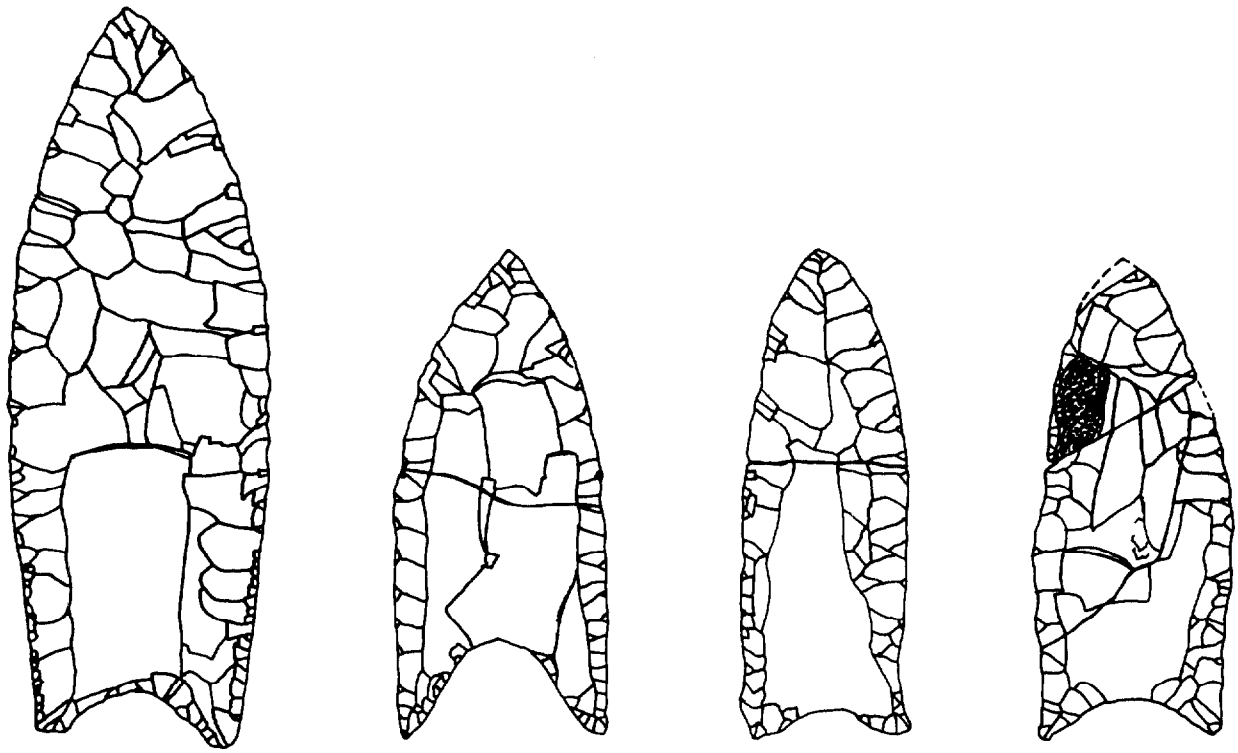
THE MAINE ARCHAEOLOGICAL SOCIETY INC. BULLETIN



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Recent Archaeological Investigations in the Southern Androscoggin River Valley, Maine

Ellen R. Cowie

Archaeological phase I survey and phase II testing conducted along the margins of the Gulf Island and Deer Rips hydroelectric head ponds in the southern Androscoggin River Valley have led to the identification of twenty-nine aboriginal sites ranging in age from the Early Archaic period to the Contact period. This research represents one of the few large scale projects conducted in an interior riverine setting in Maine to date and has helped to fill the gap in our knowledge of aboriginal adaptations during the Holocene epoch.

This work was conducted for Central Maine Power Company to satisfy federal relicensing requirements for their hydroelectric facilities in what has been designated the Gulf Island/Deer Rips Project area. These facilities and related impoundments were originally constructed in the early twentieth century without environmental and cultural resource studies. Thus, it was initially expected that cultural resources would be identified there, but there was no way to estimate the number or complexity of the cultural resources that might be found.

The Deer Rips and Gulf Island dams are located approximately 32 river kilometers north of the convergence of the Androscoggin River with the Kennebec River in tidal Merrymeeting Bay near the Atlantic coast (Figure 1). These dams lie approximately 143 river kilometers below the headwaters of the Androscoggin River which is in Errol, New Hampshire. The project area lies within the Seaboard Lowlands of the Gulf of Maine.

The Gulf Island/Deer Rips Project area is defined as all areas that are subject to effect by the existing Gulf Island and Deer Rips head ponds and dam facilities. The combined project area encompasses 36 river kilometers along the drowned and partially drowned main channel of the Androscoggin River. This stretch includes 2 km behind the Deer Rips dam which has a 40 ft head and 28 km behind the Gulf Island dam which has a 56 ft head. The combined river frontage totals approximately 131 km along the margins of the two head ponds.

The nature of the inundation of these head ponds has a direct effect on the archaeological deposits preserved and potentially identifiable there. Inundation of the Androscoggin River occurs along its entire length and along higher (T2) terraces towards the southern portion of the impoundment. The inundation behind the Gulf Island dam has submerged T1, T2, and in some cases, higher still T3 terraces along the southern half of the head pond over a linear distance of at least 12 km north of the dam. This portion of the head pond can be characterized as a lake since little evidence of the original river channel remains. T1 and T2 terraces are again exposed to one degree or another in the northern portion of the project area farther away from the dam, and therefore were accessible for archaeological survey and testing work. This upstream portion of the head pond appears little changed from the original configuration of the Androscoggin River prior to its inundation, although lateral erosion has altered adjacent landforms. Thus, it should

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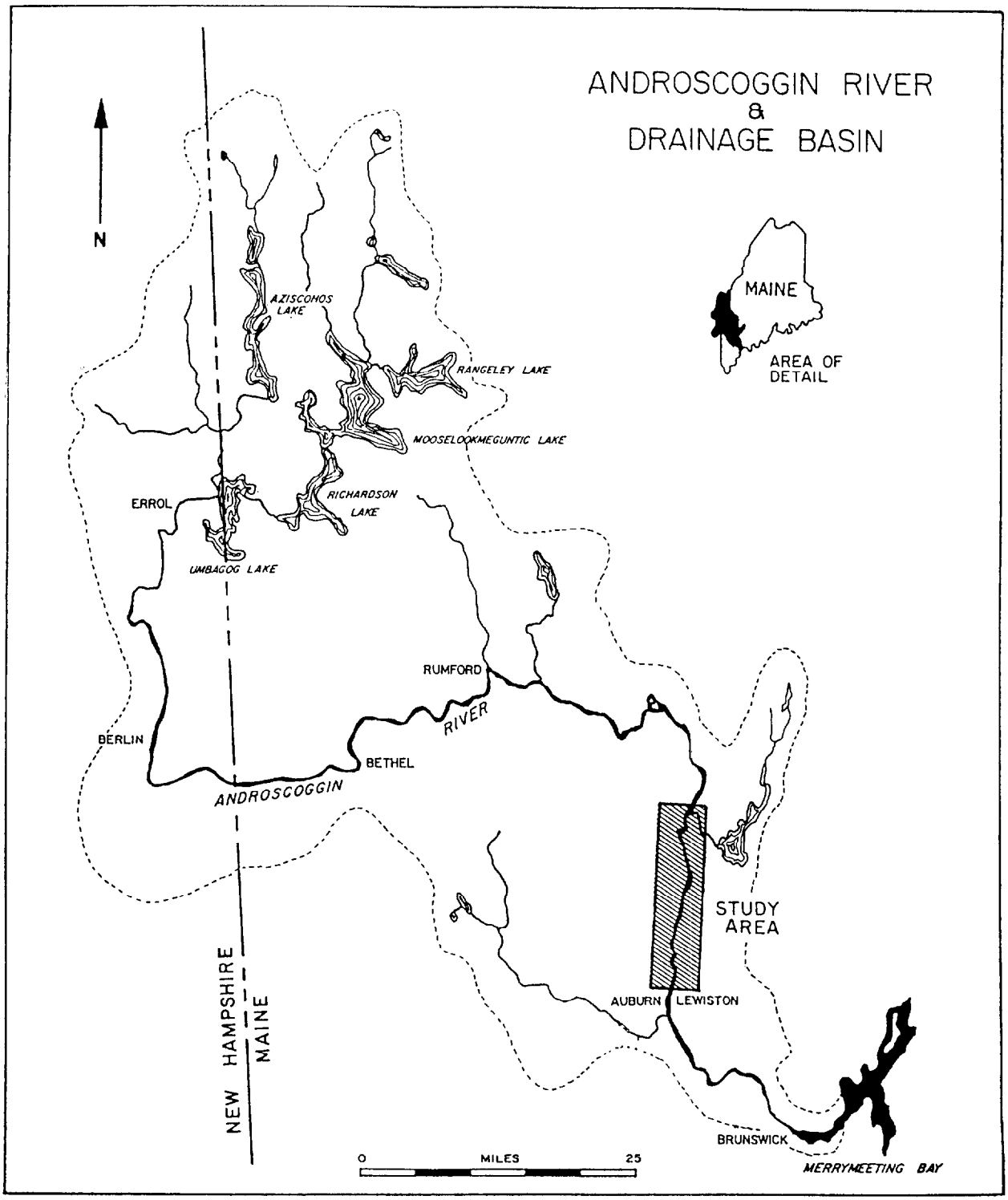
Figure 1. Location of the Gulf Island/Deer Rips Project area in relation to the Androscoggin River drainage of western Maine and eastern New Hampshire.



be emphasized that many other archaeological sites may have been once present in the Gulf Island/Deer Rips Project area, especially in the Gulf Island portion, but these have been likely drowned and/or destroyed by its construction and operation.

SAMPLING METHODS

Given the relatively large area involved, a sampling methodology was developed to maximize the number of archaeological sites identified. This methodology included motor boat and walkover coverage of the project area and systematic testing of areas deemed most likely to contain prehistoric and/or historic sites. The location of sampling areas was based on initial elimination of those areas which were obviously disturbed, either by historic Euroamerican development or partial or total inundation by the project head ponds. In addition, areas deemed uninhabitable were eliminated, such as excessively steep or sloped areas which made the river relatively inaccessible, or wet, swampy areas.

Ultimately, 680 0.5 m x 0.5 m test pits were excavated on alluvial terraces bordering the head ponds. This led to the identification of 29 aboriginal sites and one late eighteenth century Euroamerican historic site district (Cowie et al. 1987). All but one of the 29 aboriginal sites were identified through subsurface testing; the one exception was first identified by a surface walkover of an eroding terrace margin. Although erosion at many of the sites is quite dramatic, only one site would have been identified on the basis of surface walkovers alone. The full head ponds thus made surface survey a relatively unproductive method for site discovery.

Subsequent phase II testing was conducted at 26 of the 29 sites that were subject or likely subject to effect by the Gulf Island/-Deer Rips Project. The phase II work ultimately included the excavation of approximately 178 cubic meters at these sites (Cowie and Petersen 1988).

FIELD WORK RESULTS

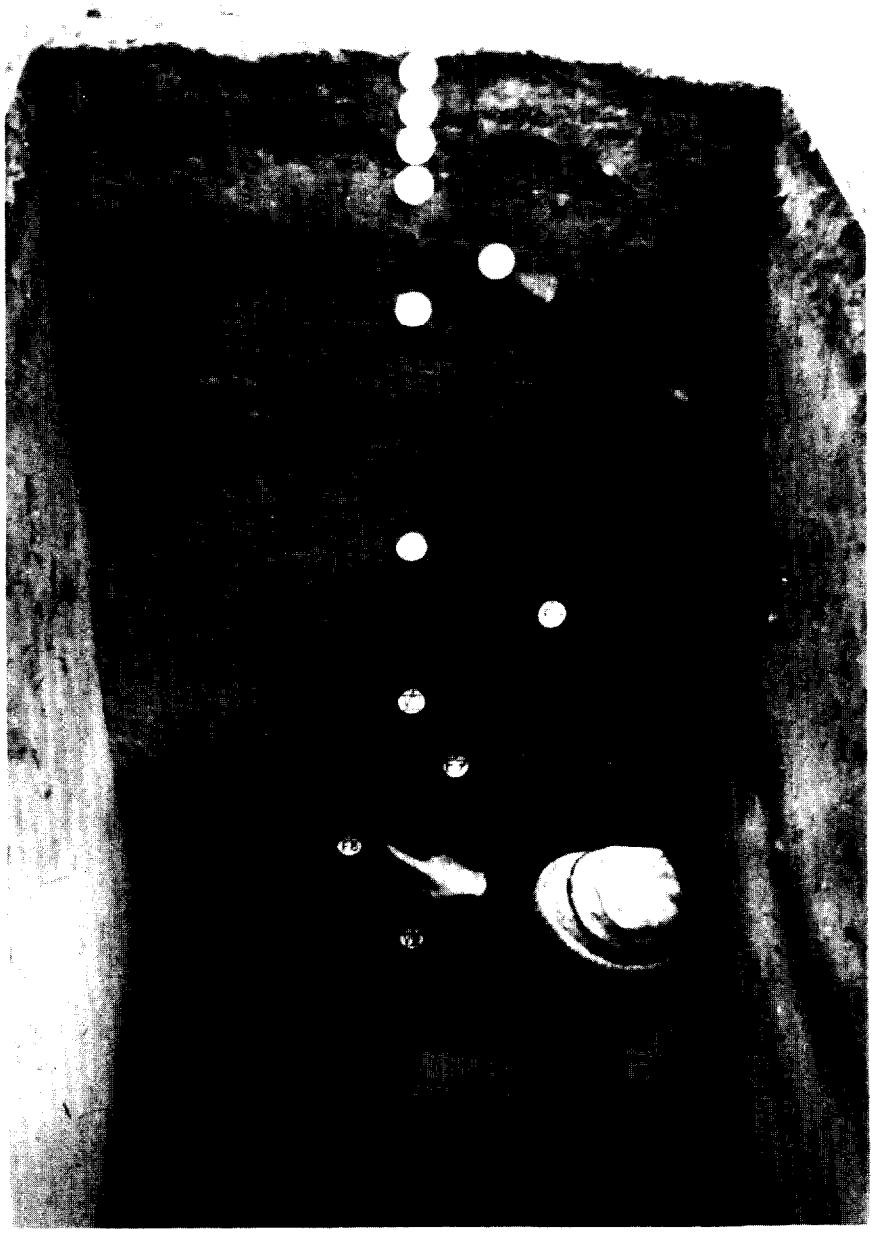
Phase I survey and phase II testing has revealed the presence of aboriginal populations in this area dating from at least the Early Archaic period, ca. 6000 B.C. onward throughout much, if not all of the subsequent prehistoric and early historic periods. Although some sites proved rich in aboriginal cultural remains, many appear to have been small, ephemeral camping locations consisting of a light scatter of cultural deposits. It is also possible that in some cases erosion has removed most of the cultural deposits and what where once more substantial sites are now limited in content and extent. Of the 29 sites located within the project area, thirteen can now be attributed to known periods of prehistory and history. The other sites can be only attributed to aboriginal activity since no temporally diagnostic artifacts or radiocarbon dated samples were recovered from them.

