Indians, ones that perhaps the government felt they could trust more. In any case, whether they were Christian or not, they appear to have been Natives that were trusted enough that the courts felt they could unbiasly mind these others.

During the course of King Philip's War, there was no known fighting in Sepecan, possibly due to the lack of any real English presence. One important event involving the leader of the English forces, Captain Benjamin Church, did occur on the shore of Aucoot Cove. In 1676, Church and his company traveled to Agawam, present day West Wareham to meet some Natives and assure that they supported the English in the war. The failed to find them in Agawam, but on their travel west leaving Agawam:

" When they came to Sippican River, Mr, Howland began to tyre, upon which Mr. Church left him, and two more, for a Reserve at the River, that if he should meet with Enemies and be forced hack, they might be ready to assist them in getting over the River. Proceeding in their March, they crossed another River, and opened a great Bay, where they might see many Miles along shore, where were Sands and Flats; and hearing a great noise below them towards the Sea. They dismounted their Horses, left them and crep'd among the bushes, until they came near the bank, and saw a vast company of Indians, of all Ages and Sexs, some on Horse-back running races, some at Foot-ball, some catching Eels & Flat-fish in the water, some Clamming, &c. but which way with safety to find out what Indians they were, they were at a loss." (Church 1975:31)

The natives encountered by Church were from the community of Sakonnet on the eastern shore of Narragansett Bay and were led by the sonksqua Awashonks. The natives pledged their loyalty to the English and some men thereafter served under Church.

A little later in 1676, Church was again in Sippican searching for parties of natives " that haunted the Woods between Plymouth and Sippican, that did great damage to the English in killing their Cattel, Horses; and Swine" (Church 1975: 461). Church soon found them somewhere between Plymouth and Sippican. He learned that they were Tispaquin's men. Tispaquin was the sachem of Nemasket, present day Middleboro. They also learned that Tispaquin was gone with John Bump, and one more, to Agawom and Sippican to kill Horses, and were not expected back in two or three days (Church 1975:461).

Following this incident, there does not appear to have been any more troubles with the natives in Sippican for the remainder of the war. The next time Sippican was encountered in the records was in 1679 when a controversy arose concerning the boundaries between Sippican and the neighboring towns (PCR Vol 11679:163). The following year, Elizabeth Ellis, widow, and Joseph Dotey, of Sandwich, with two others, complained against Leiftenant Ephraim Morton, of Plymouth, in an action of trespass on their lands in Sippican (PCR 1680: Vol 8: 228). Ellis and Doty stated that on May 12, 1679 Morton and others did "committ divers inormities and wronges against the said purchasers and demaundors, and against the publicke peace, by desturbing some of the said purchasers and sharers, being on their occations lawful, and in a peacable manor forwarning them from the same, as trespassers, and defaming their title to the said lands so fairly purchased as foresaid, and more pticularly did deface the bound markers of the said land of the said Ellis and Dotey, being a pyne tree, marked with two noches on the one syde, and three noches on the other syde, standing neare Sepecan Necke, a little below the rock house, or

wigwam..." (PCR 1680: Vol 8: 228). The court found for the plaintiff and awarded them 20 shillings, which was considerably less than the 100 pounds silver that they originally requested.

In 1682, William Connett, a native, was brought to court by Thomas Hinckley and Capt Laythorp, of Barnstable, agents for the purchasers of Sepecan and places adjacent, for trespassing on Sippican lands. Connett was charged with having "entered by intrusion on their lands, and made use thereof, with a high hand, against and without their leave, disturbing some of the proprietors and purchasers thereof, and slaughtering said purchasers title to the said purchase title to the said lands, from the east side of Sepecan River to the eastward of Nianticke and places adjacent, contained within their said purchase, which they purchased of the agents of the General Court of this colonie, the said William Connett challenging all the said lands to be his, without any true and just right thereunto." (PCR 1682: Vol 8: 254). This land lays in what is now West wareham between Cohasset Brook and the Wankinco River. Connett asserted that the lands belonged to him and that they had been illegally purchased without his leave. Connett hired Jonathan Morey as his lawyer and eventually the case was settled between the parties.

The final action of the seventeenth century involving Sippican was in 1697 when Lieutenant Jonathan Morey, James Warren and Samuel Lucas were empowered to run a line and settle the boundaries between Sippican and Plymouth (PCR 1697: Vol 1: 255). These men were paid 1 pound 13 shillings the following year for this service (PCR 1698: Vol 1:264).

Mattapoissett, Marion, Rochester Archaeological Sites

In the Massachusetts Historical Commission sites files, a total of 70 prehistoric sites (Mattapoissett N=26, Marion N=37, Rochester N=7) have been identified by both professional and avocational archaeologists in the area that was once called Sippican. Of these 70 sites, only 27 or 40% (Mattapoissett N=8 or 30.8%, Marion N=20 or 54.1%, Rochester N=3 or 42.9%) had temporally identifiable components. The remainder of the sites are identified generally only as having artifacts recovered but with no identified materials being listed. Of the 27 identified sites, seven in Mattapoissett were single component and only one was multi-component, 15 of the 17 in Marion were single component and two were multi-component and all three in Rochester were multi-component. The difference in occurrence between multi-component and single component sites in Mattapoissett and Marion and Rochester may be the result of excavator identification as opposed to representing a true cultural distinction. The majority of the Marion sites were identified by the Public Archaeology Lab, Inc. and they appeared to have included small stemmed points as being Early Woodland, thus creating a situation where most of the sites they identified were temporally labeled as having Late Archaic, Terminal Archaic and Woodland components. The archaeological work done in Mattapoissett on the other hand was generally done by avocational archaeologists who appear to have a preference for the Late Archaic.

From the 27 sites where temporally identified components were present, a total of 89 components were present (Table 1). Unfortunately the majority of the sites were of unknown ages. This was the result of non-diagnostic material being recovered and from sites being recorded with no known material being noted. The second most common type of site in all three towns were of Late Archaic age, a situation typical of southeastern Massachusetts towns.

When the unknown sites are removed from discussion, the remaining components show a truer distribution of sites from the various time periods (Table 2).

Table 1: Components identified (Total sites, unknown included)

	Mattapoisett	Marion	Rochester
Paleoindian	1/ 2.3%	0	0
Early Archaic	1/ 2.3%	1/ 2.9%	0
Middle Archaic	3/ 6.8%	0	1/ 10%
Late Archaic	11/ 25%	7/ 20%	2/ 20%
Early Woodland	7/ 15.9%	3/ 8.6%	0
Middle Woodland	1/ 2.3%	1/ 2.9%	0
Late Woodland	3/ 6.8%	3/ 8.6%	0
Contact	1/ 2.3%	2/ 5.7%	0
Unknown	16/ 36.4%	18/ 51.4%	4/ 40%
Totals	44/ 100%	35/ 100%	10/ 100%

Table 2: Components identified (Total sites, unknown excluded)

	Mattapoisett	Marion	Rochester
Paleoindian	1/ 3.6%	0	0
Early Archaic	1/ 3.6%	1/ 5.9%	0
Middle Archaic	3/ 10.7%	0	1/ 33.3%
Late Archaic	11/ 39.3%	7/ 41.1%	2/ 66.7%
Early Woodland	7/ 25%	3/ 17.6%	0
Middle Woodland	1/ 3.6%	1/ 5.9%	0
Late Woodland	3/ 10.7%	3/ 17.6%	0
Contact	1/ 3.6%	2/ 11.87%	0
Totals	28/ 100%	17/ 100%	3/ 100%

In Rochester, an inland community, the only sites that were on file with the MHC, dated to the Middle and Late Archaic periods. In Marion and Mattapoisett, coastal towns, Late Archaic and Early Woodland sites appear more common. This may indicate that people during these time periods were utilizing the inland or coastal areas more than they were in other periods, but it more likely is a result of limited archaeological testing and site identification in the town. A comparison of the distributions of sites of the different time periods will be returned to after the collection from the Mattapoisett Historical Society is discussed below. It will be seen that the collection at the society has the potential to change our understanding of where people were living during the various time periods.

Material Types

Below, brief descriptions of the common types of materials that were identified in the Mattapoisett Historical Society collections, are given. Following this introduction to the lithic resources utilized by the inhabitants, the types of material present in the collection will be discussed and comparisons will be made between Rochester and Mattapoisett collections.

Argillite

Argillites are fine grained sedimentary rocks (like mudstone and slate) that have been metamorphosed to varying degrees. As a result, these stones are harder than their original sedimentary rock and thus suitable for limited stone knapping to produce tools. Unfortunately, argillites still maintain a degree of sedimentary platyness and have a tendency to flake in layers, making them somewhat difficult to work. Types of argillite include Black (originating in the Delaware River Valley of New Jersey and Pennsylvania), Maroon (originating from the Chicopee shales in western Massachusetts), Blue-Grey, Tan, Grey (all originating from either the Cambridge slates in the Boston basin or Barrington, Rhode Island), Green Platy (originating in Barrington, Rhode Island and also occurring in glacial drift deposits in the Taunton River Basin), Banded (originating in the Cambridge slates in the Boston basin) and Coarse grained green (Originating in Hull, Massachusetts). Argillites are common in glacial drift deposits in many locals in eastern Massachusetts and occur predominatly in the Late Archaic, although they were also used to a lesser degree in other time periods.

