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Multiple Property Documentation Form

This form is for use in documenting multiple property groups relating to one or several historic contexts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. For additional space use continuation sheets (Form 10-900-a). Type all entries.

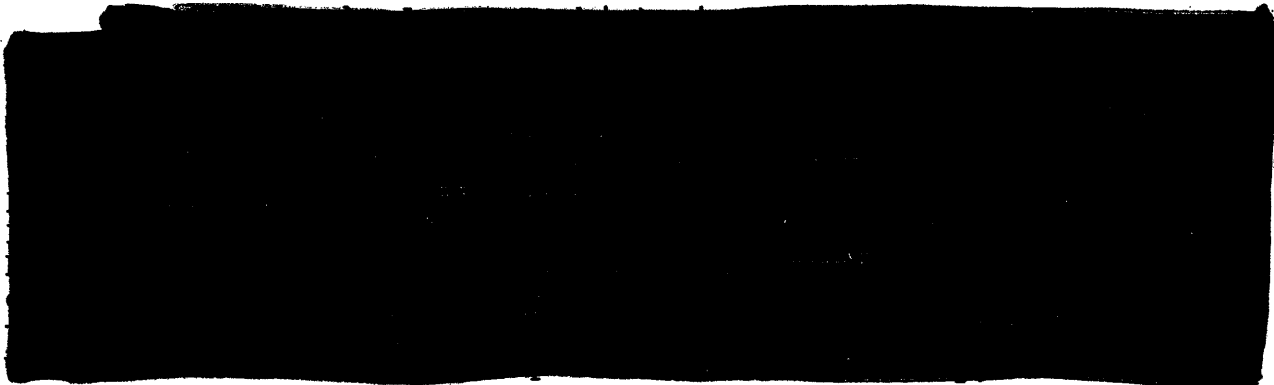
A. Name of Multiple Property Listing

Cobscook Area Coastal Prehistoric Sites

B. Associated Historic Contexts

The Ceramic Period  
Susquehanna Tradition

C. Geographical Data



See continuation sheet

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards for Planning and Evaluation.

*Ernest J. Thibault*  
Signature of certifying official  
Maine Historic Preservation Commission

5/1/90  
Date

State or Federal agency and bureau

I, hereby, certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

*John J. Kowal*  
Signature of the Keeper of the National Register

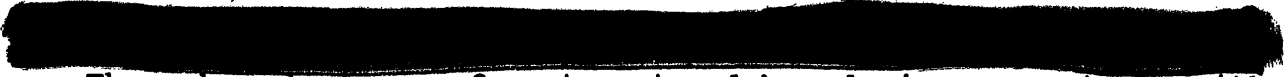
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Date

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These boundaries conform to natural boundaries or ecotones with the exception that the eastern boundary of the Multiple Resource Nomination is formed by the International Border with Canada. All of Passamaquoddy Bay would surely be included in a larger Quoddy Region nomination if it were part of the United States.

## E. Statement of Historic Contexts

Discuss each historic context listed in Section B.

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Sites or artifacts representative of the full range of New England prehistoric periods have been found in eastern Maine or the Maritimes provinces, within which the Quoddy Region and greater St. Croix River basin lie. The Cobscook Area, including the tidal shoreline from Cutler around Cobscook Bay to Read Beach, is the portion of the Quoddy Region falling within the United States. Paleo-Indian populations were present in the Maritimes by about 11,000 B.P. (Spiess and Wilson 1989). Paleo-Indians moved into the area from the south and west shortly after the retreat of the glacier, probably following large game animals such as caribou, and possibly mammoth and mastodon. Relative sea level during the Paleo-Indian period was much lower than it is today. If there were coastal sites associated with Paleo-Indians they would be well under water today, and probably either badly eroded or buried under postglacial sediments. Early and Middle Archaic (circa 10,000 to 6000 B.P.) populations are poorly represented in the eastern Maine and Maritimes region. As yet there is no evidence for coastal sites of Early or Middle Archaic Periods, but there are lithic artifacts relating to both periods in the interior (Sanger 1986). Again, rising sea levels have probably destroyed the coastal sites of these populations. Late Archaic artifacts of the Maritime Archaic, Laurentian, and Shield Archaic Traditions have all been identified in the eastern Maine and Maritimes region. The Moorehead Phase of the Maritime Archaic Tradition (circa 4200 to 3800 B.P.) is found in the interior St. Croix system at Spednik and West Grand Lakes. The Shield Archaic Tradition is represented in New Brunswick (Deal 1986, Sanger 1986, Tuck 1984).