Although no evidence of Paleoindian period remains were recovered from the project area, Early and Late Paleoindian period peoples were clearly present in the Magalloway River at the headwaters of the Androscoggin River drainage by ca. 8500 B.C. (Gramly 1982). Evidence from the Michaud site, a Paleoindian period encampment located only about 13 km southwest of the project area, indicates that there was indeed human occupation in the local area during this early period (Spiess and Wilson 1987).

Evidence of the first human occupation of this specific portion of the Androscoggin River drainage was obtained from two sites within the project area. Early Archaic period remains were obtained from the deeply stratified Cape and Wood Island sites. At the Cape site a radiocarbon date of 8050 ± 90 B.P., or 6100 B.C. (Beta-24768) was obtained from a cultural feature in deep alluvium containing lithic flakes and calcined bone fragments, while at the Wood Island site charcoal from a stratified feature also in deep alluvium containing lithics and calcined bone fragments returned a date of 8040 ± 80 B.P., or 6090 B.C. (Beta-24772) (Figure 2). No traditionally recognized temporally diagnostic artifacts were recovered from these features during the limited testing done at each site to date.

Middle Archaic period remains were also recovered at the Wood Island site where charcoal associated with lithic tools and debitage returned a date of 6900 ± 80 B.P., or 4950 B.C (Beta-24771). This hearth fea-

Figure 2. Wood Island site Feature 8, dated 8040±80 B.P. (Beta-24772).



ture is stratigraphically positioned in alluvium above feature 7 dated to the Early Archaic period. Again no temporally diagnostic artifacts have been recovered to date in association with this feature.

While no dates for the Late Archaic period in the project area are currently available, a gouge fragment from stratified deposits at the Moyer site, and a large biface fragment from the eroded Irish site are likely attributable to this period, ca. 4000-1000 B.C. The biface is more specifically attributable to the Susquehanna tradition, ca. 1800-1000 B.C., on the basis of its morphology and technology (e.g., Borstel 1982; Bourque 1976).

Early Woodland (Ceramic) period remains were recovered from stratified deposits at three sites in the project area, including the Vinette I, the Cape, and the Wood Island sites, on the basis of classic interior/exterior fabric paddled ceramics (e.g., Doyle et al. 1982) (Figure 3). Although not directly dated at these sites, the ceramics allow these sites to be cross-dated to the period ca. 1000-100 B.C.

Middle Woodland (Ceramic) period remains were recovered from eight sites in the project area. Aboriginal decorated ceramics, including pseudo scallop shell, rocker dentate, simple dentate, and cord-wrapped stick and circular punctate decorated forms have been identified from these sites. Two radiocarbon dated features attributable to the Middle Woodland (Ceramic) period were identified at the Cape and Wood Island sites. Feature 3 at the Wood Island site produced a date of 1570 ± 70 B.P., or A.D. 380 (Beta-24770), and feature 1 at the Cape site produced a date of 1090 ± 80 B.P., or A.D. 860 (Beta-24776). A side notched projectile point made of gray chert was found in association with the latter date of A.D. 860 at the Cape site (Figure 4).

Late Woodland (Ceramic) period remains are also represented at eight sites in the project area. Aboriginal ceramics, including incision decorated, and exterior fabric paddled shell and grit tempered forms, were recovered from these sites (Figure 5). Two sites preserve features which returned dates assignable to the Late Woodland (Ceramic) period. Feature 2 at the Wilson I site was radiocarbon dated to 890 ± 50 B.P., or A.D. 1060 (Beta-24765), and feature 2 at the Cape

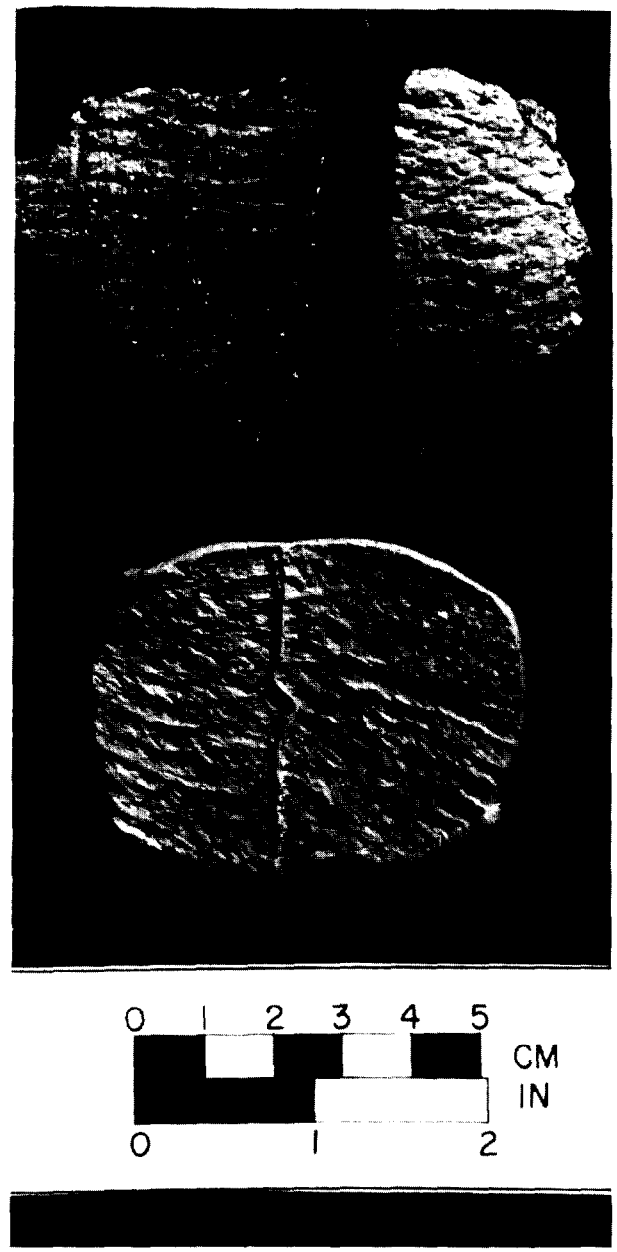


Figure 3. Vinette I ceramic sherd from the project area, with a positive impression of the cord-wrapped paddled exterior finish.

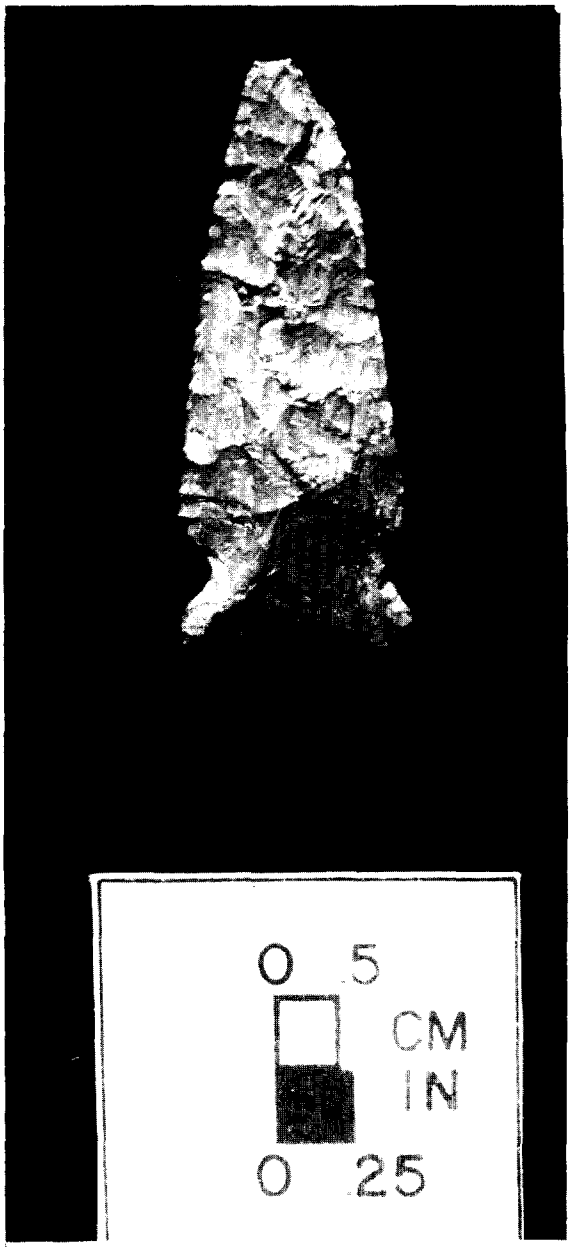


Figure 4. Side notched point made of gray chert, associated with Feature 1 (1090±80 B.P., Beta-24776) at the Cape site.

site returned a date of 720 ± 70 B.P., or A.D. 1230 (Beta-24767).

Contact period remains were recovered from the Quartz Scraper site where shell tempered ceramics and European seed beads were found in a radiocarbon dated hearth feature. Although feature 2 returned a date of 1190 ± 60 B.P., or A.D. 760 (Beta-24769), the associated artifacts indicate that this date may be related to an earlier occupation of the site.

The one historic Euroamerican site, or more properly site district, in the project area, the former village of Keens Mills, preserves several intact cellar holes and the foundations of associated outbuildings (Figure 6). Out of a larger sample, remains of eight structures and several wells were mapped during the phase II testing project. The village appears to have once been a self-sufficient and thriving community, particularly during the late nineteenth century. The historic flood of 1936 destroyed many of the homes, and ultimately resulted in the abandonment of the village after CMP bought up the property during construction of the Gulf Island/Deer Rips Project in the late 1930s.

As a result of the phase II testing project, over 5500 aboriginal lithic artifacts, 304 aboriginal ceramic sherds, and 5200 fragments of calcined bone were recovered from the tested sites. In addition to these artifacts, a minimum total of 23 cultural features, including both hearths and occupation surfaces, were identified at nine of the sites.

A comparison of flake raw material types from the radiocarbon dated features reveals a dominance of quartz throughout the Archaic period and subsequent Woodland (Ceramic) period within this portion of the Androscoggin River drainage. A total of 519 flakes were recovered from known Archaic period features and the following raw material breakdown was obtained after analysis: 73.6% white quartz, 20.4% clear quartz, 1.7% rhyolite, 1.5% graywacke, 1.7% quartzite, 0.8% argillite, and 0.2% of an unknown material type. The quartz and clear quartz materials obviously dominate the Archaic period flake samples.

A similar pattern is evident in the flake samples recovered from radiocarbon dated

Figure 5. Late Woodland ceramics from the project area.