Cryptocrystalline Silicates

These sedimentary rocks are extremely fine-grained and as a result, are the perfect type of stone for flint knapping. There are few fractures running through them and due to their tight molecular crystalline structure, the flake with sharp strait edges. None of the cryptocrystalline silicates found archaeologically are known to occur as outcrops in Massachusetts and when recovered from a site are generally believed to have arrived through trade or were carried there by the past inhabitants. This class of lithic includes chalcedonys and cherts. **Chalcedonys** include Grey, such as Ramah chalcedony (originating in northern Labrador) and White (originating from Flint Ridge, Ohio). **Cherts** include Green, such as Cossackie and Deepkill, (outcropping in the Hudson Valley), Grey (outcropping in the Western Onondaga formation, New York), Grey and Brown Mottled, commonly associated with Meadowood points (outcropping in

the Western Onondaga formation, New York), Scoracious or pitted (outcropping at Fort Ann, New York), Banded, commonly associated with Paleoindian sites, Black (outcropping at Normanskill, Fort Ann, Helderberg and Munsungen Lake, New York), Dark Brown (occurring in the Normanskill and Central Onondaga formations, New York), White, a weathered variety of black or brown chert, and Fossiliferous, or those containing fossils.

Felsites/ Rhyolite

The term felsite and rhyolite are used interchangeably by archaeologists, leading to heated discussions about which is the correct one. Both terms can be used to describe the same lithic type, basically intrusive volcanics formed by the rapid cooling of granite magma. Felsite/ rhyolites are fine grained with dark or light crystals (phenocrysts), essentially bits of volcanic crystals, imbedded within the matrix. They can have no visible phenocrysts (aphenitic felsite/ rhyolite) or have large, prominent ones (porphyritic felsite/ rhyolite). The phenocrysts may be large or small and banding may also be present. Felsite/ rhyolites commonly occur in glacial drift deposits and are often encountered as rounded cobbles on beaches. The original parent source of these stones appears to have been in the northeastern quarter of Massachusetts.

Felsite/ Rhyolites include Black with white phenocrysts (originating in the Newbury Volcanic Complex), Green Fine-Grained, a dark green felsite lacking visible phenocrysts (originating in the Lynn Volcanic Complex in Melrose, Massachusetts), Maroon/ Purple/ Red (originating in the Lynn Volcanic Complex in Marblehead, Massachusetts), Grey with dark small phenocrysts (originating in the many volcanic complexes), Blue-Grey with dark phenocrysts (originating in the Blue Hills Complex in Braintree, Massachusetts), Cream and Rust Stained coarse grained grey green to tan with pyrite crystals (originating in the Mattapan Volcanic Complex in the Sally Rock Quarry in Hyde Park), Red Banded with dark red to pink fine banding or swirls on a light red, tan or cream matrix, also called Mattapan Red Felsite (originating in the Mattapan Volcanic Complex on the Neponset River), Red to Maroon Porphyritic with dark red or white phenocrysts (outcropping in Hingham, Massachusetts), Green porphyritic visible dark glassy and white phenocrysts (outcropping at Mount Kineo on Moosehead lake in Maine), Red light red to pink with a coarse texture phenocrysts may or may not be visible but are pink or tan feldspar or translucent silica glass, banding may occur in same composition as phenocrysts, also known as Attleboro Red Felsite (outcropping in Attleboro, Massachusetts), Banded and Other Porphyritic.

Volcanics

Volcanics is a sort of catch all classification encompassing several classes of material. **Hornfels** are dark grey to black metamorphosed lithics formed by the baking of sedimentary deposits by cooling bodies of magma and are found in quarries in the Blue Hills outside of Boston. Rhyolitic Tuff is orange to tan with a coarse sandy texture and no phenocrysts (originating in the New bury Volcanic Complex). **Brown Jasper** is a brown to yellow fine grained cryptocrystalline silicate also known as **Pennsylvania Jasper**. It originates in Pennsylvania but may also be found in Conklin, Rhode Island. **Red to Maroon Jasper** is also called **Saugus Jasper** and is an igneous rock (originating in the Lynn Volcanic Complex). It is a fine grained, glassy and aphenytic varying in color from maroon to light pink with yellow to tan banding. **Igneous** is a term used to identify any lithic types that do not fall within the other classifications.

Crystalline Silicates

This class includes quartz and quartzites. Quartz may include Crystalline, Milky or smoky. Quartz is a vein forming mineral that was deposited in the fissures in other rocks. Quartzite, a metamorphosed sedimentary rock that originated as ancient beaches with a coarse grained texture and no phenocrysts or banding, commonly occurs in glacial drift deposits. Sources for quartzite have been identified in Westboro in the Sudbury and Assabet Drainages and Worcester at the South Bay quarry. Quartzite that has been highly metamorphosed is called metaquartz or mylonite. These are extremely fine grained occasionally with a glassy texture ranging from green to light green to white. These have been identified from the Concord/ Sudbury and Ware/ Quaboag drainages and may outcrop in Central Massachusetts.

Other Materials

Sandstone, a soft sedimentary rock with a coarse texture was often used for abrading and sharpening tools. **Schist** is a metamorphosed sedimentary rock. One form, an **amphibolite schist**, is dark grey to dark green and coarse grained to the point of resembling quartzite with platy fracture patterns. This was often used on Middle Archaic Stark points. **Slates** are metamorphosed mudstones with platy fracture properties.

Collection Analysis: Material Type

All the same materials, except for granite, were represented in both the Mattapoissett and Rochester collections. These materials included stone types that were likely collected locally (quartz, quartzite, rhyolite, granite) as well as more exotic lithics that would have been acquired either through trade or quarrying (chert, hornfels, jasper). Local lithics were likely acquired either in the form of beach cobbles or from cobbles found along stream or river banks. Exotic materials appear to have come from New York State (chert), Pennsylvania (jasper) and the Blue Hills near Boston (hornfels). The argillite may have come from local sources or it may also have been acquired through trade or collection from the Narragansett Bay region or the Taunton River drainage.

Rhyolite, quartz, quartzite and argillite were the most common lithic types represented in both towns (Table 3). Significantly more argillite was recovered from the Rochester sites than from Mattapoissett. This may be a result of trade by Rochester Natives with people on the Taunton River drainage or possibly an occurrence of the material in the Rochester area and not in Mattapoissett.

Table 3: Material Comparison

	Mattapoissett	Rochester
Quartz	37/ 26.1%	40/ 24%
Quartzite	13/ 9.2%	18/ 10.8%
Argillite	9/ 6.3%	23/ 13.8%
Rhyolite	66/ 46.5%	70/ 41.9%
Volcanic	5/ 3.5%	8/ 4.8%
Chert	6/ 4.2%	4/ 2.4%
Hornfels	3/ 2.1%	2/ 1.2%
Jasper	3/ 2.1%	1/ .6%
Granite		1/ .6%
	142	167

Exotic materials accounted for 8.4% of the lithic assemblage at the Mattapoissett sites, while only 4.2% of the assemblage was made up of exotics at the Rochester sites. This may indicate a greater accessibility to exotic lithics by coastal people as opposed to those living inland. This may indicate either that exotic lithics were traveling into the Sippican area via a coastal route or that exotic lithics were more commonly exchanged during the warmer months when people

commonly were living and congregating on the coast.

In general, among the entire artifact assemblage from all site cataloged, rhyolite, quartz and argillite accounted for the majority of the points and bifaces identified (Table 4 and 5).

Table 4. Identified Points

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Hornfels
Paleo 12-10 000 YA						1	
Fluted						1	
Early Archaic 10 000-8 000 YA		1	1				
Dalton		1	1				
Middle Archaic 8-6 000 YA		8	9	25	4		1
Neville		3	3	16	3		1
Stark		5	6	9	1		
Late Archaic 6-3 000 YA	52	8	10	44	4	4	1
Otter Creek			6	22	2		
Vosburg				1			
Brewerton Corner Notched		1					
Brewerton Notched		4	3	8	1		1
Small Stemmed	27	1		8			
Squibnocket Triangle	25	1					
Normanskill						2	
Atlantic		1		2			
Susquahanna Broad			1	2	1	1	
Wayland Notched						1	
Early Woodland 3-2 000 YA		3	2	6	3		1
Orient Fishtail		3	2	6	3		1
Middle Woodland 2-1 000 YA		1	3	11	1		1
Fox Creek Stemmed		1		2			1
Fox Creek Lanceolate			3	6			
Greene				3	1		
Late Woodland	16	1		5			

1000-400 YA							
Levanna	16	1		5			
	68	22	25	91	12	5	4
	30%	9.7%	11%	40%	5.3%	2.2%	1.8%

Table 5. Bifaces

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Jasper	Granite
Biface		2	1	10		1	2	
Oval Biface	1	1	2	9				1
Triangular Biface	3	1		1				
Lanceolate Biface/ Blade	2	1	1	11	2	1		
Point Tip		1		1				
Drill		1	1	3				
	6	7	5	35	2	2	2	1
	10%	11.7%	8.3%	58.3%	3.3%	3.3%	3.3%	1.6%

When the distributions of materials used in each time period is examined (tables 6 and 7) the following trends for each material type can be seen:

-Quartz was commonly used in both the inland and coastal sites in the Late Archaic and Late

Woodland at comparable amounts, with a greater utilization of quartz in the Late Archaic as opposed to the Late Woodland with the coastal sites creating a greater percentage of quartz points than during the Late Woodland

-Quartzite appears in the inland collection in the Early Archaic, it was most extensively used in

the Middle Archaic and next most common usage was in the Late Archaic and then the

usage dropped off from the early woodland to the Late Woodland, at the coastal sites

quartzite was used in the Middle Archaic but was most commonly used in the Late Archaic, it was used in the early and Middle Woodland but not in the Late Woodland.

-Argillite usage at the inland sites appears to begin in the early Archaic, was common in the Middle Archaic and most widely used in the Late Archaic, it continued in use during the

early and Middle Woodland but not the Late Woodland, usage at the coastal sites was

most common in the Middle Archaic and it was also common in the Late Archaic but

does not show up in other periods.

