NARRAGANSETT INDIAN SUBSISTENCE PRACTICES DURING THE LATE WOODLAND THROUGH CONTACT WITH EUROPEANS

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Date: April 1, 1986

Course: Independent Study / Honors Project

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INTRODUCTION

This project is divided into three sections. Part 1 is a synthesis of my research on Narragansett Indian subsistence practices before, during and after contact with Europeans. This synthesis is in the form of a model for studying Late Woodland-Contact culture change based on archaeological evidence that a shift in settlement pattern and subsistence practices may have occurred between the Late Woodland and Contact periods. This section was presented at the NEAA meetings in Buffalo this Spring. Part 2 is a review of my proposal for this project. It contains the original steps I intended to follow in conducting my research and explanations of how these steps were modified as I proceeded. My conclusions for each step and recommendations for further study are also presented in this section. The third section of this paper is an Appendix listing the presently known Late Woodland and Contact period sites in Rhode Island.

PART 1:

A MODEL FOR STUDYING NARRAGANSETT INDIAN SUBSISTENCE PRACTICES DURING THE LATE WOODLAND THROUGH CONTACT WITH EUROPEANS

The purpose of this paper is to provide a model for Late Woodland-Contact change in Narragansett Indian settlement-subsistence patterns. This work is based on a similar model designed by McBride and Bellatoni (1982) used to study Indians of the Connecticut river valley. In this paper I attempt to adapt this riverine model to Rhode Island as a more coastal model. The suggestions that are made about the causes of changes from the Late Woodland to the Contact period, based on this model, can be tested in further research.

There are a variety of settlement-subsistence frameworks for the Late Woodland and Contact periods in Southern New England. For example, Barnes (n.d., p. 6) described Late Woodland settlement-subsistence patterns in Rhode Island compared to earlier times as "more sedentary, with large central villages, though temporary hunting and gathering camps were still maintained on a seasonal basis". Snow (1980) noted that main villages were usually located at the heads of estuaries and that these villages grew through the Late Prehistoric Period (A.D. 1000 - 1600) and satellite farmsteads proliferated until the end of the period. Snow (1980) also stated that during the Contact period main villages became semi-permanent sedentary communities built away from the coast and occupied mostly in winter. Historic and ethnographic accounts (Williams, 1963; Wood, 1977) suggest that family farmsteads and seasonal family camps were dominant in the Contact period. Work by McBride and Bellatoni (1982) studying a sample of twelve Late Woodland and Contact period sites in Connecticut revealed that these seasonal family

camps were occupied longer and involved a greater variety of activities than the temporary hunting, gathering, and special purpose camps of the Late Woodland. They concluded that a transition to the family or extended family as the basic unit of subsistence occurred from the Late Woodland to the Contact period and they attributed this change to "an increased reliance on native cultigens" (p. 62).

I propose that this change in social organization not only indicates an increased reliance on horticulture as suggested by McBride and Bellatoni (1982) but also indicates the need to fish more, hunt more, and exploit all of the resources available. This includes the use of resources which may not have been exploited earlier. Subsistence activities were primarily conducted around central village basecamps with satellite farmsteads or at temporary hunting, gathering, and fishing camps. This suggests a comfortable adaptation around the basecamp with seasonal resources being brought back to the village. The apparent shift in Contact times to subsistence activities which were primarily concentrated around family farmsteads near the coast, seasonal family hunting, gathering, and fishing camps, as well as the use of inland winter villages indicates a need to increase many food sources.

Based on information recorded by Williams (1963) and Wood (1977) and a similar reconstruction by McBride and Bellatoni (1982) for the Indians of the Connecticut River valley, the seasonal round for the Narragansetts during the Contact period was as follows:

1. Winter was spent in inland villages located in heavily wooded areas, selected for defense as well as an adequate wood supply. These villages were probably occupied by large groups of people until early spring (McBride and Bellatoni, 1982). Temporary winter activities away from the villages consisted of ice fishing on lakes and rivers, hunting small animals such as skunk and beaver, birds if still available or deer if in early winter. If stores of corn, acorns, berries, smoked meat or fish ran low, shellfish were harvested on the coast.