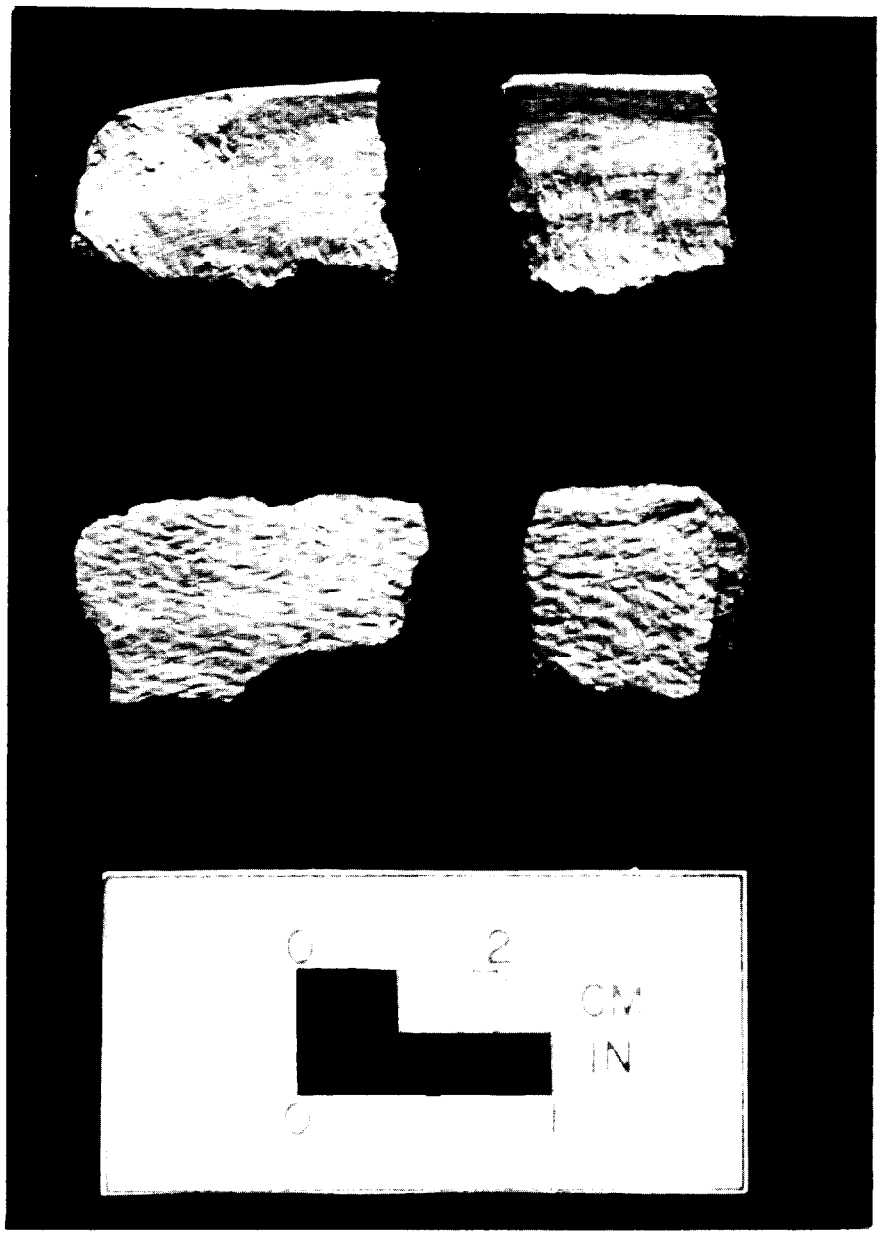
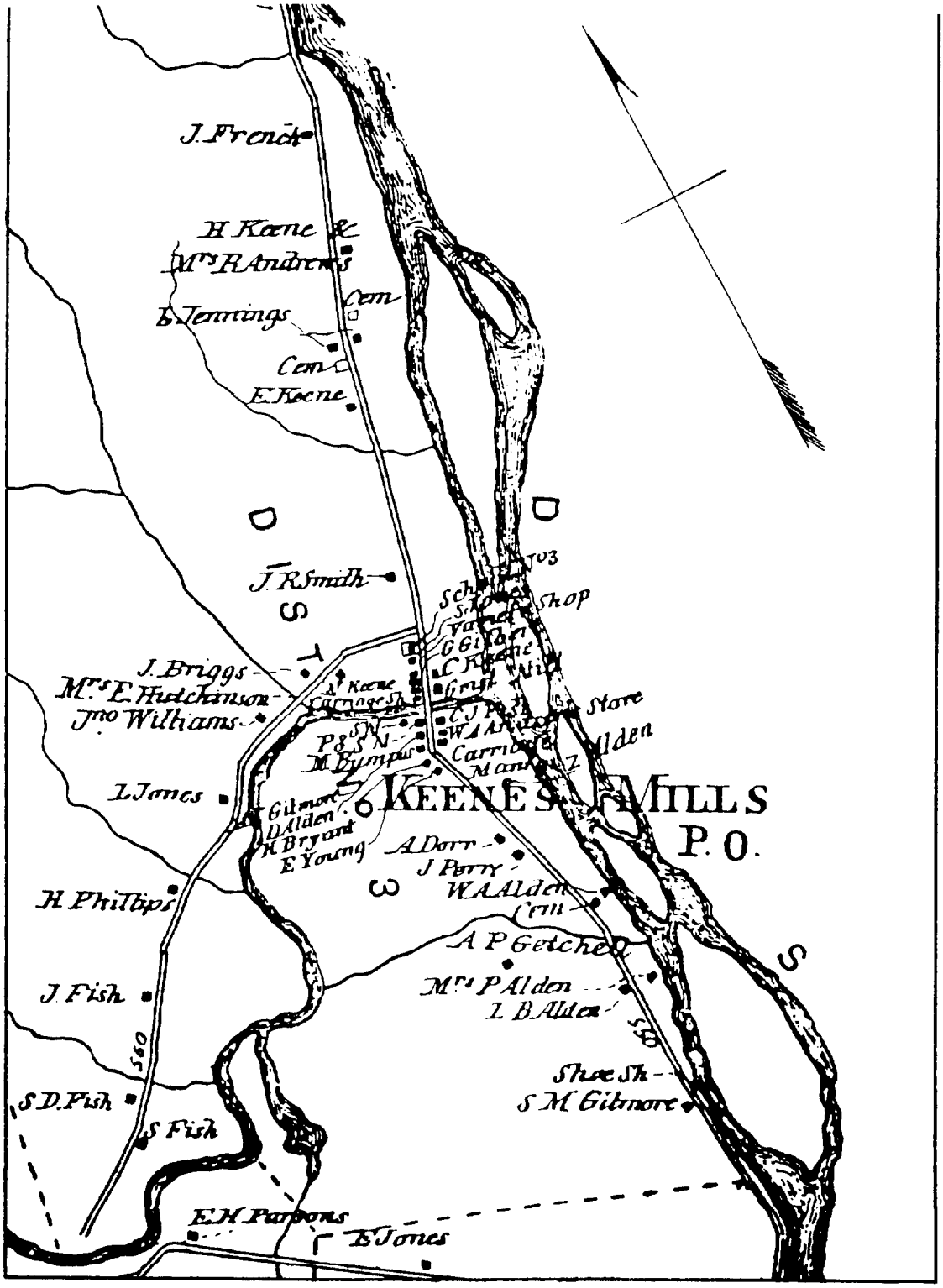


Figure 6. The former village of Keene's Mills, Turner. From the 1873 Atlas of Androscoggin Co., Maine.



Woodland features. A total of 1,426 flakes were obtained from features associated with the Woodland period, which includes 78% white quartz, 13% clear quartz, 4.9% rhyolite, 1.8% felsite, 1.5% chert, 0.6% quartzite, and 0.1% graywacke. This heavy reliance on quartz through time suggested by the samples from the Archaic and Woodland (Ceramic) period does not necessarily reflect patterns known elsewhere in the Northeast (e.g., Dincauze 1976; Petersen 1989; Petersen and Spiess 1988). Considering the general availability of quartz within the Androscoggin River drainage, it is not an unexpected pattern of raw material usage. A similar pattern can be seen in the Saco River drainage to the south where both quartz and clear quartz dominate in samples attributable to both the Archaic and Woodland (Ceramic) periods (Cowie and Petersen 1989).

This reliance on quartz throughout the Archaic and Woodland (Ceramic) periods makes the utility of a specific tool form, the quartz core/uniface scraper, which has been proposed as a diagnostic of the Early and Middle Archaic periods, questionable at least within the Androscoggin and Saco River drainages where quartz represents the dominant raw material type and where Woodland period features have produced similar tools. This tool form may still be a reliable diagnostic elsewhere, however (e.g., Petersen et al. 1986).

Evidence of long distance trade is based on the presence of exotic lithic raw material types which are assumed to be not available locally within the Androscoggin River drainage. Raw materials, including Mt. Kineo rhyolite, Munsungun chert, Vinalhaven rhyolite, and Cheshire quartzite are apparently represented in small quantities within the available artifact inventory from the project area. Although the available samples are relatively small, there appears to be an increase in the use of chert materials during the Woodland (Ceramic) period, which is a pattern seen elsewhere in the Northeast (Petersen 1989). Additional evidence of aboriginal trade comes from the Quartz Scraper site where European trade beads were recovered from a Late Woodland (Ceramic)/Contact period hearth feature. Thus, cultural interconnections seem characteristic of this area over a relatively long period of time.

SITE DISTRIBUTION AND GEOMORPHOLOGICAL SETTING

The distribution of the known archaeological sites reveals an often seen pattern of aboriginal land use. During all periods of aboriginal occupation of this area, it is clear that the confluence of the Androscoggin River and the Nezinscot River, and its confluence with Allen Stream were highly favored. Of the 23 aboriginal sites present along the margins of the Gulf Island head pond, 55% are located within 1.0 km of this confluence area and 15% of the sites are located on the confluence of the Androscoggin and Dead rivers at the northern end of the project area. It should be again emphasized that the total number of sites originally present along the margins of the head pond is not necessarily represented in the available sample due to sampling biases and the relatively great degree of inundation there. Nonetheless, this apparent site concentration around these confluences is expected. It is a pattern of aboriginal land use that has been documented repeatedly in the Northeast with such strategic settings favored over most other settings (Cowie and Petersen 1989; Petersen et al. 1986; Petersen 1989).

The geomorphological settings of the sites also reveals an apparent pattern of preference for site location. For the most part, archaeological deposits are located on alluvial levee formations and appear to be concentrated on the riverside and levee crests in each case. Very few cultural remains were located on the back sides or within the swale areas behind the levee formations.

Of particular interest, Archaic period components are largely located on T2 terrace formations where the soils are classified as spodosols, while Woodland (Ceramic) period components are more often located on the more recent T1 terrace formations with younger soils. These younger alluvial terrace soils are classified as inceptisols. This same pattern has also been observed on the Saco River (e.g., Brakenridge 1989).

Evidence from the two better understood multi-component stratified deposits at the Cape and Wood Island sites indicates that the cultural remains lie on rather well pre-

Figure 7. Bank erosion at the Jennings Island I site (ME 36-33). Note the crewmember standing in the upper right, for scale.

served buried soil surfaces or paleosols, two of which have been dated to the Early Archaic period. Based on data from these sites, the alluvial deposition on these T2 terraces can be characterized as relatively slow (Ferring 1986:261). Approximately 1.5 meters of fine alluvial sands have been deposited over the last 8,000 years at these two sites and it appears that relatively little of this deposition has occurred during the last 1,000 years. These may represent portions of the abandoned floodplain. Unfortunately, these terraces and other terraces now lie once again within the floodplain and are subject to erosion due to the inundation and water level fluctuation caused by the operation of the hydroelectric dams.

PROJECT EFFECTS

Of the 29 aboriginal sites located within the Gulf Island and Deer Rips head ponds, 28 are situated on alluvial deposits of Holocene antiquity, while one is emplaced on late Pleistocene glacial till. Most of these sites are located on undefended terraces which are within 3 m or less above

Figure 8. An eroded river bank flatwith tree trunks, indicating the original extent of the Moyer site (ME 36-28) before erosion.

the normal levels of the head pond, making them readily subject to erosion. The available site inventory is clearly concentrated towards the upstream end of both head ponds, and as previously noted, almost certainly represents an incomplete record of those sites originally present. Other sites potentially located toward the southern portions of these impoundments are completely inundated even under low water conditions.

Five of the 29 sites are located within the Upper Floodpool zone as defined by the National Reservoir Inundation Study conducted by the National Park Service (Lenihan et al. 1981). These sites are subject to occasional inundation and undoubted erosion caused by heavy spring run-off. The other 24 sites are located within the Shoreline Fluctuation zone, which is defined as that portion of the project area subject to the periodic rise and fall of the head pond. The most destructive erosion of cultural resources is evidenced within this zone, as expected on the basis of the results of the National Reservoir Inundation study.

The fluctuations of the head ponds have caused dramatic ongoing erosion along the margins of the alluvial terraces. Erosion in the form of bank undercutting, bank spalling and mass wasting can be seen along

nearly all the landforms adjacent to the impoundments. It is most serious along their upper reaches where alluvial terraces have not been completely inundated (Figure 7). During periods of low water, tree stumps and eroded flats indicate the preinundation elevation of the river and in some cases allow estimation of original site size prior to reservoir erosion (Figure 8).

Relatively few aboriginal artifacts were recovered from most sites. This may be due, in part, to the ephemeral nature of the sites, or as noted above, the sparse in situ cultural remains may be a reflection of the degree of past erosion. In many cases, the remaining cultural deposits were located on the landward side of largely eroded levee formations at these particular sites. The circumstance suggests that only the original site periphery remains and indeed helps confirm the magnitude of potential threat to the other more intact sites within the project area.

CONCLUSIONS

The results of the Gulf Island/Deer Rips archaeological survey and testing studies clearly demonstrate the cultural richness and significance of this previously unstudied portion of the Androscoggin River drainage. It is now apparent that this area has been the scene of human occupation from the Early Archaic period onward throughout most, if not the entire Holocene epoch thereafter. It is expected that some degree of phase III mitigation excavation will be conducted at eight of the 29 sites over the next decade or so where their integrity and significance merit attention due to ongoing erosion.