The Susquehanna Tradition dominates the end of the Late Archaic period (circa 3900 to 3100 B.P.). This tradition is well represented in the eastern Maine and Maritimes region. Susquehanna lithic styles are distinctive, beginning with large, broad points (Atlantic Phase) made almost exclusively of local materials, then eventually evolving to somewhat smaller, narrower points. Much debate centers around who the makers of the Susquehanna Tradition tools were and from where they came (Sanger and Bourque 1986, Spiess 1989, Tuck 1984). Because of rapid coastal erosion which selectively destroys earlier occupations, and because of the relatively late date of the Susquehanna Tradition, material of that age will likely be the earliest material found in uneroded context in coastal sites in the Quoddy Region.

Ceramic period (circa 3000 to 350 B.P.) sites (called Woodland elsewhere in the Northeast) can be recognized by the presence of fired clay ceramics. Differences in ceramic styles form the diagnostic material which determines the sequencing of Ceramic periods. Though particularly useful to the archaeologist as a relatively accurate measure of Ceramic chronology, the use of ceramics does not necessarily indicate much change in the lifestyle of the users (though some increase in sedentism may be implied). Faunal remains indicate Ceramic adaptation to the environment to have been a generalist procurement strategy.

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Ceramic sites of eastern Maine and the Maritime provinces are largely of Middle and Late Ceramic age, although Vinette-I (Early Ceramic, circa 3000 to 2000 B.P.) pottery sherds have been found at Minister's Island and West Grand Lake. Middle Ceramic (circa 2000 to 1000 B.P.) sites are plentiful in eastern Maine and the Maritime Provinces. Early Middle Ceramic sites contain well fired, grit tempered pottery decorated with toothed tools producing "rocker dentate stamped" and "pseudo-scallop shell" patterns. Ceramics from later in the Middle Ceramic period tend to be more coarse, dentate stamped, often with incised lines or punctates. Late Ceramic (circa 1000 to 500 B.P.) sites often overlie Middle Ceramic and Late Archaic sites. The early Late Ceramic is not uncommon in the Maine - Maritime region. "Cord-wrapped stick" or "cord-wrapped paddle" decorated pottery tempered with either shell or grit has been recovered from a number of sites (Diggity, Portland Point, Mud Lake Stream and Great Spruce Island to name a few). The end of the Late Ceramic period is also represented by Iroquois-like pottery in the Fehrer collection from the interior (Sanger 1986, Tuck 1984).

Archaeological research began early in the Quoddy Region, although relatively little has been done in the Cobscook Area. In 1797, Judge Robert Pagan was able to settle, in favor of the British, a border dispute between Canada and the United States by excavations establishing the settlements of DeMont and Champlain on St. Croix Island. However, nearly a hundred years passed before anyone else took an interest in the archaeology of the region. Most notably, in 1883, George F. Matthews excavated a shell midden and associated dwelling depressions in northern Passamaquoddy Bay near the mouth of the Bocabec river in New Brunswick. His techniques and excellent report, including lifestyle reconstructions, have been largely corroborated by archaeologists today. Little research followed Matthew's work until the 1950's when Douglas Byers began working on sites in Maine and the Maritime provinces. In the 1960's, Richard Pearson tested three sites, Sand Point, Minister's Island and Pagan's Point, for Canada. A radiocarbon date was obtained from each of these sites (Sanger 1986).

In the mid 1960's, David Sanger began a long range project of archaeological survey and excavation in and around Passamaquoddy Bay. From 1967 to 1979 several sites were excavated under Sanger's supervision including Sand Point, Minister's Island, Teacher's Cove, and the Carson site, all in New Brunswick. Survey of the lakes drained by the St. Croix River began in 1967 leading to Michael Deal's excavation of the Mud Lake Stream site in 1983.

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Patricia Allen of New Brunswick Historic Resources Administration, surveyed both the U.S. and Canadian side of portions of the St. Croix International Waterway in 198 . Diane Kopec has analyzed the amateur Eddie Brown's collection from the area and visited those sites (Sanger 1986, Kopec 1985).

