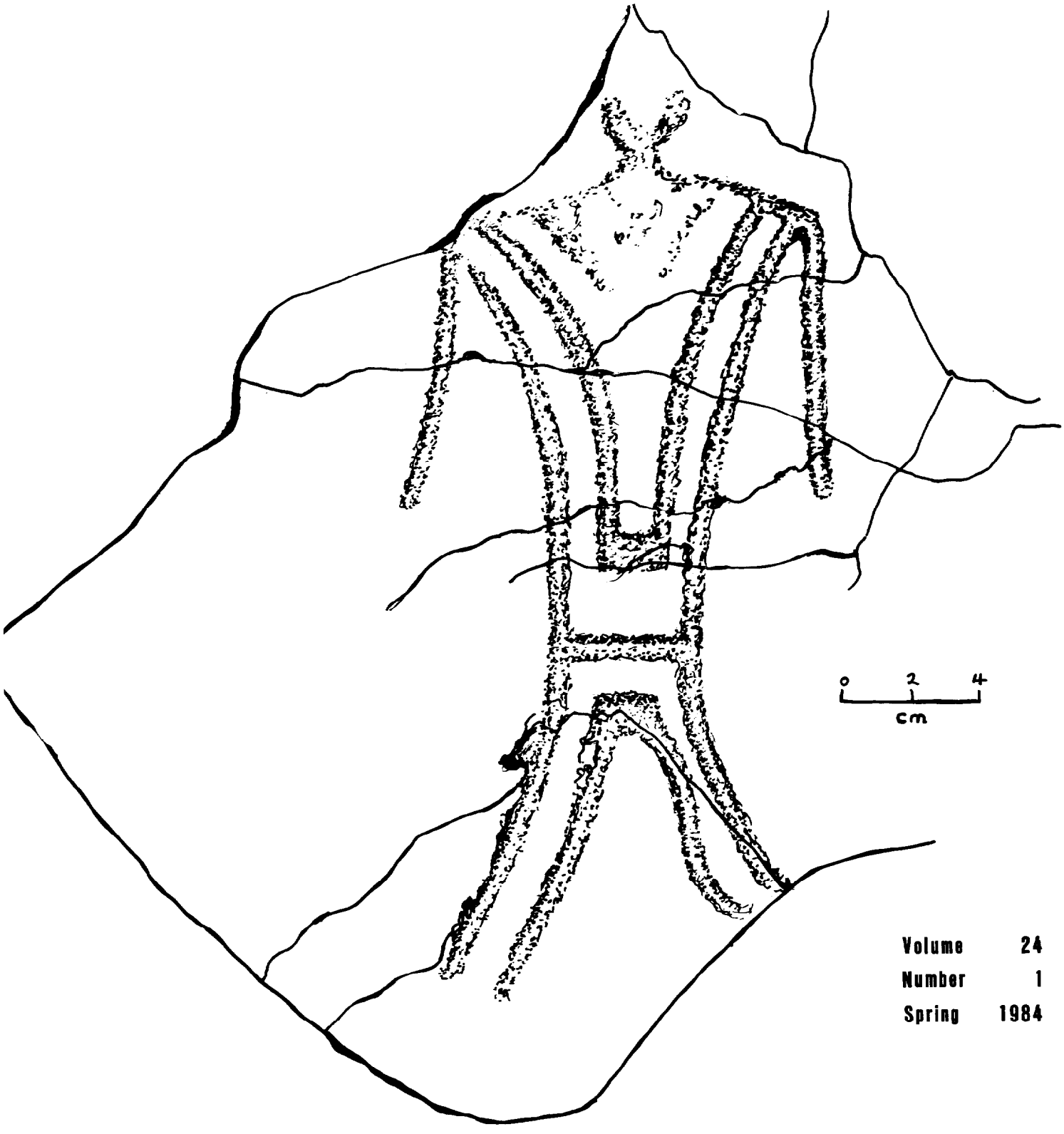
MAINE ARCHAEOLOGICAL SOCIETY INC. BULLETIN



Volume 24
Number 1
Spring 1984

MAINE ARCHAEOLOGICAL SOCIETY, INC.

Officers for 1984:

President:	Richard Doyle, Jr.; 60 Tuttle Road; Cumberland, Maine 04021 829-5833
1st V. P.:	Mark Hedden; Box 33, Anderson Road; Vienna, Maine 04360 623-2206
2nd V. P.:	Bernice Doyle; 60 Tuttle Road; Cumberland, Maine 04021 829-5833
Secretary:	David Cook; R.F.D. #2, Box 1300; Winthrop, Maine 04364 377-2186
Treasurer:	Margaret Cook; R.F.D. #2, Box 1300; Winthrop, Maine 04364 377-2186
Editor:	Eric Lahti; R.F.D. #4, Box 1070; Skowhegan, Maine 04976 474-5961
Ass't. Ed.:	Arthur Spiess; R.F.D. #2, Box 236; Litchfield, Maine 04350 268-4769

Trustees:

Terms Expire:

1984	Alaric Faulkner; R.R. #1, Box 915; Winterport, Maine 04496 223-4760
	Martha Spiess; R.F.D. #2, Box 236; Litchfield, Maine 04350 268-4769
1985	Marshall Rice; Box513; Deer Isle, Maine 04627 348-2506
	Michael Brigham; Milo Printing Company; Milo, Maine 04463 943-7384
1986	Riley Sunderland; Windy Corner; Bar Harbor, Maine 04609 288-5317
	Steven Cox; R.F.D. #1, Box 2240; Litchfield, Maine 04350 268-4061

Permanent Address of the Society:

Maine Archaeological Society, Inc.
Department of Anthropology
University of Maine at orono
Orono, Maine 04469

PLEASE NOTE THAT THERE WAS AN ERROR IN TYPING THE FIRST PARAGRAPH ON PAGE 2 OF THE LAST ISSUE OF THE BULLETIN 23:2, FALL, 1983.

Erratum: Page 2 first paragraph should read:

While a few objects recovered in archaeological excavations of graves and living sites may have been associated with shamanistic activities--such as pipes, stones that are unusual in shape or color, or skulls of animals that may have had special connotations for its former owner, there is no way to demonstrate a clear connection with shamanism. One aspect of prehistoric remains can be connected with shamanism in both the historic record and by analysis of the nature of the designs. These prehistoric remains are what we call petroglyphs.

CONTENTS

Volume 24 Number 1 Spring, 1984

(Text for Cover Illustration MAS
Bulletin Spring 1984 V 24 #1)

THE FORM OF THE COSMOS IN THE BODY OF THE SHAMAN

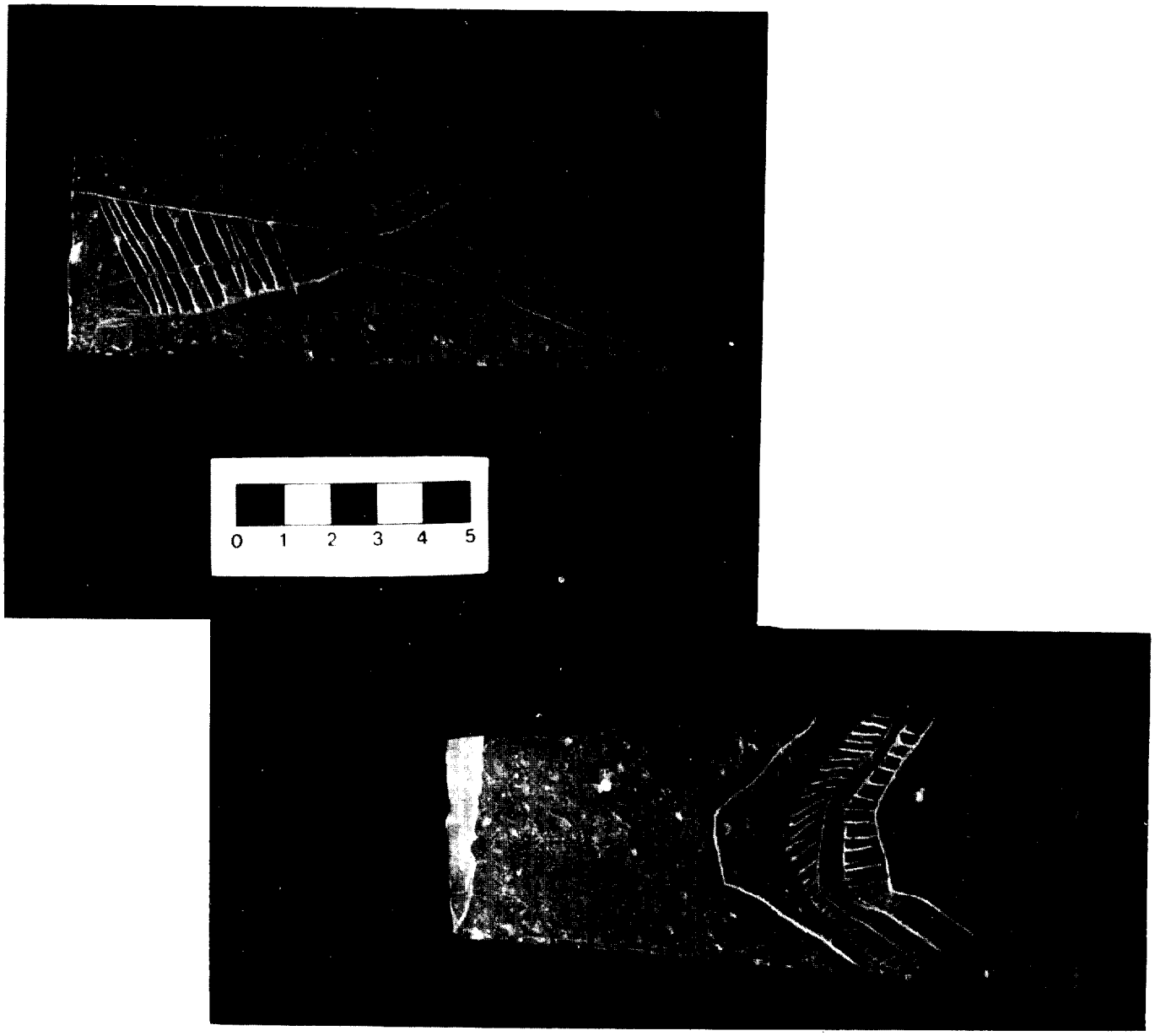
The cover drawing illustrates a petroglyph found on a ledge at the outer extremity of Clark Point, Machiasport. The surface layer on which this and other petroglyphs appear had been largely destroyed by erosion before this design was recorded: twenty whole or fragmentary designs were still traceable in 1981. Since the land mass in the area has been subsiding in relation to sea level at a rate estimated to be as fast as one centimeter per year for several centuries (and perhaps millenia), the situation of the ledge beyond the present limits of glacial till cover at Clark Point suggests that the surfaces used for making these twenty petroglyphs were washed clean of their original overburden some time prior to the exposure of the present shoreline ledge where the bulk of the surviving petroglyphs are located. This reasoning suggests that the figure on the cover was executed at an earlier date than the petroglyphs illustrated in the Spring and Fall 1983 Bulletins.

My inference of an early date is supported stylistically by a shift to straight line triangular body forms on the inshore petroglyphs and by the scattered but widespread occurrences of the "H" with excurvate sides in other petroglyphs attributed to the Algonkians, as for example, at Safe Harbor, Pennsylvania and Peterborough, Ontario, Canada (Cf. Vastokas 1973: Figure 48). On the basis of associated pottery, the Vastokas have estimated the Peterborough site petroglyphs to be at least 1500 years old. The motif, however, seems to have survived in variant forms in Algonkian art up to the 1820's in the Great Lakes area when Schoolcraft (1853: 364 Fig.16) recorded a painted figure with excurvate sides and V-shaped head as a mnenomic sign used by initiates to the Medewiwin shaman society.

Schoolcraft offers no explanation of the peculiar trait of excurvate sides open at top and bottom on the figure; however, the stylistic continuity into historic times lends weight to the possibility that the concept implicit in the ideograph in its early form survives in recorded oral traditions. One Ojibway Midewiwin origin myth recorded by Ruth Landes suggests a formal conception of the cosmos that may apply here. Briefly, in the Ojibway myth, the earth and sky are composed of various layers which must be penetrated if the powers of the manitous above and below are to be made available to man. In the myth, the manitou Bear assists by pushing a Mide Cedar tree up through the various layers beneath the earth, thereby making a path along which the Midewiwin could be brought along from its birthplace in the bowels of the earth. Meanwhile, from above, the Mide manitou assisted by others bring down the Mide ceremony through the various layers of Mide sky. Finally, accompanied by much rumbling and crashing, the assembly of the Midewiwin is accomplished at the midpoint between Earth and Sky (i.e. in the ceremonial lodge).

The body of the shaman, in effect, may represent an idea of the cosmos with the line across the waist representing the plane of the earth, the point of contact between the spiritual powers of earth and sky—from which, ultimately, the shaman draws power.

The Ojibway account, of course, only documents the persistence of the concept into a very late Algonkian ethnographic context (1930's); however, I have indicated elsewhere that the idea is not limited to the Algonkian culture. Comparable schematic forms combining a human figure with the cosmological sign or in which the sign stands alone are well documented for petroglyphs and other ideographic expressions in Eurasia beginning some 6000 years ago and survived into the 19th Century as part of the inventory of ceremonial body and facial painting, masks and ritual objects recorded for tribal groups in Africa, Asia, the South Pacific and South America. While explicit interpretations along the lines I have proposed above are not usually associated with published examples of the motif, some prehistoric instances—such as a petroglyph recorded near The Dalles, Oregon, that shows the motif with cloudlike forms above and rootlike extensions below—appear in contexts that indicate the petroglyph maker interpreted the ideograph in the same manner (See Hedden 1977 for an illustration of the petroglyph and brief discussion). Masks, carvings and petroglyphs scattered at wide intervals from Alaska to Peru bear the motif. Where dateable contexts are available, the earliest appearances in America are in the last centuries before Christ. While this widespread distribution with limited time depths raises intriguing questions on the sources of ideas and range of cultural



Front and back of engraved slate plaque or "gorget" found near Milo, Maine. The top has broken off. If the engravings are at all related to those designs that appear in Maine petroglyphs, then the constricted waist figure, similar to several prehistoric petroglyphs, may represent an Algonkian shaman or spirit(left). The perpendicular line cutting through the horizontal lines across the upper torso could refer to a concept of the cosmos as successive layers that must be penetrated to bring the powers of the Manitos above and below together to aid people on earth. The engraving on the reverse face (right) may represent the longer cosmos or underworld with the horizontal top as the plane of earth (compare cover drawing).

exchanges between prehistoric tribal cultures in North America and elsewhere, I mean here only to underline the possibility that the concept expressed in the historic Ojibway narrative represents a continuation of an old idea, present as an ideograph for at least 2000 years in North America.

A chance find in 1983 of an incised slate tablet eroding from a cultural stratum in the bank of a river in the vicinity of Milo, Maine by Michael Brigham seems to offer another example of the motif in Maine. The broken tablet is 13.3 cm. long by 6.3 cm. wide by 0.6 cm thick at its widest end and narrows to 4.35 cm wide by 1.1 cm thick at the point of fracture. One face bears what appears to be a constricted waist figure incised with narrow lines ranging from 0.3 - 1.0 cm in width with rounded grooves.

Twelve lateral lines connect the tapered outer lines on one side of the waist constriction and are penetrated by a perpendicular line that ends at the point of constriction. Conceivably this represents a sacred path through the layers of earth or the heavens. On the reverse face, a flat top pyramidal outline is irregularly repeated below by 4 lines joined in pairs by a filling of more or less perpendicular connecting lines. This figure could be interpreted as the lower half of a constricted waist figure or as a mound or mountain form. At the point of fracture in the center of the obverse side an indentation suggests that the tablet may have had a hole for suspension or that the original owner may have been in the process of making such a hole before the fracture. To judge by the color of the broken edge, the fracture was not a recent event. The incised lines with rounded cross-section appear to have been made with a stone tool.

To sum up, a petroglyph from Machiasport and an incised slate tablet from Milo, Maine apparently express a formal conception of the cosmos which is still present in modern Ojibway Midewiwin ceremonies. The ideograph initially appears at least 1500 years ago in other petroglyphs attributed to the Algonkians and has a scattered distribution on several continents among non-literate cultural traditions with limited time depths.

Note: The field research and analysis of the Machias Bay petroglyphs was funded through the Maine State Museum as part of the "12,000 Years in Maine" exhibit now in preparation. Special thanks to Mike Brigham for the loan for study of the incised slate tablet.

Mark Hedden
January, 1984

Hedden, Mark

1975 Dispositions on the American Neolithic I in ALCHERINGA MAGAZINE Vol 1, # 2
Boston

1977 Dispositions on the American Neolithic II in ALCHERINGA MAGAZINE Vol 3, # 1
Boston

Landes, Ruth

1968 Ojibwa Religion and the Midewinwin University of Wisconsin Press, Madison

Schoolcraft, Henry R.

1853 History, Etc., of the Indian Tribes of United States. Volume 1 Philadelphia

Vastokas, Joan M. and Romas K.

1973 Sacred Art of the Algonkians
Peterborough

ABORIGINAL CULTURAL RESOURCES INVENTORY OF THE GREATER MOOSEHEAD LAKE REGION, NORTHWESTERN MAINE

Nathan D. Hamilton,

James B. Petersen

University of Pittsburgh

and

Richard A. Doyle, Jr.

University of Southern Maine

ACKNOWLEDGEMENTS

All of the research described herein was conducted gratis by the research team, with the exception of reimbursed expenses provided by the Maine Historic Preservation Commission for the 1981 field season. The site information and collection data were computed and analyzed at the University of Pittsburgh and Cumberland Research Center. All authors participated in field work, as well as artifact analysis. Nathan D. Hamilton and James B. Petersen compiled and prepared this report, for which Petersen served as general author and editor.

Special thanks are extended to Dr. David Sanger, University of Maine-Orono, and Howard Sargent, Franklin Pierce College, for providing incentive for the project and survey information in 1974. Various local informants who unselfishly provided information include Mrs. Phebe Moody, Lincolnville, Mrs. Elizabeth Hartsgrove, West Bath, Mr. Harry Sanders, III, Greenville, Mrs. Bernice Edwards, Greenville, Mrs. Viola Redmond, Greenville, and Ms. Linda Hubbard, Greenville.

Dr. James M. Adovasio, University of Pittsburgh, provided a camera for the research team, and gave support for the preparation of photographs.

Thanks are also extended to Elaine Hamilton, who assisted in the fieldwork, and Mr. and Mrs. Gerald D. Hamilton, Greenville, who provided invaluable support during the course of the entire project. Most importantly, we would like to thank Dr. Arthur Spiess, Archaeologist, Maine Historic Preservation Commission, for providing encouragement as well as limited financial support. The success of this report is largely due to his support, although any errors or omissions are the responsibility of the research team.