On the broadest level, archaeological research in Maine has largely focused on coastal localities in the past, which of course is only one broad ecological setting potentially significant in terms of aboriginal culture history. Other broad areas, including riverine settings such as those present within the Gulf Island/Deer Rips Project area, may well preserve evidence of completely distinct lifeways, or at least, may preserve aspects of lifeways different than those on the coast. In fact, recent research in the Saco and Penobscot river drainages in southwestern and central Maine has begun to demonstrate the wealth of information available from interior sites of any sort (e.g., Belcher and Kellogg 1987; Cowie and Petersen 1989; Petersen et al. 1986). This is particularly the case for the earliest periods of Maine prehistory before 3000 B.C., since evidence of this antiquity has been largely destroyed along the coast due to sea level rise.

It is likely that additional research in this portion of the Androscoggin River drainage and other Maine river drainages can be used to formulate a long needed model of interior aboriginal adaptation, given the relatively good state of preservation and the apparent diversity there in terms of site size, content and setting. This reconstruction should be significant beyond local contexts and will be useful for comparison with the few other such studied areas in the Northeast.

ACKNOWLEDGEMENTS

This article represents a revised version of a paper first presented at the 54th Annual Meeting of the Society for American Archaeology in Atlanta, Georgia, April 1989. The author would like to thank the University of Maine at Farmington for the financial support to attend this meeting. Also at UMF, thanks go to the many individuals involved in the Gulf Island/Deer Rips Project. Without their hard work and enthusiasm for archaeology, the prehistory and history of this portion of the Androscoggin River might be less well understood. Jeffery Parker prepared the graphics which appear in this article. James B. Petersen provided invaluable editorial support during the preparation of this article and continues to be an inspiration through his enthusiasm and dedication to the prehistory of the Northeast. Finally, thanks goes to Central Maine Power Company which provided funding for the Gulf Island/Deer Rips Project archaeological work summarized here.

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Study Unit I: Fluted Point Paleoindian

Deborah Wilson and Arthur Spiess

Editor's Note.

The concept of archaeological site significance is one of the foundations of modern cultural resources management archaeology as administered by the Secretary of the Interior through State Historic Preservation Offices. Significant archaeological sites are eligible for listing in the National Register of Historic Places, and eligible for various protection plans under federal and state law. Significant archaeological sites deserve professional archaeological attention in the form of controlled excavation and data recovery sometime in the future. A large Paleoindian campsite or an intact 17th century farmstead are without doubt significant archaeological sites in Maine. A 19th and 20th century garbage dump is an archaeological site, but few would argue it is significant. What about the majority of sites, on which there might be varying legitimate opinions about significance? Obviously, some standard is necessary.

The most often used significance criterion for listing archaeological sites on the National Register of Historic Places is Criterion D, which states in part that a site is significant if it will "yield information important in prehistory or history" (Anonymous 1986:1). How do we use this criterion to decide upon the significance of the majority of archaeological sites? In an effort to standardize significance decisions within each state, and to provide a reasonable basis for them, the National Historic Preservation program requires that each state prepare a document called a "State Plan". Among other things, the State Plan will discuss the current knowledge of archaeology within the state and neighboring states, summarize the current questions that are being asked by archaeological researchers in the state and region, and present concrete criteria by which archaeological sites may be judged for their contributions to the study of prehistory or history.

The Prehistoric portion of the Maine State Plan for Cultural Resources will contain a series of a dozen or so essays called "Study Units." Each Study Unit will focus on a particular prehistoric time period or cultural unit. The core of each Study Unit contains eleven Research Significance Themes. These Themes are general topics around which archaeologists can organize most of their data and theories.

If a site can contribute substantive data to one or more Research Significance Themes, then it will "yield information important in prehistory." At the end of the Study Unit, under a section entitled "Evaluation", we list definite attributes which a site must have to contribute significant data, and thus be judged "significant." Any given archaeological site (or portion of a site) will be judged significant if it has the attributes listed in the Evaluation Section of one or more Study Units, and any other attributes that might be applicable in a particular geographic area of the state.

Each Study Unit is considered to be a draft, which is based upon current knowledge. Each will have to be revised periodically, as our knowledge increases. The production of these Study Units is considered by the Maine Historic Preservation Commission and the Department of the Interior to be a process which involves both professional and public comment. The draft Fluted Point Paleoindian Study Unit presented below was first distributed to Maine's professional prehistorians in the fall of 1989. The publication of this document in the Maine Archaeological Society Bulletin

The Maine Archaeological Society Bulletin 30:1:15-31 (1990)

constitutes a request for comment by interested members of the public. Comments can be addressed directly to Dr. Arthur Spiess, Maine Historic Preservation Commission, State House Station #65, Augusta, Maine 04333. Hopefully, the Maine Archaeological Society and the Maine Historic Preservation Commission will be able to present other draft study units on a regular basis.

INTRODUCTION

The Paleoindian period (ca. 11,000-10,000 BP) marks initial aboriginal use of the State of Maine. Glacial ice covered most of Maine until ca. 13,000 BP. Following the decay of this massive ice sheet, marine waters innundated much of south-central Maine, all of the present coastal areas, and well inland up the major river drainages in western Maine. As these marine waters regressed in response to isostatic rebound of the land surface, glacial and marine derived soils were open to vegetative colonization and, somewhat later, to colonization by faunal communities. Until floral and faunal communities became well-established, probably ca. 11,500 BP, human use of the State of Maine would not have been possible.

Paleoindian assemblages similar to those found in Maine have been identified in many parts of North and South America, generally dating between 11,500 and 10,000 BP. The diagnostic attributes of these assemblages include the fluted point; several other uniformly distributed tool types including spurred endscrapers, sidescrapers, and gravers; the consistent use of high quality cryptocrystalline stone, often exotic (non-local), for toolmaking; and consistently high quality craftsmanship in lithic manufacture. The broad geographic distribution of Paleoindian materials, coupled with the paucity of well dated aboriginal materials known to predate the presence of fluted point using peoples, has led researchers to postulate a major and possibly culturally unique period of human expansion during the late Pleistocene.

Three events occurred during the late Pleistocene which are complexly interrelated. First, the climate changed quickly and radically, causing glacial melt and a continent-wide reorganization of floral and faunal communities. Second, the late Pleistocene is a period marked by the extinction of many species of fauna, some of extremely large size, that were not replaced by new types. During the last part of the period, fluted point-using Paleoindians appear over much of North and South America.

Many Paleoindian tools, particularly in the west where climatic and soil conditions are conducive to bone preservation, have been discovered in association with the remains of extinct fauna including mammoth. This association, coupled with the long-distance transport of high quality lithic material for tool-making characteristic of the period, has led researchers to characterize Paleoindians as free-wandering large game hunters. The broad geographic uniformity of Paleoindian assemblage attributes has suggested equal uniformity in adaptive patterns.

As Paleoindian data accumulate, several general research themes must be addressed for the period. First, does the widespread and almost simultaneous appearance of fluted point assemblages across two continents signal large scale and rapid movement of people, or does the appearance of Paleoindian materials mark the diffusion of a very successful technology to indigenous, perhaps low density populations? (These populations are not presently visible archaeologically.) Second, we need to seek the factors, cultural or environmental, that spurred either large scale population expansion or rapid technological diffusion, coupled in either case with dramatic population increase. Third, while the inter-relationship of environmental change, faunal extinctions and the appearance of Paleoindians during the late Pleistocene has received much attention in the literature, no definitive explanations have as yet been forthcoming. This important topic must be continually addressed, for it is likely that the answers to the former questions are directly linked to such an understanding. Finally, as noted earlier, Paleoindian assemblages from a broad geographic area share many characteristics. Does the apparent uniformity in lithic technology and possibly lithic procurement strategy connote an equal uniformity in the Paleoindian adaptive pattern and cultural system? These questions are general, yet each Paleoindian site that is

excavated and analyzed contributes valuable information toward answering them.

Fluted points were first recognized as very "early" in the sequence of aboriginal occupation of the Americas in the 1920's when the Folsom Site in New Mexico was located and excavated. At that time radiocarbon dating was unknown, and the great antiquity of Paleoindian materials was not suspected. Subsequent to initial identification, Paleoindian materials were recognized in many other areas. In the west, an early form of fluted point, termed "Clovis" after the site of first discovery, was found in association with the remains of extinct megafauna. Folsom fluted points, associated with larger assemblages and bison kills, were thought to postdate the earlier Clovis assemblages. The early identification of fluted point assemblages in the west and their associated faunal remains has shaped the interpretive framework used in Paleoindian studies to the present.

In the Northeast, the record of Paleoindian presence in the area began in the 1940's, when Ritchie (1944) produced a synthesis of fluted point data for the Northeast. At that time there were no fluted points known for either Maine or New Hampshire, with the highest incidence in New York, the area of Ritchie's research. By the 1950's, the Bull Brook site, a very large Paleoindian site in northeastern Massachusetts (Byers 1954), and the Reagen site, a late Paleoindian site located in western Vermont (Ritchie 1953), had been discovered. During the 1960's the Debert site was reported in Nova Scotia (MacDonald 1985). By this time, radiocarbon dates had been obtained on several Paleoindian assemblages in the west and the great antiquity of the Paleoindian period had been established. Radiocarbon dates derived from charcoal from the Debert site yielded an average date of 10,500 BP. These dates placed the New England-Maritimes region Paleoindian assemblages somewhat later than the earliest assemblages from the west but contemporaneous with others.

A letter (personal communication Jordan to Bourque 1974) between archaeologists working in Maine during the first half of the 1970's reveals that isolated fluted points had been identified within the borders of the State by that time, but it was not until the latter part of the decade that an actual Paleoindian site was discovered. The first Paleoindian sites to be discovered in Maine were quarry workshop sites located near the Chase-Munsungan Thoroughfare in northern Maine (Bonnichsen et al 1982). Subsequent to these discoveries, a number of other Paleoindian sites have been identified and, in most cases, at least partially excavated. These include the Vail site, a large habitation site situated in the Magalloway Valley of western Maine, and numerous smaller habitation sites, two killing grounds and a stone cache in the same vicinity (Gramly 1982, 1984, 1988a); the Michaud and Lamoreau sites (Spiess and Wilson 1987), the former a small habitation site and the latter possibly an associated hunting stand, both located in Auburn, Maine less than a kilometer from one another; and the Dam site (Wilson and Spiess 1988), a small habitation site in Wayne, Maine. In addition, several other possible site locations are known and numerous isolated fluted points (Spiess and Wilson 1987) have been recovered from various locations within the state boundaries.

Prior to the identification of Paleoindian sites in Maine, little research effort was accorded to the Paleoindian period. Archaeologists had no basis for forming predictive models of site locations and had abundant work elsewhere. The diagnostic artifacts that were known were related to a "normative" Paleoindian type that was originally based on the more numerous data from the west, although certainly the issue of a distinct eastern Paleoindian adaptation had already been raised (Byers 1954). However, the general trend was to look for similarities (i.e.,uniformity) that would link the Maine materials, culturally and temporally, with Paleoindian assemblages elsewhere.

The most recent analyses of Paleoindian sites in Maine (Bonnichsen 1982; Gramly 1982, 1988a; Spiess and Wilson 1987; Wilson and Spiess 1988), inspired by new cultural and paleo-environmental data from Maine and New England and by a wealth of new Paleoindian data elsewhere, have begun to expand the scope of Paleoindian research themes in the State. Importantly, Paleoindian regionalization within a restricted area that includes Massachusetts, New

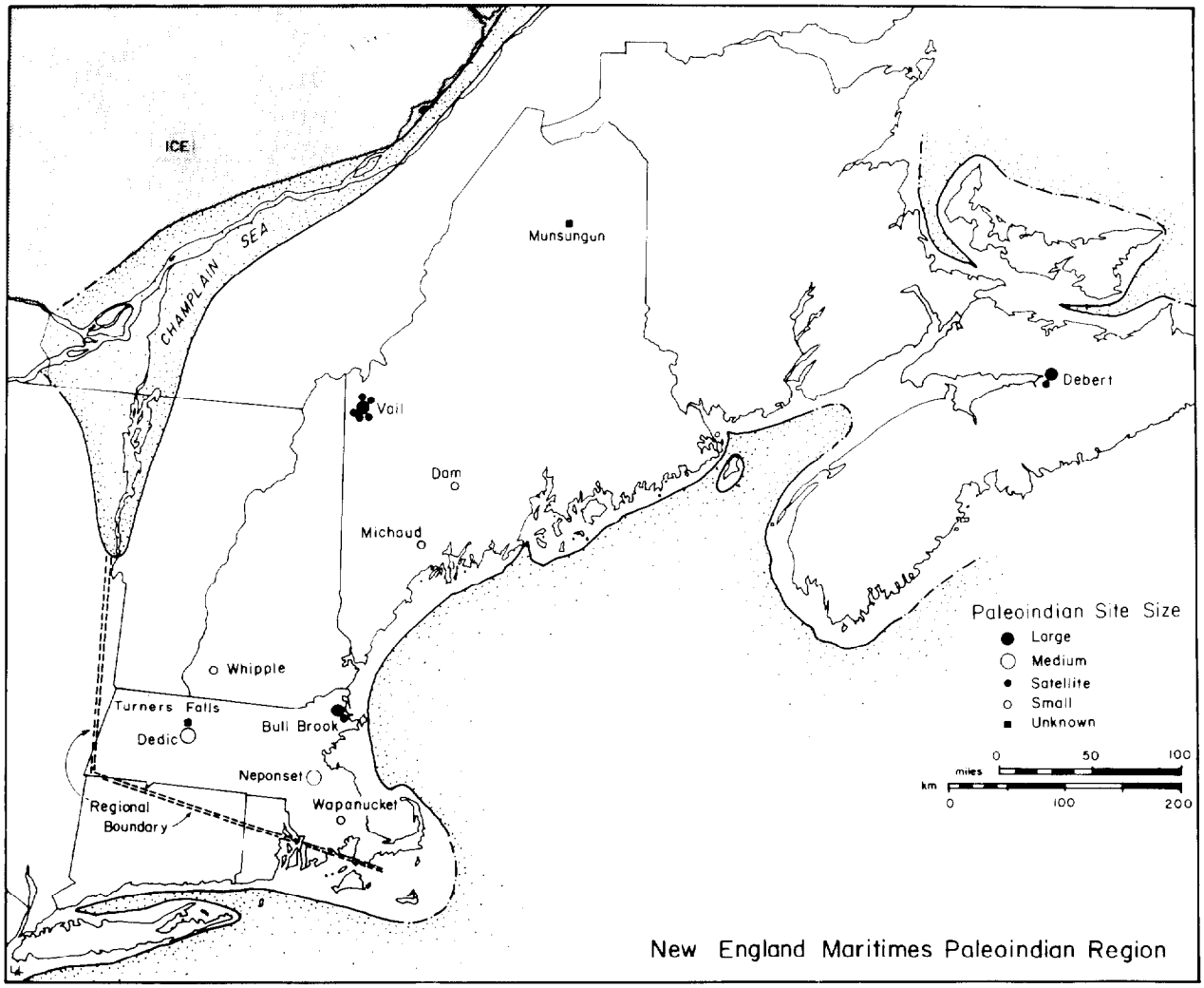

Figure 1. The New England-Maritimes Paleoindian region (after Spiess and Wilson 1987).