-Rhyolite usage at the inland and coastal sites appears in the Middle Archaic, peaks in the Late

Archaic and drops in the early woodland, for the coastal sites the use continues to

drop to

the Late Woodland while at the interior sites it increases in the Middle Woodland but

again drops in the Late Woodland

-Volcanics usage on the inland sites first appears in the Middle Archaic, peaks in late Archaic

and Early Woodland and drops off in the Middle Woodland, on coastal sites it peaked in

the Middle Archaic and drops in the Late Archaic, disappearing after that

-Chert usage on inland sites was restricted to the paleoindian period and peaked in the Late

Archaic, at coastal sites it was only found in the Late Archaic

-Hornfels was only recovered in the coastal assemblages where it was eventually distributed from

the Middle Archaic to Middle Woodland.

Table 6: Material by time period for Mattapoissett

	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Hornfels
Paleo							
Early Archaic							
Middle Archaic		2/ 20%	5/ 62.5%	18/ 31.6%	3/ 75%		1/ 25%
Late Archaic	31/ 88.6%	5/ 50%	3/ 37.5%	31/ 54.4%	1/ 25%	3/ 100%	1/ 25%
Early Woodland		2/ 20%		4/ 7%			1/ 25%
Middle Woodland		1/ 10%		3/ 5.3%			1/ 25%
Late Woodland	4/ 11.4%			1/ 1.8%			
	35	10	8	57	4	3	4

Table 7. Material by time period for Rochester

	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Hornfels
Paleo						1/ 33.3%	
Early Archaic		1/ 8.3%	1/ 5.6%				
Middle Archaic		6/ 50%	4/ 22.2%	7/ 15.9%	1/ 12.5%		
Late Archaic	21/ 63.6%	3/ 25%	7/ 38.9%	22/ 50%	3/ 37.5%	2/ 66.6%	
Early Woodland		1/ 8.3%	2/ 11.1%	3/ 6.8%	3/ 37.5%		
Middle Woodland			3/ 16.7%	8/ 18.2%	1/ 12.5%		
Late Woodland	12/ 36.4%	1/ 8.3%		4/ 9.1%			
	33	12	18	44	8	3	

Looking at the material distribution in another way, that of the popularity of various materials during different time periods (Table 8 and 9), the following trends can be seen:

-Paleoindian points are only represented in the inland assemblages where they were made of

chert

-Early Archaic points, again only present in inland assemblages, were made of quartzite and

argillite, possibly indicating limited mobility and a greater dependence on local stones

-Middle Archaic points in the inland assemblages were made of a greater variety of materials

with rhyolite followed by quartzite being the most common, coastal assemblages showed

similar preferences with rhyolite being most common but followed by argillite and then

volcanics, hornfels was also used on coastal sites

-Late Archaic points from inland and coastal sites showed a split preference for quartz and then

rhyolite, hornfels was used at coastal sites as well

-Early Woodland points from the inland and coastal assemblages were most commonly made

from rhyolite but at the inland sites argillite was the second most common while on the

coastal sites it was quartzite and then hornfels

-Middle Woodland points were most commonly made from rhyolite at the inland and coastal

sites, followed by argillite at the inland sites and quartzite on the coast as well as hornfels

-Late Woodland points at both the coastal and inland sites showed an overwhelming preference

for quartz and then rhyolite, with quartzite being used at the inland sites as well

Table 8: Popularity of materials in Mattapoissett assemblages

	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Hornfels	
Paleo								0
Early Archaic								0
Middle Archaic		2/ 6.9%	5/ 17.2%	18/ 62%	3/ 10.3%		1/ 3.4%	29
Late Archaic	31/ 41.3%	5/ 6.7%	3/4%	31/ 41.3%	1/ 1.3%	3/ 4%	1/1.3%	75
Early Woodland		2/ 28.6%		4/ 57.1%			1/14.3%	7
Middle Woodland		1/ 20%		3/ 60%			1/ 20%	5
Late Woodland	4/ 80%			1/ 20%				5

Table 9: Popularity of materials in Rochester assemblages

	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Hornfels	
Paleo						1/100%		1
Early Archaic		1/ 50%	1/ 50%					2
Middle Archaic		6/ 33.3%	4/ 22.2%	7/38.9%	1/5.6%			18
Late Archaic	21/36%	3/5.2%	7/12.1%	22/38%	3/5.2%	2/3.4%		58
Early Woodland		1/11.1%	2/22.2%	3/33.3%	3/33.3%			9
Middle Woodland			3/25%	8/66.7%	1/8.3%			12
Late Woodland	12/70%	1/5.9%		4/23.5%				17

Conclusion

The collection from the Mattapoisett Historical Society consists of six sub collections, four of which were collected from Mattapoisett and Rochester areas while one other one came from the Aptucxet Trading Post in Bourne and the final collection may have come from New York State. All the collections were catalogued with special emphasis being placed on the Mattapoisett, Rochester and Bourne collections. The Mattapoisett and Rochester collections are the main focus of this report, but site forms will be filled out for all but the New York collections.

Mattapoisett Historical Society Collections

Mattapoisett (general)- Alice Ordway collection

Aptucxet Trading Post Bourne, Massachusetts- Mrs. Ruzicka collection

North Rochester Indian Camp Site on Wallen Place- Mrs. Ruzicka collection

North Rochester- Wallen Collection

Aucoot Cove

New York Collection

A total of 567 items (both artifacts and natural pieces) are present. The number of pieces in each collection can be broken down as follows:

Ordway Collection	5
Aptucxet Trading Post	6
Wallen Collection North Rochester	163
Wallen Place Indian Camp Site	21
Aucoot Cove	153
Collection on boards	219
	567 total artifacts in collection

The entire collection was analyzed with the following objectives:

- 1) identify the sites present in the collection
- 2) identify the types of artifacts
- 3) identify the temporal associations
- 4) identify the materials
- 5) identify any significant trends in the collection indicating collector bias or real archaeological trend
- 6) evaluate research/ educational potential of collection
- 7) place the collection within a larger framework of the town archaeological record and New England prehistory

Collector Bias

The sites present in the Mattapoisett Historical Society collection can be characterized as representing collections made with a high degree of collector bias. Very little chipping debris is present, no faunal material, no shellfish remains and no pottery. On the other hand, there are broken projectile points and biface fragments, so the collectors were not just looking for whole pieces. This is especially true for the material collected eroding onto the shore of Aucoot Cove. The Wallen and Ordway collections are without hard collection area information, although it is believed that the Ordway material is local, as she is a local resident, and the Wallen material is believed to have been found at the southern end of Great Quitticus Pond where it is known he often collected. This can not be accepted at face value though, due to the occurrence of

barnacles on the full grooved stone axe believed to be from this site. Barnacle are only found in salt water, this piece must have been found on the shore somewhere, possibly in Mattapoisett as there is no salt water in Rochester.

It was believed that the collection from the Mattapoisett Historical Society could be used to test the following hypothesis:

- 1) Certain lithic materials were preferred or more often used at certain periods than other materials
- 2) There is a difference in the occurrence of sites of different time periods between Rochester and Mattapoisett (inland versus coastal collections)
- 3) Comparison of the collections with those on file at the Massachusetts Historical Commission will help to determine if these collections fit in with the information provided by the site files or if they are at odds with it.

The first two hypothesis were found to hold true. Rhyolite, quartz, quartzite and argillite were the most common lithic types represented in both towns (Table 3). Significantly more argillite was recovered from the Rochester sites than from Mattapoisett. This may be a result of trade by Rochester Natives with people on the Taunton River drainage or possibly an occurrence of the material in the Rochester area and not in Mattapoisett. Exotic materials accounted for 8.4% of the lithic assemblage at the Mattapoisett sites, while only 4.2% of the assemblage was made up of exotics at the Rochester sites. This may indicate a greater accessibility to exotic lithics by coastal people as opposed to those living inland. This may indicate either that exotic lithics were traveling into the Sippican area via a coastal route or that exotic lithics were more commonly exchanged during the warmer months when people commonly were living and congregating on the coast.

When the distributions of materials used in each time period is examined (tables 6 and 7) the following trends for each material type can be seen:

- Quartz was commonly used in both the inland and coastal sites in the Late Archaic and Late Woodland at comparable amounts, with a greater utilization of quartz in the Late Archaic as opposed to the Late Woodland with the coastal sites creating a greater percentage of quartz points than during the Late Woodland
- Quartzite appears in the inland collection in the Early Archaic, it was most extensively used in the Middle Archaic and next most common usage was in the Late Archaic and then the usage dropped off from the early woodland to the Late Woodland, at the coastal sites quartzite was used in the Middle Archaic but was most commonly used in the Late Archaic, it was used in the early and Middle Woodland but not in the Late Woodland.
- Argillite usage at the inland sites appears to begin in the early Archaic, was common in the Middle Archaic and most widely used in the Late Archaic, it continued in use during the early and Middle Woodland but not the Late Woodland, usage at the coastal sites was most common in the Middle Archaic and it was also common in the Late Archaic but does not show up in other periods.
- Rhyolite usage at the inland and coastal sites appears in the Middle Archaic, peaks in the Late Archaic and drops in the early woodland, for the coastal sites the use continues to drop to the Late Woodland while at the interior sites it increases in the Middle Woodland but again drops in the Late Woodland
- Volcanics usage on the inland sites first appears in the Middle Archaic, peaks in late Archaic and Early Woodland and drops off in the Middle Woodland, on coastal sites it peaked in

- the Middle Archaic and drops in the Late Archaic, disappearing after that
- Chert usage on inland sites was restricted to the paleoindian period and peaked in the Late Archaic, at coastal sites it was only found in the Late Archaic
- Hornfels was only recovered in the coastal assemblages where it was evenly distributed from the Middle Archaic to Middle Woodland.