2. Spring involved movement of families from the winter village to the fields. Stops were made to hunt or fish. Spring runs of spawning fish such as salmon, herring, and sturgeon were netted or speared at falls or narrows in rivers. Migratory birds and waterfowl were hunted. By April the families arrived at their fields where they stayed most of the year. Sowing of corn and other crops such as beans, squash, sunflower, and tobacco occurred in April and May according to Williams (1963).

3. According to McBride and Bellatoni (1982, p. 59) summer was spent near the fields which were in "areas of good agricultural potential, most likely floodplain or terrace areas" next to large rivers. McBride and Bellatoni (1982) were referring specifically to the Connecticut River. In Rhode Island fields were probably located in fertile areas along the coastline. Ownership of large fields by a small group (family or extended family) is implied by the large labor force needed to help break up a field. "All the neighbors, men and women, forty, fifty, a hundred etc. come and help". (Williams, 1963, p. 123)

Summer activities included smoking and drying fish and shellfish for winter stores, ceramic production, and possibly some inland hunting. Berries were usually gathered in the summer also.

4. Fall centered around the harvest. Crops were picked then parched or dried for winter storage. Summer camps broke up after the harvest and gradually moved inland in family groups. Seasonal camps were set up for deer hunting. Williams noted "About harvest, they goe ten or twentie together, and sometimes more, and withall...wives and children also" (1963, p. 189). At these camps fruits, chestnuts, and acorns were gathered, processed like corn and stored. Williams noted that acorns were a staple like corn. Migratory birds and waterfowl were also hunted at these fall/winter camps.

It should be noted that the sites studied by McBride and Bellatoni (1982) were primarily small, seasonal camps and temporary or special purpose camps. Based on their model, they determined that fishing camps, village basecamps, and farmsteads were the other types of sites that should be represented in the archaeological record. They also provided specific criteria for identifying these types of sites in the archaeological record. McBride and Bellatoni (1982) noted that their sample was small and lacked the full range of site types, stating that their conclusions were only preliminary. Further work is needed and the archaeological record in Rhode Island must be analyzed for evidence of the Late Woodland-Contact period transition that appears to have occurred based on this work and that of Barnes (n.d.) and Snow (1980).

If temporary, limited activity, seasonal camps were dominant in the Late Woodland, then resources such as deer, fruits, acorns, chestnuts, migratory birds, and spring runs of anadromous fish were probably not exploited as intensively as in the Contact period where more long-term, multiple activity, seasonal camps were dominant. The Late Woodland camps appear to have been occupied by groups of males while the Contact period camps appear to have been occupied by family groups. These fall/winter seasonal family camps indicate an increased reliance on deer hunting, and fruit and nut processing. Living at independent family farmsteads rather than at satellite farms attached to basecamp villages shows an increased reliance on horticulture and also on shellfish resources.

What does this apparent increased diversification of subsistence resources, including deer, fruits, nuts, native cultigens, berries, shellfish, migratory waterfowl and anadromous fish, mean? Cohen (1977) suggests that the need to obtain more calories from the same territory reflects a need to feed denser populations. He notes that plant resources are less desirable than meat but provide more calories per unit of land per unit of time. Cohen (1977) also suggests that the increased use of water resources such as fish and shellfish is also evidence of population pressure. The increased exploitation of plant foods, fish and shellfish coincides with the greater emphasis on processing and storage as is evident in the farmstead settlements.

Expansion of groups into new ecological zones with the goal

of increasing food resources such as deer meat, fruits, and nuts by more intensively exploiting a limited area as seen in the fall/winter seasonal camps also indicates population pressure according to Cohen (1977). Cohen (1977) cites the shift to foods such as acorns which require longer preparation times for grinding, pounding, leaching as another indicator of the need for a population to increase its food supply. The exploitation of migratory waterfowl and spring runs of anadromous fish, if it increased would reflect a further need to use all available resources.