INTRODUCTION

This report provides documentation of recent archaeological research conducted in northwestern Maine, on and around Moosehead Lake. Moosehead Lake is the largest lake in Maine and one of the largest lakes lying totally within the United States. The present study area, centered on Moosehead Lake, is situated in the northernmost extension of the Appalachian Mountain system. In spite of the fact that little systematic archaeological research had been previously conducted in the area, it can now be demonstrated that prehistoric adaptation to the Moosehead Lake region spanned nearly the entire range of aboriginal occupation of the Northeast after ca. 11,000 B.P., from the Paleo-Indian through Historic periods. Consequently, the greater Moosehead Lake region has a significant and varied research potential, which will be touched upon herein.

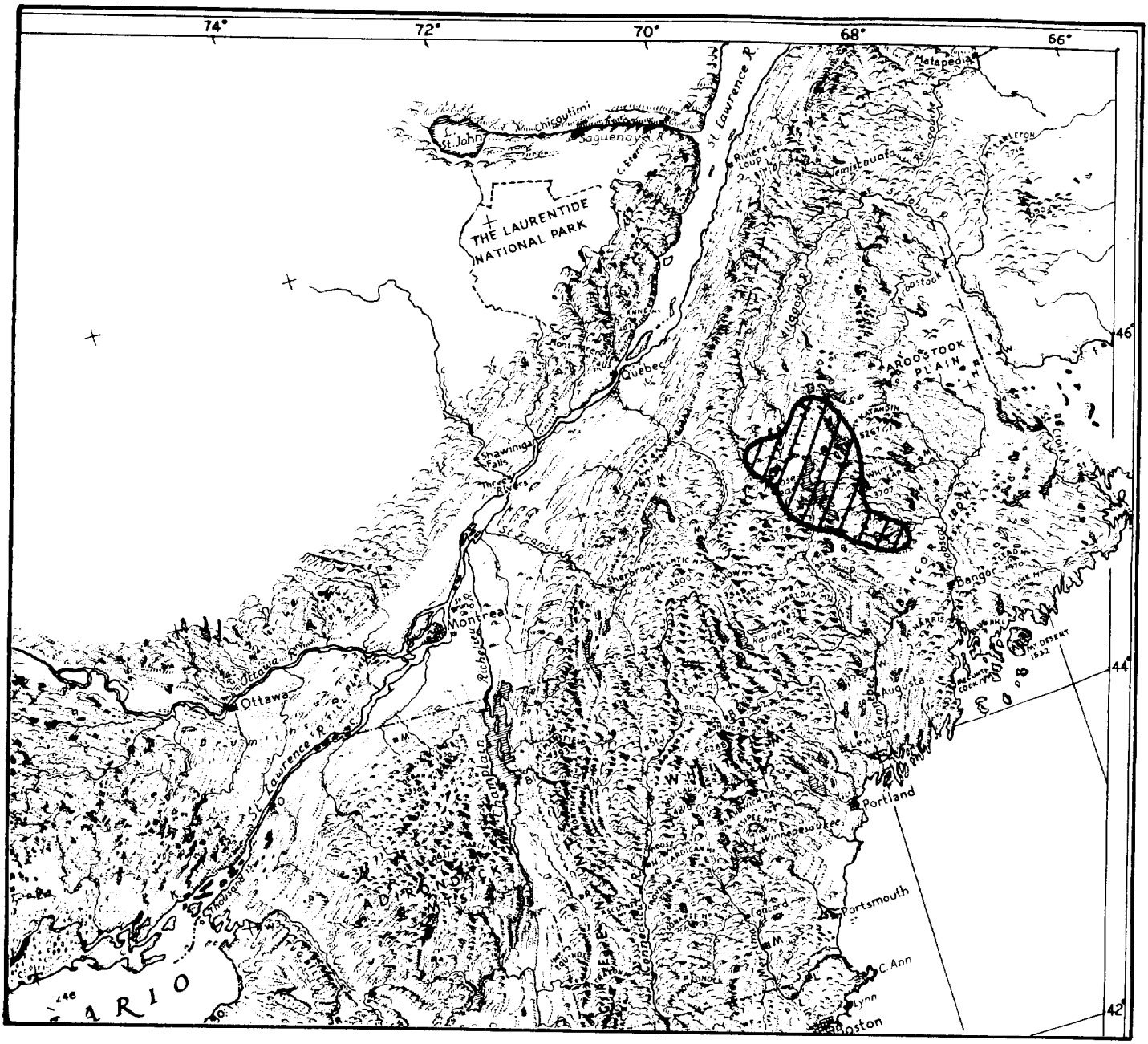


Figure 1. Physiographic Map of Northeast with Research Area Outlined.

The purpose of this report is: 1) to provide a summary of existing artifact and site data for the area, the primary focus of recent research; 2) to establish some tentative research problems which may be ultimately addressed in terms of local and regional prehistory; and 3) to establish research priorities for the study area. These concerns are variably addressed below.

Recognizing that environmental conditons influence human adaptations, particularly among hunter-gatherer populations as considered here, the environmental setting for the region is initially summarized for both modern and paleoenvironmental conditons. Within the environmental section, geographical boundaries, hydrology, topography, climate and bictic resources are discussed. A still

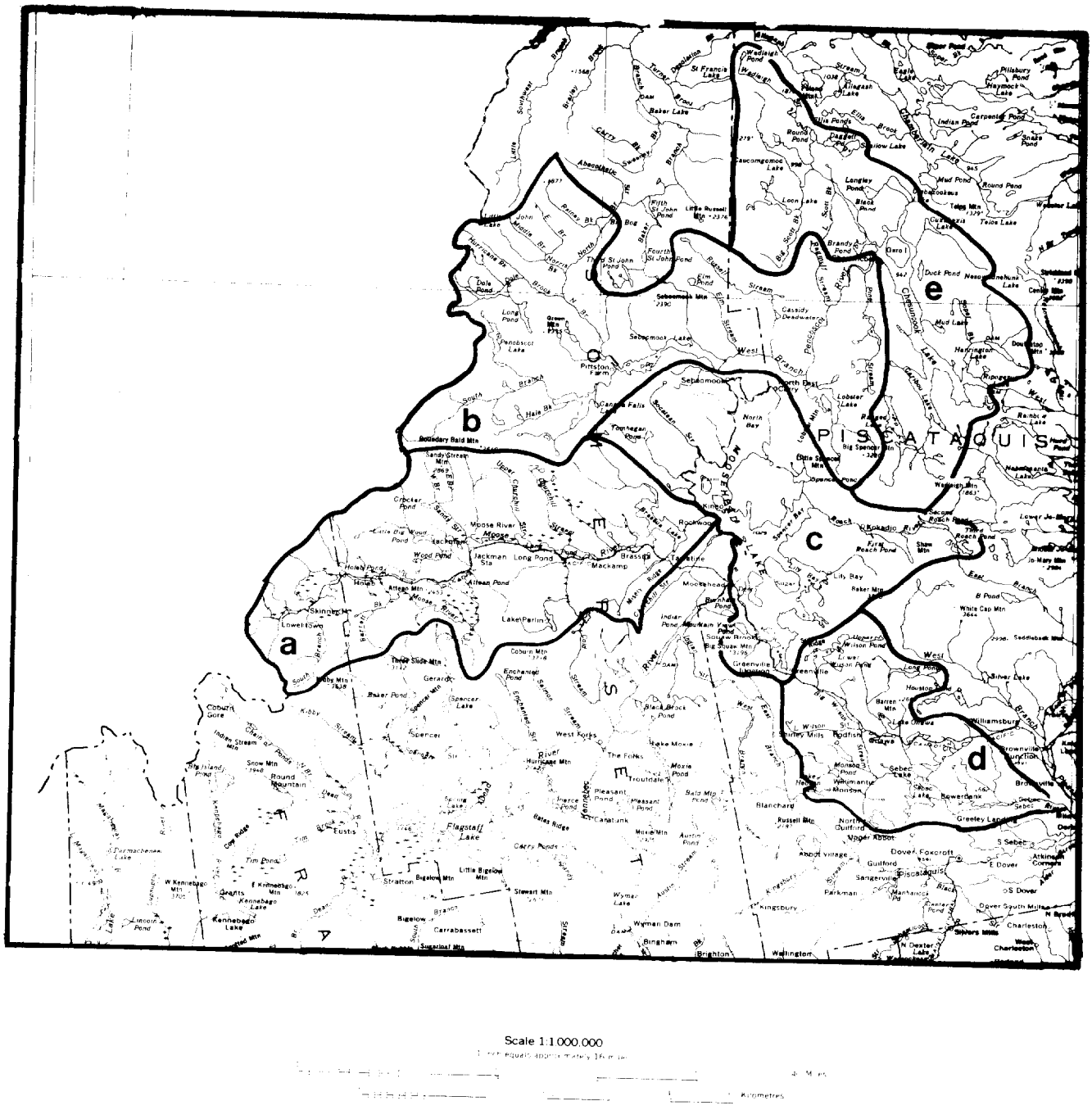


Figure 2. Research Area in North West Central Maine, a Moose River drainage, b West Branch Penobscot River, c Moosehead Lake basin, d Wilson Stream/Sebec Lake, e Chesuncook Lake basin.

more generalized summary of the paleoenvironmental conditons provides a background against which the culture history of the area may be ultimately interpreted.

A summary of the cultural setting for aboriginal populations of northern New England is presented with special emphasis given to broad Northeastern cultural manifestations which have been recognized in the study area. Following discussion of past research in the area and methods of the present research, the distribution of archaeological sites is presented by drainage area. A summary

for each area is presented, along with consideration of site types and locations. Finally, a concluding summary of the varied data is presented in conjunction with recommendations for future research in the greater Moosehead Lake study area.

MODERN ENVIRONMENTAL SETTING

The study area includes portions of two major drainages, the upper Kennebec and Penobscot Rivers. The Kennebec River originates at Moosehead Lake, as the only outlet of the lake before flowing southward toward the Atlantic Coast. The area drained by the Moose River, including Brassua Lake, flows eastward into Moosehead Lake and is totally included in the study area. The Penobscot River originates north of Moosehead Lake and includes Seboomook and Chesuncook Lakes. The upper portion of the Piscataquis River, which drains eastward from the Sebec Lake into the Penobscot River, is also included in the study area.

Topography varies widely within the study area. Elevations range from just above 300' a.s.l. at Sebec Lake to almost 1000' on Moosehead Lake, and a maximum elevation of 3,644' a.s.l. on White Cap Mountain. Mt. Katahdin, the highest point in Maine at 5,268', lies near the study area. In general, the area is a glaciated upland with a series of rolling hills, ridges, and mountain peaks dissected by the hydrologic features enumerated above. In spite of the rugged character of the region, human movement has been long afforded by and along these varied hydrologic features.

Nearly all of the northwestern Maine study area falls within the northern climate division of Maine as defined by Fobes (1946). The January mean temperature ranges from 7 to 12 degrees F. and July mean temperature from 61 to 68 degrees F. The annual mean is 39 degrees F., with a recorded low at -48 degrees F and high at 104 degrees F. Temperatures on the Atlantic Coast are generally more moderate, with temperatures in January some 10 to 15 degrees F warmer than in the interior regions. The annual mean precipitation is 37 inches, with snowfall ranging from 90 to 130 inches. Average frost free days in the study area are 111 days, significantly fewer than some 164 average frost free days along the Atlantic coast (Banasiak, 1961; Fobes, 1946).

Soils within the study area are generally classified as rough and rocky with shallow podzols, although portions of the area along the Kennebec and Penobscot Rivers are better characterized as glacially deposited clay loams (Bonasiak, 1961). The floral resources of this area fall largely within the Spruce-Fir-Northern Hardwoods zone of potential vegetation, although a small portion of the study area lies within the Northern Hardwoods-Hemlock-White Pine zone (Westveld, et al., 1956). The Spruce-Fir-Northern Hardwoods zone is characterized by predominant red spruce and balsam fir, and some combination of beech, yellow birch, white birch, aspen, red maple, and sugar maple. The Northern Hardwoods-Hemlock-White Pine zone has a similar combination of hardwoods which are predominant, but hemlock and white pine predominate among the softwoods rather than spruce and fir.

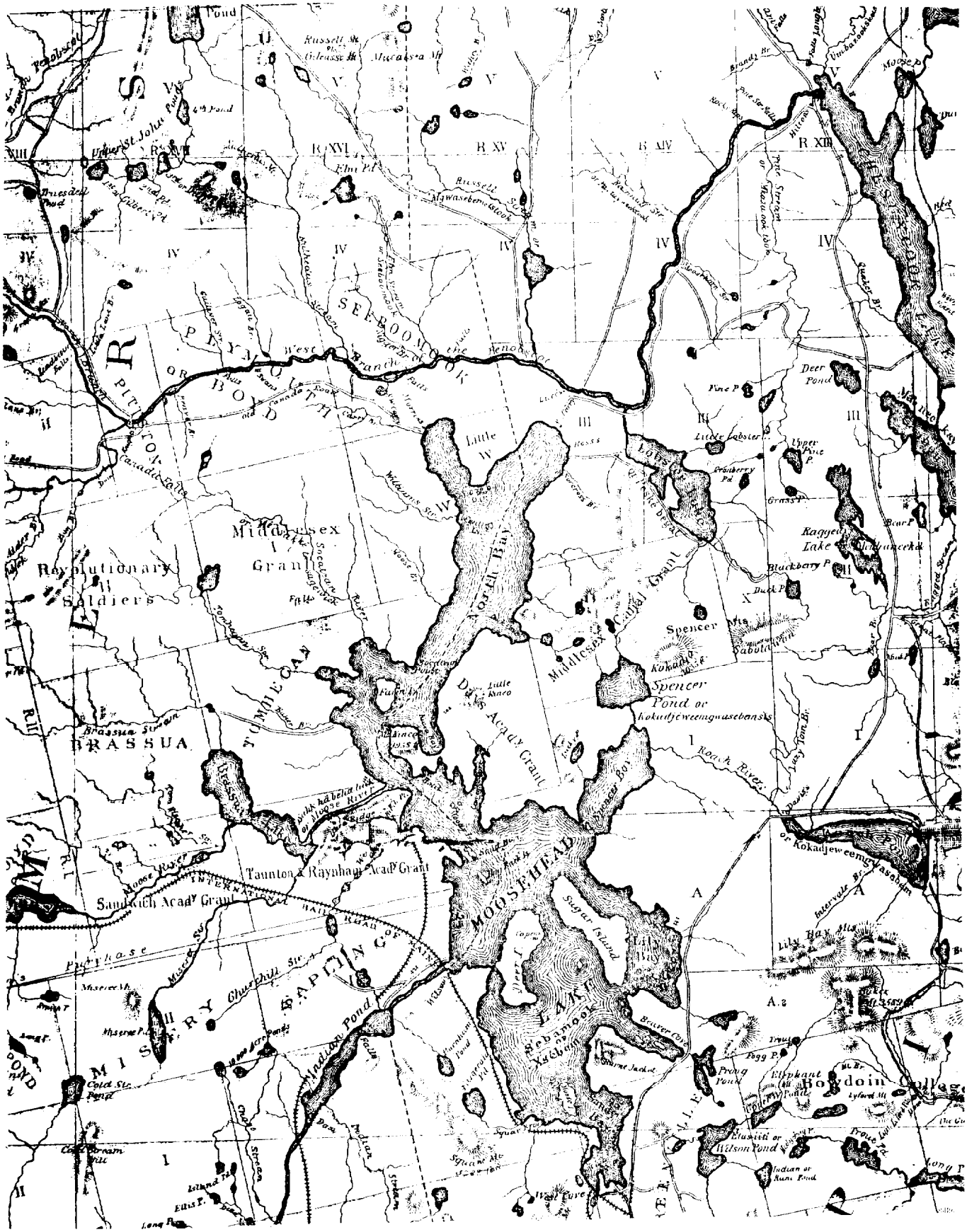
The fauna of this region is varied, including diverse fish and mammal resources in the rivers and lakes, and terrestrial resources throughout the area. Of the fish species, the salmonids and whitefish seem most significant in the lakes, and anadromous Atlantic salmon seem most significant in the upper rivers (Cooper and Fuller, 1945; Cutting and Meister, n.d.; Foye et al., n.d.). A variety of large game species, including white-tailed deer, moose, woodland caribou, and black bear, are or were the most significant terrestrial resources in the study area. Other game species, including lynx, rabbit, grouse, beaver, otter, and muskrat, were similarly available in the region (Farrar, 1889; Snow, 1978; Speck, 1940).

PALEOENVIRONMENTAL SETTING

The precise elucidation of paleoenvironments, including both geological and ecological aspects, is a difficult matter in northwestern Maine, as it is generally in northern New England and adjoining areas. As briefly outlined below for the northwestern Maine study area, only the most general of paleoenvironmental reconstructions are possible for the late Pleistocene and Holocene epochs, in spite of the fact that a variety of palynological studies (e.g. Bradstreet and Davis, 1975; Carr et al., 1977; Davis, 1969; Davis, et al., 1975; McDowell, et al., 1971; Mott, 1975; Ogden, 1977; Whitehead, 1979) and geological studies (i.e. Borns, 1973; Caldwell, 1972; Hansen and Caldwell, 1977 Kirkland and Coates, 1977; Kite, Lowell, and Nicholas, 1982; Stuiver and Borns, 1975) have been conducted in the broad region.

The most recent expansion of the extensive Laurentian ice sheet began at about 25,000 B.P., reaching a maximum position on Long Island by at least 18,000 B.P., at which time essentially all of New England was covered by an icemass of variable thickness. Retreat of this icemass began by ca.

Figure 3. Map of Moosehead Lake in 1889. Note West Branch of Penobscot River prior to the construction of Seboomook Lake (from Farrarr, 1889).



17,000-15,000 B.P. and it had passed north of the St. Lawrence River by ca. 12,500 B.P. Local ice masses apparently remained in upland portions of northern New England from some undetermined period, however, specifically including mountains in and around the study area until ca. 11,000 B.P. (Kite, Lowell, and Nicholas, 1982). A series of ponds, lakes, and other surfacial features were left as the result of this most recent glacial advance and retreat (Caldwell, 1972: 42-46; Hansen and Caldwell, 1977; Nicholas, 198a; Sanger, et al., 1977: 459; Thomas, et al., 1981: 21-28).

As the result of the complex interplay between crustal rebound and changing sea levels, nearby coastal areas were greatly modified during this same period. Following the retreat of ice from the Atlantic coast by ca. 13,000 B.P., initial inundation of coastal margins was followed by a depressed sealevel, possibly as much as 60 m below local modern levels by 11,000 B.P. After this last extensive exposure of the continental shelf, sea level rose relatively quickly to 5,000 B.P., and thereafter continued to rise to modern levels at a reduced rate in the most simple scenario (Bloom, 1960; Emery, et al., 1967; Schnitker, 1974).

A corresponding sequence of vegetational change can be likewise suggested for the broad region, with applicability to the northwestern Maine study area. The first pollen zone following deglaciation, Zone 1 or Period I, indicates the presence of an initial tundra vegetation over the wide region with progressive development of a spruce-fir woodland, between about 13,000 and 9,500 B.P. By ca. 9,500-9,000 B.P., more approximately modern conditions were established when a mixed conifer-deciduous vegetation was present. White pine, birch and oak were apparently dominant in Zone IIa, from ca. 9,500 to 7,000 B.P., and hemlock, birch, white pine and northern hardwoods predominated in the pollen record in Zone IIb, from ca. 7,000 to 5,000 B.P. (Bradstreet and Davis, 1975; Sanger, et al., 1977).