Looking at the material distribution in another way, that of the popularity of various materials during different time periods (Table 8 and 9), the following trends can be seen:

- Paleoindian points are only represented in the inland assemblages where they were made of chert
- Early Archaic points, again only present in inland assemblages, were made of quartzite and argillite, possibly indicating limited mobility and a greater dependence on local stones
- Middle Archaic points in the inland assemblages were made of a greater variety of materials with rhyolite followed by quartzite being the most common, coastal assemblages showed similar preferences with rhyolite being most common but followed by argillite and then volcanics, hornfels was also used on coastal sites
- Late Archaic points from inland and coastal sites showed a split preference for quartz and then rhyolite, hornfels was used at coastal sites as well
- Early Woodland points from the inland and coastal assemblages were most commonly made from rhyolite but at the inland sites argillite was the second most common while on the coastal sites it was quartzite and then hornfels
- Middle Woodland points were most commonly made from rhyolite at the inland and coastal sites, followed by argillite at the inland sites and quartzite on the coast as well as hornfels
- Late Woodland points at both the coastal and inland sites showed an overwhelming preference for quartz and then rhyolite, with quartzite being used at the inland sites as well

The final hypothesis, that comparison of the collections with those on file at the Massachusetts Historical Commission will help to determine if these collections fit in with the information provided by the site files or if they are at odds with it, will now be looked at. Table 10 compares the number of points identified during the analysis of the collection, with the identified components previously on file with the MHC. It was hoped that by converting the number of points from each period into a percentage of occurrence in the collection, a number that could be compared with the number of components on file at the MHC could be arrived at.

The collections at the Mattapoissett Historical Society did not yield any evidence of Paleoindian or early Archaic occupation in Mattapoissett, while the site files at the MHC did not record any known Paleoindian or early Archaic sites on file for Rochester. Significantly fewer components were on file at the MHC for Rochester than were present in the Mattapoissett Historical Society collections, so analysis of this collection has significantly expanded our knowledge of the prehistoric settlement there. Mattapoissett sites were well represented at the MHC, possibly as

Table 10. Collection points versus MHC components

	Mattapoissett		Rochester	
	MHS	MHC	MHS	MHC
Paleoindian	0	1/ 3.6%	1/ .9%	0
Early Archaic	0	1/ 3.6%	2/ 1.8%	0

Middle Archaic	29/ 24%	3/ 10.7%	18/ 15.4%	1/ 33.3%
Late Archaic	75/ 62%	11/ 39.3%	58/ 49.6%	2/ 66.7%
Early Woodland	7/ 5.8%	7/ 25%	9/ 7.7%	0
Middle Woodland	5/ 4.1%	1/ 3.6%	12/ 10.3%	0
Late Woodland	5/ 4.1%	3/ 10.7%	17/ 14.5%	0
Contact		1/ 3.6%		0
Totals	121/ 100%	28/ 100%	117/ 100%	3/ 100%

MHS= Mattapoissett Historical Society MHC= Massachusetts Historical Commission

of the general collector bias trend to focus more on the coastal areas than inland ones. A greater occurrence of Middle Archaic, Late Archaic and Middle Woodland points were identified in the Historical Society collections than the MHC site files and no Contact Period components were identified in either town during collection analysis. This last observation is not surprising due to the elusive quality of Contact period sites and the fact that the only way to identify a Contact Period site versus an late Woodland one is the presence of European derived artifacts from the former and a lack of such from the later.

The collection from the Mattapoissett Historical Society is a good example of what can be learned from old collections. What we have been able to do with this collection is to put forth a series of observations concerning collections from Mattapoissett and Rochester that can be compared with other archaeologically or collector derived collections to see if they form a pattern. Is there a real difference between local materials and exotics between coastal and inland sites in the Mattapoissett and Rochester area or even more broadly, along the Mattapoissett and Sippican River drainages? Is the difference seen in the utilization of locally derived materials between the coastal and inland sites a real occurrence or a result of collector bias? These are just tow of the observations we have made that we will continue to test as new material is recovered or inventoried.

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Collection Inventory

Below is the catalog of the archaeological collections present at the Mattapoissett Historical Society. Measurements are arranged with the length first followed by the maximum width (L x W). No measurements were taken for the mounted collection as it is unknown where these came from. It is suspected that they were traded by Mr. Wallen from a collector in New York. This is hypothesized due to the abundance of chert artifacts and the Iroquois style pottery fragment present.

Given by Alice Ordway (from Mattapoissett)

Material	Quartz	Argillite
Late Archaic 6-3000 YA	1/ 50%	1/ 50%
Squibnocket Triangle	1	
Susquahanna Broad		1
Late Woodland 1000-400 YA	1/ 100%	
Levanna	1	

Bifaces

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert
Point Tip				1		

White/ Clear quartz Squibnocket 2.5 x 2.1 cm

Tan red argillite Susquahanna Broad 4.1 x 2.1 cm

White Quartz Levanna broken tip 4 x 4.4 cm

White with pink tinge cryptocrystalline oval biface 4.7x3.2 cm very fine grained may not be local

Grey with dark phenocrysts rhyolite biface/ projectile point frag broken at shoulder 4.6 x 2.2 cm

From Aptucxet Trading Post given by Mrs. Ruzicka

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert
Middle Archaic 8-6 000 YA			2/ 50%	1/ 25%	1/ 25%	
Neville		1	1	1		
Stark		1				
Late Archaic 6-3 000 YA			1/ 100%			
Susquahanna Broad		1				

Neville

Tan quartzite Neville 4.5 x 2.8 cm

Purple grey argillite Neville drill 5 x 2.7 cm

Dark grey with white phenocrysts rhyolite Neville 8 x 3.8 cm

Stark

Grey brown quartzite Stark 7 x 2.5 cm

Susquahanna Broad

Tan with gray phenocrysts rhyolite Susquahanna Broad 3.6 x 2.4 cm

Tan quartzite Susquahanna Broad 6.2 x 4.7 cm

North Rochester Wallen's Collection

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert
Paleo 12-10 000 YA						1/ 100%
Fluted						1
Early Archaic 10 000-8 000 YA		1/ 50%	1/ 50%			
Dalton		1	1			
Middle Archaic 8-6 000 YA		4/ 33.3%	3/ 25%	5/ 41.7%		
Neville		1	1	2		
Stark		3	2	3		
Late Archaic 6-3 000 YA	18/ 35.3%	2/ 3.9%	6/ 11.8%	21/ 41.2%	3/ 5.9%	1/ 2%
Otter Creek			5	15	2	
Brewerton Notched		1	1	3		
Small Stemmed	10			1		
Squibnocket Triangle	8	1				
Susquahanna Broad				2	1	
Wayland Notched						1
Early Woodland 3-2 000 YA		1/ 12.5%	2/ 25%	2/ 25%	3/ 37.5%	
Orient Fishtail		1	2	1	3	
Meadowood				1		
Middle Woodland 2-1 000 YA			3/ 25%	8/ 66.6%	1/ 8.3%	
Fox Creek Lanceolate			3	6		
Greene				2	1	
Late Woodland 1000-400 YA	9/ 64%	1/ 7.1%		4/ 28.6%		
Levanna	9	1		4		

Possible Paleoindian

Green gray chert possible paleoindian base and midsection body flares away from base
flute running ¼ up one side 3 x 2.3 cm

Dalton

Green grey quartzite Dalton-like point 1 ear broken 4.2 x 2.7 cm .7cm deep basal
concavity

Grey argillite Dalton shaped possible drill 1 ear missing 4 x 2.2 cm

Neville

Grey green argillite Neville like possible drill ¾ complete 4.9 x 2.8 cm

Grey tan rhyolite possible Neville drill base and tip missing 2.8 x 2.1 cm

Grey rhyolite with dark and white phenocrysts 90% complete Neville

Neville Variant

Dark grey quartzite complete 4.4 x 2.2 cm

Stark

Purple tan quartzite Stark-like drill made out of a flake 3.9 x 2.4 cm
Light tan quartzite Stark ½ complete 3.2 x 2.2 cm drill like
Tan quartzite Stark snapped ¾ way up 4.8 x 2.5 cm
Green grey argillite Stark snapped ¾ way up 4.8 x 2.2 cm
Grey brown argillite Stark ¾ complete 5.2 x 2.7 cm
Dark grey rhyolite with white phenocrysts ½ complete long basal tang possible drill 3.8 x 3 cm basal tang 1.8 cm long
Brown purple rhyolite with many white phenocrysts Stark complete 5.4 x 2 cm
Grey purple rhyolite with many white phenocrysts Stark ¾ complete 4.9 x 2.7 cm very long base tang 1.2 cm

Squibnocket Triangle

White quartz Squibnocket Triangle 2.8 x 2 cm deep base concavity .3 cm
Tan quartzite Squibnocket Triangle 2 x 1.5 cm
White quartz possible Squibnocket Triangle 1.3 x 1.2
White quartz Squibnocket Triangle tip missing 1.5 x 1.6 cm serrated
White/ clear quartz Squibnocket Triangle bottom ½ 1.8 x 2.1 deep concavity .3 cm
White/ clear quartz Squibnocket Triangle bottom ½ 1.7 x 2.1 deep concavity .2 cm
White/ clear quartz Squibnocket Triangle tip missing 2.2 x 2 asymmetrical
White quartz Squibnocket Triangle missing ear 2.5 x 1.9
White/ clear quartz Squibnocket Triangle tip broken 2.2 x 2.2 cm