Based on the possibility that this population increase during the Late Woodland and Contact periods is real and indicative of population pressure and increased population density, what caused this pressure and when did it begin? There is some evidence that this population pressure was already in progress at the time of early contact. Verrazanno noted the presence of cleared fields in 1524 (Hakluyt, 1966). These had probably been cleared by burning for the purpose of horticultural activity or to cause secondary growth of wild plant foods and berries attractive to both human and deer populations. Cohen (1977, p. 78) calls this "evidence of environmental degradation of the land by human beings to maintain subclimax vegetation" and he cites this as another indicator of population pressure. It can be argued that if the intensification of horticulture was occurring as early as Verrazanno, the depletion of coastal woodlands may have driven deer populations further inland, and depleted populations of small animals and natural

vegetation, neccessitating a shift to seasonal family camps in order to increase the area exploited (Barnes, personal communication).

Although this population pressure may have been due to a natural increase, based on a successful adaptation to reliable resources, this alone does not seem likely. Since resources seemed to be very reliable in the Late Woodland, it would seem logical for populations under stress to expand geographically, rather than change their social organization and patterns of resource exploitation. Some limitations on this expansion did exist due to the presence of other groups such as the Pequot and the Massachusett in the area. Conflict was apparent in the Late Woodland times in burials and settlement patterns (Barnes, n.d.). This conflict was most likely territorial based on the expansionistic wars fought by the Narragansetts in the Contact period. Hayden (Wenke, 1984) suggested that even dense populations such as those of the Northwest coast could survive without any changes in their subsistence system if their resources were abundant and reliable. In the case of Rhode Island, the resources before contact were abundant and reliable and geographic expansion was possible although it sometimes involved warfare.

External factors arising from the immigration of Europeans into Rhode Island after 1636 probably added much to any pre-existing population pressure and degradation of the natural environment. The balance in population-to-resources was further upset by the arrival of the colonists. Assuming the native

population was growing naturally, colonization would have caused several problems. Between 1550-1700 there was a doubling of the colonial English population (Kupperman, 1982). This immigration of new people into Narragansett territory greatly increased Native population densities by decreasing the man-to-land ratio. Although diseases such as smallpox were brought by the Europeans, Salwen (1978, p. 172) noted that the epidemics of 1617-1619 did not seem to have affected the numbers of Narragansetts who continued fighting wars and expanding to the west and to the east with the help of their allies. The counter-arguement that depopulation occurred and might have been underestimated due to the low ratio of colonists to Narragansetts should be noted but will not be discussed here. The colonists also acquired land which placed a limitation on Indian access to resources. Often sites favored by colonists were also those that had been favored by Indians. This is clearly seen on Block Island where the first plats on a 1661 plat map correspond to pre-Contact Indian farming sites (Morenon, 1985). On the mainland the colonists were likely to have settled near the coast perhaps displacing Indian basecamp villages of the Late Woodland. English farms established in these areas were occupied all year. English cattle and grazing animals were often not fenced and intruded on Indian farmlands. Pigs fed on clams among other resources. The immigrant population also provided competition for deer which Williams noted were plentiful and well liked by the settlers. These recent arrivals also competed for coastal resources such as fish and shellfish. The colonists and their way of life crowded

the Indians and diminished their resources. "Once the population-to-resource balance was disturbed...there was a premium on every resource" (Wenke, 1984, p. 193) This would have created stress and might have led to the changes in resource exploitation strategies that appear to have occurred in the Contact period.

The shift to families as the basic economic unit was most likely reinforced by trade relations between the Indians and the colonists. The Indians regularly divided into family farmsteads during the summer in order to survive by producing a surplus of horticultural products. This surplus was also a necessary commodity for dealing with the colonists. Kupperman (1982) reports that at the time the English colonial population was doubling from 1550-1700, they were also experiencing widespread crop failures. The Narragansetts were reported by Williams (1963) and Wood (1977) to have been clever in trade and very industrious. Williams observed that members of the Narragansett tribe had begun to specialize in certain crafts and the procurement of certain resources to trade to the colonists. He observed that some Narragansetts specialized in making pottery and wampum and some concentrated on fishing or hunting as a means to obtain trade resources. The division into family farmsteads without a village basecamp in the summer and into seasonal family camps in the spring and fall enabled families to specialize in producing certain goods to trade as well as to establish a surplus that they would need to live on in the winter.

