Research Questions: Concept of the Village

One overall research objective for the Muttock-Pauwating site regarded the concept of the Native "Village" in southeastern Massachusetts and the question of whether the Muttock-Pauwating site could represent a portion of one such village. As traditionally defined, a village is a collection of houses grouped according to a regular plan and occupied for a large part of the year (Luedtke 1988: 58). Villages should contain the remains of structures that housed several families, storage pits, processing facilities, artifacts representing a range of activities from a semi-permanent occupation spanning several months (Thorbahn 1988: 47). Smaller sites of one or two houses are not "villages" but more appropriately, hamlets (Luedtke 1988:58).

Village sites as so defined should consist of a number of houses concentrated in one small area with evidence of processing, refuse disposal and storage systems located within or next to them Luedtke saw semi-sedentary residences, possibly in a village form, as being essential for people practicing horticulture (Luedtke 1988: 59). These types of residences resulted from a slow process of acceptance of cultigens from outside New England. Sites at which people were practicing horticulture should show evidence of an increase in the size and number of storage pits over time, presence of processing equipment such as mortars and pestles and changes in pottery styles as corn became more important in the diet. Luedtke hypothesized that Native people had established this type of site in New England by 1300 AD (Luedtke 1988: 60).

The argument over the location and identification of the Late Woodland villages in southern New England essentially revolves around three models of Late Woodland occupation that proposed by McManamon and Bradley (1986:22-23). They based these models on four dimensions of the activities that would lead to a large settled community: the seasonal scheduling, location, range and intensity of involvement related to those activities. The models were: 1) Native people made infrequent, seasonal use of the coast until trade commenced with Europeans during the Contact Period. They followed their infrequent, seasonal use by rapid aggregation on the coast anticipating the arrival of European ships with whom Native people could trade for valued exotic items. This would lead to a situation where Late Woodland and Contact Period sites were small and dispersed.; 2) Intensive use of the coast in the summer as part of a coastal to interior seasonal round which has its roots as early as the Late Archaic. Village sites in this model would be characterized by a range of activities with more intensive evidence of these activities. Late Woodland and Contact Period sites would be large and concentrated in the winter and small and dispersed in the summer 3) Permanent and semi-permanent habitation along the coast beginning as early as the Middle Woodland with cultivated fields, special activity areas and communal burial grounds. The settlements in this model would be smaller and less agrarian than in other areas like New York State, but would be characterized by a range of activities of variable intensity. Sites would be small to moderate in size during all seasons of the year (Kerber 1988: 44, Luedtke 1988: 58).

In Eastern Massachusetts there have been a number of small dispersed settlements that archaeologist have tested and excavated, but no solid data on large sites where a greater number of people stayed. Peter Thorbahn thought that testing in the 1980s by Brona Simon at the Swift site in Acushnet, could yield evidence of one of these large sites (Thorbahn 1988:51). Subsequent testing at the site identified not one large site, but two smaller ones, Swift I and II. These sites turned out to represent short-term

occupations along the Acushnet River, possibly at two different times no evidence of contemporaneity. Swift I was found to cover 1600 square meters with an artifact density of 152 artifacts per meter. Swift II was found to be smaller, 1200 square meters, with a lower density of 21.9 artifacts per square meter (Thorbahn 1988: 51). Swift I yielded shatter, chipping debris, finished points and one biface at a rate of 2.1 pieces of chipping debris per pieces of shatter. Swift II also yielded the same types of artifacts, but in this case, only one finished point, three bifaces and less than one (.9) pieces of chipping debris per shatter. Archaeologists identified Swift I as a site where people finished projectile points while they interpreted the Swift II site as a location where people processed resources, as evidenced by fragments of calcined bone recovered, and initial lithic reduction for the production of bifaces took place (Thorbahn 1988: 51) .

The Swift sites are a good example of the interpretive dilemma that Thomas felt archaeologist should consider by archaeologists when they are evaluating potential "village" sites (Thomas 1986). Thomas was concerned with archaeologists attempting to identify sites that appear to represent individual episodes of occupation spread out over a relatively large area as a "village" when what they may be seeing may also represent the repeated selection of a particular location by many groups separated by an unknown number of years (Thomas 1986: 99). MHC site files are filled with numerous sites identified by both avocational and professional archaeologists, as "villages". The search for "villages" that seems to be partially based on the ethnographic bias of New England's seventeenth century historic records towards the European colonists identification of various Native "villages" in eastern Massachusetts (Thomas 1986: 101). Unfortunately, these same records record nothing about the spatial extent and internal configuration of these "villages" that they saw and reference to small special purpose occupation sites that must have been more numerous than the larger villages the colonists identified

Using modern ethnographic research collected by Yellen on the !Kung of the Kalahari desert in Africa, Thomas sought to define the following attributes of their settlements:

1) spatial unit within sites from activities
2) possible clustering of such units
3) maximum distribution of spatial units by one group in one occupation