It is important to recognize that these paleoenvironmental changes only approximate the regional patterns of vegetational succession. This is due to a variety of sampling problems and the recognition that relatively great differences existed in forest composition. For instance, it has been suggested that general patterns of vegetation change were some 500 to 1,000 years later in northern New England than corresponding changes in southern New England (Bradstreet and Davis, 1975; Thomas, et al. 1981: 37). The precise paleoenvironmental sequence has yet to be worked out in the northwestern Maine study area, but it is expected to generally parallel the regional sequence, with recognition that specific factors such as topography, elevation and drainage have been important determinants of local environmental conditions over time.

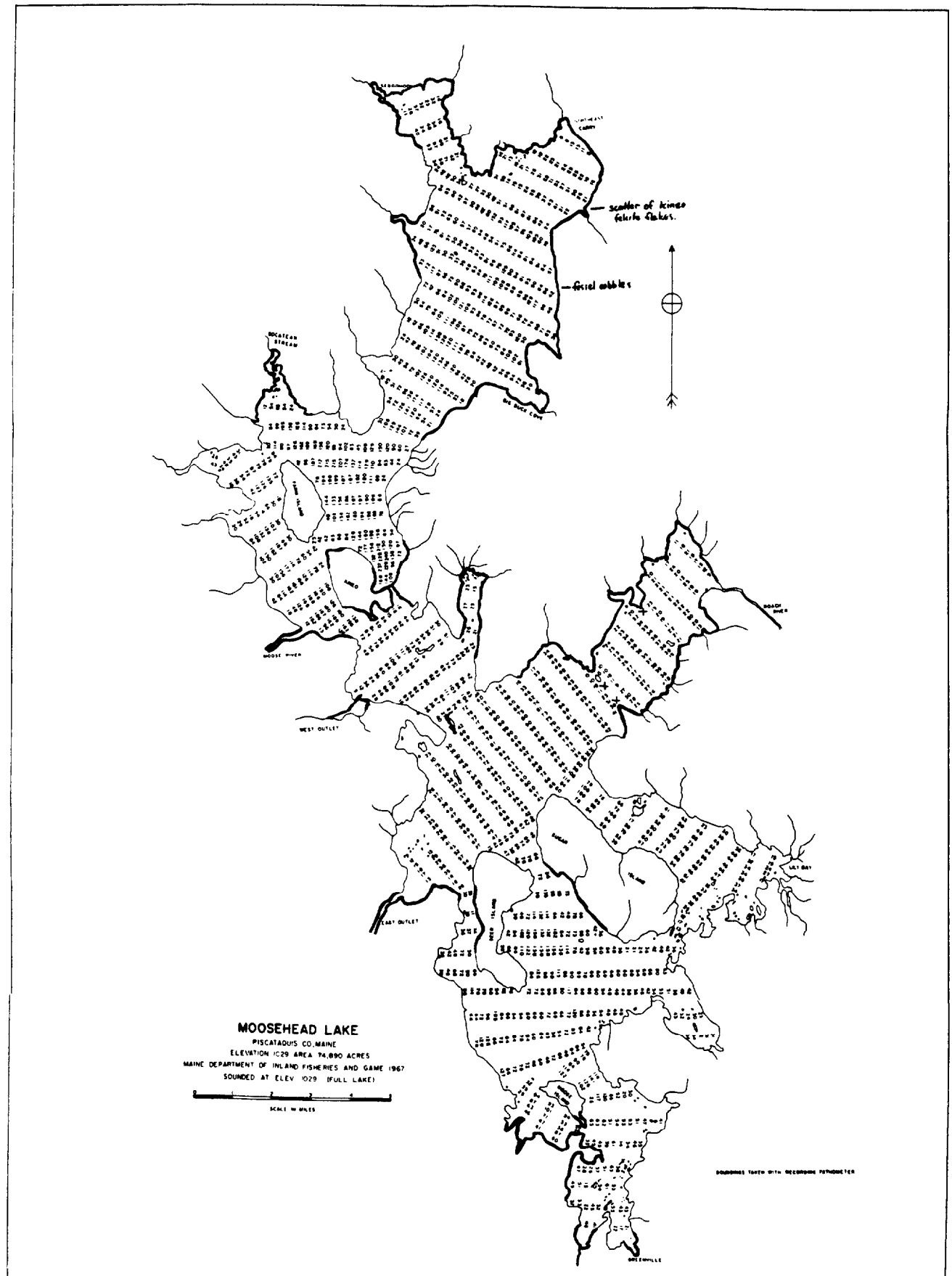
CULTURAL SETTING

The cultural setting of northwestern Maine and adjoining areas spans a period some 12,000 years in maximum duration during which aboriginal groups occupied the region. While Euro-Americans have also been present in the past 350 years or so, this summary deals solely with the native inhabitants of the region following the dictates of the current research. Most of the following discussion will be centered on widely scattered sites and cultural complexes, since the entire span of prehistory is imperfectly known in the northwestern Maine study area as elsewhere in the Northeast. Nonetheless, cultural remains from the study area have been related to the wider Northeast where possible.

The span of aboriginal occupation can be divided into four major temporal periods, of which three cover the long period of prehistory and the fourth represents the relatively brief span of known historic occupation. Using broad Northeastern terminology, these periods include: (1) the Paleo-Indian period, ca. 12,900-9,000 B.P., (2) the Archaic period, ca. 9,000-2,500 B.P., (3) the Woodland period, ca. 2,500-3500B.P., and (4) the Historic period, ca. 350 B.P. - present. Of these periods, the Archaic and Woodland periods are typically divided into three subperiods, designated early, middle, and late (ie. Fitting, 1978; Funk, 1976; Haviland & Power, 1981; Ritchie, 1965, 1969; Ritchie & Funk, 1973; Tuck, 1978; Wright, 1979). Alternate designations, particularly for the Woodland period, have been recently suggested for the Maine-Maritimes region (Sanger, 1974, 1975b, 1979a), and broader New England (Snow, 1980). The first mentioned more widely employed Northeastern designations have been used here, however, to designate temporal periods rather than cultural stages or types in the local region and the broader Northeast.

The initial occupation of the entire Northeast was dependent on the dispersal of the contiental ice mass, which in northwestern Maine had largely dispersed only after ca. 11,500 - 11,000 P.P., as previously discussed. The first occupants during the Paleo-Indian period have been traditionally considered big game hunters dependent on gregarious

Figure 4. Moosehead Lake with Lake Shore Examined between 1973 and 1981.



herd animals to some unknown degree. These populations, typically known as Paleo-Indians, followed a restricted wandering community pattern in tundra or forest parkland environments. In the northwestern Maine study area and wider Northeast, caribou were probably the main focus, although in the Northeast, caribou remains have been only rarely reported, as from the Holcombe site in Michigan and Dutchess Quarry in New York. Caribou remains were dated to 12,530± 370 B.P. at the latter site (Fitting, 1970; Funk; 1978; Kopper, Funk and Dumont, 1980; Ritchie and Funk, 1973). Other notable Paleo-Indian sites in the Northeast include the Reagan site in Northern Vermont (Ritchie, 1953, 1957), the Bull Brook site in eastern Massachusetts (Byers, 1954, 1955) and the Whipple site in southwestern New Hampshire (Curran, 1979: Curran & Dincauze, 1977), with caribou also tentatively identified from the Bull, Brook and Whipple sites (Funk, 1982: XIII, 1983: Spiess et al. 1982).

Two other sites, Debert and Vail, are particularly germane to the consideration of Paleo-Indian remains in the study area. The Debert site, located in central Nova Scotia and dated to an average date of 10,600± 47 B.P., has been interpreted as a series of seasonal camps occupied by caribou hunters during the Paleo-Indian period (MacDonald, 1968). Still more locally, the recently discovered Vail site in northwestern Maine has been interpreted as a habitation and kill site. Dates from the Vail site average about 10,700 B.P. (Gramly 1981, 1982; Gramly & Rutledge, 1981; Lothrop and Gramly, 1982). Another site of the Paleo-Indian period has been recently discovered at Munsungan Lake in northern Maine (Bonnichsen, et al. 1980). Although only a surface find, one diagnostic fluted point of the classic Paleo-Indian period has been previously discovered in the study area at Brassua Lake, and is currently curated at the University of Maine - Orono. Parenthetically, this point was manufactured from local Kineo rhyolite.

The current research has located another site possibly attributable to the Early Paleo-Indian period within the study area, on the basis of partial fluting evident on a single surface collected point. This point may be better attributable to the Late Paleo-Indian period, however.

A small number of particularly germane Late Paleo-Indian sites have been identified in northerly portions of the Northeast, including the St. Lawrence drainage of Quebec and Ontario (Benmouyal, 1978; Ritchie, 1965; Wright, 1979), the Lake Champlain drainage of New York and Vermont (Ritchie, 1953, 1957, 1979; Snow, 1977, 1980), Sebago Lake in southwestern Maine (Doyle, et al. 1983; Hamilton and Doyle, 1980) and the Lake Winnepesauke area in New Hampshire (Bolian 1980). In closer proximity to the study area, Late Paleo-Indian remains have also been identified in the upper St. John drainage (Nicholas 1982b). At least five sites clearly attributable to the Late Paleo-Indian period have been identified in the northwestern Maine study area (Doyle, et al. 1983).

Roughly correlated with the development of mixed conifer and deciduous forests, ca. 9,000 B.P., the Archaic period has been generally recognized in the Northeast as having three subdivisions: Early Archaic, 9,000-7,500 B.P., Middle Archaic, 7,500-6,000 B.P., and Late Archaic, ca. 6,000-2,500 B.P. Progressive regionalization and adaptation to local conditions by generally broad spectrum hunter-gatherer populations have been recognized for the Archaic period throughout the Northeast (e.e. Funk, 1978; Ritchie and Funk, 1973; Tuck, 1978).

Evidence of the Early Archaic period, like that for the Late Paleo-Indian period, is relatively rare over the wide Northeast on the basis of scattered finds (i.e. Ritchie and Funk, 1973; Sanger, 1977c, 1979d; Tuck, 1975; Wright, 1978), although actual Early Archaic sites have been recently reported in several areas, including New York (Funk, 1979; Funk and Rippeteau, 1977), Vermont (Thomas and Robinson, 1980), and New Hampshire (Bolian, 1980). No Early Archaic sites have been yet identified in the study area, however.

The subsequent Middle Archaic period has been more clearly delineated in the Northeast, primarily through research at the Neville site in southern New Hamshire (Dincauze, 1971, 1976), adjoining areas of southern New England (Dincauze and Mulholland, 1977; Starbuck and Bolian, 1980), and New York (Funk, 1976, 1979; Funk and Rippeteau, 1977). Extensive Middle Archaic occupations have been clearly documented in the Sebago Lake Basin of southern Maine (Hamilton and Doyle, 1980; Yesner, Hamilton and Doyle 1983), at the well studied Hirundo site in central Maine (Sanger & MacKay, 1973; Sanger, et al., 1977) and at a number of sites elsewhere in Maine (Cook & Spiess, 1981; Spiess, Bourque, and Gramly, 1983). To the north in the St. Lawrence estuary and adjoining areas, a variety of maritime adapted occupations appeared by at least 7,500 B.P. and represent the earliest beginnings of the Maritime Archaic tradition (Tuck & McGhee, 1975a, 1975b; Tuck, 1976a; Wright, 1979), contemporaneous with and stylistically similar to Middle Archaic complexes elsewhere in the North-

east.

In the study area, at least five Middle Archaic sites have been recognized through the current research. These include some clear manifestations of the Neville complex, as well as possible relationships with the Maritime Archaic tradition, which are discussed more completely in the following discussion of the Late Archaic period.

The subsequent Late Archaic period, ca. 6,000-2,500 B.P., witnessed further diversification of Northeastern aboriginal populations, as well represented in northern New England. Although apparently different Late Archaic manifestations were once lumped under the term "Boreal Archaic", primarily on the basis of research in eastern Maine (Byers, 1959), a series of discrete cultural manifestations have since been distinguished in the broad Northeast. In Maine, probable evidence of the Laurentian tradition (Sanger & Mackay, 1973; Sanger, et al., 1977) has been recognized at the Hirundo site, where it is dated to ca. 4,300 B.P., as well as at other locales (Butler & Hadlock, 1962; Cook & Spiess, 1981; Spiess, Petersen and Hedden, 1983). The Laurentian tradition has been further defined elsewhere in the Northeast (Haviland & Power, 1981; Kennedy, 1967; Ritchie, 1965, 1968, 1979; Wright, 1979), and is recognized as one manifestation of the widespread Lake Forest Archaic tradition (Snow, 1980; Tuck, 1978).

Evidence of the Maritime Archaic Moorehead complex (or Moorehead phase), ca. 5,200 - 3,800 B.P., has been recognized at a variety of Maine sites in both interior and coastal settings, including the notable Passadumkeag, Nevin, Turner Farm, Taft's Point and Waterside sites (Butler & Hadlock, 1962; Byers, 1979; Cook & Spiess, 1981; Hadlock, 1939; Hadlock & Stern, 1948; Mellgren, 1960; Moorehead, 1922; Rowe, 1940; Snow, 1969, 1975, 1980). Of these, the Turner Farm site is especially important because of its stratified components, and early local evidence of Maritime Archaic coastal adaptations by at least 5,000 B.P. (Bourque, 1975, 1976). Maritime Archaic manifestations have been even more fully recognized in regions along the Atlantic coast and the St. Lawrence river to the north (Dumais, 1978; Fitzhugh, 1972, 1975; Marois & Ribes, 1975; Sanger, 1973; Tuck, 1976a, 1976b; Tuck & McGhee, 1975a, 1975b; Wright, 1979).

Subsequent Late Archaic developments include clear evidence of the Susquehanna tradition in Maine, dated ca. 3,600 to 3,300 B.P., particularly at the Turner Farm, Hirundo, Hathaway, Young, Stanley, and Goddard sites (Borstel, 1982; Bourque, 1975, 1976; Cook & Spiess, 1981; Sanger, 1975; Sanger, et al., 1977; Snow, 1975; Spiess, Petersen, and Hedden, 1983). Comparable evidence is available from the wider Northeast to the south and west of Maine (Dincauze, 1968, 1975; Snow, 1975; Turnbaugh, 1975).

Although little recognized previcusly in Maine, one additonal important Archaic manifestation is known in the Northeast, the Shield Archaic, a putative hunter-gatherer complex based on adaptation to the widespread boreal forest (Wright, 1972, 1979). A local manifestation of the Shield Archaic, the Tobique complex, has been recognized in northern New Brunswick in an environmental context much like that found in the study area (Sanger, 1971a).

Variable evidence of the above mentioned Late Archaic manifestations have been recognized in the study area, including at least fifteen sites. These include clear evidence of the Moorehead complex and the Laurentian tradition. In addition, possible relations to the Tobique complex are also represented.

The Woodland period spans the period from ca.2,500 - 350 BP. (Fitting, 1978; Ritchie, 1965; Ritchie & Funk, 1973; Wright, 1979). A significant temporal marker, ceramics, appeared in the Woodland period throughout much of the Northeast, as the alternative designation "Ceramic period" used by Maine and Maritime researchers (Sanger, 1974, 1979b), implies. Other traditionally recognized Woodland period adaptations in the Northeast, including the addition of cultigens, the transition to horticultural subsistence systems, population aggregation and corresponding shifts in settlement systems, made few inroads in northern New England and the Maritimes. Hunter-gatherer subsistence systems in this region survived late in the prehistoric period, and in some cases, persisted into the Historic period (Sanger, 1979b; Snow, 1980). Shifts in seasonality, increased shellfish utilization and the presence of semi-subterranean houses, have all been recognized in Maine and the Maritimes during the Woodland period, however.

Varying coastal developments during the Woodland period have been recognized in the areas of Casco Bay (Hamilton & Yesner, 1981, 1983; Wyman, 1868; Yesner, 1980), Damariscotta Bay (Berry, 1898; Snow, 1969; Willoughby, 1935), Penobscot Bay (Bourque, 1971, 1973; Bourque and Cox, 1982; Bruce, 1965; Descartes, 1974; Hadlock, 1939, Rowe, 1940; Sanger, et al., 1980; Snow, 1970, 1972; Varney, 1971), and Passamaquoddy Bay (Bonrichsen & Snger, 1977; Davis, 1978; Sanger, 1971b). Woodland period

remains have been recognized in the interior, but remain undated and poorly isolated in most cases (Bonnichsen, et al., 1980; Butler & Hadlock, 1962; Cook & Spiess, 1981; Doyle, Hamilton & Petersen, 1982; Dunn, 1960; Lahti, et al., 1981; Leadbetter, 1978; Sanger, 1977, 1979c; Sanger, et al., 1977; Spiess, Hedden, and Petersen 1983). Relevant Woodland period chronologies have been developed in other portions of northern New England and the Maritimes at recently investigated stratified sites (Allen, 1980, 1981; Foulkes, 1980; Petersen, 1980; Petersen & Power, 1981, 1983a; Power, et al., 1980). Interestingly, one recent study (Petersen & Power, 1983a, 1983b) suggests long distance interaction between the study area in Maine and the Lake Champlain drainage of western Vermont in the Middle Woodland period, ca. A.D. 600 - A.D. 1,000. Extensive north-south coastal interaction seems also present during the Late Woodland period, after A.D. 1,000 (Bourque & Cox, 1982), as represented by "Ramah chert" from Labrador and Nova Scotian agates at the Goddard site.

In the study area, at least 28 Woodland period sites have been recognized on the basis of combined fieldwork and collection research. For the most part, these remains are recognized by lithic projectile points which seem best related to materials from Penobscot Bay, Passamaquoddy Bay, and the St. John River drainage.

The final era of aboriginal occupation in the study area and adjoining New England is the Historic or Ethnographic period, ca. 350 B.P. to the present. Ethnographic data indicate that the entire study area was likely occupied by Penobscot and Kennebec populations, both of which are Eastern Abenaki groups. In the most simple scenario, these groups spent summer seasons aggregated on the coast and dispersed widely throughout the interior during winter seasons (McGuire, 1908; Snow, 1968, 1980; Speck, 1940). Although much of the Eastern Abenaki likeways have been disturbed through contact with Euro-Americans, Penobscot populations survive today in the Penobscot drainage of Maine, and as amalgamated associates of the Western Abenaki in Quebec (Day, 1981; Snow, 1980). Besides the Western Abenaki (Day, 1978), other cultural groups in the region who interacted with and influenced the Eastern Abenaki include the Malecite-Passamaquoddy (Erikson, 1978) and the Micmac (Bock, 1978). Four Historic Period aboriginal sites have been indentified in the study area.