In this paper, I have suggested that the seasonal round

described in the historic and ethnographic sources indicates an increased reliance on not only horticultural products, but also on fish, shellfish, berries, meat, fruits, nuts, migratory waterfowl and anadromous fish. Noting that further evidence of this is required, I have also suggested that this apparent increase in the exploitation of available food resources suggests a response to population pressure and increased population densities. I presented limited evidence that suggests that this population pressure might have begun in the Late Woodland period as a natural increase possibly due to the successful adaptation to reliable resources. I then suggested that this population pressure and environmental degredation, if already in progress, was amplified by the arrival of Europeans who caused a further increase in population density by increasing the man-to-land ratio, decreasing Indian access to resources either because of private ownership or in competition over publicly available resources. The presence of the Europeans restricted Indian mobility as well as upset the population-to-resource balance which developed before contact. I finally suggested that the shift to the family as the basic subsistence unit was most likely rewarded in trade relations with the colonists.

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PART 2:

REVIEW OF ORIGINAL PROPOSAL

In my proposal, I intended to look at Narragansett Indian subsistence from the Late Woodland through Contact in terms of whether Narragansett cultivation was more like horticulture or more like agriculture. I made a distinction between these two terms based on the degree of intensity and whether or not an annual surplus was being produced using work by Carneiro (1968). In conducting further research, I realized that this distinction was vague and would not be useful. Using traditional definitions, I was obviously only looking at horticulture, since agriculture usually entails the use of the plow and draft animals. Since the later ethnographic accounts stressed the intensive cultivation of corn and other domesticates over other means of subsistence (Russell, 1976; Russell, 1980; Winthrop, 1908) and the intensity and importance of horticulture was unclear in the early contact reports (Hakluyt, 1966; Williams, 1963), and direct archaeological evidence for horticulture was scant for both the Late Woodland and Contact periods, I shifted my focus to the intensity and relative importance of horticulture compared to other means of subsistence during the Late Woodland and Contact periods. In my proposal I defined a series of steps to follow which I felt would be a logical way to examine this problem. In conducting my research, and redefining the problem, it was necessary to modify these original steps.

Step 1: Summarize and evaluate the existing archaeological record. I modified this to simply summarizing the relevant record, since the evaluation will follow in the discussion of its completeness. In Rhode Island there are presently 13 Late

Woodland sites, 7 Contact period sites and 3 sites that were occupied during both periods or that overlap. (Refer to the Appendix for more specific information.) Aside from these sites, archaeological materials from these time periods are known to exist in museum collections all over Rhode Island. In general vegetal, faunal, and artifactual remains for both the Late Woodland and the Contact period are similar. For both periods, botannical evidence relating to cultivated crops is scant. A couple of beans were recovered at the Joyner site and few corn kernels were recovered at RI667 (Morenon, personal communication). Evidence for horticultual activities in Rhode Island is mostly indirect, consisting of hoes, mortars, pestles, tobacco pipes and ceramics. Nuts have been found and provide evidence for gathered foods. Remains of deer and small animals, and shell middens indicate hunting and marine exploitation. The presence of fishooks and netsinkers provides further evidence that water resources were being used. In terms of site types, features and settlement pattern, it is uncertain if differences exist between the Late Woodland and Contact periods. Since it was not possible for me to examine every site report, I had to rely on work by others for this information. Barnes (n.d.) noted that large central villages with satellite farmsteads and temporary, seasonal hunting and gathering camps were characteristic of the Late Woodland period in Rhode Island. Snow (1980) noted that satellite farmsteads were usually attached to these large basecamp villages. Williams (1963) and Wood (1977) described independent family farmsteads and seasonal family camps

as characteristic of the Contact period. Work by McBride and Bellatoni (1982) in Connecticut supports the idea of this type of shift in settlement pattern from the Late Woodland to the Contact period. The relevant archaeological record in Rhode Island needs to be closely examined for information on site types, features, and settlement pattern before any conclusions can be drawn about differences in subsistence practices. McBride and Bellatoni (1982) have determined using an ethnographic model what types of sites should be present from the Late Woodland-Contact periods and they have developed very specific criteria to use to test for these sites in the archaeological record.