Like the rest of the Maine - Maritimes region, the Quoddy Region and St. Croix River drainage provide much more data about prehistoric occupations beginning with the Late Archaic period. As previously mentioned, the Moorehead component of the Maritime Archaic Tradition is found in the interior at Spednik and West Grand Lakes, but not on the coast (again, probably due to coastal erosion). Susquehanna occupance is well represented. At the Mud Lake Stream site a Susquehanna Tradition feature has multiple dates of about 4,000 B.P., somewhat earlier than many dates to the south (Deal 1986). In addition to the Mud Lake Stream site, the Susquehanna Tradition is found at other Quoddy Region sites: Diggity, Teacher's Cove, Portland Point, Minister's Island and Moose Island among them (Sanger 1986, Tuck 1984). A soapstone bowl fragment, representative of the late Susquehanna Tradition was recovered at Portland Point (Deal 1986). Interestingly, the Susquehanna sites of the Quoddy Region show a general lack of shellfish, though some of the Susquehanna components do underlie later middens (Sanger 1986).

Little evidence for Early Ceramic (circa 2800 to 2200 B.P.) populations in the Quoddy Region comes from Minister's Island, and from the interior St. Croix River system at West Grand Lake. By 2000 B.P., prehistoric occupation is plentiful as evidenced by many Ceramic shell middens present in the Quoddy Region (Sanger 1986). Sanger, based on his north Quoddy Region work from the mid 1960s through the 1970s, has described a Ceramic tradition lifestyle he calls the Quoddy Tradition (Sanger 1986: 148-153). Sites of the Quoddy Tradition were occupied by people of Middle and Late Ceramic periods (circa 2200 to 350 B.P.). Analysis of site locations, dwellings, fauna, ceramics and lithics all combine to define the tradition. Quoddy Tradition sites should be found on fairly level ground, usually facing south to southeast for protection from prevailing winter winds. They should be positioned near a small-craft-worthy beach for all-tide access to the water, with clam flats and often fresh water nearby. The midden/refuse area of Quoddy Tradition sites are located near the edge of the sea. Semi-subterranean dwellings tend to be toward the back of the site. Homes were apparently wigwam like structures built over an oval shaped depression with beach sand and gravel stratified floors. The houses were the locus of (large amounts of) tool

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manufacturing activity, indicating cold weather occupation. Communal sharing of large game may be represented at one site, Sand Point, by the distribution of what could be one moose among three or four dwellings (Sanger 1986). Quoddy Tradition people focused their subsistence pursuits for part, or perhaps most, of the year on marine resources. Within the middens, ring shaped fire hearths are rare. Rather, hearths are present throughout the midden which seems to indicate clam-bake style cooking. Faunal remains indicate a generalized procurement strategy with white-tailed deer, moose, beaver, caribou, and seal representing the major caloric and protein contributions. Fish remains are scarce. Various analyses of faunal remains indicate mostly cold weather residence at the north Quoddy Region sites, but the presence of year round species make occupation at any season possible (Sanger 1986). Anita Crofts' (1984) review of lithic artifacts from several sites in the Quoddy Region indicate that almost 50% are produced from imported material. Lithic artifacts include projectile points, knives and scrapers. Additionally, many bone artifacts including awls, harpoons and beaver-tooth chisels are recorded from the Quoddy Tradition sites (Sanger 1986).

David Black (1986, Bishop and Black 1988) refers to the coastal Ceramic occupations of the Quoddy Region as the "Maritime" Woodland period. Middle Maritime Woodland faunal remains from the Partridge Island site infer both warm and cold season occupations. The remains also indicate a more intense marine focus than do the faunal assemblages from the northern Quoddy Region mainland sites. A greater diversity of mollusc remains is also reported from Partridge Island.

The climate of the Quoddy Region is similar to that of the greater Bay of Fundy region, of which it forms the western edge. The Quoddy Region is more temperate than its neighboring inland vicinity. Average temperatures range from lows of 17 degrees Fahrenheit in January and February to highs of 65 degrees Fahrenheit in July and August. Precipitation is distributed fairly evenly on the average throughout the year, and humidity generally ranges from 72-85%. Fog is common in spring and summer. Summer winds are usually from the south or southwest at an average of ten knots, while winter winds arrive predominately from the north to northwest and average 20 knots. There are, of course, storms. Low pressure centers travelling up the east coast from the southwest and across the continent from the west, converge in the Quoddy Region, and produce variable weather sometimes accompanied by gale-force winds, most often in winter. During the late summer, tropical storms and hurricanes may pass through. Icing of the

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coastline is heaviest in sheltered reaches like Denny's Bay (where site 80.15 is located), and snowfall is heaviest from December to March (Thomas 1983).