Small Stem

Dark grey with many white phenocrysts possible Small Stem, missing base 4 x 1.8 cm
5 white quartz small stemmed points 2.5 x 1.1, 2.9 x 1.5, 2.8 x 1.5, 2.6 x 1.2, 2.6 x 1.3
2 clear quartz small stemmed points, tips missing 3.3 x 1.5, 2.9 x 1.4
2 white quartz point tips 1.6 x 1.4, 1.6 x 1.2
Grey quartz parallel sided small stem 2.5 x 1.5

Otter Creek

Purple rhyolite drill tip possible Otter Creek 3.2 x 1cm
Grey rhyolite with conspicuous white phenocrysts and dark phenocrysts ¾ complete 4.4 x 2.1 cm
Tan rhyolite Otter Creek base and midsection ½ 6.1 x 2.6 cm
Grey with black phenocrysts rhyolite Otter Creek base and midsection ½ 4.2 x 3 cm
Dark grey purple with white phenocrysts rhyolite Otter Creek base and midsection ½ 5 x 3.2 cm
Purple grey with white phenocrysts rhyolite Otter Creek base and midsection ½ 3.6 x 2.6 cm
Banded purple and pink volcanic Otter Creek base and midsection ½ 3.7 x 1.8 cm
Grey with dark phenocrysts rhyolite Otter Creek base and midsection ½ 4.2 x 2.5 cm
Grey with white phenocrysts rhyolite Otter Creek base and midsection ½ 4.9 x 2.7 cm
Dark grey with white phenocrysts rhyolite Otter Creek base and midsection ½ 3.9 x 3 cm
Light grey with white and black phenocrysts Otter Creek base and midsection ½ 5 x 2.9 cm
Grey green argillite Otter Creek base and midsection ½ 4.6 x 3.1 cm
Purple grey with white phenocrysts rhyolite Otter Creek base and midsection ½ 3.7 x 2.9

cm

Dark grey with many white phenocrysts rhyolite Otter Creek base and midsection $\frac{1}{2}$ 3.2 x 2.1 cm

Mottled purple and tan volcanic Otter Creek base and midsection $\frac{1}{2}$ 4.5 x 2.2 cm

Green grey argillite Otter Creek base and midsection $\frac{1}{2}$ 5 x 3.1 cm

Green grey argillite Otter Creek base and midsection $\frac{1}{2}$ 5 x 3 cm

Dark grey purple with many white phenocrysts Otter Creek snapped $\frac{1}{4}$ way up 3 x 3.4 cm

Grey green argillite Otter Creek snapped $\frac{3}{4}$ way up 4.4 x 2.9 cm

Tan argillite Otter Creek snapped $\frac{3}{4}$ way up 5 x 2.6 cm

Banded light grey and dark grey volcanic Otter Creek 90% complete 4.2 x 2.2 cm tip missing

Light grey with large dark phenocrysts Otter Creek $\frac{3}{4}$ complete 5.2 x 3.2 cm

Dark grey rhyolite many dark phenocrysts Possible Otter Creek $\frac{3}{4}$ complete 4.8 x 3.1 cm

Brewerton Notched

Grey with many white phenocrysts rhyolite Brewerton Eared snapped $\frac{3}{4}$ way up 4.4 x 2.5 cm

Grey quartzite complete fine grained Brewerton notched 4.4 x 2.7 cm

Dark grey with many white phenocrysts Brewerton Notched 4.1 x 2.4 cm

Grey green argillite Brewerton Notched drill 4.3 x 2.6 cm

Mottled grey and white rhyolite Brewerton notched base $\frac{1}{2}$ complete 2.7 x 2.6 cm

Susquehanna Broad

Tan grey with small dark phenocrysts rhyolite Susquehanna Broad snapped $\frac{1}{2}$ way up 3 x 1.7 cm

Banded purple and pink volcanic Susquehanna Broad snapped $\frac{3}{4}$ way up 5.1 x 1.7 cm

Dark maroon grey with white phenocrysts rhyolite Susquehanna Broad snapped $\frac{1}{2}$ way up 3.6 x 2.1 cm

Orient Fishtail

Banded dark grey purple and light grey volcanic orient Fishtail with flake curve to it snapped just below tip 5 x 1.5 cm

Purple pink banded volcanic Orient Fishtail complete 5 x 1.5 cm

Dark grey volcanic Orient Fishtail 90% complete 4.7 x 1.5 cm

Grey quartzite Orient Fishtail $\frac{3}{4}$ complete 5.5 x 1.9 cm

Dark grey rhyolite with many white phenocrysts Orient Fishtail $\frac{3}{4}$ complete 4.2 x 1.8 cm

Grey green argillite Orient Fishtail $\frac{3}{4}$ complete 4 x 1.7 cm

Grey green argillite Orient Fishtail $\frac{1}{2}$ complete 4.1 x 1.5cm

Wayland Notched

Tan chert burned with spalls snapped $\frac{1}{2}$ way up 3 x 1.3 cm

Meadowood

Dark Grey with many white phenocrysts rhyolite Meadowood $\frac{3}{4}$ complete 2.9 x 1.8 cm

Greene

Banded purple and tan/ pink volcanic 6.4 x 2.3 cm complete

Dark grey rhyolite with small dark phenocrysts Greene Point tip broken 4.4 x 2 cm

Maroon rhyolite with small white phenocrysts Greene Point $\frac{3}{4}$ complete 5.7 x 2.1 cm

Fox Creek Lanceolate

Grey green argillite Fox Creek Lanceolate complete 8.2 x 3.9 cm

Grey rhyolite with small dark phenocrysts Fox Creek Lanceolate ½ complete 4.5 x 2.6 cm

Grey green argillite Fox Creek Lanceolate ¾ complete water worn 5.9 x 3.5 cm

Grey rhyolite with small dark phenocrysts ¾ complete Fox Creek Lanceolate 4.7 x 2.6 cm

Dark grey rhyolite with many white phenocrysts ½ complete Fox Creek Lanceolate 4.4 x 3.1 cm

Dark grey rhyolite with many white phenocrysts ¾ complete Fox Creek Lanceolate 3.6 x 5.5 cm

Dark grey rhyolite with many white phenocrysts ½ complete Fox Creek Lanceolate 3.4 x 2.5 cm

Grey argillite Fox Creek Lanceolate water worn 3 x 5.9 cm

Light grey rhyolite with small dark phenocrysts 3.2 x 2.6 cm

Levanna

Grey quartzite Levanna snapped ½ way up 2.5 x 4.2 cm

White quartz Levanna ear missing snapped on crystal planer fracture 3.2 x 2.1 cm

Dark purple grey with white phenocrysts rhyolite Levanna tip missing 3 x 3.5 cm

Dark grey rhyolite with dark phenocrysts 6.8 x 5 cm

Dark grey rhyolite with white phenocrysts Levanna 2 ears broken 2.2 x 2.1

Dark grey rhyolite with white phenocrysts Levanna 1 ear broken 2.2 x 2

White quartz Levanna 2.8 x 2.6

Clear/ white quartz Levanna tip broken 2.7 x 2.9

Clear/ white quartz Levanna 1 ear broken 2.9 x 2.5

White quartz Levanna 1 ear broken 1.9 x 2.5

Clear/ white quartz Levanna 1 ear broken 3.1 x 2.2

Clear/ white quartz Levanna 1 ear broken 2.3 x 1.8

Clear/ white quartz Levanna tip broken 1.6 x 2

Clear/ white quartz Levanna tip broken 2.2 x 2.7 cm

Cobble

Oval granite cobble probably natural possible crushing on one edge 12 x 6.1 x 3 cm thick dorsi/ ventrally compressed

Oval granite cobble hammerstone/ pecker 10 x 7.1 x 3.8 cm thick possible flattening on one surface dorsi/ ventrally compressed

½ of an oval granite small cobble very hubbly 6 x 5.5 x 2.7 thick dorsi/ ventrally compressed

Granite cobble triangular 10.4 x 7 cm 3.6 cm thick natural

Chipping debris

Dark grey Hornfels secondary cd

Light grey with many white phenocrysts rhyolite secondary cd

Dark grey rhyolite with many white phenocrysts secondary cd

Dark purple grey rhyolite with many white phenocrysts secondary cd

"Rubbing Stones"

Grey slate flat slab rectangular 6.1 x 2.9 cm

Grey schist ovalish rod 8.4 x 2.3 cm

Grey slate oval rod 7.1 x 1.3 cm

Grey slate oval rod 7.2 x 1.3 cm

Tan schist rectangular slab 7.8 x 2.9 cm

Bifaces

Material	Quartz	Quartzite	Argillite	Rhyolite	Hornfels	Chert	Granite	Jasper
Biface		1	1	8		1		1
Oval Biface	1	1	2	8			1	
Triangular Biface	3	1						
Lanceolate Biface/ Blade	2		1	4	1		1	
Drill		1	1	3				

Drill

Tan quartzite T-shaped drill ½ complete 3.5 x 2.5 cm

Grey green argillite drill tip 3 x 1.5 cm

Grey rhyolite with white phenocrysts triangular drill 3 x 3cm

Grey rhyolite with conspicuous white phenocrysts drill midsection 4.7 x 1.6 cm

Dark grey rhyolite with many white phenocrysts possible drill ¾ complete 5.7 x 3 cm

Lanceolate blade/ biface

Dark grey hornfels lanceolate blade/ biface "Leaf point" water worn ground blade 9 x 3.5 cm with squared base

Grey rhyolite with conspicuous dark phenocrysts lanceolate blade/ biface ¾ complete 7 x 2.9 cm squared end

Grey rhyolite with conspicuous white phenocrysts lanceolate blade/ biface ¾ complete squared end 7.1 x 3.1 cm