Yellen found that !Kung sites consisted of three elements, the Limited Nuclear Area (LNA), the Limited Scatter (LS) and substantial amounts of empty space with no evidence of activity (Thomas 1986: 102). He defined LNAs as the space where physical evidence from a number of activities overlap or cluster, for example a shelter with a hearth in front and a scatter of nutshells (Thomas 1986:102). He defined the LS as the refuse of specific activities carried out away from the LNA.
The average !Kung family size was 10-24 individuals, which were 2 to 6 nuclear families, who stayed at the locations studied by Yellen for a period of 1 to 30 days. The total area for the sites that the families created ranged from 59 to 581 square meters with the average being 223 square meters (Thomas 1986: 101). The greatest diameters of the sites studied were between 34.8 to 132 meters with the average being 20.5 meters. Within each site were between two and seven LNA s covering between 3 to 30 square meters. There were 0-13 LSs at each camp measuring between .09 to 186 meters square, although most were less than four meters square (Thomas 1986: 101). What was interesting was that while camp sites ranged from between 59 to 581 square meters, only 19-47.6% of this contained anything that would be evident in the archaeological record, even though the !Kung occupied and used

the entire area (Thomas 1986: 101). Extrapolating from the analogy of the !Kung, Thomas concluded that because of the site area versus the family size versus the stay of occupation, archaeologists can not state that a site is a "village" unless they can control for the number of people and the duration of the stay at a site, something impossible to do precisely with archaeological evidence (Thomas 1986: 108).

Thomas compared Yellen's findings with his own from archaeological excavations at the Willis Hill site, a Middle Woodland camp in Montague, Massachusetts (Thomas 1986: 106). Willis Hill was found to occupy approximately 120 square meters, within which was a 2.47 x 4.63 meter shelter and a number of spatially discrete activity areas relating to tool sharpening and point manufacture as well as approximately 60 square meters of "empty" space that contained no artifacts but which must have been within the occupation area (Thomas 1986: 107). He estimated that 5-8 people occupied the site for a short period of time (Thomas 1986: 107).

Thomas recommended that archaeologists interpreting sites be aware that artifact concentrations and refuse scatters are not continuous across a site and that individual episodes of reduction will be evident if archaeologist subdivide their units to take a finer look at distributions (Thomas 1986: 108-110). Archaeologist should expect dense lithic workshops to be oval in shape and may cover areas up to 20 meters square while individual reduction stations will also be oval, but will only cover an area of one to four square meters (Thomas 1986: 118).

This was a testing strategy that was not usually conducted in cultural resource management studies due to budgetary and time constraints and the resulting reliance on no-contiguous test pits in disturbed soils. This project allowed for the this type of testing, a strategy advocated by the late Dr. Barbara Luedtke who stated that it was important to demonstrate occupational contemporaneity at a site to consider it a village (1988).

Researchers examined relative contemporaneity in a number of ways. The first was by examining distributions of materials to identify temporal distributions and associations of lithic or faunal concentrations with specific temporal components in each lot. By using a SURFER graphic distribution program, archaeologists plotted each material type in relation to the features, temporally diagnostic materials (projectile points, pottery styles, and lithic tool types) to examine which temporal component they are associated with. For example, is the distribution of chert chipping debris and artifacts related most closely to the Late Archaic or Middle Woodland occupation at a specific lot and then how does the contemporaneity at one lot relate to another and finally how does it relate to other sites in the general area of southeastern Massachusetts. Distributions and overlaps of lithic concentrations and features should also help to identify recurrent occupation of the same area during subsequent years, which may help to support or refute the idea of the village versus recurrent occupations.

A second way of examining contemporaneity was by submitting a number of radiocarbon samples from similar features, for example hearths, across the project area dating at Beta Analytic in Miami, Florida. If feature dates from the type of features selected were found to cluster around a two sigma date range, then relative contemporaneity can be assumed, although it may span several centuries. Using radiocarbon dating would allow for gross temporal comparisons between lots and across the project

area. Due to funding problems, radiocarbon dates were not submitted for this project but are planned for the future when alternate funding sources are found.

A final way of investigating the whether the occupations evidenced across the project area were more likely from either one large occupation by an appreciable number of people or if a small group of people occupied the project area at temporally distinct times, was through a study of seasonality as represented by the floral and faunal remains recovered. Period sources discuss the seasonal harvesting of certain species of animals such as anadromous fish and birds, and the general seasonality of species that hibernate in the fall to spring, for example, turtles can be examined through field guides and wildlife management reports. Floral species may be an even more seasonally sensitive indicator of occupation due to the fact that species of plants have specific and times of the year when the flower and fruit, making these the times when they are most abundant. Both studies, the floral and faunal analysis, had to take into account the fact that native people dried and stored various plant, for example corn or tobacco, and animal species, shellfish and fish, for use out of season. If seasonality studies across the project area all point to occupation during a specific time of the year, this may be tentative evidence of either contemporaneous occupation of the lots or at least of recurrent seasonal occupation.