Where not controlled by bedrock outcrops, the topography surrounding Cobscook Bay is mostly flat to gently sloping where it is not cut by the steep gullies formed by new streams. The stream systems are generally branching networks. Much of the area's surficial deposits are composed of Presumpscot Formation glacio-marine deposits (silts and clays generally), till, end-moraines and exposed bedrock. The Presumpscot Formation materials were deposited when sea level was higher than at present, circa 13,500 to 12,000 B.P. Till deposits generally conform to the bedrock surfaces that they overlie and were deposited directly by glacial ice. The end-moraine deposits form ridges of varying length, width and depth, which were left at the terminal zone of the Late Wisconsin glacier either by glacial ice or by emergent meltwater streams (Borns 1975).

Bedrock formations in the area are unlike other Appalachian formations. During the Silurian and Devonian epochs up to 7 kilometers thickness of volcanic rock were deposited in the Quoddy Region. The syncline which formed here in the Acadian mountain building episode trends toward the north to northwest, contrary to the prevailing north-eastering Acadian folding of other regions. In the Upper Devonian the region became a downfaulted alluvial basin, unlike any others found to the east of the Appalachians. At this time, coarse conglomerates also containing extrusive volcanics and granitic rocks were deposited. During the Carboniferous the Oak Bay Fault, with a north to northwest trend, offset the older rocks. Later in the Carboniferous, east to northeast striking faults divided the Quoddy Region into separate fault blocks with their own unique lithologies. In the area, Precambrian, Ordovician, Silurian and Devonian age stratified rocks can all be observed (Gates 1984). Some of these rocks have qualities that made them useful, in the last few thousand years, to the prehistoric inhabitants of the region.

The "Surficial Geology" map of the Eastport quadrangle (Borns 1975) shows much exposed bedrock. At least half of the map's area is depicted as having bedrock outcrops. In the Denny's Bay area, within the large Cobscook anticline, bedrock outcrops belong to the Denny's and Edmund's Formations of Middle Silurian age. Bedrock in the immediate vicinity of the Reversing Falls site is of the Edmund's Formation. Diverse marine fauna such as brachiopods, trilobites, gastropods and corals are present and indicate Wenlockian and Ludlovian eco-communities of the latter Silurian

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(415 to 405 million years ago). Occasional fossils were recovered in the excavated midden trench. Bedrock is a varied complex of marine volcanics which include basalt flows (these are more common in the Denny's Formation), rhyolite flows and domes of tuff-breccias. Bedded tuffs, fossiliferous shales and siltstones also contribute to the complex. To the north and west (inland) of site 80.15 the Edmund's Formation is overlain by the Upper Silurian age Leighton Formation, composed of gray shales and siltstones. The shales and siltstones are intercalated with basalt and rhyolite flows along with tuff-breccias. All were deposited in shallow water (Gates 1984). Lithic tools made from rhyolites, tuffs, siltstones and black volcanics (basalts?) are all present in Passamaquoddy Bay sites (Crotts 1984).

The Cobscook area is well forested. Vegetation in the Quoddy Region has gone through considerable change during the Postglacial era beginning about 12,000 years B.P. A short period of tundra gave way to forest associations with varying dominance of birch and poplar, spruce, then pine, birch and other hardwoods. There was an increase of hemlock approximately 6600 years ago complimented by a decrease in pine. Hardwoods (beech) were dominant in the forest from about 5100 years B.P. until about 2000 years B.P. when hemlock increased again. Over the last 2,000 years an ongoing increase in the frequency of spruce in the forest has been complimented by diminishing numbers of hemlock (Mott 1974 cited in Hinds 1983). The modern forest in the Cobscook Area is classed as New England's Zone 1, a "spruce-fir-northern hardwoods" forest. Zone 1 is made up of two basic subzones. Denny's Bay falls into the subdivision occurring on lower slopes and fairly well-drained soils. The forest consists mostly of beech, sugar maple, yellow birch, hemlock, red and white spruce, and balsam fir. Ferns and herbaceous plants, bunchberry, Canadian mayflower and sarsparilla are all undergrowth common to this type of forest. Shrubs of blueberry, sheep laurel and mountain laurel are also present (Hinds 1983, Westveld 1956).