HISTORY OF RESEARCH

The first professional archaeological research carried out in the study area was conducted by C. C. Willoughby in 1895, under the auspices of the Peabody Museum. Willoughby surveyed and described four workshop sites at Mount Kineo on Moosehead Lake. His research included testing and collecting materials from these sites, where few finished or near finished implements were found, with the exception of large biface preforms or "turtlebacks." On the basis of his research Willoughby concluded that most of the products of the Kineo workshops were intended for transportation and finishing at some distance from the workshop sites (Willoughby, 1901, 1935).

In 1907, 12 years after Willoughby's fieldwork, McGuire (1908) visited Moosehead Lake and collected both existing ethnological information and archaeological data. His research focused on the lake shore from the south side of East Outlet to Squaw Point and Squaw Brook. Four-hundred artifacts were collected which included: 105 "ovate" bifaces, 100 knives, 68 "turtlebacks," 12 scrapers, 10 hammerstones and four projectile points. All of these specimens were made of Kineo rhyolite with the exception of four quartz specimens. No discussion of lithic debitage is included in the report (McGuire, 1908).

In his survey and digging activies with the R.S. Peabody Foundation, Moorehead (1922) also visited Moosehead Lake in 1912, Chesuncook and Seboomook Lakes in 1914 and Sebec Lake in 1917. His party was confronted with high water levels in July as they examined 50 probable site areas, and excavated at twenty-one of these areas. Most often materials were found in shallow water over areas which are large and shallow when inundated, as during his visit. At Mount Kineo, his party excavated around the talus and apparently they also tested a cemetery of the "Red Paint People" (Maritime Archaic Moorehead complex) at the Kineo Hotel site, although Moorehead mentions little else about this site. Little new information was generated on the basis of Moosehead Lake survey conducted by Moorehead and his crew.

From information provided by Mr. S. J. Guernsey of the Peabody Museum, Moorehead's party attempted to locate sites on Sebec Lake, but again high water levels limited the potential of the area. Moorehead suggested that Kineo rhyolite was moved through Wilson, Trout and Long Pond to Sebec Lake and then down the Pleasant and Piscataquis Rivers to the Penobscot, rather than down the Ken-

nebec. He further suggested that the Katadin Iron Works, just north of Sebec Lake, was the principle source of both red and yellow ochre used in Maritime Archaic burials.

North of Moosehead Lake on the West Branch of the Penobscot River, Moorehead's party collected and described five sites. He concluded that the sites were generally workshop sites, but that ceramic remains indicated more than temporary use of the site areas. His party proceeded up the north branch of the Penobscot where they failed to locate any additonal sites.

Following Moorehead, professional research was not conducted in the study area for nearly 60 years until the early summer of 1976, when Bonnichsen (1977), representing the University of Maine at Orono, returned to the area. Bonnichsen examined the volcanic ridge of Kineo rhyolite from the south end of Blue Ridge at Brassua Lake to Lobster Lake, also including Mount Kineo and Little Kineo Mountains, following his concerns with lithic raw material sources.

In the study area, a number of active "amateurs" have studied the local prehistory over a long period. Their collections range in size from several hundred specimens to several thousand. Although specimen provenience is unknown to some collectors, several amateurs have kept excellent records and can provide much useful data and background discussion. Table 1 provides a list of known amateurs, lake areas collected, rough size of collections and where the materials are currently located. Without further fieldwork, the greatest potential for research in the study area lies in the study and interpretation of these collections due to their large size, the collectors' long term of activity, and the relatively unique collection opportunities they have been afforded.

RESEARCH METHODS

Systematic research in the study area was first undertaken in 1973. Dr. David Sanger of the University ofMaine-Orono, and Howard Sargent, then of the University of Maine at Portland-Gorham, provided a background for the prehistory of the region, as well as a roster of known sites and forms for documentation of additional sites to Nate Hamilton. In the summers of 1973, 1974, and 1975, fieldwork was conducted in the areas indicated in Figure 4, in conjunction with pulp removal work for Scott Paper company. From 1976 through 1979, lakeshores and riverbanks were examined during periods of low water levels. In 1980, Richard Doyle participated in the fieldwork and in 1981 James B. Petersen also took part. The 1980-1981 research was focused on the West Branch area.

Field work largely involved the surface examination of lake shores when water levels were reduced. Through 1975, the lake levels on Moosehead and Brassua Lakes were low in the fall as the result of the Scott Paper drives on the Kennebec River. The drives ended in 1975 and since then the lake levels have been consistently high. The 1980 and 1981 seasons provided unique opportunities for surface examination on the west end of Seboomook Lake, however. Although many sites are partially or totally inundated, some sites across the study area contain intact and undisturbed portions.

Relevant field data were recorded on Maine site survey forms, and have been subsequently transferred to site survey forms employed by the University of Pittsburgh. Measurements of site size were recorded in the field and surface collection of cultural remains was undertaken, where possible. Particular attention was given to sites which demonstrated great research potential, such as intact deposits and/or quarry locales.

The analysis of collections has been of special importance as well. In 1975, the Moody collection and Eastman collection were examined. Both collections were photographed in 1977, and the Eastman collection was rephotographed in 1980. In addition, the Edwards collection was examined in 1976, and photographed in 1980. The Sherman, Wilson, Hartsgrove and Day collections were examined in this same period, but remain unphotographed. These collections have provided broader coverage than the research team has been able to examine to date.

Only a small portion of the minimal recommended data for each collection have been recorded. Metric measurements have only been taken on materials actually collected during the present research, as well as the Edwards collection. All of the above named collectors have agreed to provide access to their collections, however, so that the research team can more completely document pertinent data for each. As discussed in the final section of this report, a more comprehensive and rigorous approach is suggested for future research, with the overall goals being conservation and comprehension of cultural resources in the northwestern Maine study area.

DISTRIBUTION OF ARCHAEOLOGICAL SITES

The distribution of archaeological sites in the study area is discussed by lake. The lakes examined include: Sebec, Brassua, Moosehead, Seboomook and Chesuncook. Smaller lakes and segments of rivers and streams associated with lake areas are discussed as well. Each summary description includes mention of hydrology, geographical and topographic features, archaeological sites and associated cultural remains.

Sebec Lake (Figure 2d) is the southeasternmost lake in the Moosehead study area. The lake is 18 km. long from the mouth of Wilson Stream on the west end to Sebec at the head of Sebec River. The lake surface is currently 324 feet above sea level. On the northwest shore of Sebec lie both Big Wilson and Ship Pond Streams. Wilson Stream drains both Big and Little Wilson Ponds, ca. 800 feet higher. Ship Pond Stream drains Lake Onawa, ca. 300 feet higher and ultimately Long Pond, ca. 800 feet above Sebec Lake. Meanders and old oxbows are present on the lower portions of both Ship Pond Stream and Wilson Stream. Changes in stream gradients and discharge rates from Wilson Ponds to Sebec Lake may provide useful data in studies of the relationship of coastal rebound and subsidence to upland areas (cf. Sanger 1979d). Additional small streams and brooks on the western end include Bear Pond, Ice Cave, Salmon, Garcock and Bennett.

Cultural remains are present at numerous sites on the western end of the lake (Figures 5, 6, 7), specifically on all streams and brooks mentioned above. No Paleo-Indian or Early Archaic materials were identified in known collections from the west end. The Middle Archaic period is represented by Neville-like and Stark points manufactured from Kineo rhyolite and other rhyolites. The Late Archaic period is represented by various stemmed and notched points relating to Susquehanna, Snook Kill, Normanskill and Maritime Archaic forms. A small number of Moorehead Complex ground stone artifacts,

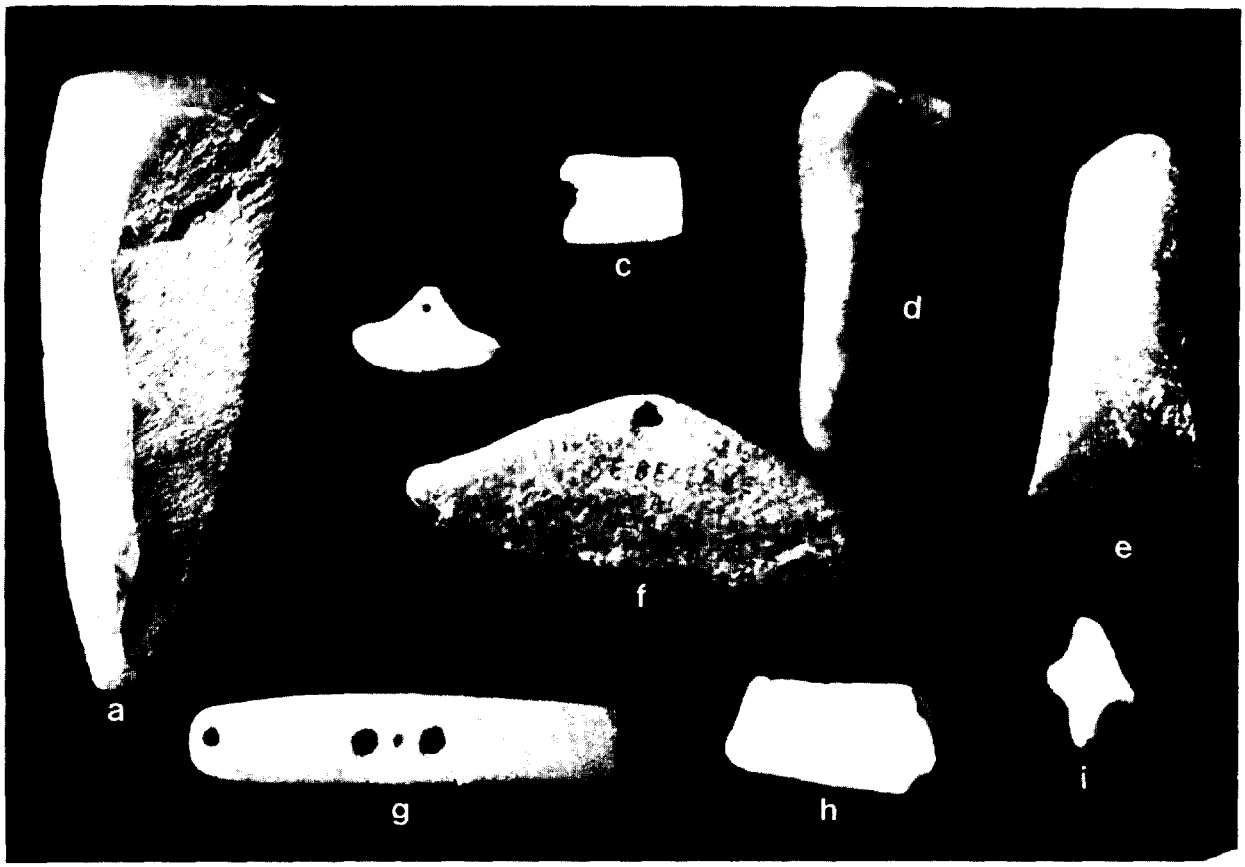


Figure 5. Ground Stone and Flaked Stone from Sebec Lake, a, e, Celt, b Small Ulu pendant, c, g, f Perforated Stone, i Stark Biface.

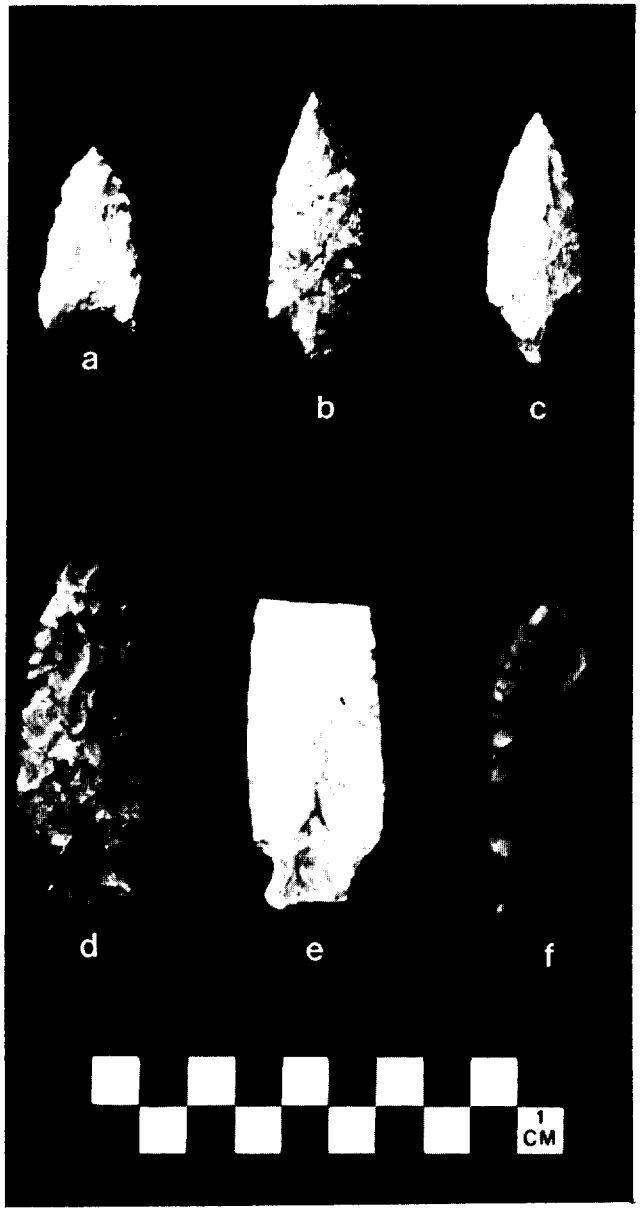


Figure 6. Flaked Stone Artifacts, a Late Paleo-Indian, Seboomook Lake, b. c Stark Biface, b Sebec Lake, c Unknown, d Notched Slate, Moosehead Lake, e, f Otter Creek Biface, Chesuncook Lake.

including celts, gouges and plummets, were present. Two Otter Creek points make from chipped slate, as well as a ground and notched slate blade preform were also recovered. These latter finds are seemingly indicative of a Laurentian manifestation.

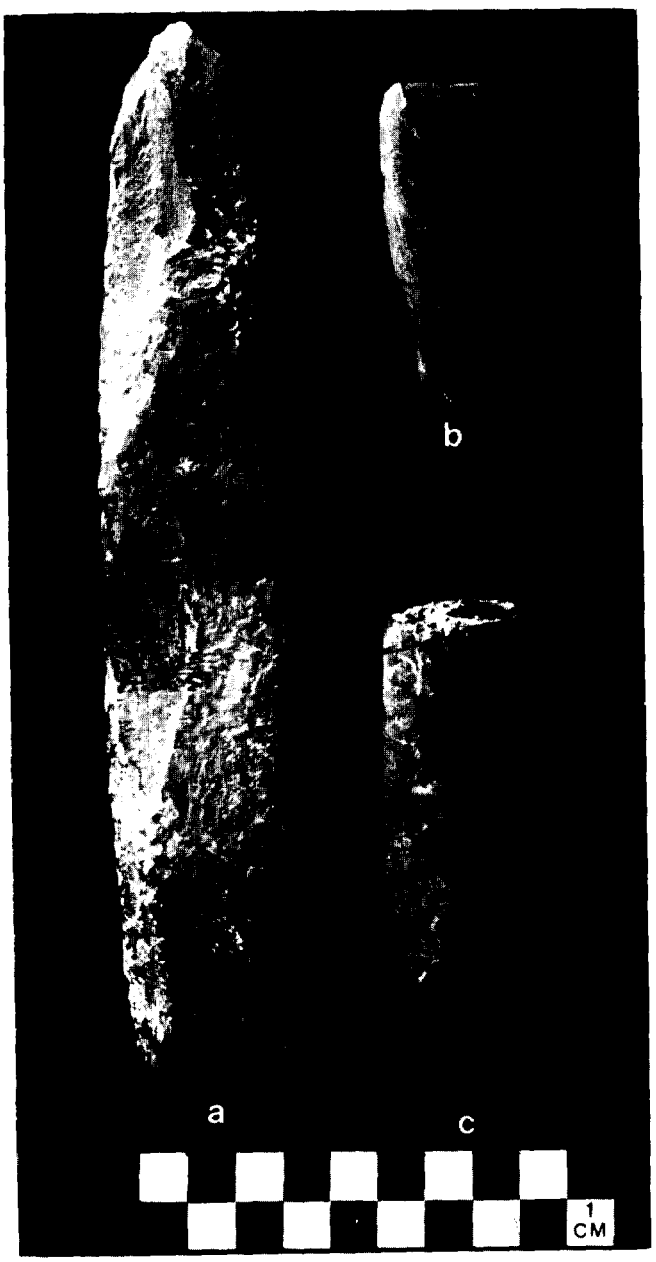
Following the Archaic period, the Woodland (Ceramic) period is well represented by numerous notched and nonstemmed points. Four Levanna points, all made from Kineo rhyolite, were present. However, there were no ceramic remains in the local collections. Apparently, local lithic materials were important throughout all periods, with "exotics" being more numerous during the Late Archaic, which included points manufactured from "Ramah chert," a material which originated in Labrador, as mentioned above.

Brassua Lake (Figure 2a) is situated on the west side of Moosehead Lake and is nine km. long and two km. wide for nearly the entire length (Figure 8). The construction of a dam on the lake in the early 20th century increased the surface area ca. four times the original size and added 30 feet of water to the normal pool elevation originally 1,043 feet above sea level (Figure 9). Moose River enters on the west central shore of the lake, after draining Long Pond ca. 10 km. to the west. Additionally, the area north of Misery Mt. and south of Bald Mountain drains east to Brassua. This area is particularly noted for its dense moose population. Brassua Stream on the north end and Misery Stream on the south end also drain into the lake. The outlet of the lake is Moose River, which flows 4 km. east to Moosehead Lake, becoming wide and deep near its mouth. The river also runs parallel to Blue Ridge, a primary source area for Kineo rhyolite (Figures 10-12, 14). Due to dramatic fluctuations in lake levels after the construction of the dam, all lake shore sites are currently inundated.

Cultural remains from the lake include a single fluted point of Kineo rhyolite (Snow, 1980). The specimen in the Chandler collection curated at University of Maine - Orono, is of unknown provenience. While Early Archaic period materials are absent, Middle Archaic materials include several Stark points from ME 117-2 and other Stark variants in collections without provenience from the lake. Late Archaic materials are more numerous with a large amount of ground stone (Figure 13) and stemmed projectile points from ME 117-2. Following the Archaic period, Woodland (Ceramic) period remains include notched and non-stemmed bifaces with a variety of thin scrapers.

A large primary lithic source and an extensive

Figure 7. Ground Stone Artifacts, a Chipped Slate Preform, Sebec Lake, b Ground Slate Point Base, Seboomook Lake, c Ground Slate Point Base, Moosehead Lake.



workshop area (ME 117-6) is located on Brassua Lake. Many exceptionally large bifaces, ranging from 15 to 45 cm. in length, have been discovered there, along with many primary and secondary reduction flakes. Although hard to place in time, the materials can potentially provide extensive information on reduction states and technology associated with Kineo rhyolite.