Hampshire, Vermont, Maine, New Brunswick and Nova Scotia has been noted (Spiess and Wilson 1987), based on the distribution of the limited number of known lithic materials utilized by Paleoindians for tool-making. Similar Paleoindian regionalization has been postulated for other areas in the northeast, including New York (Gramly 1988b), the Great Lakes (Storck 1988), and the mid-Atlantic States (Meltzer 1984). The identification of Paleoindian use of specific regions allows researchers to examine the possibility of distinct regional adaptive patterns based on the structural properties of different environments as well as to examine change through time during the Paleoindian period.

In the New England-Maritimes region, Wilson and Spiess (1988) have produced a chronological scheme for Paleoindian use of the region that includes three phases. The earliest phase involves an entrant or exploration stage. Since environmental conditions precluded human use of the region prior to approximately 11,500 BP, it is likely that fluted point-using peoples were the first people to settle here. While it is generally inadvisable to seek examples of unique arch-

aeological events, the clean slate of human occupation in the region prior to the entrance of fluted point-using peoples provides a possible exception to the rule. To date a single site, the Dam site (36.17), may represent this early phase of the Paleoindian sequence here. Fluted points from the Dam site are typologically early in any sequence and are similar to Clovis points in the west. The sources of the lithic materials present in the Dam site collection are widely separated. Materials identified as coming from the New England-Maritimes region include Munsungan chert from northern Maine, Champlain Valley chert and Cheshire quartzite from Vermont and possibly chalcedony from Nova Scotia. Extra-regional materials include chert from New York and Pennsylvannia. It has been hypothesized (Wilson and Spiess 1988) that Paleoindians made broad reconnaisance of unoccupied regions, "mapping" the location of lithic sources as well as other resources in order to determine the feasibility of settlement in a given area. The Dam site collection is suggestive of such exploratory behavior.

A second phase in the Paleoindian chronological sequence proposed for the New England-Maritimes region is a colonization phase. Colonization implies the occupation of a given space, or, as defined here, a region. Typologically, this phase is characterized by fluted points similar to those found at the Bull Brook site. These fluted points display many Clovis characteristics with the notable addition of the Folsom method of fluting by striking the channel flake from a prepared "nipple," a method generally producing a longer flute scar. Sites displaying this type of fluted point are found in Massachusetts (Bull Brook, Bull Brook II, Wapanucket), New Hampshire (Whipple and possibly others), and Maine (Michaud and Lamoreau). Isolated fluted points of this style are found in all of the aformentioned states as well as Vermont and in New Brunswick, Canada.

It is presently unknown whether or not Paleoindian peoples followed a geographically repetitive seasonal round at this point, or whether they practiced a focal or generalized subsistence pattern. It seems likely that the colonization phase was a period of cultural adjustment to the particular environmental characteristics of the New England-Maritimes region.

A third phase, characterized by increasing regionalization, is exemplified by sites related to the Vail and Debert assemblages. The distinctive fluted points in these assemblages are found largely in the northern part of the New England-Maritimes region, although scattered examples exist along the northern rim of Paleoindian distribution as far west as the Great Lakes region. This distribution is in sharp contrast to the very general distribution of fluted points typical of the colonization or Bull Brook phase of the sequence. In addition, the lithic sources utilized by peoples at Vail and Debert and related sites do not include the more southerly lithic sources utilized by Bull Brook related peoples. A northward population shift is postulated to coincide with a northerly shift of the treeline as ameliorating climatic conditions caused a closure of previously open forest and shifts in desireable game habitat.

This chronological sequence is still in the formative stages and it is anticipated that adjustments will be necessary as data accumulate. Nonetheless, it provides a framework for interpretation of new Paleoindian data and a basis for classifying Paleoindian materials. Several research themes are suggested by the concept of a Paleoindian chronology: 1) If evidence substantiates the attribution of certain sites to the entrant or exploration phase, what can we learn of the pattern of such behavior i.e., did Paleoindians make broad reconnaisance of unoccupied territory, "mapping" the location and nature of resources, or did they "creep" into unoccupied territory, edging cautiously into the unknown? 2) Can we see evidence of increasing regionalization beyond a simple difference in typological attributes of fluted points and the distribution of sites and lithic sources i.e., does the internal patterning of sites as well as the distribution of certain site types across the landscape for any phase suggest changes in adaptive patterns or other cultural traits? 3) Can we correlate fine-scale environmental change with perceived range changes of Paleoindian groups? 4) Can we define the transition from classic Paleoindian to late Paleoindian and early Archaic more clearly.

These questions and probably others still unprovoked remain to be answered. In the following several paragraphs a summary is provided of the currently known Paleoindian site types. At present there is no evidence of chronological change in Paleoindian site types that may possibly be used to subdivide the current unitary concept of "Paleoindian site."

Any definitive subdivision of Paleoindian site types is problemmatic given the present knowledge of the Paleoindian settlement pattern in the New England-Maritimes region. At present no formal subdivision is made for the more inclusive idea of a Paleoindian habitation or camp site. A general scheme, based on site size with some consideration of function, is presented here, with the expectation that it will be revised as additional data on the period accumulates. A list of suggested types and their currently known locational attributes is presented below.

Large site or base camp. Several large Paleoindian sites, including the Vail site in Maine, the Bull Brook site in Massachusetts and the Debert site in Nova Scotia, are known in the region. These sites appear to represent places of whole band or multiband aggregation, probably for an extended period of time (one or more months). The ability to aggregate in one location is dependent on the availabilty of resources sufficient to feed a large number of individuals. Thus, large sites probably represent places where game was plentiful, although the presence of game may have facilitated aggregation rather than provided the cultural reason for it.

Bull Brook, Debert and Vail are all located on sandy soils, the former two associated with wetlands and the latter associated with an intermontaine valley, stream and kettle hole. Caribou bone was recovered from the Bull Brook site, and a caribou hunting focus has been postulated for all of these sites (Gramly 1982; MacDonald 1985; Spiess, Curran and Grimes 1985).

Small Site: Small sites are representative of population dispersal, for which there are several possible explanations, any or all of which may be correct. First, the population may have dispersed in small family groups during seasons when resources were scarce or of low incidence in any one location. Second, task groups may have left a base camp to obtain or locate resources for a larger group. Third, small groups may have moved for social, political or ideological reasons that may not be visible archaeologically.

Paleoindian sites of small size include Bull Brook II, Dedic, Hanneman, Neponset and Wapanucket in Massachusetts, Whipple in New Hampshire, Michaud, Dam, Munsungun sites and small sites in the Magalloway Valley in Maine. The sites at the Chase-Munsungun Thoroughfare are quarry-workshop locations, and at present the size and composition of the groups who occupied them is unknown. Bull Brook II and the small sites in the Magalloway Valley are located in proximity to large sites, Bull Brook and Vail, respectively. It has been postulated (Spiess and Wilson 1987) that the smaller sites were occupied prior to the larger encampments, with inhabitants identifying resources that led to aggregation in the area. Alternatively, the smaller sites, particularly in the case of Bull Brook II, may represent special activity areas utilized during occupation of the large sites. Other sites, including Michaud, Whipple and Dam, have not been identified with a specific resource such as lithic material or in proximity to a large site. These sites may represent groups in transit between resources or social groups, task groups, or a dispersal phase in the settlement pattern where groups located resources on an encounter basis.

Most of these sites are located in sandy soils in proximity to some form of stream or wetland. On a macro-environmental level, they are located in diverse areas, some in the coastal lowlands and others deep in the interior. As more small Paleoindian sites are located, the following questions can be addressed: 1.Can we define the range of small types better, and correlate these findings with an overall settlement pattern? 2.Can we use the distribution of the sites to establish the range of sub-regional groups and the movement corridors within ranges? 3.Can chronological change be denoted, among other things, by changes in the settlement system?

Ephemeral sites: Ephemeral sites (low to extremely low artifact density) display po-

Figure 2. Some Paleoindian stone tools from Maine. At right are three fluted points, and a broken fluted point preform from the Michaud site (Spiess and Wilson 1987). At left is a large biface from Aziscohos (see Spiess n.d.).

tential Paleoindian affiliation by virtue of their location on sandy soils adjacent to a wetlands despite a lack of diagnostic artifacts. At least three of these ephemeral sites are now known: 12.23 in Casco has yielded a diabase core and flake industry similar to that seen at the Michaud and Lamoreau sites; 36.6 in Leeds has yielded a chert endscraper with a spur on the bit characteristic of Paleoindian endscrapers; 51.3 in Farmington has yielded 22 chert flakes after complete excavation of the area. All of these sites occur in areas of duned sands. They are significant in that they provide examples of the lowest level of archaeologically visible site use by Paleoindians, and they can be used in the reconstruction of movement corridors within a Paleoindian range.

Isolated Findspots: Many examples exist of Paleoinidan tools, principally the diagnostic fluted point, found on the ground surface with no associated assemblage or site context. The presence of these tools appears to result from random discard, loss, or cacheing (Spiess n.d.). The findspots themselves do not contribute information to an analysis of site types. However, the distribution of the tools across the landscape is significant in that they increase our knowledge of Paleoindian use of specific portions of the region for which there are no presently known sites.

The Paleoindian period ends at the opening of the Holocene epoch, circa 10,000 BP. Geologically, this boundary marks a division between the last ice age and the present interglacial period. In Maine, the transition is characterized by stabilizing environmental conditions. The rapid changes, both in terms of climatic conditions and colonization by plant and animal communities (and later, human communities), that marked the terminal Plestocene slowed and were replaced by the long period of gradual, almost imperceptable change that includes the present. Thus, Paleoindians flourished during a transitional period in earth's history, and many of their distinctive cultural traits did not survive beyond the geological boundary of that time. Remnant characteristics are seen in later inhabitants, suggesting that descendent populations survived the transition, in the process losing many of the distinctive characteristics of their forebears.

IDENTIFICATION

Paleoindian sites in Maine have been located to date under the auspices of several different projects. Chronologically first was Robson Bonnichsen's survey of the Munsungan Lake region (Bonnichsen et. al. 1982), which resulted in the location of two confirmed Paleoindian sites (154.14 and 154.16). Several other sites in this vicinity have been identified as probable Paleoindian sites, although they lack diagnostic artifacts. The two confirmed sites are presently only partially excavated, but they have yielded evidence of multiple lithic reduction episodes, suggesting that the sites functioned in part as quarry workshop locations. It appears that stone was removed from several outcrop locations, at distances of from 1 to 8 km from these sites, reduced into cores or large flakes at the outcrop, and subsequently brought to quarry workshops for further reduction into tool preforms or finished tools. Quarry locations at nearby chert outcrops have been located, but currently no single locus at a quarry has yielded a firm Paleoindian association. Both confirmed workshop sites are located on a kame terrace that was close to the level of water in the Chase Lake-Munsungan Lake Thoroughfare at the time that the sites were occupied. The criteria used to predict site location in this survey, other than proximity to chert outcrops, are unclear from the reports published to date.

A number of surveys for Paleoindian sites have been conducted by R. Michael Gramly in the Magalloway Valley area of western Maine, following the identification of diagnostic Paleoindian tools in an amateur's collection from that area (Gramly 1982;1984;1985;1988a). In the early 1980's, Gramly found the Vail site when he was shown the stone tools collected by Francis Vail from a spot on the shores of man-made Lake Aziscohos. Gramly subsequently excavated the Vail site, recovering approximately 4,000 tools from eight or nine loci. Continuing survey of the area has revealed at least eight more Paleoindian sites in the vicinity, all of them smaller than the Vail site. Significantly, Gramly located two kill sites close to the Vail site, represented only by fluted points and distal fragments of fluted points, several of which were later

refit to bases from the Vail site. In addition, a stone structure, interpreted as a meat cache, was identified at the Atkins site, a site located less than 1 kilometer from the Vail site. Both the presence of killing grounds and a stone cache associated with Paleoindian sites in the Magalloway Valley enhance our understanding of the Paleoindian adaptive pattern in Maine, for neither has been previously recorded east of the Mississippi River.