The array of terrestrial fauna found in the Quoddy Region is not unusual when compared with the rest of Maine. Today however, the relative seclusion of the Pembroke area offers a desirable habitat for the less human-tolerant species. And in marine fauna, the area offers a much longer species list than do most other coastal areas of Maine, perhaps longer than the list provided by most of the United States' east coast. Terrestrial fauna present in the area include snowshoe hare, various small rodents, gray and flying squirrels, porcupine and beaver. Carnivores include coyote, river otter, skunk, terrestrial mink, black bear, raccoon, bobcat



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and lynx among others. Moose and white-tailed deer are the primary large wild herbivores. Caribou, eastern mountain lion, timber wolf and sea mink are locally extinct due to over exploitation and environmental changes.

As mentioned above, the number of marine mammals present in the Quoddy Region is large. Harbor and gray seals are the phocid species present. Both harbor and gray seal populations have, in the past, been subject to bounty hunting, so their populations have been reduced from carrying capacity. Since the mid 1970s, all sea mammals in the United States have been protected by the Marine Mammal Act. Both species do still haul out on breeding grounds on the east side of Grand Manan Island. A total of 17 cetacean species are present in the region. The endangered right and humpback whales are regularly seen in the area along with the far more common minke whale. Harbor porpoise is also commonly seen while the white-sided dolphin is spotted less regularly.

The large number of mammalian marine species reflects high productivity maintained by the extensive vertical mixing caused by the area's large tidal amplitudes. Though lowest of the tidal ranges for the entire Bay of Fundy (maximum range of 16 meters in Minas Basin), the Quoddy Region still averages 5 to 5.5 meter tidal amplitudes, providing considerable mixing (Thomas 1983). This vertical mixing cools the surface water even in summer as it is freshly enriched by the cooler, deep water (Appolonio 1979). Large quantities of herring and mackerel inhabit the waters from late spring through fall, providing food for harbor porpoises and the once common harbor seal. Vertical mixing is also responsible for high populations of phyto- and zooplankton which attract the baleen whales to the Quoddy Region.

The avian faunal list for the Quoddy Region is long. The variety of water birds in the region is higher in the winter, while the converse is true for the land-based birds. The Christmas day list for water birds in the Eastport-Campobello circle (essentially the mouth of Cobscook Bay) lists 27 species including loons, grebes, cormorants, eleven duck species, mergansers, sandpipers, gulls and alcids. Also common in winter are eagles and osprey, while the warmer seasons see herons and king-fisher as well (Christie 1983).

The Cobscook Area is an artificial subset of the larger Quoddy Region, caused by the International border which runs through the Quoddy Region. In defining the site types, periods of significance, and related research topics for the Cobscook Area, we draw upon the much larger body of available research for the Quoddy Region. The dominant site type in the Quoddy Region, and

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indeed along the whole coastal zone of Maine, is the shell midden (further defined under FII of this nomination). Sites without appreciable shellfish content in their matrix are non-shell middens. Non-shell middens may be either sites that never had much shell in their matrix, or portions of former shell middens from which the shell-bearing portion has eroded, or from which a thin shell deposit has been dissolved by humic acid or other natural soil processes. Coastal erosion in the Quoddy Region has eliminated almost all sites with components predating the Ceramic Period. Only the Ceramic Period, and its immediate predecessor, the Susquehanna Tradition, are likely cultural affiliations for components at sites in the Cobscook Area coastal zone.

A draft Susquehanna Tradition State Plan study unit (Spiess 1989) contains 11 research significance themes to which Susquehanna Tradition site components can contribute. Because of the extensive erosion in the Quoddy Region, which has eroded portions of many sites and totally eroded others so that they exist only as scatters of lithic material, we will be unlikely able to address more than a few of these themes with extant data. For example, "Culture History" and "Settlement Pattern" are hard to address without the stratified sites and uneroded, large sites or large samples of small sites. "Subsistence Patterns" might be addressed with partially preserved deposits that yielding bone or charred plant remains. "Transportation, Trade and Commerce" can be addressed, in part, by identification of lithic raw materials in debitage and tool samples and their percentage in a given assemblage. Stone is the most likely database to survive the erosion of the region.