Mottled dark and light grey rhyolite lanceolate blade/ biface 2/3 complete oval end 5.6 x 3.1 cm

Light grey rhyolite with conspicuous dark phenocrysts lanceolate blade/ biface ½ complete rounded end 3.2 x 2.9

Grey granite lanceolate blade/ biface with squared end ½ complete 5.5 x 2.7

White/ clear quartz triangular lanceolate blade/ biface 6.3 x 3 cm

White/ clear quartz triangular lanceolate blade/ biface 5.1 x 1.7 cm

Grey green argillite lanceolate blade/ biface ½ complete oval end 3.3 x 2.8 cm

Uniface

Tan quartzite large uniface with cortex 11.5 x 7cm

Biface

Grey tan rhyolite biface 4.2 x 2.7 cm

Dark grey rhyolite with conspicuous white phenocrysts biface with rounded end ½ complete 4.4 x 3.9 cm

Mottled grey and light purple rhyolite biface large 6.3 x 4.9 cm

Pink and dark pink Saugus Jasper biface, roughly shaped 4.3 x 2.8 cm

Dark grey chert possibly burned biface ½ complete 3.8 x 3 cm

Purple rhyolite with small white phenocrysts biface long 7 x 3 cm

Purple rhyolite with small dark phenocrysts ½ biface 4.1 x 3.3 cm

Grey rhyolite rectangular biface 5.3 x 4.7 cm

Grey rhyolite large blade base small dark phenocrysts, many white phenocrysts 4.9 x 4.5

cm

Purple rhyolite with small dark phenocrysts biface ½ complete 4.5 x 4.3 cm
Grey quartzite ½ complete blade biface tip and midsection 4.1 x 2.6 cm
Green grey argillite biface possibly eared point 4.5 x 3 cm

Oval Biface

Grey granite oval biface 8.5 x 4.5 cm
Purple and pink rhyolite oval biface 4.1 x 2.7 cm
Dark grey with white phenocrysts oval biface with cortex on 1 side 6.8 x 3.3 cm
Grey with many white phenocrysts ½ complete oval biface 3.9 x 5.1 cm
Purple argillite ½ complete oval biface 5.7 x 4.3 cm
Grey/ clear quartz oval biface 4.9 x 3.3 cm
Grey with conspicuous dark phenocrysts rhyolite oval biface 6.6 x 4.5 cm
Purple grey argillite oval biface 3 x 3.7 cm
Dark grey rhyolite with many white phenocrysts ½ complete oval biface large hump present 5.5 x 4.3 cm
Grey rhyolite small dark phenocrysts oval biface ½ complete 4.5 x 4.3 cm
Dark grey rhyolite with many white phenocrysts ¾ complete oval biface 5.3 x 3.1 cm
Dark grey rhyolite with many white phenocrysts ½ complete oval biface 6 x 4.3 cm
Grey purple quartzite oval biface ½ complete 4.7 x 3 cm

Triangular Biface

Grey green quartzite complete triangular biface 6.5 x 4 cm
Fine grained purple quartzite triangular biface 5.2 x 4.2 cm
Grey quartzite biface cortex present 7.6 x 5.9 at wide edge 2.7cm at narrow edge triangular
White quartz biface very chunky possible Levanna preform 7.5 x 6 cm

Pestle

Gray green argillite pestle mostly complete, 1 piece chipped off one end 21.2 x 5.7 x about 6 cm at one end by 3.1 x 2.5x 3.2 at other end, use crushing on one end and use crushing and a break on other

Full Grooved Axe

granite or basalt considerable battering on butt end nice working edges 13.6 long x 8.7 x 4.6 cm at butt end x 7.1 cm at groove barnacles on butt end, must have been recovered from beach and not in North Rochester

Pendent

Gray slate rectangular pendent 10.7 cm long x 3.8 cm at one end and 2.8 cm at other hole located near smaller end body slightly beveled hole drilled from both sides right on to each side hole .8 cm at top .4 cm at middle

Celt

Grey basalt celt chipped on working edge 8.2 cm long 5.1 cm on working edge 4.3 cm wide at other end 2.4 cm thick
Grey purple rhyolite possible celt thin working edge thin irregular butt end 9.4 x 5.9 cm at edge 2.7 cm thick

**From Indian Camp Site on Wallen Place"
"Found by Mrs. Ruzicka"**

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert
Middle Archaic 8-6 000 YA		2/ 33.3%	1/ 16.7%	2/ 33.3%	1/ 16.6%	
Neville		1		1	1	
Stark		1	1			
Late Archaic 6-3 000 YA	3/ 42.8%	1/ 14.3%	1/ 14.3%	1/ 14.3%		1/ 14.3%
Otter Creek			1	1		
Brewerton Notched	1	1				
Squibnocket Triangle	3					
Normanskill						1
Early Woodland 3-2 000 YA				1/ 100%		
Orient Fishtail				1		
Late Woodland 1000-400 YA	3/ 100%					
Levanna	3					

Squibnocket Triangle

White Quartz complete Squibnocket Triangle 2.2 x 1.6 cm
 White Quartz complete Squibnocket Triangle 2 x 1.8 cm
 White Quartz complete Squibnocket Triangle 2.4 x 2.2 cm

Levanna

White quartz complete Levanna 2.5 x 2.5 cm
 White quartz complete Levanna 2.6 x 3 cm
 White quartz complete Levanna 5.4 x 4.2 cm

Stark

Grey argillite complete Stark 6.6 x 2 cm
 Tan brown quartzite complete Stark 5.5 x 2.1 cm

Neville

Brown quartzite Neville 90% complete 5 x 2.5 cm
 Dark grey and white banded volcanic complete Neville or Atlantic 6.5 x 4 cm
 Grey with white phenocrysts rhyolite Neville complete 4.7 x 3.4 cm

Orient Fishtail

Dark grey with white phenocrysts rhyolite Orient Fishtail complete 4.8 x 1.7 cm

Otter Creek

Dark grey with many white phenocrysts rhyolite 95% complete tip missing Otter Creek
 5.4 x 2.4 cm
 Grey green argillite complete Otter Creek 3 x 6 cm

Brewerton Notched

Tan quartzite complete Brewerton Notched asymmetrical base 4.8 x 2.5 cm

Normanskill

Brown grey chert possible Normanskill base snapped off 3 x 1.9 cm

Untyped point

Grey mottled white rhyolite complete point with very long base tang 4.1 x 2 cm
reminiscent of Stark but may be Lagoon

Biface

Light tan quartzite projectile point tip and midsection 4.6 x 2.9 cm

Maroon with many white phenocrysts rhyolite biface base missing 5.1 x 3.4 cm

Grey quartzite biface with base missing 5.7 x 2.5 cm

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert
Biface		1		1		
Point Tip		1				

Possible Stark

Banded dark and light grey volcanic Possible Stark base missing 4.4 x 1.9 cm

Aucoot Cove

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Hornfels
Middle Archaic 8-6 000 YA		2/ 6.9%	5/ 17.2%	18/ 62.1%	3/ 10.3%		1/ 3.5%
Neville		1	2	12	3	1	
Stark		1	3	6			
Late Archaic 6-3 000 YA	30/ 41%	5/ 6.8%	2/ 2.7%	31/ 42.5%	1/ 1.4%	3/ 4.1%	1/ 1.4%
Otter Creek				6			
Vosburg				1			
Brewerton Notched		2	2	5	1	1	
Small Stemmed	17	1		7			
Squibnocket Triangle	13						
Atlantic		1		2			
Susquahanna Broad		1		8		3	
Wayland Notched				2			
Early Woodland 3-2 000 YA		2/ 28.6%		4/ 57.1%		1/ 14.3%	
Orient Fishtail		2		4		1	
Middle Woodland 2-1 000 YA		1/ 20%		3/ 60%		1/ 20%	
Fox Creek Lanceolate		1		2		1	
Greene				1			
Late Woodland 1000-400 YA	3/ 75%			1/ 25%			
Levanna	3			1			

Stark

Grey with white phenocrysts rhyolite complete Stark 4.6 x 3 cm snapped base tip
 Maroon with white phenocrysts rhyolite complete Stark 5 x 2.2 cm long tang 1 cm
 Dark grey with many white phenocrysts rhyolite complete snapped base 5.3 x 3.8 cm
 Grey green argillite Stark 3.5 x 2.6 cm ½ complete
 Tan grey argillite Stark ¾ complete 3.4 x 2.3 cm
 Tan quartzite Stark small break on base 6.4 x 2.4 cm
 Light grey rhyolite with dark phenocrysts Stark water worn very chunky 7.6 x 3.1 cm
 long tang 1.2 cm complete
 Light grey rhyolite Stark water worn 6.2 x 2.3 cm complete
 Grey argillite Stark complete 5.1 x 2.9 cm
 Tan rhyolite with many dark phenocrysts possible stark preform weathered complete 4.5
 x 4.4 cm