Gramly surveyed most of the Magalloway Valley, largely identifying additional Paleoindian sites on an encounter basis. Because the fine grained deposits that comprise the Valley floor had been reworked by water and ice action following the flooding of the area by dam construction in the early part of the twentieth century, many Paleoindian materials were visible on the surface. Gramly attempted 100% coverage of the area by walk-over survey, particularly when artifical lake levels were low.

Two Paleoindian sites, the Michaud and Lamoreau sites (Spiess and Wilson 1987) have recently been identified and excavated in Maine as part of project-specific archaeological survey conducted by Maine Historic Preservation Commisssion personnel for the Maine Department of Transportation. Archaeological survey was required when a connector road was proposed between the Maine Turnpike and the Auburn-Lewiston Industrial Park and Airport. Paleoindian artifacts and lithic debris were recovered from an area of duned sand plains in the road construction area (the Michaud site). The site proved to be a small habitation site, particularly significant because of the intact horizontal distribution of most of the cultural material. The Lamoreau site, a probable hunting stand associated with the Michaud encampment, was located during surface reconnaissance of the Michaud site vicinity. It is situated overlooking a bog and stream and the sand plain on which the Michaud site is located. A close relationship between the two sites has been established based on similarities in lithic materials and manufacturing techniques. Both sites are located in sandy soils of marine deltaic origin.

The most recent Paleoindian site investigated in Maine is the Dam site, a site that was initially identified when a hunter recovered several stone tools of probable Paleoindian association in a sandy field in Wayne, Maine. Excavation of the site by Maine Historic Preservation Commission and Maine State Museum personnel revealed a small habitation site comprised of three or four loci and including most Paleoindian tool types. The variety of lithic material obtained from geographically distant sources at the site is astonishing. The location of the site on a sandy surface is significant, for it substantiated the impression that many Paleoindian sites in Maine are located on sandy soils, generally away from major river drainages but often in association with an area of wetlands.

As the correlation of Paleoindian sites and sandy soils became apparent, an informal survey plan was developed by Arthur Spiess of the Maine Historic Preservation Commission to examine areas of exposed sandy soils in South-Central Maine for additional Paleoindian sites. Henry Lamoreau, an avid avocational archaeologist, walked over potential areas, locating the evidence of a totally disturbed Paleoindian site (Desert of Maine, Freeport) and a possible small Paleoindian site (Casco).

Spiess and Wilson (1987: Chapter 7, Appendix 3) have reviewed site location attributes for Paleoindian sites and isolated fluted point findspots in the New England-Maritimes region. Fluted point findspots do not appear to share any locational attribute patterning. The presence of isolated fluted points on the landscape is most often interpreted as a product of random discard or loss, although there is some evidence to refute such an interpretation (Spiess n.d.). Isolated finds do contain data useful in interpreting Paleoindian behavior. For example, the location of the find in relation to other Paleoindian sites and find spots, combined with identifications of lithic material, provide evidence of Paleoindian movement and possibly the nature of regional exchange (Spiess and Wilson 1989a; Gramly 1988b).

Most fluted point Paleoindian habitation sites, on the other hand, share one or more locational attributes. A significant association has been made between Paleoindian sites and sandy, well-drained and sometimes duned soils, usually near an area of wet-

lands. The Michaud, Lamoreau, Dam, and possibly Vail and related sites are located in such areas. Outside of Maine, the Debert site in Nova Scotia, the Bull Brook, Bull Brook II, Dedic, Wapanucket and Neponset sites in Massachusetts, and the Whipple site in New Hampshire are located on sandy soils associated with an area of wetlands. These areas, apparently never used by later aboriginal inhabitants of Maine, often offer high visibility of archaeological remains for several reasons: 1) they are easily recognized on soils maps; 2) deposition subsequent to Paleoindian habitation on these sands has often been limited to minor reworking of the surface sand itself; 3) once cleared of vegetation, the sands move in the wind, uncovering cultural materials that were not deeply buried. The only known Paleoindian sites in the New England-Maritimes region that do not at least partially fit this model are the sites at Munsungun associated with quarry activity. That sites of different size and function occur in similar physiographic situations is noteworthy, and we must allot continuing survey effort to such places.

RESEARCH SIGNIFICANCE THEMES

Research significance themes applicable to the fluted point Paleoindian record are rather limited by the mostly lithic nature of the archaeological record. A brief discussion is provided for each research significance theme.

Theme 1: Culture History. A chronological scheme for fluted point Paleoindian sites has been proposed for use in the Maine-Maritimes region (Spiess and Wilson 1987, Wilson and Spiess 1988, 1989). The sequence is based on projectile point typology and seriation thereof, differential lithic source use and geographic distribution of projectile point types. The primarily typological basis for chronological subdivision of fluted point assemblages in the Northeast is not likely to change because of imprecision in radiocarbon dating and a systematic lack of stratified deposits which contain fluted points. However attention has recently been paid to minority tool type variation in Paleoindian assemblages as chronological/group markers (Ellis and Deller 1988) in the Great Lakes region, an approach that may be applicable in the New England-Maritimes region.

The relevance of Fluted Point Paleoindian occupation to the ethnohistory of Maine's native inhabitants is debatable. Of course, Fluted Point using Paleoindians were the first inhabitants of the State, which was deglaciated just before their arrival. And Paleoindians were definitely Amerindians somehow related to later native Americans. Only a tenuous connection inferred between late Paleoindian and the Maritime Archaic sequence on the south coast of Labrador, and an assertion of the continuity of the Maritime Archaic cultural tradition over millennia has relevance. The vast majority of archaeologists working in the Northeast see too many abrupt changes in technology and lifestyle over the 10,000 years since the close of the fluted point-using era to accept a direct ancestor-descendant relationship with modern Native inhabitants of the region.

Theme 2: Settlement Pattern. Known fluted point Paleoindian habitation sites in the Maine-Maritimes region seemingly exhibit a highly focussed locational preference different from any succeeding group. Sites are found on well drained, fine sandy soils (Spiess and Wilson 1987). There is no evidence of the focus on rivers, lakes and the Maine coast, which characterized all later settlement patterns to one degree or another in Maine. A research topic, then, pertaining to Paleoindian settlement patterns should focus on the question why sandy locations were favored. Perhaps a particular vegetational association was preferred, or perhaps the very well drained nature of these soils was important in the poorly developed drainage environment of the terminal Pleistocene in recently deglaciated areas.

In this document we have indicated the potential for subdivision of sites into types (large camps, small camps, special purpose camps) at some future time. Can we understand differences in site types in terms of correlations between site type and micro/-meso environmental conditions. Such an understanding would greatly facilitate work on fluted point Paleoindian settlement patterns. Workers in the Great Lakes (Storck 1984) have proposed a settlement pattern incorporating back-and-forth annual movements over several hundred kilometers. A

similar annual cycle of movement has been proposed for New England by Curran and Grimes (1989). Both of these hypotheses rest on the assumption that the apparent movement of lithic material by Paleoindians is informing us of movement patterns of most of the Paleoindian population (see various papers in Ellis and Lothrop 1989). In contrast, Spiess and Wilson (1989a) have proposed a logistically organized type of lithic procurement strategy for Paleoindians, which decouples long lithic procurement trips from the movement patterns of most of the Paleoindian population. This is one of the major research topics that must be resolved before further progress can be made on Paleoindian settlement pattern research.

Theme 3: Subsistence patterns. Rather little is known about how Paleoindians in the Northeast fed themselves, primarily because of poor organic preservation on Paleoindian sites. Because the Paleoindian subsistence record is so sparse we must look outside of Maine, and outside of New England in order to perceive patterns. There is some evidence that mastodon were hunted by Paleoindians in the Northeast (Fisher 1984, Fisher and Koch 1983), and that mammoth and mastodon were both contemporaries of fluted point Paleoindians in New England (Oldale, Whitmore and Grimes 1987). The Smith site in New York (Laub et al 1988) has recently yielded a fluted point in definite association with a mastodon (Gramly pers. comm). Most of the faunal remains directly associated with Paleoindian habitation sites in the Northeast, however, consist of calcined bone. Caribou and beaver have been identified at Bull Brook, caribou at Whipple (Spiess, Curran and Grimes 1985), cervid (which could be caribou) at the Michaud site (Spiess and Wilson 1987), caribou, fox, and hare at the Udora site in southern Ontario (Spiess and Storck n.d.), and caribou at the Holcombe site in Michigan (Cleland 1965). This evidence demonstrates that caribou were consistently hunted, and that small mammals (apparently furbearers especially) were hunted or trapped by Paleoindians in the Northeast. There are no fish or bird bones from Northeastern Paleoindian sites, although fish have been identified in Mid-Atlantic region fluted point sites.

The floral record is weak in Maine and the Northeast in general. The charcoal of one berry species has been associated with the fluted point Paleoindian, in a hearth feature at the Michaud site (Spiess and Wilson 1987). As with all arctic/subarctic hunter-gatherers, the fluted point using Paleoindian people of New England probably relied heavily on animal products for meat and furs and ate relatively little vegetable material. There is no hint of extreme economic specialization.

Theme 4: Mortuary Practices. There is no direct evidence of fluted point Paleoindian mortuary practice from the New England-Maritimes area. The Crowfield site in Ontario (Deller and Ellis 1984) has been interpreted as a cremation burial assemblage, including the burned remnants of many stone tools and stone tool preforms. On the high Plains, the Anzic site has been interpreted as a red-ocher containing burial with a spectacular assemblage of uncremated and unbroken stone and bone artifacts that are rarely found complete on habitation sites. These examples provide a range of models for what might be expected in Maine.

Theme 5: Transportation, Trade and Commerce. As stated above under the Settlement Pattern theme, there is current controversy over the meaning of long-distance transport of lithic material in the Paleoindian record. Lithic material was moved consistently over large distances (100-600 km) during fluted point Paleoindian times, and was generally procured from a limited number of high quality sources. As an extreme example, Gramly (pers.comm.) has documented the presence of a fluted point made of Knife River (North Dakota) chalcedony in the Lamb site in western New York state. Several authors in a recent volume (Ellis and Lothrop 1989) discuss the contribution of exchange versus direct procurement to this pattern. Spiess and Wilson (1989) take a position that lithic procurement may have been decoupled from the annual cycle of movement of most of a Paleoindian band. It is postulated that long-distance journeys to lithic source areas were commonplace in a "logistically" oriented adaptation where transport capacity of some kind was used to move and "preposition" or cache materials for later use. A stone structure has been

excavated at the Adkins site in northwestern Maine (Gramly 1988a), indicating that the construction of caches played a role in the Paleoindian adaptive patterns in the New England-Maritimes Region. Exchange is also seen as an integral part of the Paleoindian pattern in the model.

Theme 6: Social and Political Organization. There is currently no dispute that fluted-point Paleoindians in the Northeast were band-organized hunter-gatherers. Recently, researchers have begun to differentiate loosely defined "regions", band territories or groups of band territories (Gramly 1988b). One of these is the New England-Maritimes Paleoindian Region (Spiess and Wilson 1987), within which we perceive possible homogeneity in settlement pattern and in use of a limited number of lithic sources. A related concept is the designation of a Paleoindian Phase or group of related sites (Ellis and Deller 1988, Storck 1983, Grimes et al 1984) which is based on the following factors: 1) use of a limited number of stone sources for the vast majority of stone tools, 2) similarity in the details of manufacture ("style") of fluted points and other stone tools, and 3) geographic contiguity. Meeting all three of these criteria reflects some sort of sociopolitical unity or relationship among families or bands for a short period of time (perhaps a century or less).

There are, however, sites that do not fit neatly into the "regional" or "phase" model. The Dam site (Wilson and Spiess 1989), for example, is a small occupation that utilized many lithic sources from across the Northeast. Conversly, there are sites which show stylistic similarity, but are separated by hundreds of kilometers and utilized different lithic sources. Clearly, the phase or region concept of organization only explains a portion of Fluted Point Paleoindian movement sociopolitical organization behavior.

Theme 7: Laboratory or Field Techniques. Geological studies of sedimentary petrology, in particular chert formation and characterization, are especially relevant to Paleoindian studies. Paleoindian lithic studies seem to be driving the characterization of many chert sources in the Northeast (eg. Pollock 1987, Storck and von Bitter 1989, Julig et al. 1989) These studies are the cause of a fine scale examination of chert depositional units, a necessary precondition to studies of chert procurement and exchange.

Theme 8: Anthropological Archaeology. Several broader anthropological research topics seem to be "just over the horizon" in Northeastern Paleoindian studies. In a broad sense, Paleoindian data may eventually contribute to theory about the causes of human migration: does perceived opportunity pull people into new territory, or does necessity cause people to abandon an old one. More specifically, was the formerly glaciated New England-Maritimes region settled once by a pioneering group of Paleoindians, or several times in a span of 500 years as groups attempted to move into the region and then died out or moved away? If the Paleoindian economy was in part caribou oriented, was it an unstable adaptation, with periodic population crashes similar to those postulated for prehistoric Labrador (Fitzhugh 1972)? The larger question of human adaptation to a rapidly changing environment, accompanied by many faunal extinctions and continuous reorganization of floral communities, is perhaps the central question in Northeastern Paleoindian research.