A broader range of research topics can be addressed with the larger sample of Ceramic Period material from the Cobscook Area. No State Plan study unit for the Ceramic Period exists yet, so we discuss the relevant research topics in outline only. "Culture History" includes both the topic of internal culture change within the archaeological sequence in the region, and the topic of ethnohistory. Any securely dated component contributes to the understanding of culture change, most valuable in terms of the ceramic chronological framework proposed by Petersen and Sanger (1989). Detailed geographic distribution patterns of certain material culture items (eg. ceramic designs, perhaps decorative styles on bone tools, on gaming pieces, decorative and non-secular objects) can possibly be used to trace population or ethnic boundaries through time. These topics might be of special interest to the Quoddy Region Native American population, primarily the Passamaquoddy tribe. Various aspects of "Settlement Pattern" and "Subsistence" are incorporated into Sanger's definition of the

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Quoddy Tradition. Shell middens, with excellent bone and shell preservation, are particularly useful for answering questions concerning diet and season of occupation. Source studies for lithic material contribute to understanding "Transportation, Travel, Trade and Commerce." "Mortuary Patterns" and "Human Biology" require human physical remains, which are so far absent from the archaeological sample.

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**F. Associated Property Types**

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I. Name of Property Type Shell midden

II. Description

A shell midden is a habitation site where occupation debris includes the shells of invertebrates in sufficient quantity (1) to be visible throughout a majority of the volume of the site matrix and (2) to neutralize the natural acidity of Maine soil to an extent that vertebrate bone is preserved with relatively little degradation. The invertebrate shell in the matrix may represent as little as a few percent of the volume of the site matrix, may consist of one or mixed species, may be stratified or unstratified, and may occur in a layer as thin as 2-3 centimeters. The habitation debris may be from very short term occupations (a few hours

III. Significance

Two characteristics of shell middens differentiate them from many other sites in Maine. First, they contain substantial quantities of invertebrate shell, which neutralizes soil acidity and preserves vertebrate bone remarkably well. This property provides archaeologists the opportunity to study prehistoric diet and related topics such as season of use. These topics are basic data for much understanding of hunter-gatherer cultural adaptation. Moreover, bone preservation preserved bone tools, which augments the strictly stone-tool and ceramic data base for culture history and stylistic variation. Second, the volume of shell midden matrix is often mostly composed of human-imported material: the shell, or course, and gravel or other fill used to prepare living surfaces.

IV. Registration Requirements

Using the standards in the draft Susquehanna Tradition State Plan Study Unit, the first site in a Multiple Resource nomination area yielding a Susquehanna Tradition component is significant at the local level if that site will yield a reasonable sample of diagnostic artifacts separable from other stone tools through vertical or horizontal stratigraphy. This criterion allows designation as significant a site which will yield some regional data on Susquehanna Tradition tool form, raw material usage, and stylistic detail from stone tools. Further Susquehanna Tradition components in the nomination area are significant only if they will yield a stone tool component separable from other time periods by vertical or horizontal stratigraphy and in association with one or more of the following: features yielding faunal remains and/or floral (charred plant) remains, and/or human biological remains.

Ceramic Period shell middens must minimally contain a component of stone or bone tools and/or ceramics from an identifiable, relatively limited portion of the Ceramic Period, and provide the opportunity for controlled excavation over a substantial area,

See continuation sheet

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See continuation sheet for additional property types

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**G. Summary of Identification and Evaluation Methods**

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Discuss the methods used in developing the multiple property listing.

Maine archaeologists have now completed reconnaissance survey of roughly 50% of the Maine coastline, locating approximately 3000 prehistoric sites, 95% or more of which are shell middens (Belcher 1989; Bourque 1981, 1982, 1984; Hamilton 1985; Kellogg 1982, 1984, 1985; Spiess and Hedden 1983; Yesner 1979, 1980; and see discussion of research in adjacent New Brunswick in the Historic Context portion of the nomination). Less than 10 sites (0.3%) of that sample do not abut the eroding (sinking) coastline. Thus, the vast majority of coastal sites, both shell middens and non-shell middens, are visible along the eroding coast without extensive shovel testing. Because earlier sites were more likely built on landforms at lower elevation near the (rising) sea, there is a greater bias against the above-water preservation of older sites (Archaic versus Ceramic, early Ceramic versus later Ceramic). Thus, even without much survey in the Quoddy region, we can develop expectations for site preservation, which incidentally will be much worse than on the more slowly sinking central Maine coast.

Professional prehistoric archaeological work in the Quoddy Region has been sporadic at best. There are 56 known sites within

See continuation sheet

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**H. Major Bibliographical References**

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1982 Report on Archaeological Survey Activities in Penobscot Bay, 1981. Report on file, Maine Historic Preservation Commission, Augusta.