Step 2: Hypothesis: The archaeological record is not complete. I modified this to be a possibility rather than an hypothesis. Based on Contact period descriptions, it can be concluded that certain types of remains are absent, specifically direct evidence of cultivation, such as caches of corn, beans, squash, jerusalem artichokes, and tobacco. This may be due to the fact that these vegetal remains do not preserve well in acidic Rhode Island soils. Faunal remains and ceramics do not preserve well either, unless associated with shell heaps or burials. In Rhode Island the use of flotation could increase the recovery of these organic remains but this technique has not been widely and/or consistently practiced. Aside from poor preservation of organics in Rhode Island soils, and an ineffective use of flotation, the archaeological record is also incomplete due to natural disturbances, and historic and modern development which has destroyed many sites and/or made them

inaccessible to archaeologists. Vandalism is another problem. There has also been a definite bias towards the coast in studying the archaeological record in Rhode Island. With the exception of recent work in western Rhode Island by the Public Archaeology Survey Team (P.A.S.T), relatively little is known archaeologically about this part of the state and this is another reason the record is not complete.

Step 3: Test the notion that agriculture was practiced continuously before, during, and after contact. This was modified since horticulture is what was practiced. The notion that horticulture was intensive and more important than other means of subsistence from the Late Woodland through Contact times was considered. This notion implies continuity in intensive cultivation of domesticates. If a shift from satellite farmsteads attached to village basecamps to independent family farmsteads occurred, this would appear to indicate that the intensity and importance of horticulture increased. It would also imply that there was not a continuous emphasis on horticulture from Late Woodland times as the most important form of subsistence. Since the evidence for this shift is not yet conclusive, I looked at descent reckoning, residence patterns, language, religion and art for evidence of Narragansett continuity from the Late Woodland as intensive horticulturalists. Matrilineal descent and matrilocal residence patterns would be characteristic of intense horticulturalists. According to Salwen (1978), it is uncertain how the Narragansetts reckoned descent and he provides various examples of conflicting evidence.

Salwen (1978) noted that residence patterns tended toward patrilocal or ambilocal, which would not support a focus on horticulture as the dominant mode of subsistence. Information on Narragansett language comes exclusively out of Williams' (1963) Key Into The Language of America. Not much can be concluded about the dominance of particular forms of subsistence from this work. It is clear that terms for native cultigens such as corn, beans, squash, tobacco, and sunflower and the planting, harvesting, and processing of these were ingrained into the language. It is not clear, however, that these terms were significantly more ingrained or more important than terms for animals, wild foods, fish, shellfish, and the procurement and processing of these. As for religion, Williams noted the Narragansett belief that corn, beans and squash came from their God, Cautantowit in the Southwest and the original seeds were delivered by a crow. Because a crow delivered these first seeds the Indians refused to shoot crows, preferring to scare them away if disturbing their fields. He did not mention any ceremonialism involved in planting the fields or otherwise involving native cultigens. Narragansett Indian art motiffs seen on religious, ornamental and functional objects including pottery usually consist of various geometric designs and nothing related to subsistence. What I have seen of Narragansett Indian art in books and in museums may not be representative and further study of artistic motiffs is recommended. Evidence for Narragansett continuity as horticulturalists from the Late Woodland was inconclusive in most aspects of their culture and was not

supported by the tendency toward patrilocal or ambilocal residence patterns in the Contact period.

Step 4: Alternative hypothesis: The archaeological record is complete. I modified this to be a possibility rather than an hypothesis. This possibility is unlikely given the arguements mentioned in Step 2. Historic and modern development, vandalism, natural disturbances, and poor preservation of organics in acidic Rhode Island soils all suggest that some parts of the archaeological record have been and will continue to be lost.