Moosehead Lake (Figures 2e, 3, 4) is the center of the study area. The lake is the largest in the state of Maine and one of the largest in the U.S. The surface is ca. 74,000 acres in area, with an overall length of 67 km. and a maximum width of ca. 34 km. The entire shoreline of the lake is ca. 500 km., making complete lake survey and research somewhat difficult and certainly long term. The lake is constricted at Mount Kineo, a portion of the volcanic rhyolite belt that runs from Misery Ridge to Lobster Mt. and dissects the lake (Figure 14). On the north end several streams enter the lake, including Carry Brook, Williams, Socatean, Tomhegan, Baker and Norcross. These are mostly on the western shore, which is less mountainous than the east side. The north end is rather flat in topography, extending over to the West Branch of the Penobscot River. The southern area contains the headwaters of the Kennebec River, including both the east and west outlets, the Kennebec being the only major outlet of Moosehead Lake. Roach River, draining First, Second, and Third Roach Ponds, enters the lake on the north end of Spencer Bay. Streams and brooks in the southern area include Cowan, Lucky, Spencer, Lily Bay, Tussel, Mud, Beaver Creek and Squaw. The Beaver Creek and Prong Pond route may be a likely crossing area to the Wilson Ponds. The three largest islands are Sugar, Deer and Moose.

Cultural remains are known from at least 20 locations on Moosehead Lake. Concentrations of activity areas are evident at river outlets and most importantly, at Mount Kineo (Figures 15-19, 20e, 21). No Paleo-Indian artifacts have been recovered from Moosehead, and diagnostic Early and Middle Archaic materials are virtually unknown. One exception is the Wilson site, ME 118-3, where a single Stark-like specimen and a side-notched ground slate point (Figure 6d were recovered. The Late Archaic period is represented by Maritime Archaic groundstone, including an elongate slate point (Figure 7c). Late Archaic material is well known on the lake at a variety of localities. The Woodland (Ceramic) period is represented by side-notched and stemmed bifaces; several specimens are similar to Jacks Reef type points. One Jacks Reef-like point (Figure 22d) from ME 131-7 was manufactured from "Ramah chert". The Woodland (Ceramic) period is well represented by lithics, while ceramic remains are almost non-existant, probably the result of difficulty in recognizing ceramics rather than an absolute scarcity.

Seboomook Lake (Figure 2b) is located in the northwestern portion of the Moosehead research

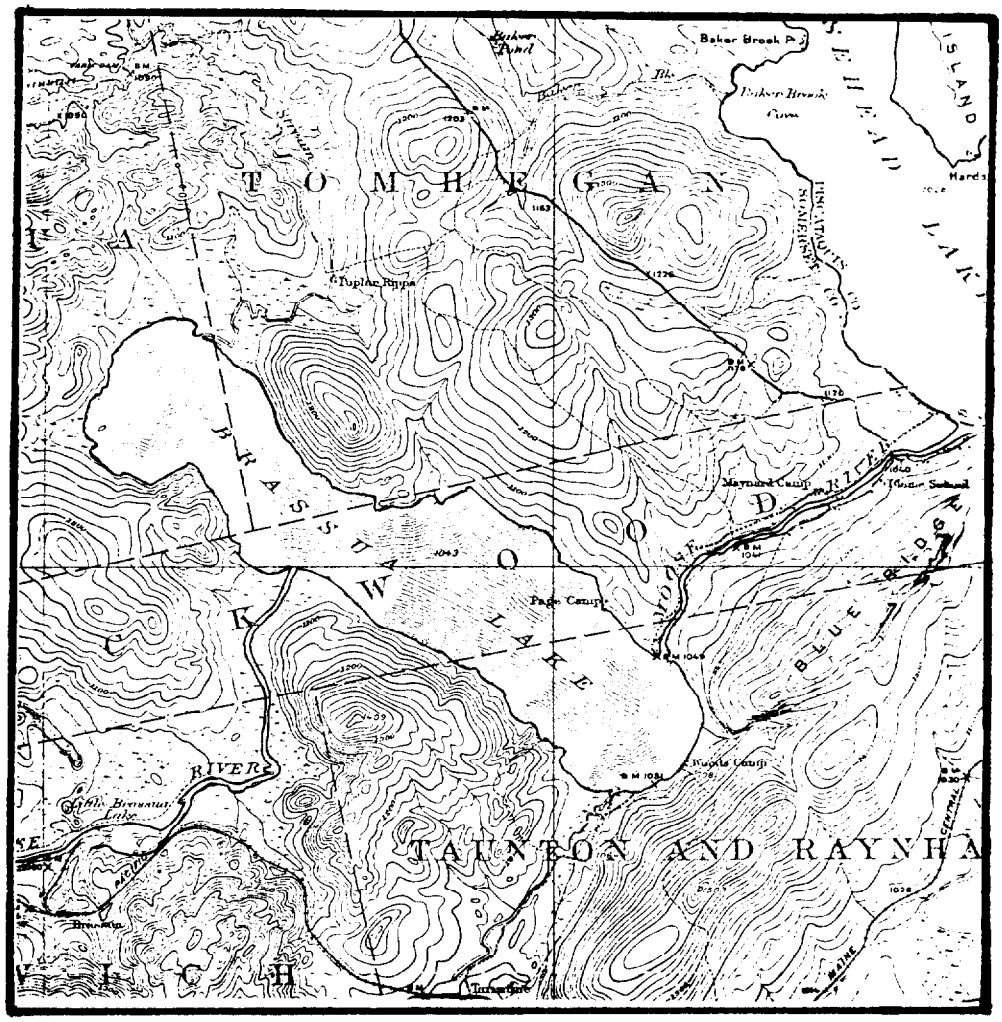


Figure 8. U.S.G.S. 15' Brassua Lake Quadrangle (ME117) with Pre-Dam Water Level of 1043 ft. above sea level (1923 edition).

area. The lake is ca. 15 km. in length and 1 to 2 km. in width. The lake is man made, originally being a segment of the West Branch of the Penobscot River (Figure 3). Black Hawk Island is an important feature in the lake, located just above the falls at the eastern dammed end. Seboomook is oriented in an east-west direction and flows eastward. On the western end of the lake, the North Branch and South Branch of the Penobscot River meet at Pittston Farm. The North Branch drains Canada Falls Lake (also man make), Hale Brook and Penobscot Lake. On the eastern end, the West Branch of the Penobscot flows from Seboomook Lake. This point, in the area of Black Hawk Island, is ca. 3 km. from the Seboomook Hotel area on Moosehead Lake.

A number of brooks and small streams enter Seboomook Lake. On the north side are Gilliver, Logan, Nulhedus, and Negro and on the south side are Beaver and Carry. The surface of the lake is 1,070 feet above sea level, which is ca. 30 feet above the original river level at the dam on the east end. The West Branch of the Penobscot runs east ca. 9 km. to Lobster Stream and turns north toward the northern end of Chesuncook Lake, ca. 18 km. distant.

Cultural remains from Seboomook Lake included materials from all known cultural periods in the

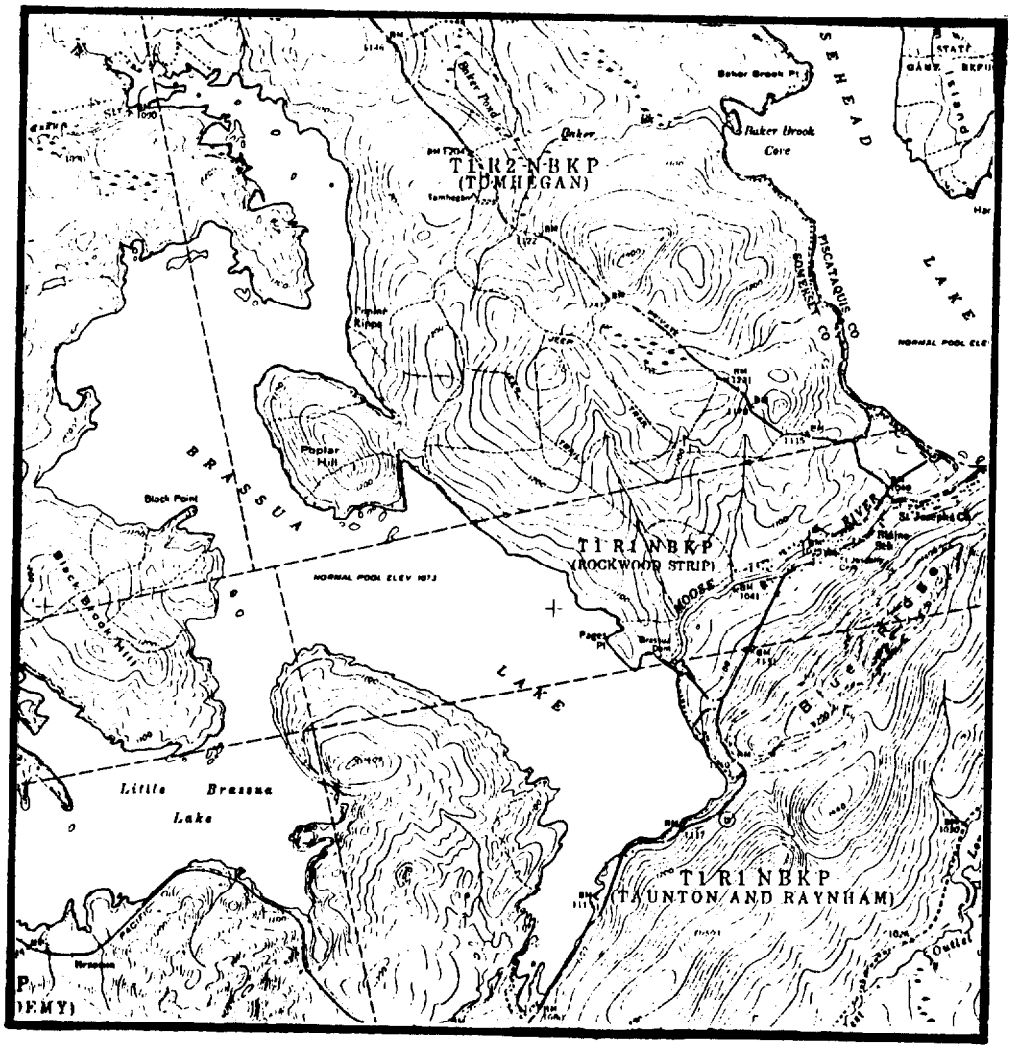


Figure 9. U.S.G.S. 15' Brassua Lake Quadrangle (ME117) with Dam Water Level of 1073 ft. above sea level (1982).

Figure 10. Blue Ridge as it Decends into Brassua Lake. Note the Rhyolite Exposure on the Southeastern Face.

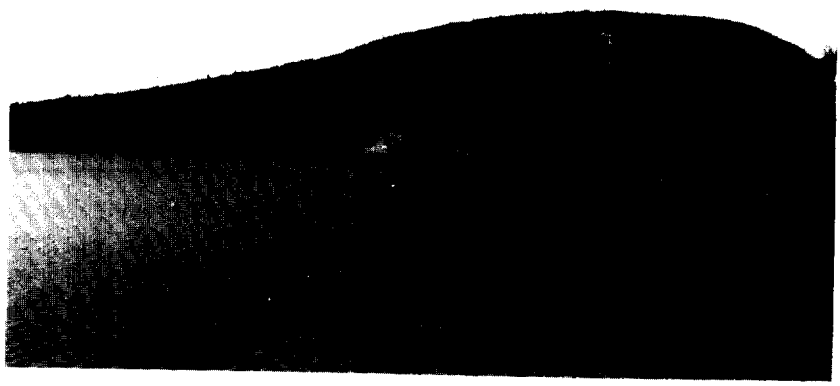


Figure 11. Brassua Lake Shore North of Blue Ridge Talus. Note white rocks are all Kineo Rhyolite.

Figure 12. Moose River outlet of Brassua Lake.

Figure 13. Ground Stone Artifacts from Brassua Lake, a, c Celt, b Perforated Pendant, d Plummet, e Full Grooved Axe, F Full Channelled Gouge.

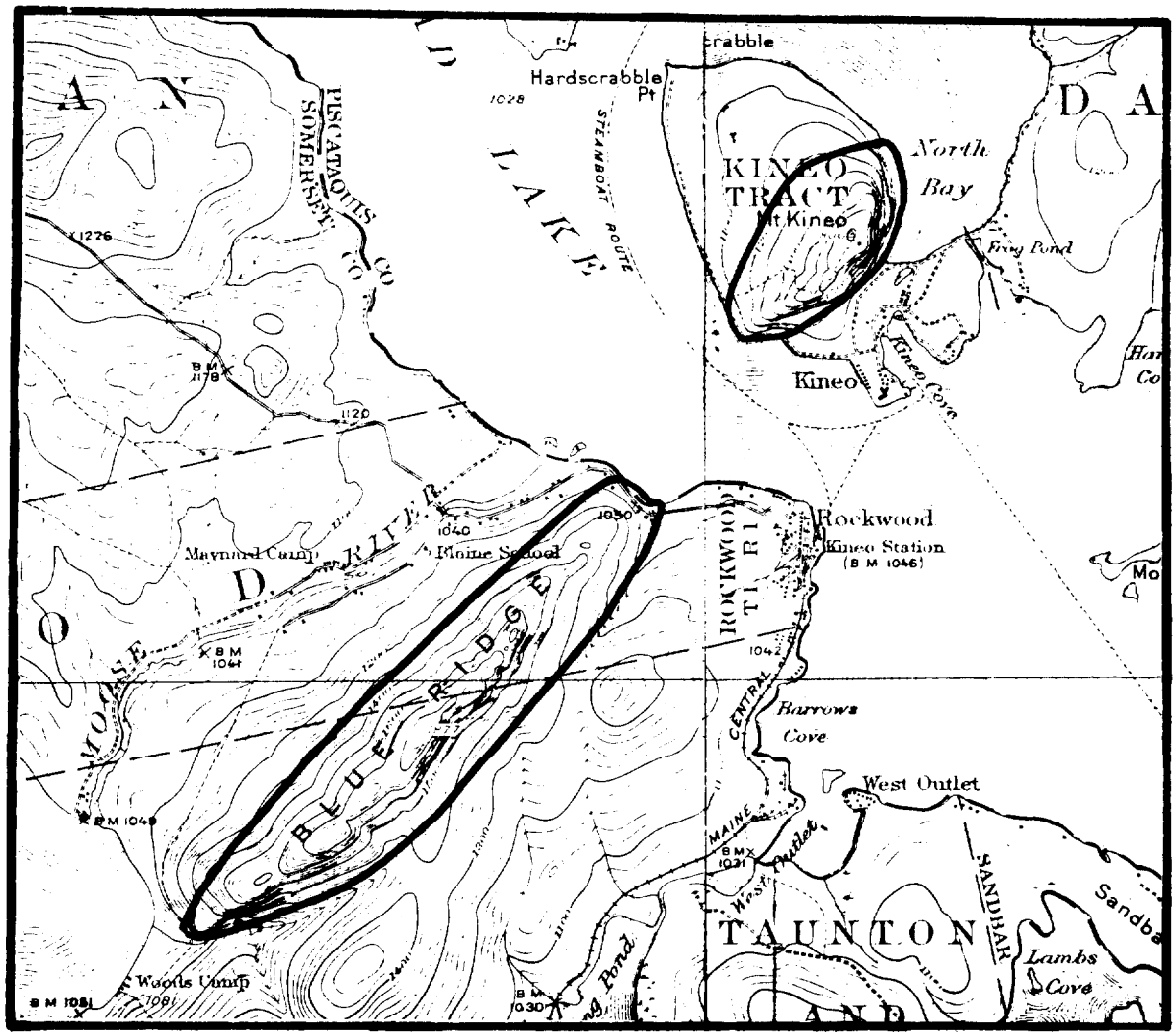
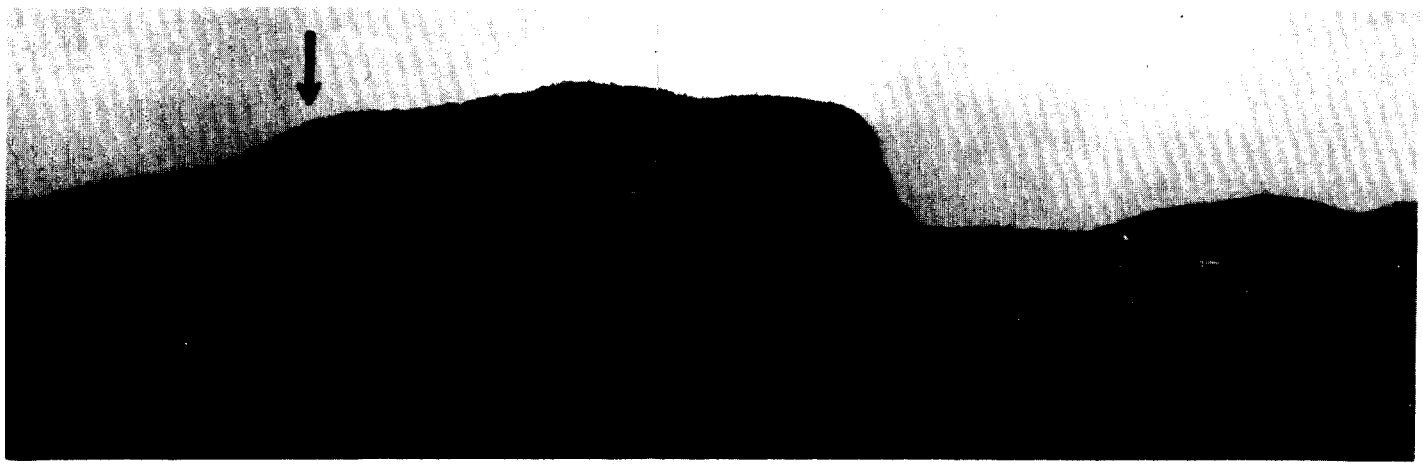


Figure 14. U.S.G.S. Map of Mount Kineo and Blue Ridge.

Figure 15. View of Mount Kineo from the South. Arrow points to talus and rhyolite quarry site.



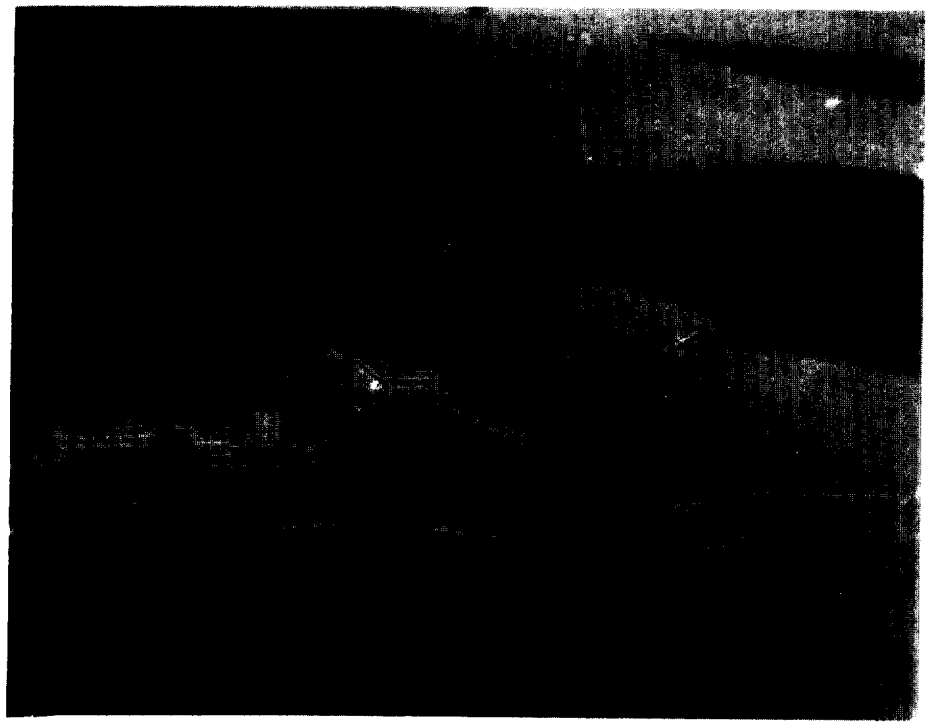


Figure 16. Air photo of Mount Kineo taken from hydroplane. The tennis court in front of the hotel is the location of prehistoric graves removed and later on display in the hotel lobby (ca. 1930).