See continuation sheet

Primary location of additional documentation:

- State historic preservation office  
 Other State agency  
 Federal agency

- Local government  
 University  
 Other

Specify repository: Maine Historic Preservation Commission

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**Associated Property Type: Shell midden**

**II. Description continued.**

to days), perhaps repeated more than once but not necessarily, or from much longer term occupations. The mechanism(s) of formation of shell middens is currently a matter of research and debate (Will 1976, Spiess 1988 and references therein, Belcher 1989), but the physical dumping of "messes" of shell on an occupation surface is the generally accepted overall model.

**III. Significance continued.**

Because of the high volume of human-imported material, shell middens grow vertically as human occupants create their own cultural stratigraphy. In an environment such as the Maine coast which is highly erosional, this depositional human behavior creates stratigraphic sequences where there would not otherwise be any. Our understanding of culture history benefits as a result. Only in certain fine alluvial sequences along interior rivers is such stratigraphy surpassed, and in those situations there is little bone preservation.

**IV Registration Requirements continued.**

minimally 5 meters in shortest horizontal dimension (ie. greater than 25 square meters), will be considered significant. Either the site must have been utilized for a limited portion of the Ceramic Period, or there must be good stratigraphic separation within the shell midden. By definition, the shell midden will contain faunal remains (invertebrate shell). The presence of vertebrate faunal remains, features and living surfaces contributes additionally to site significance. Since horizontal and vertical integrity is a key factor in the minimum criteria of site significance, those sites that have been substantially damaged by human action, including looting and unsystematic digging, may not meet the above defined minimum significance criteria.

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**I. Name of Property Type: Non-shell-midden**

**II. Description**

Any prehistoric archaeological site on the coast which contains evidence of prehistoric occupation in the form of lithic material, bone, charred plant material, and/or features, but does not meet the criteria for a shell midden is placed in this category. There is at least one large, intensely occupied site on the central Maine coast, the Goddard site (30.42), which has such a low shell content that the inhabitants were evidently not concerned with shellfish collecting as a subsistence pursuit. A site may also be classed as a non-shell-middens if it at one time contained internal diversity in structure and if the shellbearing portion has eroded away, or if the soil matrix has been eroded or altered such that shell fragments, if once present, have not survived.

**III. Significance**

Research on the central coast of Maine, in particular at the Goddard site, has demonstrated that non-shell middens may have performed a special function in Late Ceramic subsistence and settlement as a summer gathering place for large numbers of people. However, a systematic search by Dr. Steven Cox for other sites similar to the Goddard site has failed to locate any. Some well preserved shell middens on Maine's central coast and in Passamaquoddy Bay contain areas with little or no shell, often located toward the back of the midden. Black (1986) suggests that there may be seasonal differences in use of one shell midden, meaning that the back/ often non-shell areas may be seasonally differentiable as habitation or use areas. Even if a shallow shell midden has lost its shell content only through in-situ humic acid (and acid rain) solution, horizontal integrity and some features, such as stone lined fire hearths, may survive.

**IV. Registration Requirements**

Using the standards in the draft Susquehanna Tradition State Plan Study Unit, the first site in a Multiple Resource nomination area yielding a Susquehanna Tradition component is significant at the local level if that site will yield a reasonable sample of diagnostic artifacts separable from other stone tools through vertical or horizontal stratigraphy. This criterion allows

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designation as significant a site which will yield some regional data on Susquehanna Tradition tool form, raw material usage, and stylistic detail from stone tools. Further Susquehanna Tradition components in the nomination area are significant only if they will yield a stone tool component separable from other time periods by vertical or horizontal stratigraphy and in association with one or more of the following: features yielding faunal remains and/or floral (charred plant) remains, and/or human biological remains. These standards apply to non-shell middens as well as shell middens.

Ceramic Period non-shell midden sites in the nomination area are significant only if they will yield a stone tool and ceramic component from a limited portion of the Ceramic period, separable from other time periods by vertical or horizontal stratigraphy and in association with one or more of the following: features yielding faunal remains and/or floral (charred plant) remains, and/or human biological remains. Collections from eroded context on a beach are not eligible.