Step 5: Test the notion that horticulture was practiced before, during, and after contact. In my research, the notion that horticulture was not intensive and was not as important as other means of subsistence from the Late Woodland through Contact times was considered. This notion implies continuity from the Late Woodland through the Contact period in having other means of subsistence which were more important than horticulture. As the apparent shift from satellite farmsteads attached to village basecamps to independent family farmsteads indicates that the intensity and importance of horticulture increased, the apparent shift from temporary hunting, gathering, and fishing camps to seasonal family camps implies a need to increase these other forms of subsistence. It seems that there was an increased reliance on all of these means of subsistence. Because of what appears to be an overall increase it is difficult to determine what form of subsistence was actually dominant. Relative frequencies of faunal, vegetal, and subsistence-related artifacts may provide clues to dominance of a certain subsistence, but as

noted before these indicators are not reliably found in the archaeological record. Frequencies of site types would also be helpful in understanding dominant modes of subsistence. Since the evidence for the shifts in settlement pattern described above is not yet conclusive, I looked at descent reckoning, residence patterns, language, art and religion for indications of a dominant form of subsistence other than horticulture. As noted in Step 3, residence patterns suggested that horticulture may not have been dominant and other evidence was inconclusive. Williams (1963) did note that deer were important to the diet and for clothing and it was customary for the first deer killed on a hunt to be given to the Sachem who presided over the territory where it was killed. This is hardly enough to conclude that deer may have been a dominant means of subsistence from the Late Woodland through the Contact period.

Step 6: Assume the later ethnographic record is correct and the archaeological record is incomplete. Although I do not believe that either record is complete, I assumed the later ethnographic record to be correct in emphasizing the intensity and importance of horticulture. I also assumed the archaeological record to be accurate in showing an apparent increased reliance on horticulture as well as on hunting, gathering, and fishing from the Late Woodland to the Contact period. I decided that since it was not possible for me to isolate a dominant means of subsistence given the available evidence, it would be better to study the shift in settlement and the intensification of all subsistence practices that seems to

have occurred between the Late Woodland and Contact periods. My conclusions about this have already been presented in the preceeding section. I recommend that my model be tested against specific archaeological evidence from Rhode Island and I regret that I did not have time to examine the existing archaeological record.

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APPENDIX

In an attempt to provide a summary of the presently known Late Woodland and Contact period archaeological record in Rhode Island, I talked with people from various agencies that conduct archaeology in Rhode Island. I attempted to get in touch with people from the Rhode Island Historical Preservation Commission, Wilbur Smith Associates, The Public Archaeology Lab., Inc., the Public Archaeology Survey Team, the Rhode Island College Public Archaeology Program, and the Massachusetts Archaeological Society. I was sucessful in reaching representatives from all of these agencies except the Public Archaeology Survey Team which is based in Connecticut. Everyone I spoke with noted that Late Woodland and Contact period sites are relatively rare compared to earlier sites in Rhode Island. Many sites from these time periods had been excavated decades ago by amateur archaeologists from the Massachusetts Archaeological Society. Alan Leveillee (personal communication) in discussing work by The PAL., Inc. noted the Freeman site (390- 60 B.P.) was a camp where food processing, lithic manufacture, and the exploitation of shellfish occurred. He also mentioned the Contact period burial grounds - Burr's Hill (A.D. 1640-1680) and West Ferry (A.D. 1620-1680) as other sites he knew about. In the past two years, according to Leveillee, no Late Woodland or Contact period sites have been studied by The PAL., Inc. Peter Mair from Wilbur Smith Associates (personal communication) said he knew of only three sites that might have Late Woodland or Contact period components. He noted the Minto Site - RI 1041 as possibly having a Late Woodland component. He discussed Friends Cemetary - RI 703 as a

possible Late Woodland-Contact period burial ground but noted that a phase II excavation had been already conducted and that there was little integrity left in the graves. Mair also said that the Joyner Site - RI 706 has Middle Archaic to Early Woodland components which may continue on into the Late Woodland or Contact period. A phase III excavation of this site is planned for this summer. Carol Barnes (personal communication) noted Late Woodland sites excavated by the Massachusetts Archaeological Society. She mentioned Potter Pond, Green Point, and Locust Spring. She also informed that Sweet Meadow Brook was dated to A.D. 1000 using thermoluminescence on pottery. Pierre Morenon (personal communication) discussed work conducted by the Rhode Island College Public Archaeology Program on Late Woodland and Contact period sites. He noted that PB-1 - RI 670 has a range of dates from the Early Woodland to modern times (2370- 70 B.P. to modern). Greenwich Cove - RI 193 was dated from the end of the Late Woodland to the beginning of the Contact period (680-80 - 330- 60 B.P.). Morenon also noted Contact period sites studied by the Rhode Island College Public Archaeology Program. These are PD-1 - RI 667 (280- 90 B.P.) , Macera (350-100 B.P.) , Lischio and Lischio context - RI 1000 (A.D. 1630-1660). Paul Robinson (personal communication) of the Rhode Island Historical Preservation Commission should be credited with completing these lists by providing either names, RI Site #s, and especially carbon 14 dates. Since Robinson had the most complete list of carbon 14 dates, the information provided by the others was checked against these dates. If no dates were available, sites