Figure 17. Mount Kineo Talus Site (ME 118-2): with R. Doyle walking up the Exposed Area.

Northeast. The Paleo-Indian period is represented by a Late Paleo-Indian projectile point (Figures 6a, 23c) made from "Saugus rhyolite", obtainable in northeastern Massachusetts (John Grimes, personal communication, 1980). It has a ground base and slightly serrated edge. Other Late Paleo-Indian materials included three lanceolate projectile points (Figure 23a, b) and two biface preforms from two separate sites (Doyle et al., 1983). One Late Paleo-Indian locus also included ca 55 specimens of argillite debitage. Middle Archaic remains include Neville and Stark-like projectile points (Figures 24l, 24m).

The Late Archaic period is represented by Snook Kill-like points and other forms (Figures 25, 26), Otter Creek-like and various untyped stemmed points, including "exotic" materials (Figures 22g-i, 24). Ground stone materials from the lake include Moorehead complex materials and a single ulu (Figure 24a). One site (ME 130-4) produced a green stone gouge and another site (ME 130-2c) produced 10 ground stone preforms, including one gouge and two celts as well as a ground slate bayonet fragment (Figures 26b, 11).

The Woodland (Ceramic) period is represented by numerous notched, stemmed and non-stemmed bifaces associated with small unifacial end scrapers. Ceramics include grit tempered vessels with dentate rocker impressed and circular punctate decoration (Figure 27) and undecorated shell tempered ceramics. Ceramic period artifacts on the West Branch provide the best evidence of occupation on Seboomook Lake, largely due to the intact nature of at least one site.

Chesuncook Lake (Figures 2e, 3) is the northernmost lake in the study region. Accurate documentation of the flora and fauna as well as an interesting discussion of the area and known Indian names was provided by Henry David Thoreau (1906). The lake is ca. 30 km. in length, averages less than 2 km. in width the entire length and was expanded by the construction of a dam on the southern end. It is oriented in a northwest-southeast direction. On the northwestern shore, the West Branch of the Penobscot enters Chesuncook Lake. Little Ragmuff Stream, Rocky Brook and Little Pine Stream drain into the West Branch below Big Island. North of the river mouth is Brandy Pond and Black Pond. Black Pond is on the lower stretch of Caucomgomoc Stream, which drains Caucomgomoc Lake, ca. 15 km. to the north. Gero Island lies in the north center of Chesuncook Lake. It is some 4 km. in length, 3.5 km. in width and is the only island in the lake, rising 138 feet above the current lake

Figure 18. Mount Kineo Talus Site (ME 118-2): close up of the surface debris.

Figure 19. Mount Kineo, North East Exposed Face with Cobble Slide.

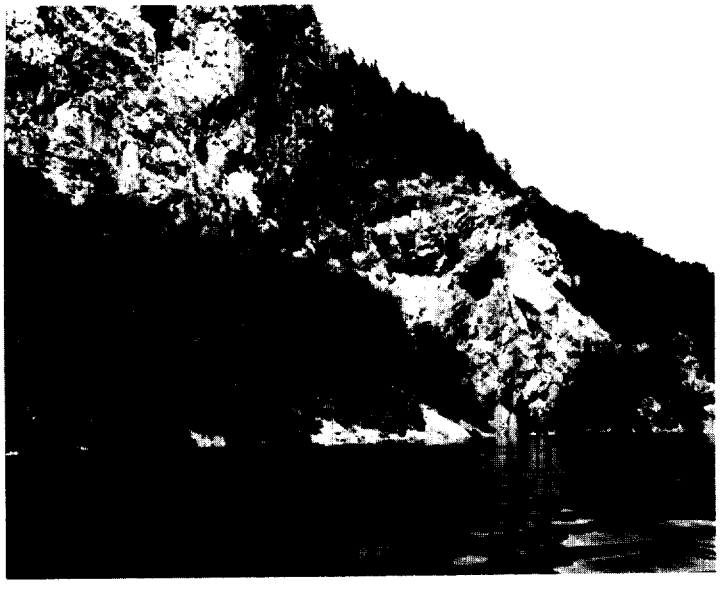


Figure 20.

Flaked Stone and Ground Stone Artifacts, a-c Biface, Moosehead Lake, d Celt, Wilsons, Moosehead Lake, e Biface, Kineo Talus, Moosehead Lake.

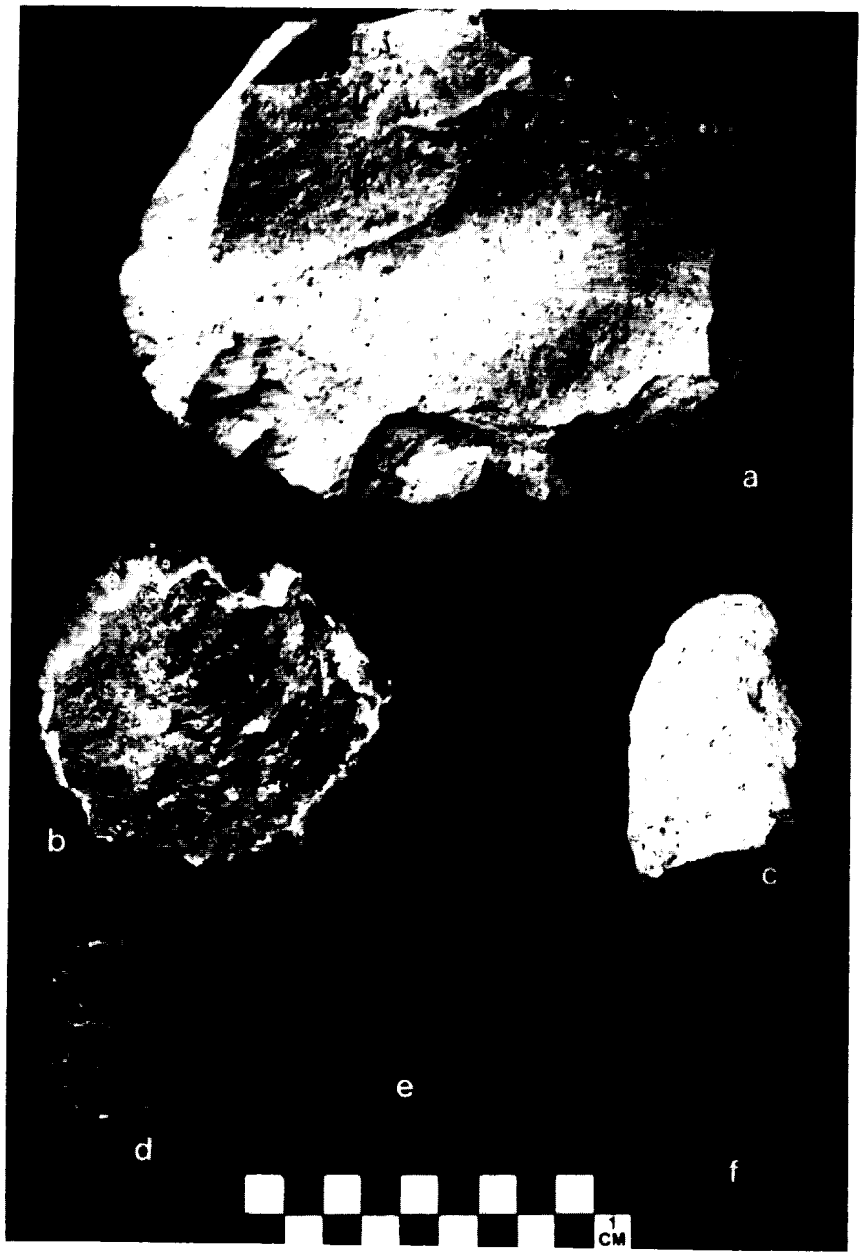


Figure 21.

Flaked Stone Artifacts, a-f All Specimens Kineo Rhyolite, Moosehead Lake.

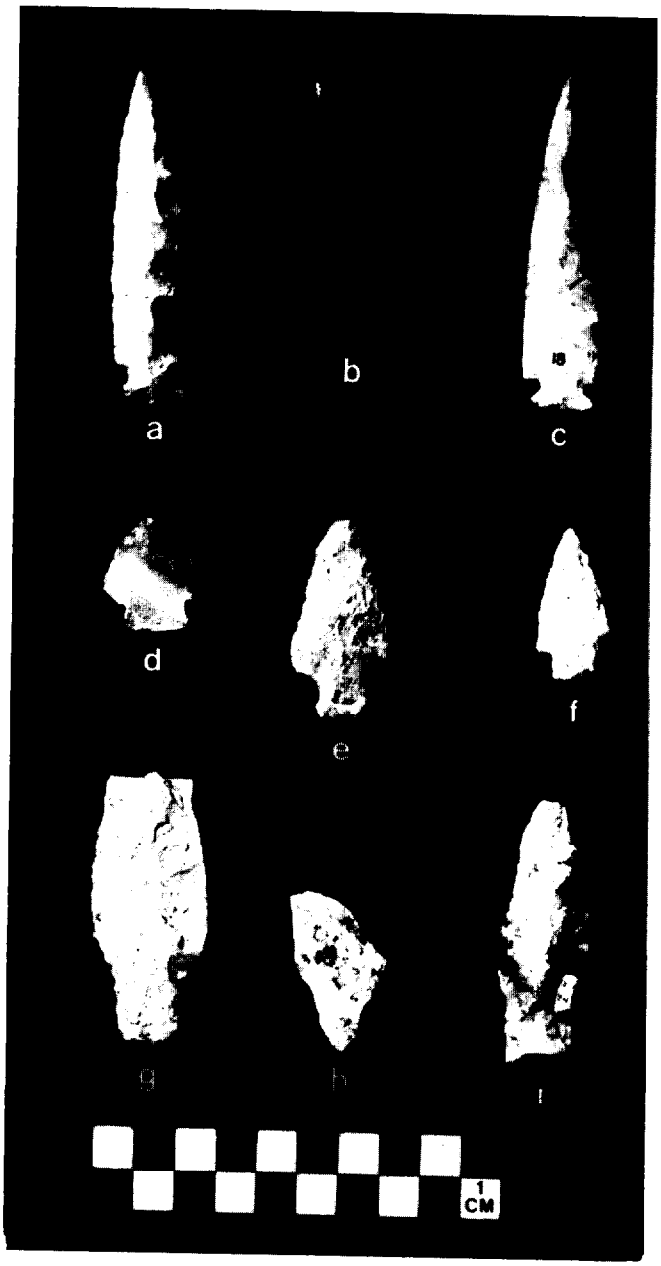


Figure 22. Flaked Stone Artifacts, a-f Notched-Points, a Long Lake, b Moosehead Lake, c Chesuncook Lake, d Ramah Chert from Moosehead Lake, e. f Moosehead Lake, g-i Stemmed Points, Seboomook Lake.

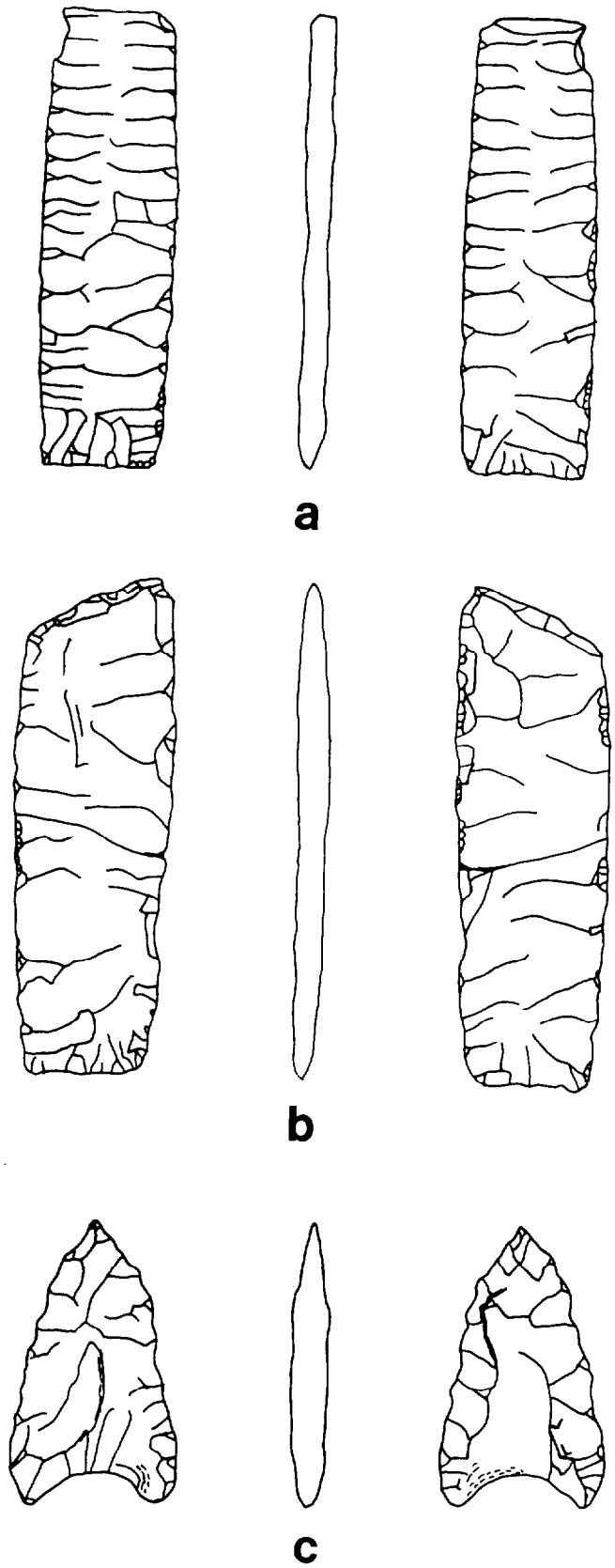


Figure 23. Late Paleo-Indian Projectile Points from Seboomook Lake. a, b Parallel Flaked Biface, c Serrated Biface.

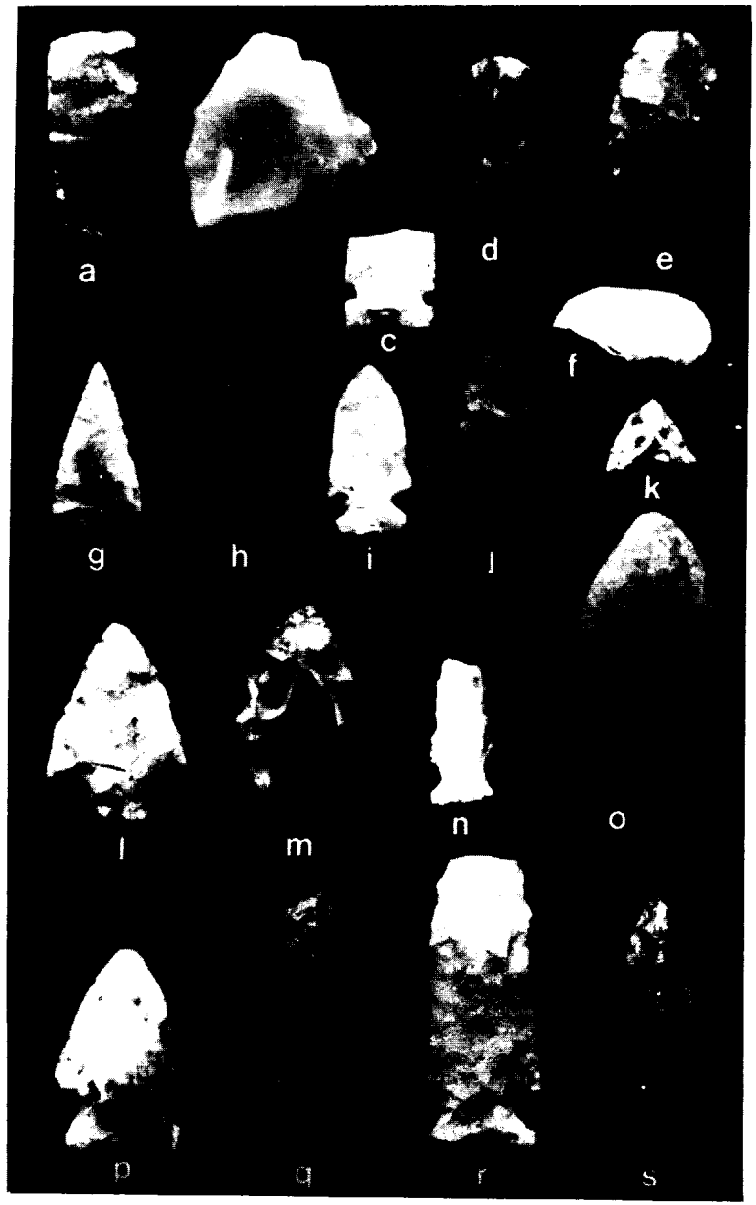


Figure 25.

Flaked Stone Cache of Stemmed Bifaces, ME130-12, Seboomook Lake. a-m possible Snook Kill Type. All manufactured from Kineo Rhyolite.

Figure 24. Flaked Stone and Ground Stone Artifacts from Seboomook Lake. a small ground Celt, b, d, e, f, j, k. Non-Stemmed Bifaces, c, g-i, n, p-s, Notched Bifaces, l, m Stemmed Bifaces (Middle Archaic), o Ground Ulu.