The quality and style of Paleoindian stone tools is another anthropological research topic. Some archaeologists are using an understanding of how people think about making stone tools to explore the meaning of differences in tool manufacture between different Paleoindian assemblages (Young and Bonnichsen 1985). On a much broader geographic scale, Paleoindian lithic technology is similar to Paleoeskimo and European Upper Paleolithic technology (Spiess 1984) in the use of high quality stone to make well-flaked, standardized and often small tools of a similar range of functions. Can cognitive archaeology, or some understanding the of common environmental and cultural constraints on technology help us here?

Theme 9: Human Biology. There is no evidence of human skeletal remains reliably dated to the Paleoindian period for all of eastern North America. Thus, we cannot at present ask questions related to demographics, disease, population relations, or other data derived directly from human bone.

Theme 10: Environmental Studies. The Smith site in western New York (Laub et al

1988) to date represents the only use of a Paleoindian site (in this case a site associated with a spring and bog) for direct paleoenvironmental reconstruction. Our knowledge of the environment in which Paleoindians lived is mostly based on cross-dated references to geological sites yielding pollen or plant macrofossils. The fluted point Paleoindian predilection for living on very well drained sandy soils means that directly associated environmental data (which often depend upon waterlogged conditions for preservation) will be hard to find. Spiess and Wilson (1987) note that Paleoindian sites are often located near bogs or other wet landforms, however. Specific exploration of some of these "near site" localities might be worthwhile.

Theme 11: Religion. There is no independent evidence of Paleoindian religion, aside from the tenuous conclusions that can be drawn from possible mortuary sites discussed above under Theme 4. Theme 11 is currently not applicable to Paleoindian data.

EVALUATION

Confirmed Paleoindian habitation or special purpose sites are among the rarest archaeological sites in the Northeast. Thus, at this point in our research efforts, any site displaying definite Paleoindian cultural association and possessing a moderate degree of internal integrity has the potential for greatly expanding our knowledge of the Paleoindian period.

During the last ten years our knowledge of Paleoindian presence in the State of Maine has increased dramatically. Initially, when Paleoindian materials were recognized, they were fit into a generalized or normative Paleoindian framework suitable for establishing their contemporaneity and cultural affiliation with Paleoindian materials elsewhere. Today, that relationship is accepted and it is necessary to seek patterns of relatedness between Paleoindian groups on a large scale and to search for regional differences in the Paleoindian adaptive pattern.

Known Paleoindian sites in Maine display variabiltity in size, intensity of use, lithic materials used for toolmaking, and geographic distribution. Yet with the exception of quarry-related sites, all appear to have been located in a similar physiographic situation. The absence of further use of these locations by later aboriginal peoples has provided Paleoindian researchers with an outstanding opportunity to analyze horizontal patterning on Paleoindian sites to a fine degree of resolution. In addition, the apparent Paleoindian preference for specific locational attributes in site selection has already yielded evidence of sites of the most ephemeral nature.

While all Paleoindian materials of known provenience are deemed valuable to a comprehensive understanding of Paleoindian use of the State, not all sites are considered worthy of National Register listing. The following criteria delineate the minimum requirements for National Register listing of Paleoindian sites:

1. The site will be firmly identified as Paleoindian by the presence of at least one morphologically diagnostic artifact, or by a suite of high quality lithic materials that were not utilized by later inhabitants of Maine.
2. There must be evidence that the site was utilized either for habitation or for specialized activity. Findspots of isolated tools are not eligible unless there is unequivocal evidence that the locality was more than the site of random discard or loss of a tool.
3. The site will display integrity of the Paleoindian assemblage. The site will lack contamination of the lithic assemblage by later habitation, or the materials of later habitation must be easily segragated on the basis of vertical or horizontal separation of components or, at the least, by raw material.

Although not minimumally necessary criteria for eligibility, the following factors will enhance the significance of a site:

1. The presence of intact features such as hearths, post molds, and caches;
2. The presence of preserved or-

ganic remains, including bone, plant remains and charcoal; and/or

3. The presence of meaningful horizontal or vertical distribution patterns.

Application of these evaluation criteria justifies the significance of several Maine Paleoindian sites. The Vail site (81.1) and associated "killing ground" was listed on the National Register of Historic Places as an individual listing. The Fluted Point and Windy City sites (154.14, 154.16) are listed on the National Register as contributing properties to the Chase Lake-Munsungun Lake Thoroughfare Archaeological District. The Lamoreau site has been listed on the National Register accompanying the Fluted Point Paleoindian Multiple Property Listing (Spiess and Wilson 1989b). The Michaud site, Dam site and Atkins site have been completely excavated and are no longer eligible to the National Register.

PROTECTION

There are several characteristics of Paleoindian assemblages that deserve special consideration when addressing the issue of site protection. First, Paleoindian lithic materials are among the most avidly sought prehistoric tools by collectors of Indian artifacts. They are generally made from extremely high quality cryptocrystalline stone that is often lustrous and gem-like in character. In addition, they are valued for their great antiquity--for their association with "Early Man" in the Americas and the hunting of large extinct mammals such as mammoth and mastodon. Fluted points in particular bring high prices in the "relic" market. For this reason, it is vital to maintain confidential records of Paleoindian site locations and to monitor known Paleoindian sites regularly.

Second, the location of many Paleoindian sites in Maine on sandy soils that are subject to deflation once they are devegetated leaves them at risk of detection by simple walkover. Once found and reported to the professional community, the best protection for exposed Paleoindian sites is extreme security of site location information. Even then, the risk is great that the site location will be deduced or rediscovered, or that the integrity of the site will be compromised by continued exposure to natural processes.

Since the stratigraphic situation of such sites is usually uncomplicated and the high research potential of any relatively intact Paleoindian site is at risk simply by being known, controlled data recovery is deemed the prudent course whenever possible. If excavation of the total site is not possible at a given time, several measures should be taken to insure protection of the site. First, all lithic debris exposed on the surface should be periodically collected and provenience data on these finds recorded. Second, an assessment of the extent and integrity of the site should be made, following standard archaeological testing methods. With this information in hand, the site should be nominated to the National Register of Historic Places if such a nomination seems appropriate based on the results of careful testing. Finally, the site should be protected by revegetation of the exposed surface, frequent monitoring, confidentiality of the listing, and extension of the protection of State laws when possible.

Protection measures for sites with buried components should begin with careful site location security, augmented by a monitoring program. A testing program designed to determine the extent and integrity of the cultural materials should be initiated as soon as possible, with the intent of recovering sufficient data to list the site on the National Register if this measure is deemed appropriate based on the nature of deposit.

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PETER LEWIS PAUL: A TRIBUTE

Nicholas N. Smith

On August 25, 1989, a bird hit my window with such force that it could not escape getting the attention of my wife and me. How strange I though for there seemed no reason for it. Was it an ancient almost forgotten message system? I recalled that the day that Dr. Gordon Day's St. Francis informant Theo Panadis died, a blue jay startled Day when it flew into his window. Soon I learned by modern communications that Dr. Peter L. Paul had died. August 25th was a day that not only the family of Dr. Peter Lewis Paul, but all the Malecite Indians, the people of Woodstock and the Province of New Brunswick, and all who had any interest in the Malecite Indians or the history of New Brunswick suffered a great loss.

The date of his death was almost the same date of August of 1951 that I first met Dr. Paul. The previous winter I had made a preliminary sorting of the Tappan Adney papers given to the Peabody Museum in Salem, Massachusetts. The name Peter Paul appeared frequently. It was apparent that if one were to follow through on Malecite research, Peter Paul was the person to contact. Wendell Hadlock had become director of the Farnsworth Art Museum and hired me to replace him at the Robert Abbe Museum at Bar Harbor, Maine, a summer job. For the winter I had taken a job teaching in Island Falls, Maine, where the school year began in August with a two week potato digging vacation in the fall. On the first weekend I decided to meet Peter Paul. It was a magnificent late summer day for an introduction to Woodstock and the beautiful St. Francis River Valley. I drove to the Reserve, where the only person in sight was an old man making ax handles. When asked where Peter Paul lived, he pointed to a house across the way. A middle-aged woman answered my knock. It was obvious that she and the several shy children with her had been watching the stranger and were curious as to why he wanted her husband. No, she didn't know when Peter would be back; he was delivering potato barrels that he had fixed.

By way of introduction I found that Tappan Adney's name was the key to information that Pete would be back about dark and would be home the following day. Later I found that the Malecite had the greatest respect for Adney because he had put aside his book on birch bark canoes (when Adney died, the book was given to Chapelle to complete) to gather material to fight a court case against those where were attempting to wrest the Woodstock Reserve from the Malecite, a case won by Adney's determination. Before leaving I spoke to Peter Polchies, the maker of the ax handles and son of Dr. Peter Polchies. Although adeptly shaping his ax handles with a crooked knife, he assured me that he knew nothing of the old ways; Peter Paul was the person to see. The next day I met Peter Paul, the beginning of a friendship that was to last until his death 38 years later.

The lives of young children changed considerably in the span of the three generations that included Peter's childhood, his children and his grandchildren. Although Peter was born on the small Woodstock Reserve, surrounded by farms and only three

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miles from town, he grew up in a reserve world rather isolated from the white world around them. The neighbors surrounding the Reserve were farmers who did not want Indians trespassing on their land.

Both Pete's mother and grandmother were expecting about the same time. His grandmother's child, born the day after Peter, did not survive; his mother and a twin brother died in childbirth. His father was in a lumber camp and later married a woman on another reserve. While most of the children of his generation had fathers and mothers who had considerable interaction with the white community, Peter was brought up by loving, dominant grandparents who kept their children from venturing very far from their yard by scaring them with, "the white people will get you, if you go to the road", or that "swamp woman", a Malecite body, would suddenly appear to carry them off.

His grandfather Noel Paul, born about 1850, was the village elder and was recognized as the head man. Federal law required that an Indian village must have a population of 60 people to qualify for a chief, a requirement that his Reserve did not meet until 1916. The small Woodstock Malecite band retained the tradition that the oldest man among them was the head man for the group. Peter's close attachment to his grandparents can be better understood when one realizes that he was not weaned from his grandmother until he was six years old. Noel retained many of the ways of his father, born about 1825, and was considered one of the last of the old hunters. He spent much time in his Maquapit hunting territory and of course, would have been accompanied by his wife and Pete.

During these years Peter absorbed much Malecite lore the way it was a generation or two prior to his own by people to whom the stories and traditions of the early 1800s were a part of daily life. He attended the Reservation school that had a very poor reputation. The teacher decided not to hold school if it rained or snowed; each year seemed to be a duplication of the previous one. Science was not a part of the curriculum. The Malecite traditions taught by the elders, who spoke little English, were of great import to the children. Weekends Pete and his grandmother were usually able to obtain a ride on a train or with a friend to Noel's camp, returning to the Reserve for school on Monday. If problems arose relating to their white neighbors, Noel was always contacted. The bright-eyed, alter grandson was usually with him silently observing. Bush camp training taught him to listen. years later Peter was able to easily recall in vivid detail many events relating to the history of the Woodstock Reserve. Pete claimed that he did not have much command of English until he was in his late 20s. These early years provided Peter with the background knowledge of a culture in decline. Later the realization that he was one of the few left who had experienced the way of life of a Malecite hunter gave him the incentive to learn evermore about his culture.

In 1928 Peter married Minnie Dedham, granddaughter of the famous Gabe Atwin. They had 9 children, Rowena, Donna, Carol, Diana, Wanda, Reggie, Bobbie, Billy, and Daryl. Although Peter had little opportunity for a formal education, experience had convinced him that education was the key to the future. Although Peter and Minnie gave their children the best education that they could and encouraged all the village children to finish high school, they were saddened to find that few village children were fluent in their native language. More than once Peter brought a runaway Indian boy he encountered under his wing providing food, shelter, and guidance. Rules were few but one that all knew was strongly enforced was: no alcohol. It was perhaps during Pete's many years serving as village constable in which he saw many tragedies that were the result of alcohol, that caused him to be so set against alcohol. His children were told that if they drank, they would not be permitted to remain at home. Both Peter and Minnie wanted their children to be able to make the best of opportunities that would offer them a better future than they had. Some year later after the children were married, Peter took me to visit some of his children. When returning to his house, he remarked that each tried to out-do the other with a better house, better car, etc. He concluded: "They are just like white people!" It was very apparent that the children had

done well having all the material goods, but there was always the concern that one would lose his Indian identity. A visit to Peter on Father's Day was a terrific model of family love, devotion and admiration; a family who showed their affection for their father with a fine array of cards and gifts from children and grandchildren. No one forgot him.

Tappan Adney began making periodic visits to the Reserve, walking the five miles there from his Upper Woodstock home. The old men would gather around him and attempt to answer his questions. Pete, a young man, stood at the outer edge of the circle listening, but letting the elders respond to the question in respect to them. One day there was no response to one of Adney's questions. Pete knew the answer so spoke up. In typical Adney sarcasm he was asked, "How does a young fellow like you know the answer when the older people don't?" Pete told him that he had learned it from his grandfather. From that point on Adney found Peter a very reliable informant. Pete did not seem to tire from Adney's continual questioning. Soon Pete was his chief informant, meeting with Adney at least once a week either at the Reserve or at Adney's home.