noted by others were not added to the following list. I did this because I was not sure if the dates taken did not match, or, if no dates were taken, I was not sure of the type of diagnostic criteria used to classify these sites as Late Woodland or Contact.

Late Woodland Sites in Rhode Island (A.D. 1000-1550)

Name / Location	RI Site #	How Dated	Date
Breezy Hill	RI 957	carbon 14	1230±220 B.P.
Foster Cove	RI 15	carbon 14	1120± 80 B.P.
- Sweet Meadow Brook		thermoluminescence	A.D. 1000
Potowomut Neck	RI 253D	carbon 14	875± 65 B.P.
Potowomut Neck	RI 253A	carbon 14	865± 55 B.P.
	RI 1205	carbon 14	850± 60 B.P.
	RI 1189	carbon 14	800± 70 B.P.
	RI 974	carbon 14	780± 50 B.P.
	RI 1204	carbon 14	740± 60 B.P.
Potowomut Neck	RI 253B	carbon 14	740± 50 B.P.
Richmond		carbon 14	610± 60 B.P.
Blue Heron		carbon 14	540±190 B.P.
Campbell		carbon 14	550±150 B.P.
	RI 982	carbon 14	540± 70 B.P.
	RI 1194	carbon 14	520± 80 B.P.
Trafalgar	RI 639	carbon 14	465± 50 B.P.
Providence Cove	RI 935	carbon 14	930± 50 B.P.- 420±550 B.P.*
Greenwich Cove	RI 193	carbon 14	680- 80 B.P.- 330- 60 B.P.
- Locust Spring		diagnostic pottery	no date
- Potter Pond		diagnostic pottery	no date
- Green Point		diagnostic pottery	no date

* Providence Cove was occupied from the Late Woodland through the Contact period. This range of dates is for 17 features at this site.

- Sites excavated by the Massachusetts Archaeological Society.

Contact Period Sites in Rhode Island (A.D. 1550-1700)

Name / Location	RI Site #	How Dated	Date
Providence Cove	RI 935	carbon 14	400- 45 B.P.- 260- 50 B.P.*
	RI 1200	carbon 14	410- 80 B.P.
Freeman		carbon 14	390- 60 B.P.
Macera		carbon 14	350-100 B.P.
PD-1	RI 667	carbon 14	280- 90 B.P.
Potowomut Neck	RI 253C	carbon 14	205- 55 B.P.
West Ferry			A.D. 1620-1680
Burr's Hill			A.D. 1640-1680
Lischio	RI 1000		A.D. 1630-1660

* Providence Cove was occupied from the Late Woodland through the Contact period. This range of dates is for 9 features at this site.

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Department of Anthropology and Geography

Date: 4-2-86

Subject: D. Mowchan's Honors Project

	Initial	Date	Action
___ PA			
___ CB			
___ SD			✓
___ GE			
___ ~~CPL~~			
___			
___ TH			
___			
___ ~~RK~~			
✓ EM			
✓ KM	KM	4/5/86	
~~✓ PH~~			
✓ CS			
✓ RS	RS	4/7/86	
✓ MW			
___ President			
___ Vice President			
___ Dean			
___ Assoc. Dean			
___ Asst. Dean			
___			

For your information.
For your information and return to Dept. Secretary.
Review, send to next person, and return to " .
Circulate to all Anthropologists & return to " .
Circulate to all Geographers & return to Secretary.
For your recommendation.
For appropriate action.
For direct reply.
For suggestions as to reply and return to _____.
For approval and signature.
Please see G. E. on this.
U R G E N T . . . . . P L E A S E F A C I L I T A T E.

Letter to DM

Honors Approved by AFC unanimous 4/09/86

Copy in Honors file + honors candidate - D.M