The Moose Island site (80.1) as described by Kingsbury and Hadlock (1951) would be eligible under these criteria at the time it was excavated. The occupation layer is described as a 1-inch thick dark soil layer from which fire-pits extended a foot or more into subsoil. An area of 2100 square feet was excavated in 1947 yielding 12 hearths. There must have been some horizontal concentration of material around these features. Although no ceramics survived in the midden, the site yielded more than a score of points identifiable as Early or Middle Ceramic in style, including varieties of stemmed lanceolate and lobate-stemmed points. There is one possible early Susquehanna Tradition point (Plate I, row 2, third from left), and several widely side-notched points from possible late Susquehanna Tradition (Plate II, bottom center). It is possible that some of the lanceolate points are earlier, from a Moorehead Phase occupation. However, the site was described as rapidly eroding in 1947, at the rate of about 1 foot per year after removal of beach gravel for road building. Moreover, it is not clear what portion of the site was excavated in 1947, but it must have been substantial. We consider it unlikely that much of the site survives, but it may represent a site type of which other examples have been preserved behind barrier gravel beaches.



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the geographic area of this Nomination. They are listed in the Maine Archaeological Survey as: 63.2, 63.3, 63.6 through 63.8, 80.1 through 80.22, 80.25 through 80.51, and 80.53.

The first professional work within the area of this management unit was accomplished by Wendell Hadlock on the Moose Island site (80.1) in Eastport (Kingsbury and Hadlock 1951). Hadlock apparently worked with local amateur archaeologists, including Dr. Isaac Kingsbury of Hartford, Connecticut, who had a summer home in Perry, and two local collectors named Knapton. During the early 1950's the first 51 sites listed on what is now designated map Quadrangle 80 were entered into the records of the R. S. Peabody Foundation, Andover, Massachusetts, where Douglas Byers, a colleague of Hadlock's, worked. The R.S. Peabody Foundation excavated at another of these sites (80.39) in the 1950's (unpublished, note on site form). All 51 of these sites had been assigned R.S. Peabody Foundation site numbers when the R. S. Peabody Foundation records were used by Dean Snow to compile the first modern listing of Maine sites (Snow 1969). We know nothing about most of these sites, beyond a probable approximate location. I suspect that many of the site locations were obtained by Hadlock or Byers from the Knapton Brothers as a location at which stone tools could be found eroding onto the beach.

About 1972 David Sanger moved from the National Museum of Canada to the University of Maine at Orono, and turned his attention from the New Brunswick side of Passamaquoddy Bay, to the nearby areas in Maine. On 11 June 1975 he visited sites 63.2, 63.6, and 63.7 near Cutler and reported them to be shell middens 75 meters, 50 m and 50 m long respectively. He also visited site 80.6, without reporting its condition. On 7 July 1980, Arthur Spiess visited sites 80.14 and 80.29. Site 80.14 was confirmed to be a scatter of lithic material (debitage) on a gravel beach. Testpits dug along the edge of the erosion scarp revealed only sterile soil; all evidence of shell fragments, prehistoric artifacts or dark "midden" soil had disappeared. Site 80.29 could not be relocated; ie. there was no longer any evidence of prehistoric occupation on or near the indicated location. On 15 May 1986 Sanger visited sites 80.26 and 80.53. These two shell middens were reported to be 50 by 20- meters and 20 x 5 meters in extent. Site 80.26 is reported to have yielded a complete Ceramic sequence, and some incised pebbles, which are a rare Ceramic period artifact found in a few Passamaquoddy Bay sites (perhaps a gaming piece or shaman's mnemonic device. Then, in 1989, the Maine Historic Preservation Commission conducted a week-long test excavation at site 80.15, the only extensive excavation in the management unit since Kingsbury and Hadlock in 1947. As follow-up work on site

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80.15 proceeded, Spiess visited sites 80.18 and 80.36 on 24 and 25 March 1990. No evidence of a site was found at or near the reported location of 80.18, meaning that it has probably been completely eroded. Site 80.36 yielded one chert flake exposed on the erosion scarp, but no shell was visible on the exposed soil. Presumably some of this site is intact, but its shell-bearing portions have been totally eroded.

Thus, including site 80.15, professional archaeologists have visited ten sites in the management unit area in the last 20 years. Three have proven so badly eroded as to be not significant (80.14, 80.18, 80.29). One, 80.36, may be near complete destruction. Five are reported with substantial remaining uneroded dimensions, which means they deserve intensive level testing and may be significant. Based upon this scant information, and what we know of site preservation and erosion in Passamaquoddy Bay, the majority of reported sites in this management unit will be found to be badly eroded, and hence not eligible for listing on the National Register of Historic Places. It is possible that site 80.15 is the largest, and best preserved, prehistoric site in the area of this Multiple Resource nomination.

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