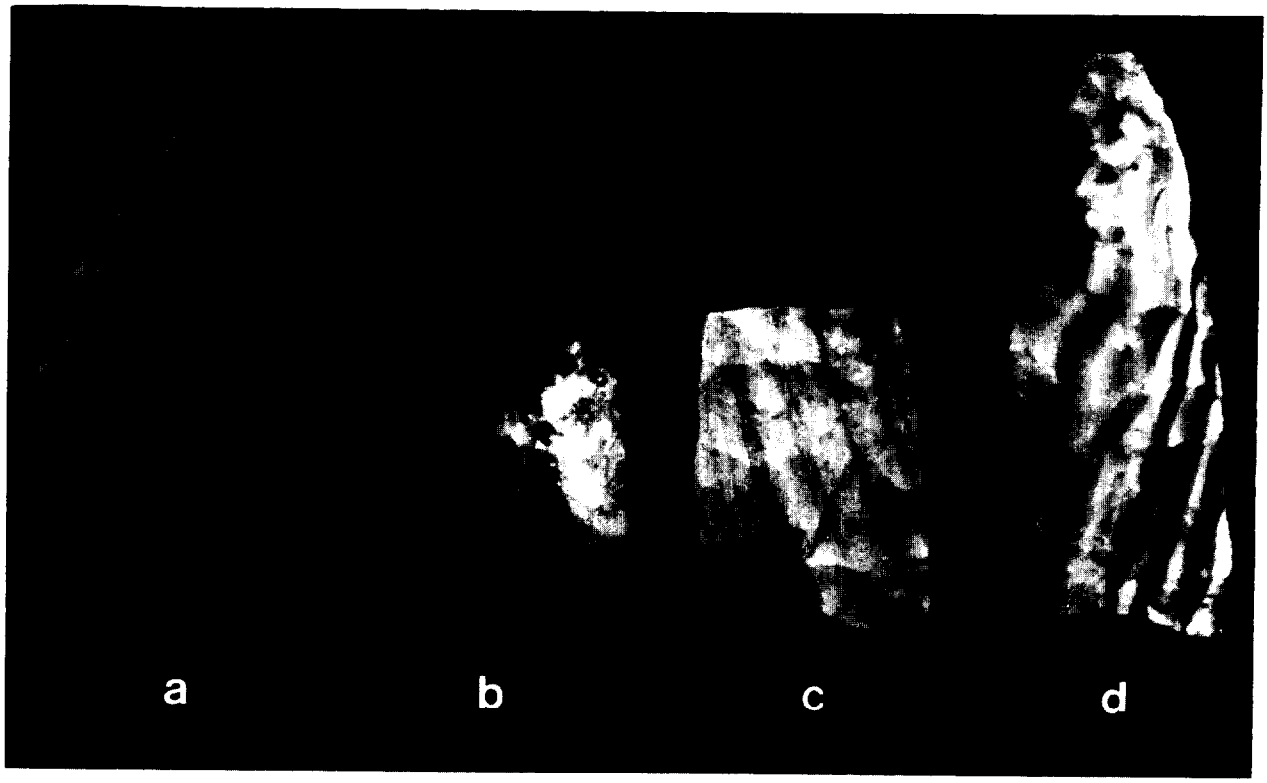
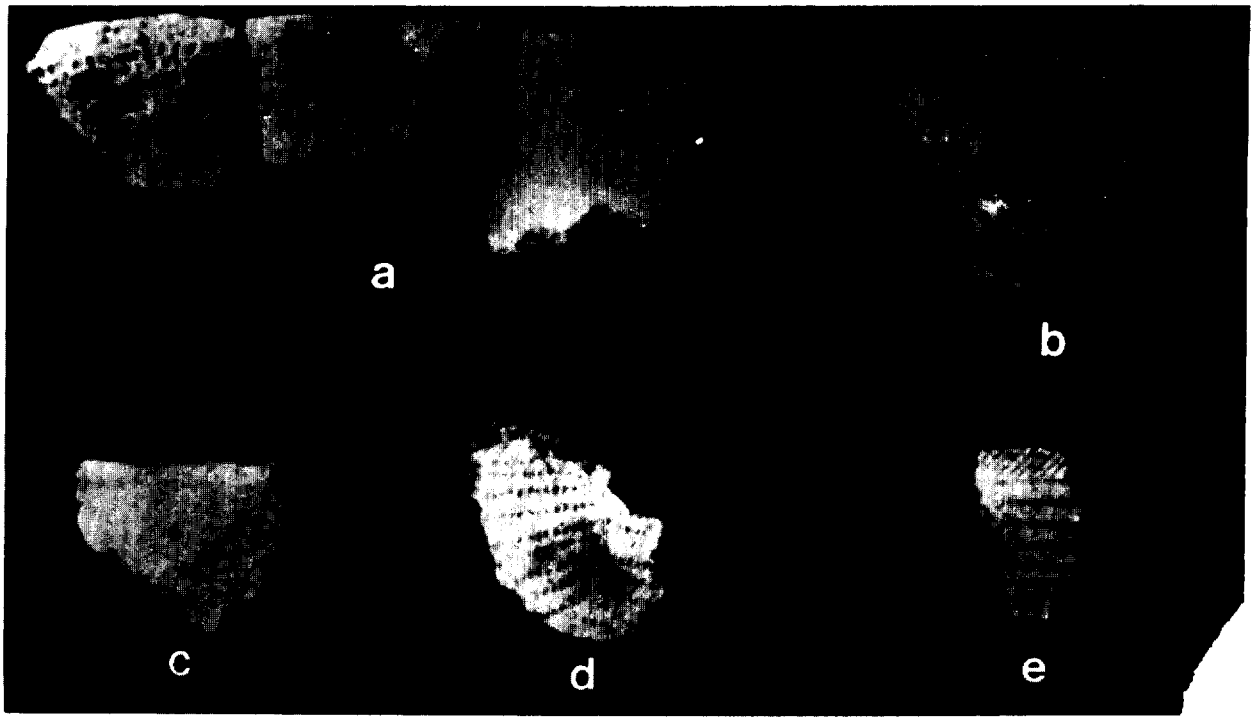


Figure 26. "Exotic" Flaked Stone Bifaces from Me130-12, Seboomook Lake. a Biface from Textured Quartztite, b Banded Chert c and d Banded Rhyolite.

Figure 27. Aboriginal Ceramic Remains from Seboomook Lake. a Dentate, Rocker-impressed, b. e Incised, c Undecorated, d Cord-Wrapped Stick Impressed.



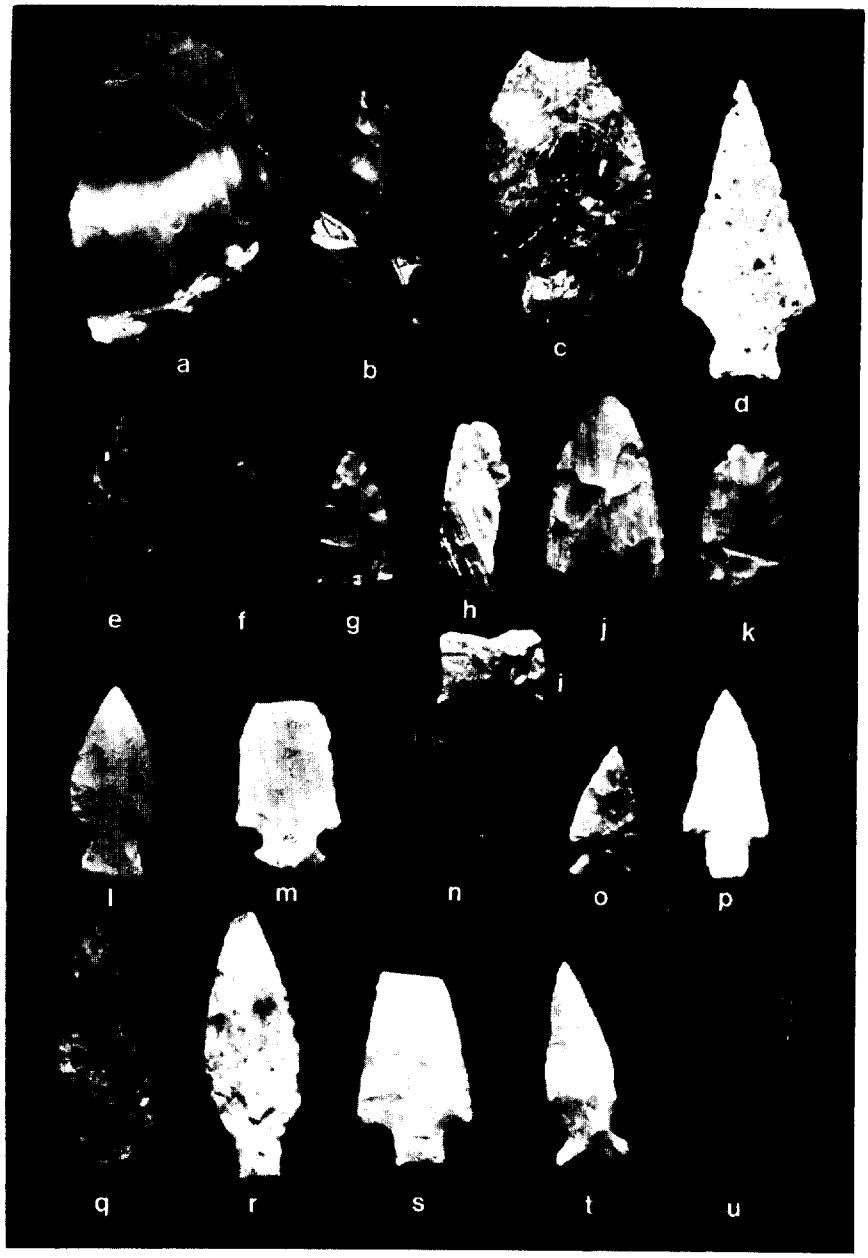


Figure 28. Flaked Stone Artifacts from Chesuncook Lake. a-c Bifaces, d Susquehanna, f-k Chert Bifaces, l Tobique-Like, m-r Notched and Stemmed Bifaces, s Neville, t Notched, and u Late Paleo-Indian Lancolate Point.

elevation of 942 feet. Directly north of Gero Island, Umbazooksus Stream enters Chesuncook Lake, draining Umbazooksus Lake and Longley Pond. East of the island is Cuzabexis Lake and Stream. Other brooks on the north end are Red, Duck, Mud and Quaker. On the southwest side, Caribou Lake is connected to Chesuncook Lake.

Cultural remains included Late Paleo-Indian, Middle Archaic, Late Archaic, and Woodland (Ceramic) period artifacts. The Paleo-Indian period is represented by a projectile point made from a black fine grained chert (Figure 28u) (see Doyle, et al. 1983). The Middle Archaic is represented by two Starklike projectile points (Figure 28s). More obvious are Late Archaic assemblages, including several Otter Creek points (Figures 6e-6f) and Moorehead Complex ground stone industries (Figures 29, 30). A variety of other Archaic and Woodland (Ceramic) period artifacts are also known from the lake area (Figures 31-35).

SITE TYPES AND DISTRIBUTION

Four types of archaeological sites were discerned in the Moosehead study area. These included small habitation, large habitation, workshop and talus quarry sites (Table 2).

Small habitation sites dominate the total inventory (n=80) of sites with 49 (61.3%). These sites were generally less than 40-50 meters in length, with a mean of ca. 20 meters. Many of the small habitation sites produced only debitage of Kineo rhyolite. The small sites are nearly twice as frequent as the large sites, although large sites may be ultimately defined as multiple small loci.

Large habitation sites were present at 28 locations in the study area, 35% of the total site inventory. Large sites were generally greater than 50 meters in length, with the mean near 70-80 meters. These sites also included concentrations of smaller artifact loci (activity areas) not apparent on small sites. Large sites were more frequent at both the outlet and major inlets of lakes. Several large sites were associated with workshop and talus quarry areas.

Eleven workshop sites were defined on the basis of artifacts and debitage. These sites included large ovate bifacial preforms reduced at another site or on the site as well as associated bifacial reduction debitage. Small activity areas associated with workshops were easily defined by debitage.

The talus quarry sites included four sites, 5% of those defined in the study area. These included large naturally exposed areas of rhyolite, often weathered into piles of natural cobbles. One site was on Brassua Lake (Figures 10 & 11) and three others were at Mount Kineo (Figures 17-19).

The distribution of sites by geographical location is summarized in Table 3. Lake shore sites at the inlet or outlet were the favored settlement location, with 27 (33.8%) sites recorded. Lake shore sites away from streams were favored nearly as often, with 20 (25%) recorded locations. Other lake shore sites included points of land with 12 (15%) recorded sites and lake islands with 10 (12.5%) sites. River and brook junctions included 12 sites (15%) and river and river or stream junctions included seven sites (8.8%). It is significant that of habitation sites, nearly all were located in areas of known fish concentrations (Farrar, 1889).

CONCLUSIONS AND RECOMMENDATIONS

On the basis of the foregoing descriptions, summary conclusions and recommendations can be offered. The present report has documented the presence of aboriginal populations in the northwestern Maine study area over a long temporal span, including nearly the entire known span of Northeastern prehistory and history, at least 10,000-11,000 B.P. to present. While the 80 recorded sites surely do not represent the entire roster of archaeological sites in the study area, the sum of the documented sites indicates that usage of the region by aboriginal populations was varied, as well as long term. Sites include variably sized presumed habitation sites, lithic quarry and workshop sites and other possibly specialized activity sites.

On the basis of the currently available data, aboriginal populations utilized the interior lake and river systems of northwestern Maine for some portion of their annual round. While the nature of their subsistence/settlement systems remains poorly elucidated, it seems likely that local resource concentrations attracted populations seasonally and probably multi-seasonally. Favored locations for habitation sites apparently included areas where fish and cervid resources were predictably available from the earliest occupation onward (Doyle, et al., 1983). Consideration of travel arteries also influenced the spatial distribution of aboriginal sites, as did notable lithic raw material sources. This latter resource must have provided an especially critical attraction for aboriginal popula-

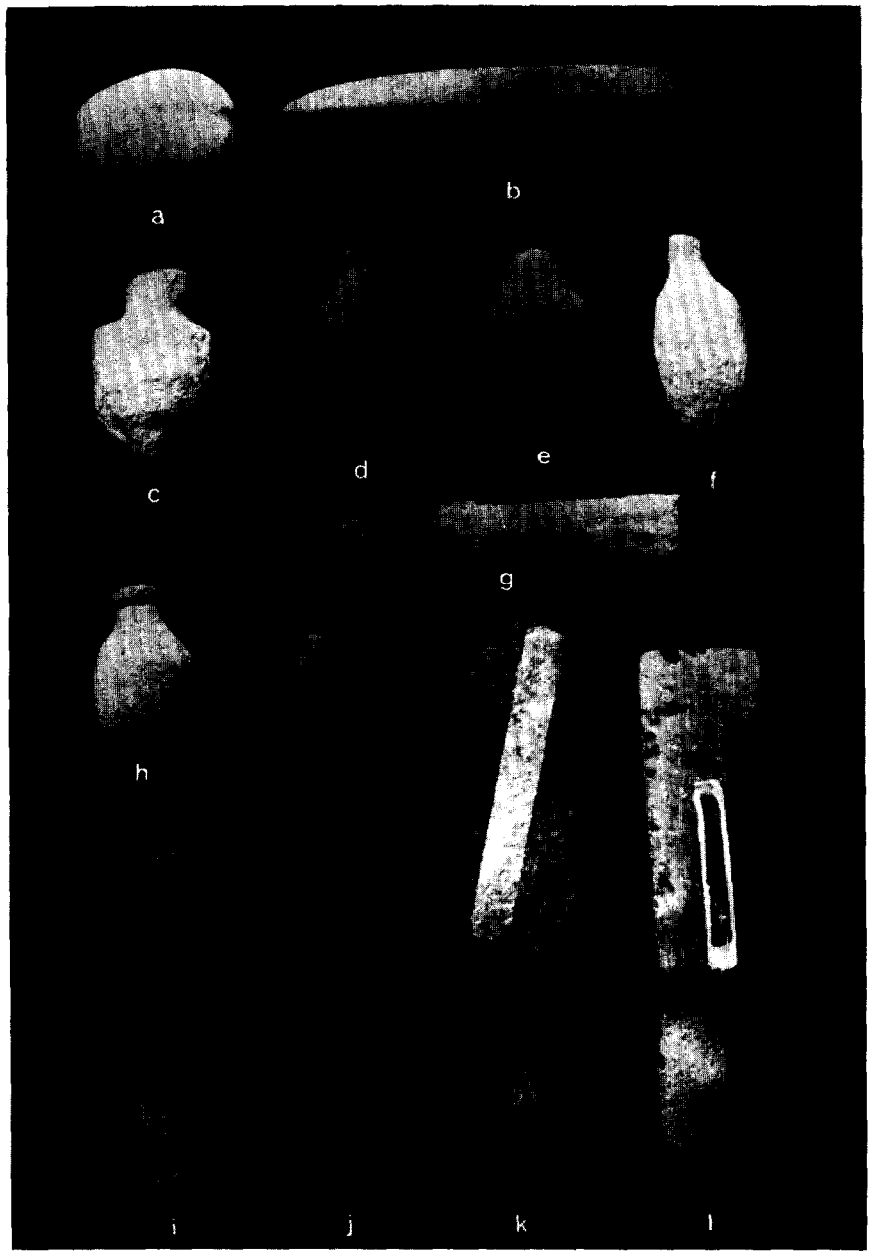


Figure 29. Ground Stone Artifacts from Chesuncook Lake. a Notched Pebble, b, g, i, j Ground Slate Blades, c-f, h Plummets, k-l Celts.

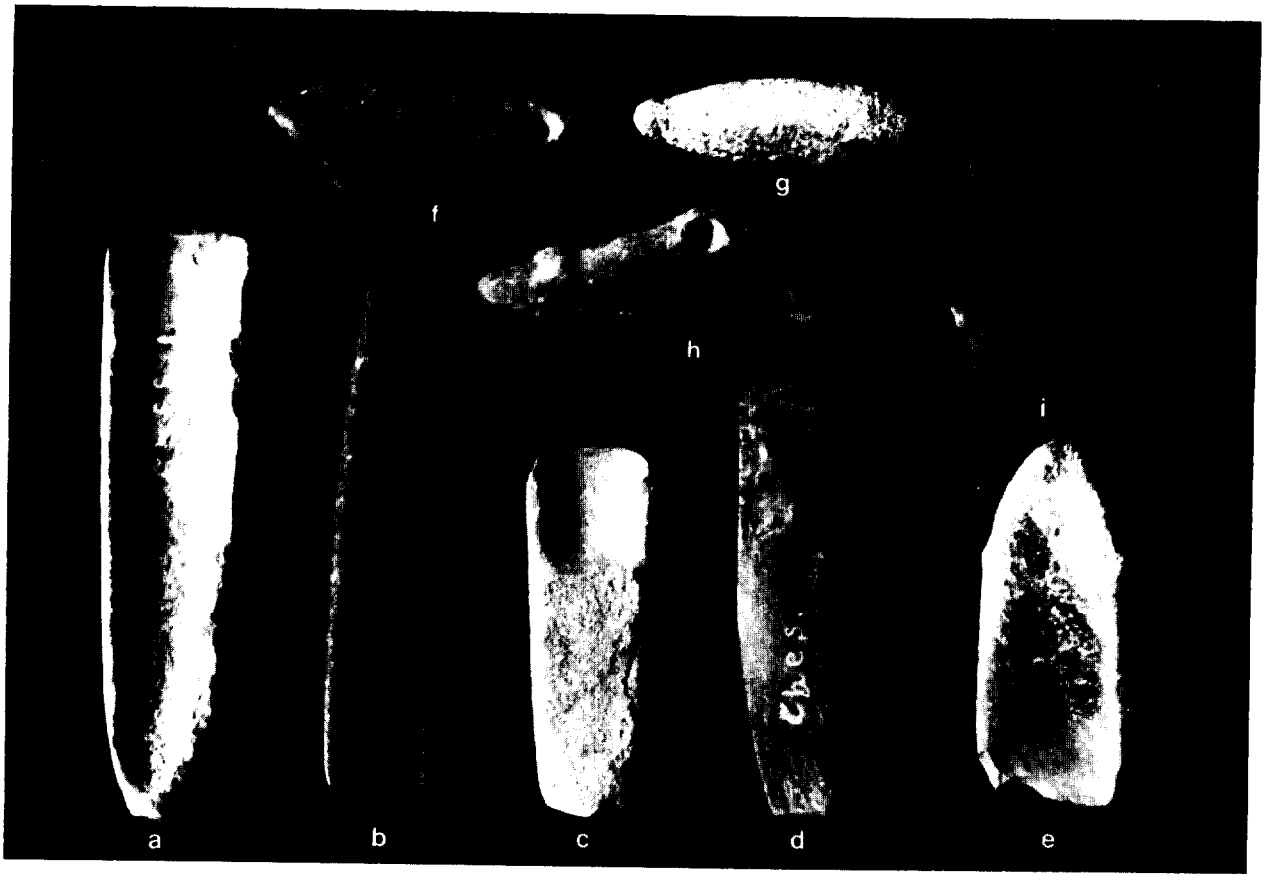


Figure 30. Ground Stone and Flaked Stone Artifacts from Chesuncook Lake. a, e Full Channelled Gouge, b, c Half Channeled Gouge, d Celt, g Plummet, f, h Preforated Stone, Disk Biface.