Adney's chief informant, who had the ability to understand and determine precisely what Adney wanted to know, had always remained a working man. Adney's script is often almost impossible to decipher. Peter opted for printing in strong, well formed block letters that could not be mistaken, the style of "the working man", Adney said. However, a fine relationship developed between the two, each needing the other. Adney was a true genius who knew that when he knew something, he was right, and he usually was. It was also that trait that made him determined and set in his ways. It was therefore almost impossible to discuss a matter with him; one must accept his assumption. Peter soon learned that often terrible arguments developed between Adney and his friends, like Dr. Fred Clarke, who frequently offered different opinions. After several weeks there was a period of making up. Peter knew that it was very important to have a good friend for good friends were often hard to find. He did not disagree with Adney. Their friendship lasted.

Dr. Frederick Clarke was another very good friend. He had a camp that bordered Noel's Maquapit hunting grounds. Clarke found his camping experiences to be greatly enriched by the companionship of his Indian neighbor. Clarke must have become acquainted with Pete as a child. He later learned how much Adney respected Peter and found him to be both a reliable informant and a very skillful craftsman in repairing birch bark canoes, old baskets, and other antiques.

Life was not easy for Peter or his grandparents. There was a high rate of tuberculosis that took a heavy toll in Noel's family. Noel's house was the oldest on the Reserve, a frame structure with no floor, sheathed with birch bark. Once when Noel mentioned to Clarke his concern of the high death rate in his family due to tuberculosis, the good doctor suggested that the germs would always be in the old house. The old wooden structure might burn well. The winter passed and it was spring before the two met again. Dr. Clarke asked if he had a new house. The reply was that the old house had caught fire twice, but his neighbors were too good! This was the house that was home to Peter, even after he was married, until a new one was built in the late 30s or early 40s. The old house then became Pete's shed and workshop. It was where he repaired potato barrels so there was always an abundance of shavings underfoot. One day some of the kids went in to sneak a smoke. Later the building burst into flame. The local fire department had a difficult time with the conflagration; the department from Houlton, Maine, was called. Before the fire was extinguished the shed and 6 homes had burned, the people losing almost everything. Many examples of earlier Malecite handicraft that Peter had collected were also lost in the fire. As it was government housing, there was no insurance, and the people were totally ignorant of renters' insurance. Peter was over 50 when this disaster befell him and he had to start all over again. While he waited for a new home, he moved into an old shed, adding some insulation to stop drafts; Minnie went back to cooking on a wood stove. A bear skin served as a rug.

This was not the first time he had to start over. A much younger Pete had ideas

of making baskets on a big scale using basket making machines. he entered into a business with a local Woodstocker. Unfortunately, the partner was not a good businessman, and needing funds sold the business without consulting Peter. Peter lost everything and had no recourse because Federal law did not permit Indians to borrow money or enter into contracts. Another time one of Peter's hands was caught in a machine and a blade came down cutting off the ends of several fingers. The indefatigable Peter worked hard, and paid off his debts from these setbacks. He found that repairing potato barrels was a good seasonal trade and then sold Christmas trees. He observed that trailer trucks came from Virginia to New Brunswick for Christmas trees. He figured that in the cities Christmas trees would bring good money so loaded his truck with trees and set off for the Boston market, making several trips a year. While in a Boston restaurant, he decided to try a "real" Boston meal so ordered "Boston baked beans", which to his surprise were not different and perhaps not as good as those Minnie cooked. He was the first on his reserve to decorate an outdoor tree with lights.

Things seemed to be going well when another problem beset him. Indians firmly believed that early treaties made in the 18*th* century gave them the right to cut basket ash anywhere. Most people considered this to be a weed tree not good for anything else. As lumber operations denuded the land, all trees became more valuable. One day Pete was ordered to appear in court for cutting an ash on private property. Adney had just died, but Pete had learned from him that old treaties do stand up in court. He had also become impressed by Mahatma Ghandi's passive resistance philosophy. Pete and Minnie discussed the problem and concluded that Pete would fight even if it meant that he would have to go to jail. The opposing lawyer thought that the case would be a very simple one in his favor. He did not know Peter Paul. Armed with treaties and abstracts of previous Indian cases based on these treaties he faced lawyers and a judge not prepared for what was coming. The case became drawn out. It was the subject of the news. It finally concluded in a draw. Although the judge tried to discourage Peter from cutting ash indiscriminantly, Peter interpreted his innocence as meaning that he could continue to cut ash and did so. This case probably meant more to him as an accomplishment than the many honors bestowed on his later because it was a landmark case to benefit his people. Some years later Simon Paul and Patrick Tomer were arrested in Hodgdon, Maine, for cutting hoop poles valued at $3.50. They called the Reserve explaining what had happened and that they had been advised to plead "guilty". Peter told them not to, and armed with a copy of the Dumner Treaty went to court and again what had been thought to be a short, cut and dried case turned out to be a long session. Later Ken Buckley of the "Bangor Daily News" called Peter for an interview. Peter showed Indians that they could do things for themselves in the white world.

Peter had an amazing array of friends, a circle that extended far beyond his neighbors. Once when dining in a Fredericton restaurant, someone came in and sat at a table near ours. Peter got up, and I was soon introduced to the Premier of New Brunswick who addressed Dr. Paul by his first name as if he were a next door neighbor. Peter knew where to obtain whatever he needed. When an old Edison player was needed to play the recordings of Malecite songs made by Mechling on wax cylinders before World War I, Pete came up with three Edisons to play them and soon figured out how to adjust them to the correct speed of the cylinder. Many of the cylinders were covered with mildew and produced very poor sound reproduction. Most of the mildew that defied cleaning soon wore off as night after night Peter played and replayed the cylinders until he knew them by heart, wrote down the words and translated them into English. This was another example of his determination to learn more about his culture. After several weeks its doubtful if his children ever wanted to hear another Indian song! The cylinders were recorded on tape and taken to other reserves so the old people could hear them. They brought back memories of Mechling, who was referred to as "Billy". Peter talked to the elders in their language; memories were stirred and other songs, long dormant, were remembered

and were sung. For several months the recordings were played in a routine from Woodstock to St. Mary's to Peter Dana's Point to Old Town and to Tobique, new songs being added at almost every stop and then the cycle was repeated. When the people saw the tape machine taken into a house, they soon began to congregate eager to hear the old songs of their culture. Customs were strong with the old people. Visitors were rare; hosts stayed up nearly till dawn recalling many things. I went to bed about 4 a.m. feeling quite exhausted only to be awakened a few hours later by people who seemed quite refreshed offering a breakfast of muskrat or duck that "got in a muskrat trap".

A list of all his achievements would be just as difficult to produce as would be a list of all the anthropologists, folklorists, and historians who found their way to his door. Each year saw more anthropologists come. The names of those who consulted him such as Tappan Adney, Karl Teeter, Ives Goddard, Tom McFeat, Vincent Ericksen, Gaby Pelletier, Andrea Bear, and James Wherry sound like a Who's Who of Wabanakiasts. He had the ability to put all that he learned from childhood into context later to help him achieve a greater understanding of his culture, and then teach others. In 1970 he was honored by the bestowal of a Doctor of Law degree from the University of New Brunswick and received many congratulatory cards and notes from the white community. When asked how his Indian neighbors reacted to it, he replied, "I guess they feel that I'm becoming more like a white man". Yet Peter was the acknowledged expert on the traditions and culture of his people! On that occasion Dr. George Frederick Clarke stated to a reporter that Peter Paul "commands the respect of all who know him", and that, "he is a legend". As such, he became the subject of a movie.

Peter wanted to see the Indian displays in museums. I took him to the New Brunswick Museum, the Robert Abbe Museum, the Peabody Museum in Salem, Massachusetts that houses Adney's material, and the Museum of the American Indian. It was not long before Peter became well-known at many museums. He was always welcome at the New Brunswick Museum and the Canadian Museum of Civilization where he repaired birch bark canoes and was consulted on other topics concerning the Malecite. Only a few weeks before his death, Peter accepted an invitation and was happy to put up a Malecite display of a wigwam scene at the opening of the Canadian Museum of Civilization in Hull, Quebec.

Peter knew how his people had felt betrayed by Gabe Paul's collecting methods for Frank Speck. These methods had resulted in Gabe having to settle at Old Town, since he was no longer welcome among his own people on the St. John River. Peter learned how to collect material in such a way that the elders entrusted Peter with their old photographs, baskets, and other items. Now many fine examples of Malecite culture are preserved in Lord Beaverbrooks', the University of New Brunswick's, the New Brunswick Museum's, the Woodstock Historical Association's, and the Canadian Museum of Civilization's fine collections.

Peter loved to teach Indians and non-Indians about his culture. Once, before the Cross Canada highway was built, he was guide for a high school class trip to the New Brunswick Museum. There were stops at historic spots such as Pokiok Falls where he related the tale about the Malecite, who to escape from the Mohawk chasing him, jumped the gorge. The swift water of the spring run-off made a lasting impression on the youngsters of this unique geologic feature. Then it was on to Fort Meductic with stories of John Gyles, Kuluskap's Snowshoes above Fredericton, and then to St. John's Reversing Falls and the New Brunswick Museum. That trip became a highlight of the school year. Both Pokiok Falls and Kuluskap's Snowshoes were victims of the Mactaquac hydro project.

Peter was an active member of the Woodstock Historical Association and volunteered many hours of skillful work for them. One happy memory is the salmon broils, sponsored by the Historical Association during the Woodstock Old Home Week, with freshly caught Atlantic salmon from the clear Wulustukw (St. John River) cooked outdoors by Peter Paul. He always preferred to patronize local people, even if others were of greater repute. Later Dr. George Frederick Clarke was to write of a portrait that Mike

Saunders did of Peter: "Karsh - the celebrated photographer - never made a better portrait than did our Mike Saunders of Peter Paul."

Of the many memorable experiences I had with Peter it is difficult to select one of greatest import. They were all unique, such as the time when Pete Polchies was skinning several beaver. Paul asked me if I had eaten beaver tail; my reply was negative. He said, "we'll try one". He picked up the tail from one of the beaver, found a stick, sharpened one end, thrust it through the tail and stuck the other end in the ground. Then he gathered some shavings from the old shed and started a fire. A ring of Indians gathered around us as we ate the beaver tail, something most had never seen cooked or eaten. For several years Peter was engrossed in a study of John Gyles, that resulted in my accompanying him by canoe from Meductic to Old Town. Robert Ross was also involved in this project with his scout troop. Among Ross's outstanding memories of the Old Trail, one occurred on a winter snowshoe outing on the trail when a beaver scampered down the trail right between his legs. He also photographed a cardinal flower growing on the trail, the first record of a cardinal flower in that part of New Brunswick. A portion of the Trail is now available for all to enjoy. Near a section that offered a view of Mt. Katahdin, eagles were sighted in a nest. Steve Pike, a retired game warden and long time resident of the area, said that the eagles had always nested there as long as he knew. Could they have been the descendants of the "wind bird" that Gyles saw?

He had a sensitivity toward others. Once, when he had several young children and Minnie was pregnant, Pete helped Minnie by hanging up the wash. One of the elders came by telling him that he was "lowering himself terribly by hanging the wash". Peter finished the job and often helped with the wash.

Peter had a deep sensitivity toward the beauties and wonders of nature. When canoeing, he would often select a way that might be a mile or so longer because it offered a magnificent view that would be missed by taking the short cut. He knew the location of all the springs, where a delightfully cold drink more refreshing than anything from a bottle or can, could be found. The Indians had both a winter and a summer name for spring water. In the winter it was "warm water" because it was bubbling or flowing, although surrounded by ice; in the summer it was much colder than the water surrounding it so it was "cold water".

Peter's interest in history was not limited to that concerning the Malecite. One bright fall Sunday he arranged to take several members of the Woodstock Historical Society along an old gravel road through woods skirting the northern border of East Grand Lake, once a well travelled highway between St. Andrews and Quebec City. it was an old military highway. Somehow he had located an old stone well and stone foundation of a building, a beautiful example of stone work. In trying to find out more about these remains he learned that during the colonial Wars a fort had been constructed somewhere in that area. I doubt if he ever ascertained if the remains were part of the fort or the work of an early New Brunswick pioneer.

For many years Peter enjoyed Sweet Caps. Smoking was as important to him as eating. The tell-tale deeply stained forefingers were evidence of an indulgent smoker. Many of his friends warned him of the dangers of his habit. He knew the importance that tobacco played in Malecite tradition so may have scoffed at their concern. Then one year word passed from one friend to another the Peter stopped smoking. He saw how Simon Paul, childhood companion and neighbor, suffered terribly from cancer, and decided that cigarettes were not worth the risk of that dreaded disease. Peter had the will-power to end a bad habit when he was convinced that terminating it was in his best interests.

Few people are honored with the bestowal of an honorary doctorate and The Order of Canada, both representing recognition above and beyond the ordinary. These honors were testimonial evidence of acceptance and success in the white world; Peter was an exceptional and distinguished Malecite ambassador to the whites. His Woodstock Reserve, too, honored Dr. Paul, presenting him with a placque in a simple ceremony of honour and veneration. This act of recognition by his own people probably meant more to

him than all the others combined. Although the white world acclaimed Dr. Paul a success, his Malecite world and identity was always of first importance to him.

Dr. Peter Lewis Paul set such an example of great determination and persistence melded with a persevering spirit that as early as 1970 Dr. George Frederick Clarke recognized him as a legend. He will long be remembered and his legend will grow.