Neville

Grey argillite Neville complete water worn
Tan quartzite Neville slight bifurcate to base complete 5.4 x 3.2 cm
Dark grey with white banding rhyolite complete Neville 4.5 x 2.5 cm tip missing
Purple red rhyolite with many white phenocrysts Neville 5.1 x 3.3 cm
Dark grey hornfels Neville $\frac{3}{4}$ complete 5.4 x 3.6 cm
Tan rhyolite Neville long tang squared long pointed ears 3.3 x 2.5 cm tip missing
Dark grey rhyolite with large white phenocrysts Neville tip missing 3.9 x 3.1 cm
Grey rhyolite with many white phenocrysts serrated edges Neville 4.8 x 3.6 cm tip missing
Very dark grey rhyolite with large white phenocrysts fine grained $\frac{3}{4}$ complete 5.5 x 3.7 cm
Grey possible argillite water worn Neville complete fine grained, may be rhyolite to worn to tell reworked to short stubby point 4 x 3.8 cm
Tan rhyolite patinated Neville $\frac{3}{4}$ complete tip missing 3.5 x 2.2 cm
Grey rhyolite with dark and white phenocrysts Neville $\frac{3}{4}$ complete 3.1 x 2.6 cm long tang .9 cm
Grey rhyolite with dark grey banding Neville $\frac{1}{2}$ complete 4 x 3.6 cm
Dark grey rhyolite weathered Neville $\frac{1}{2}$, short tang (Atlantic?) 4 x 4.7 cm
Mottled purple and grey volcanic Neville 3.2 x 4.6 cm long shoulders
Mottled purple and grey volcanic Neville 3.2 x 3.7 cm long shoulders
Dark grey and light grey banded volcanic Neville 3 x 3.3 cm rounded base
Grey with many white phenocrysts Neville $\frac{1}{2}$ complete short base 3.5 x 4.2 cm

Susquahanna Broad

Very dark grey rhyolite with small white phenocrysts Susquahanna Broad complete 2.6 x 1.8 cm
Grey with many white phenocrysts Susquahanna Broad complete 3.2 x 2 cm
Dark grey chert Susquahanna Broad complete 3.2 x 2.4 cm
Light purple pink with purple bands rhyolite Susquahanna Broad complete tip missing 3.7 x 2.5 cm
Grey chert Susquahanna Broad tip missing 4 x 2.6 cm
Tan purple rhyolite Susquahanna Broad weathered complete 3.5 x 2.1 cm
Dark purple with white Phenocrysts rhyolite Susquahanna Broad $\frac{1}{2}$ complete 3.6 x 2.7 cm
Tan and purple quartzite Susquahanna Broad $\frac{1}{2}$ complete 3.9 x 2.9 cm
Dark purple rhyolite with small white phenocrysts Susquahanna Broad complete 4 x 2.2 cm
Purple pink rhyolite with many white phenocrysts Susquahanna Broad complete $\frac{3}{7}$ x 2 cm
Light grey rhyolite with dark phenocrysts Susquahanna Broad complete 3.5 x 2.5 cm
Banded tan grey/ white quartz/ Tan/ Grey fine grained quartzite Susquahanna Broad complete 3.5 x 2.3 cm
Grey chert Susquahanna Broad complete burned 3 x 2.5 cm

Orient Fishtail

Purple grey rhyolite with many white phenocrysts Orient Fishtail $\frac{3}{4}$ complete tip missing

3.6 x 2.1 cm

Very dark grey rhyolite with many white phenocrysts complete Orient Fishtail 4.2 x 2.7 cm

Tan grey quartzite Orient Fishtail complete 4.8 x 2.5 cm

Light grey rhyolite with white phenocrysts Orient Fishtail waterworn mostly complete tip missing 4.2 x 2.5 cm

Dark grey quartzite Orient Fishtail tip missing 5.3 x 1.4 cm

Dark grey rhyolite with many white phenocrysts Orient Fishtail ½ complete 3.7 x 1.7 cm

Dark grey hornfels Orient Fishtail water worn complete 4.3 x 1.8 cm

Untyped

Tan quartzite stemmed point made from flake, may be Neville tip snapped 4.1 x 2.3 cm

White quartz stemmed point with barbs at shoulders triangular blade very fine 3.2 x 1.2 cm

Otter Creek

Grey with dark phenocrysts rhyolite Otter Creek 1 ear missing 4.8 x 3.5 cm

Dark purple with many white phenocrysts rhyolite Otter Creek tip missing 3.5 x 2 cm

Grey rhyolite with many white phenocrysts ½ complete tip missing Otter Creek 3.6 x 3 cm obliquely angled base

Tan rhyolite Otter Creek weathered ½ complete tip missing obliquely angled base 3.5 x 3.1 cm

Purple grey rhyolite with many white phenocrysts complete Otter Creek 3.9 x 2 cm

Dark grey rhyolite with many white phenocrysts Otter Creek tip missing 4.4 x 2.1 cm

Atlantic

Dark grey rhyolite with many white phenocrysts Atlantic tip missing 3.5 x 3 cm

Grey rhyolite with many white phenocrysts Atlantic shaped drill ¾ complete 4.2 x 2 cm

Green grey quartzite possible drill Atlantic shaped water worn base and midsection 5.7 x 3.7 cm

Vosburg

Dark grey rhyolite Vosburg with reworked tip very thin 3.7 x 3.6 cm

Wayland

Light grey rhyolite with many white phenocrysts complete Wayland 4.3 x 2.9cm

Light grey rhyolite with white phenocrysts Wayland complete 4 x 2.4 cm

Brewerton Notched

Pink with many white phenocrysts rhyolite Brewerton Notched complete 3.5 x 1.9 cm

Very pink grey rhyolite with many white phenocrysts Brewerton Notched complete 5.8 x 2.5 cm

Dark grey rhyolite with many white phenocrysts Brewerton Notched complete 4.1 x 2.8 cm

Dark grey rhyolite with many white phenocrysts Brewerton Notched complete 5 x 2.4 cm

Grey argillite Brewerton Notched complete waterworn 4.1 x 2.2 cm

Tan quartzite Brewerton Notched complete 4.9 x 2.1 cm

Grey hornfels Brewerton Notched complete obliquely angled base 3.7 x 2.7 cm

Grey green argillite Brewerton Notched complete 3.2 x 2.1 cm
Green grey very fine grained quartzite Brewerton Notched tip missing 4.1 x 3.4 cm
Dark grey with light grey banded volcanic Brewerton Notched ½ complete reworked tip missing (blunt) 2.8 x 2.2 cm
Purple grey rhyolite with many white phenocrysts Brewerton Notched tip missing 3.7 x 2.4 cm

Fox Creek lanceolate

Grey rhyolite with many white phenocrysts Fox Creek lanceolate reworked into possible drill or graver at tip 4.2 x 2.3 cm
Dark grey rhyolite with many white phenocrysts Fox Creek Lanceolate complete 4.2 x 1.8 cm
Grey green quartzite Fox Creek Lanceolate complete 5 x 2 cm
Black hornfels Fox Creek Lanceolate complete 3 x 1.2 cm

Small Stemmed

Pink rhyolite with white phenocrysts Small Stemmed complete 3.1 x 1.1 cm
White quartz Small Stemmed complete 5.1 x 1.5 cm
Maroon rhyolite with white phenocrysts Small Stemmed complete 4.3 x 1.6 cm
Tan rhyolite Small Stemmed base and midsection 3.5 x 1.5 cm
Dark grey with many white phenocrysts rhyolite Small Stemmed base and midsection 3.7 x 3.1 cm
White quartz Small Stemmed base and midsection 3.5 x 1.7 cm
Tan with grey bands fine grained quartzite Small Stemmed base and midsection 3.8 x 2 cm
Purple brown with small white phenocrysts rhyolite Small Stemmed base and midsection 4.8 x 2 cm
Dark grey with dark phenocrysts rhyolite Small Stemmed base and midsection 3 x 1.8 cm
Grey with white phenocrysts rhyolite Small Stemmed base and midsection 3.8 x 1.6 cm
White/ Clear quartz small stemmed 4.1 x 1.5 cm
White quartz small stemmed 3.1 x 1.4 cm
White/ Clear quartz small stemmed 3.9 x 1.3 cm
White quartz small stemmed 3.1 x 1.2 cm water worn
White/ Clear quartz small stemmed 3 x 1.5 cm
Grey/ Clear quartz small stemmed 3.1 x 1.3 cm
White quartz small stemmed 2.3 x 1.1 cm
White/ Clear quartz small stemmed 3.9 x 1.7 cm
White/ Clear quartz small stemmed 2.9 x 1.3 cm
White/ Clear quartz small stemmed 2.2 x 1.3 cm
Clear quartz small stemmed 2.6 x 1.1 cm
White/ Clear quartz small stemmed 2.9 x 1.4 cm
White/ Clear quartz small stemmed 2.3 x 1.3 cm
White/ Clear quartz small stemmed 2.2 x 1.1 cm
White/ Clear quartz small stemmed 1.2 x 1.1 cm

Squibnocket triangle

White/ Clear quartz Squibnocket triangle complete 2 x 1.3 cm
White/ Clear quartz Squibnocket triangle complete 1.6 x 1.2 cm

White quartz Squibnocket triangle complete 2.1 x 1.5 cm
 White/ Clear quartz Squibnocket triangle complete 2.7 x 2.1 cm deep base concavity .2 cm
 Clear quartz Squibnocket triangle complete 2.9 x 2.3 cm basal concavity .1 cm
 White/ Clear quartz Squibnocket triangle tip broken 1.9 x 1.9 cm .4 cm basal concavity
 White/ Clear quartz Squibnocket triangle complete 2.5 x 2.1 cm .2 cm basal concavity
 White/ Clear quartz Squibnocket triangle complete 2.8 x 2.1 cm .3 cm basal concavity
 Grey/ Clear quartz Squibnocket triangle complete 2.1 x 2 cm .1 cm basal concavity
 White quartz Squibnocket triangle complete 3.4 x 2.2 cm .3 cm basal concavity
 White quartz Squibnocket triangle complete 2 x 1.7 cm .3 cm basal concavity
 White quartz Squibnocket triangle complete 1.9 x 1.4 cm .2 cm basal concavity
 White/ Clear quartz Squibnocket triangle complete 2.4 x 1.8 cm .4 cm basal concavity

Greene

Dark purple grey rhyolite with many white phenocrysts weathered Greene Point complete 5.1 x 2.1 cm

Levanna

White quartz large Levanna 1/2 base and midsection 2.8 x 6.1 cm
 White/ Clear quartz Levanna 3.8 x 3.3 cm
 Clear quartz Levanna 3.8 x 2.5 cm
 Very dark grey rhyolite with many white phenocrysts 3 x 2.3 cm

Cores

Purple rhyolite with white phenocrysts exhausted core with cortex 7 x 4.3 cm
 White quartz with tan white bands core with cortex 6.4 x 5.8 cm
 Maroon rhyolite with many white phenocrysts exhausted blade core 4.1 x 3 cm 4 long blade flake scars present

Chipping Debris

Tan quartzite large flake with cortex "oval scraper" 9.1 x 7.2 cm
 Grey brown argillite or slate possible shatter 10.7 x 4 cm
 Very dark grey rhyolite with white phenocrysts shatter with cortex 5.2 x 3.1 cm
 Tan rhyolite with dark phenocrysts cd, possible uniface diamond shaped 6.6 x 3.4 cm
 Green grey chert secondary chipping debris water worn 4.8 x 3.2 cm
 Tan/ brown Pennsylvania jasper secondary cd with cortex 3.1 cm long
 Tan/ brown Pennsylvania jasper secondary cd with cortex 2.9 cm long possibly utilized
 Tan grey mottled chert cd 2.5 cm long
 Fine grained dark grey brown rhyolite secondary cd 4.3 cm long

Material	Quartz	Quartzite	Argillite	Rhyolite	Volcanic	Chert	Jasper
Biface				1			1
Oval Biface				1			
Triangular Biface				1			
Lanceolate		1		7	1		

Biface/ Blade							
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Bifaces

Tan grey rhyolite triangular biface 3.6 x 2.7 cm

Banded tan and brown jasper biface 3.8 x 1.9 cm

Dark purple rhyolite with small white phenocrysts biface fragment 3.1 x 1.6 cm

Oval Biface

Grey tan rhyolite with many dark phenocrysts Oval Biface ½ complete 4.5 x 5.5 cm

Lanceolate Blade

Purple rhyolite with many large white phenocrysts Lanceolate Blade ½ complete base present 4 x 2.6 cm squared

Dark grey and grey banded quartzite Lanceolate Blade complete 6.2 x 2.2 cm

Purple rhyolite with many white phenocrysts Lanceolate Blade ½ complete 2.8 x 3.3 cm squared base

Tan grey rhyolite with white phenocrysts Lanceolate Blade base squares 3 x 2.8 cm

Grey rhyolite with white phenocrysts Lanceolate Blade base squares 4.4 x 2.8 cm

Grey possible rhyolite waterworn tear drop shaped blade (Lanceolate?) ½ complete base present squared 3.5 x 5 cm

Mottled purple and white banded volcanic lanceolate blade complete 8.7 x 2.9 cm

Grey green rhyolite with many white phenocrysts and small dark phenocrysts complete lanceolate blade 6 x 2.2 cm

Very dark purple grey rhyolite with many white phenocrysts Lanceolate Blade complete 4.2 x 2.6 cm

Soapstone

Grey soapstone shallow bowl frag ¼ of bowl 1.7 cm thickest at side base juncture possible water wear 1.1 cm thick near center, thickness varies .5 cm thick at rim possible linear design on exterior consisting of vertically slanted lines near rim 5cm exterior height 3.5 cm interior depth original diameter approximately 6 ¾ "

Historic Material

Tan clay marble 3 cm dia historic period

Dark grey English flint square gunflint possibly burned on upper surface blade type, late 17th century on

Round pebble

Round rhyolite pebble natural 2.7 cm dia

Rods

Long grey tan schist rod with possible crushing on one end 2.1 cm thick 7" long 2cm thick at other end

Short tan purple quartzite rod 8.9 cm x 2.3 cm one end smoothed

Possible whetstone tan sandstone rectangular thickness 3.1-3.7 cm 3.25" long

Wallen Collection Mounted

Tray 1 (not in case)

Gray rhyolite Otter Creek

32 quartz small stemmed

14 Quartz Squibnocket Triangles

Quartz Lanceolate blade

Gray rhyolite Small Stemmed

Quartz oval biface

2 quartz Levannas

Black rhyolite Levanna

Graphite fragment

Dark grey rhyolite Orient Fishtail

Maroon rhyolite lanceolate biface

Dark grey rhyolite triangular biface

Grey tan rhyolite Stark, base broken

Grey chert triangular biface

Grey rhyolite triangular biface

Green grey rhyolite lanceolate blade

Grey rhyolite Levanna

Grey brown rhyolite Small Stemmed

Tan grey rhyolite triangular biface water worn

2 Dark grey brown rhyolite lanceolate blade

White quartz biface

Tan rhyolite Otter Creek

Maroon rhyolite lanceolate biface

Purple grey rhyolite biface

Maroon and tan rhyolite triangular biface with a gouge out of one side possibly a shaft
scraper

Gray slate split long cobble frag adze?

Tan/ maroon rhyolite oval biface

Purple grey rhyolite lanceolate blade

grey green argillite small stemmed

Dark grey brown chert Brewerton notched

Dark grey with many white phenocrysts Otter Creek

Grey green chert Genessee

Maroon quartzite serrated Neville

Tan rhyolite Otter Creek

Late Woodland pottery rim sherd fine sand tempered burned interior decoration on
applied collar, punctate at rim, vertical and sloped linear below

Tray 2

4 quartz small stemmed
2 Tan rhyolite Small Stemmed
Grey rhyolite Small Stemmed
Dark grey rhyolite Small Stemmed
10 quartz Squibnocket Triangles
4 white/ clear quartz Bifaces
Green grey chert Perkiomen
Purple grey rhyolite Levanna
Quartz Stark
Purple grey rhyolite biface
Maroon rhyolite Lanceolate blade
Dark grey rhyolite Levanna
Hornfels Levanna
Pink Chert tanged point
Tan rhyolite Normanskill
Grey brown rhyolite triangular biface
Dark grey rhyolite lanceolate blade
Dark grey rhyolite Triangular biface
2 Pink chert side notched point
Hornfels Levanna
Grey rhyolite Small Stemmed
Grey Tan rhyolite Otter Creek
Dark purple grey rhyolite Small Stemmed
Grey brown rhyolite Triangular biface
Tan rhyolite possible Neville
Tan and grey banded rhyolite Neville
Dark grey purple rhyolite lanceolate blade
Grey purple rhyolite Levanna
Pink tan rhyolite Jack's Reef Pentagonal
Dark grey slate biface
Pink Attleboro red felsite Fox Creek lanceolate
Dark grey rhyolite chipping debris

Tray 3 (Large tray)
3 quartz Small Stemmed
1 quartz Squibnocket Triangle
2 Grey tan rhyolite Levannas
Tan chert Levanna
Grey quartzite biface
Tan grey rhyolite Greene
Tan pink rhyolite Stark
Grey green rhyolite possible woodland lanceolate
Dark purple grey rhyolite Levanna
Tan quartzite Neville
Tan rhyolite Lanceolate possible woodland point
Grey tan rhyolite possible Neville
Banded dark grey and light grey banded chert stemmed point
Grey quartzite Stark
Grey green chert Atlantic
Banded dark grey and grey oval biface
Tan rhyolite biface
Dark purple grey rhyolite Neville
Dark grey rhyolite lanceolate blade
Green grey chert Lanceolate blade
Tan grey quartzite Otter Creek
Tan quartzite Neville
Grey chert Greene
Tan quartzite lanceolate blade
Pink purple rhyolite Fox Creek lanceolate
Grey tan chert lanceolate blade
Grey rhyolite Otter Creek
Tan rhyolite lanceolate biface
Grey rhyolite T-shaped drill
Pink rhyolite Orient Fishtail
Dark grey rhyolite lanceolate blade
Tan argillite Small Stemmed
Grey chert Meadowood
Quartz Neville
Dark grey rhyolite Susquahanna Broad
Banded dark grey and light grey rhyolite Otter Creek
Banded dark grey and light grey rhyolite Neville
Tan rhyolite Brewerton Notched
Grey brown chert bifurcate with recent hole drilled through it with traces of iron rust in
the hole
White quartz Bifurcate
Maroon jasper Lanceolate blade
Grey rhyolite Stark
Maroon and tan volcanic Lanceolate blade
Grey green fine grained quartzite Lanceolate blade
Maroon rhyolite possible Neville
Purple grey rhyolite Stark

Tan brown rhyolite Susquehanna Broad
Grey rhyolite Small Stemmed
(Points that fell off the board)
Grey brown quartzite Neville
Purple grey rhyolite Small Stemmed
White grey Chalcedony lanceolate biface
Grey tan quartzite Stark

Tray 4

2 quartz Small Stemmed

6 quartz Squibnocket Triangles

Tan grey chert Susquehanna Broad

Brown rhyolite Otter Creek

Black chert side notched point

2 Black rhyolite Levannas

Grey rhyolite Levanna

Grey brown chert Madison

Red brown quartzite Levanna

Tan rhyolite Orient Fishtail

Dark grey rhyolite Levanna

Dark purple grey rhyolite Levanna

Grey brown chert stemmed point

Tan quartzite Brewerton Notched

Tan rhyolite Brewerton Notched

Tan grey rhyolite Fox Creek lanceolate

Grey rhyolite Small Stemmed

Pink Chert side notched point

Brown rhyolite large stemmed point

Pink chert side notched point

tan rhyolite Orient Fishtail

Grey rhyolite Orient Fishtail

Tan chert Stemmed Point

Purple rhyolite oval biface

2 tan grey rhyolite Stemmed points