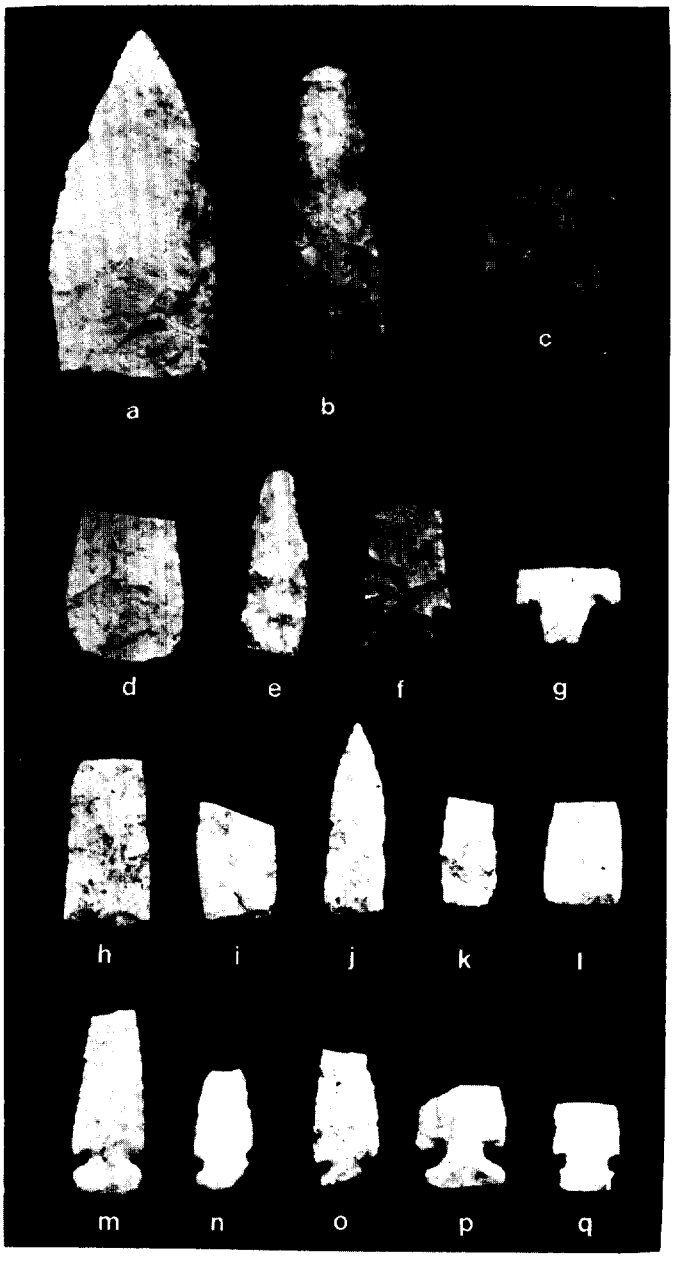


Figure 31. Flaked Stone Artifacts from Chesuncook Lake. a, c-e, h-l Non-Stemmed Bifaces, b Stark, g Neville variant, and f, m-g Side Notched Bifaces.

tions on the basis of the currently understood distribution of these raw materials in the wide region. Particularly Kineo rhyolite was apparently exchanged widely in Maine and adjoining areas of northern and southern New England. Further evidence of widespread interaction between aboriginal populations seems present throughout the entire span of occupation in the study area on the basis of non-local raw materials and stylistic criteria, which tie local populations into a variety of broad cultural manifestations in the Northeast.

It is apparent that the research reported here has incompletely sampled the archaeological potential of the northwestern Maine study area, and that more questions than answers have been generated herein. In light of this situation, the following recommendations may be proposed:

(1) First priority should be given to accurate documentation of all known private artifact collections from the study area, particularly those with associated provenience data which belong to long-term collectors in the region. These collections obviously provide an invaluable and irreplaceable source of data, which may be lost if and when these collections are ever sold or otherwise dispersed. Minimal documentation of these collections should include; recording of provenience data, technological classes, raw material type, metric measurements, and stylistic affinities.

(2) Determination of landowners for all sites through tax records and informant contacts would enable better documentation of site accessibility and might provide additional collection data. These contacts could be possibly used as a means of educating landowners in culture resource management, while at the same time obtaining permission for any future field work.

(3) Re-examination of as many sites as possible, using previously recorded locational data, should be undertaken to assess the present condition of the sites. Limited test pits at sites would provide further data as regards site stratigraphy and integrity of cultural deposits.

(4) A definite plan for future field work in the study area is also recommended, including both areas of recorded and as of yet unrecorded sites. Several localities are of particular im-

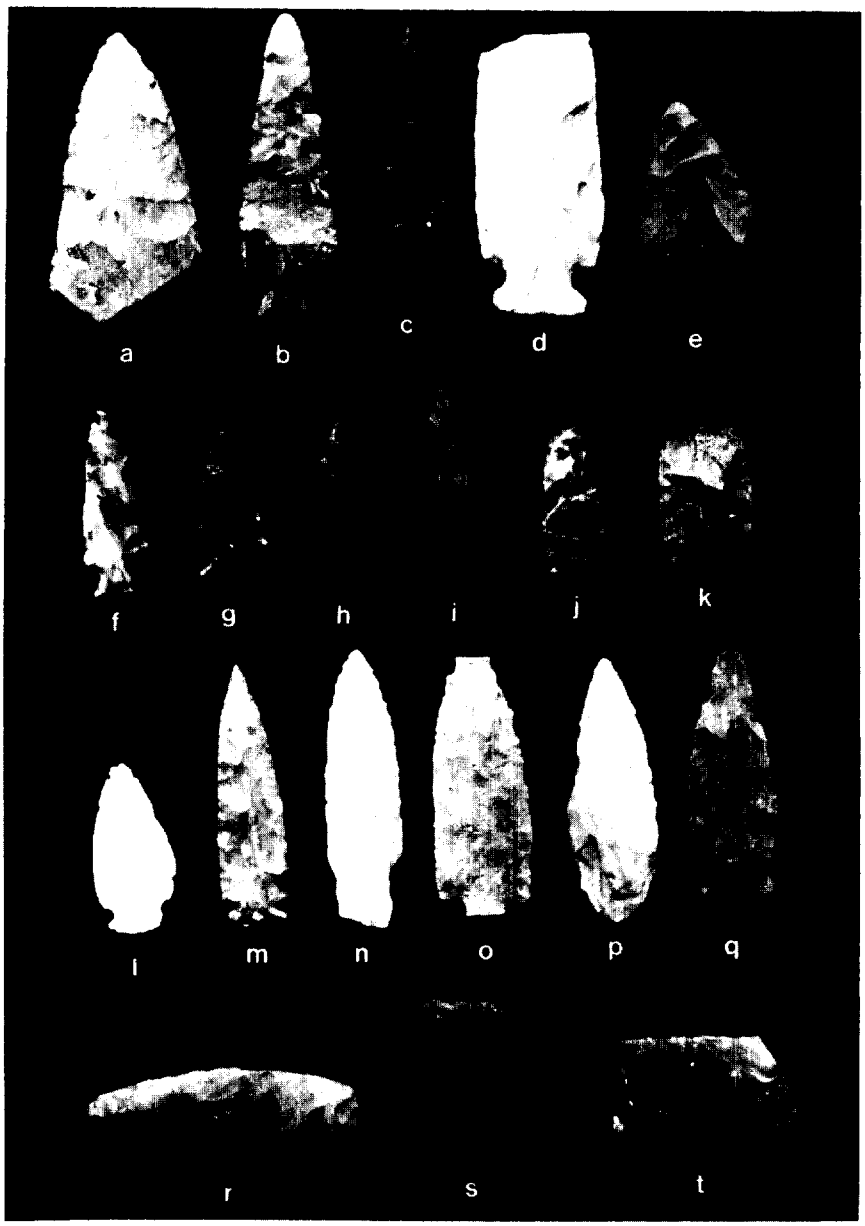


Figure 32. Flaked Stone Artifacts from Chesuncook Lake. a-t Stemmed, Side Notched and Non-Stemmed Bifaces.

Figure 33. Flaked Stone Artifacts from Chesuncook Lake. a-p Stemmed, Side Notched and Non-Stemmed Bifaces.

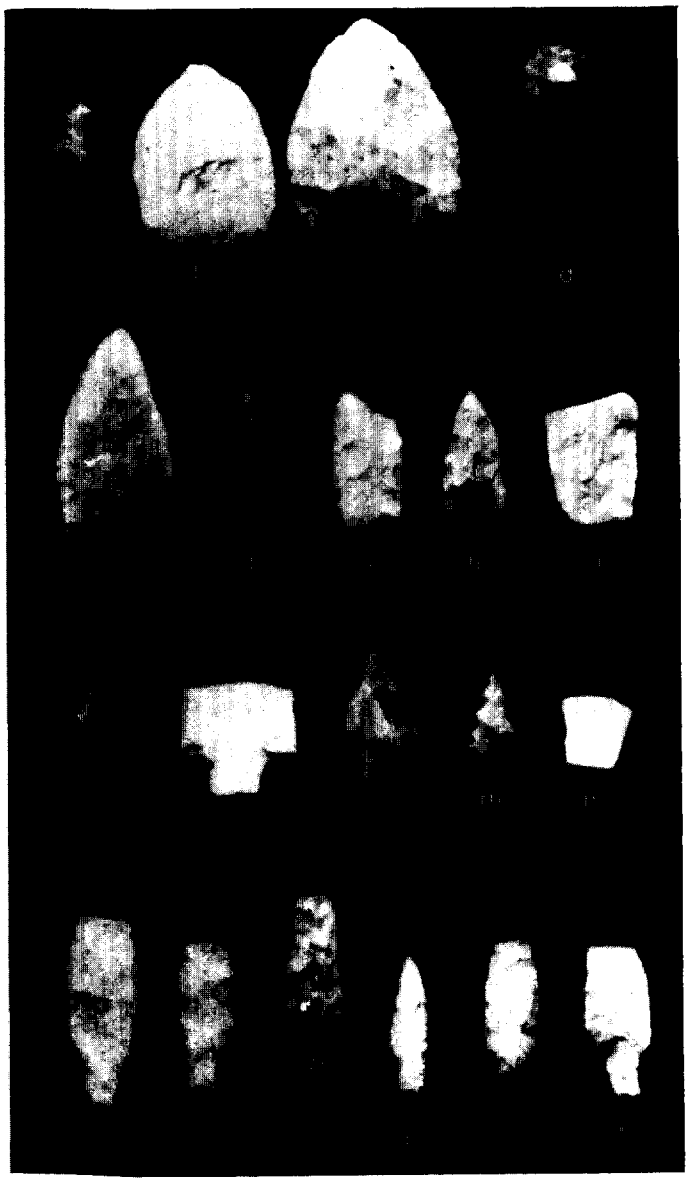


Figure 34. Flaked Stone Artifacts from Chesuncook Lake. a–j and n Non-Stemmed Bifaces, k–m, o–t Stemmed and Notched Bifaces.

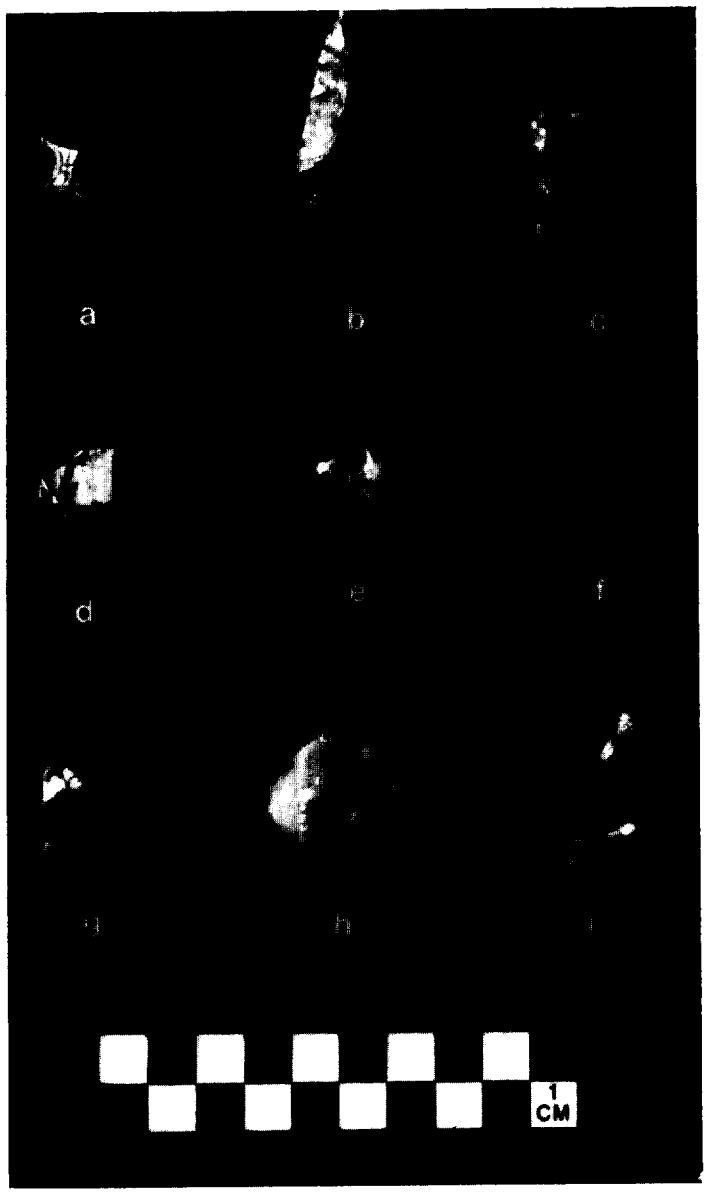


Figure 35. Flaked Stone Artifacts, a–h Scrapers, g Gunflint, b, d–f, and h Seboomook Lake, c, g and i Chesuncook Lake.

TABLE 1
COLLECTION INVENTORY AND STUDY AREA

Name	No. of Specimens	Locations Collected
Day	ca. 50	Seboomook, Moosehead and Lobster Lake
Doyle	ca. 1500	Seboomook, Brassua and Moosehead Lake
Eastman	ca. 300	Seboomook and Moosehead Lake, West Branch Penobscot River
Edwards	ca. 2000	Seboomook, Moosehead, Chesuncook Lake Black Pond
Feuchwanger	ca. 500	Seboomook and Moosehead Lake
Hartsgrove	ca. 200	Seboomook, Moosehead and Chesuncook Lake
Hamilton	ca. 200	Brassua, Seboomook, Moosehead, Chesuncook, and Sebec Lake
Johnson	ca. 150	Seboomook Lake and West Branch Penobscot River
Moody	ca. 1500	Seboomook, Moosehead and Chesuncook Lake, West Branch Penobscot River
Packard	ca. 300	Sebec, Brassua, Moosehead and Lobster Lake
Sanders	ca. 10	Brassua Lake
Sherman	ca. 300	Brassua and Moosehead Lake, First Roach Pond
Wilson	ca. 200	Moosehead Lake and Kennebec River
C. C. Willoughby	----	Moosehead Lake
J. McGuire	ca. 400	Moosehead Lake
W. K. Moorehead	ca. 500	Moosehead, Chesuncook, Seboomook and Sebec Lake
R. Bonnichsen	----	Brassua and Moosehead Lake

TABLE 2
TYPES OF PREHISTORIC SITES IN MOOSEHEAD STUDY REGION

U.S.G.S. Quadrangle	Small Habitation	Large Habitation	Workshop Site	Quarry Site	TOTAL
ME 104 Greenville	--	1	--	--	1
ME 105 Sebec	7	4	--	--	11
ME 117 Brassua	3	4	2	1	10
ME 118 Moosehead	11	9	6	3	29
ME 130 Seboomook	8	5	3	--	16
ME 131 Northeast Carry	9	3	--	--	12
ME 132 Ragged	3	--	--	--	3
ME 143 Chesuncook	8	2	--	--	10
TOTAL	49	28	11	4	82
PERCENT OF TOTAL	61.3	35.0	13.8	5.0	

TABLE 3
DISTRIBUTION OF SITES BY GEOGRAPHICAL LOCATIONS

Quadrangle	Lakeshore and River or Stream	Lakeshore	Point on Lake	River/Brook	Lake Island	River/River or Stream
ME 104 Greenville	--	1	--	--	--	--
ME 105 Sebec	2	3	2	2	2	--
ME 117 Brassua	5	1	1	1	--	--
ME 118 Moosehead	6	12	6	--	5	--
ME 130 Seboomook	2	--	--	7	--	4
ME 131 Northeast Carry	5	2	--	2	1	2
ME 132 Ragged	--	2	1	--	--	--
ME 143 Chesuncook	7	--	2	--	2	1
TOTAL	27	20	12	12	10	7
PERCENT OF TOTAL	33.8	25.0	15.0	15.0	12.5	8.8

portance because of the known intact cultural deposits in each case. Optimally, field work should be undertaken to expose cultural features and activity areas, to collect associated material culture and subsistence remains, and to obtain a radiocarbon chronology. Such information from this interior upland area becomes inceasingly important for comparative reasons in light of a growing body of data from coastal areas along the Gulf of Maine in New England and the Maritime Provinces.

In sum, it is recommended that a combination of further collection documentation and field work should be undertaken in the northwestern Maine study area. Data sets generated through this continued research will enable consideration of a variety of problem-oriented research questions, which, in turn, should permit better definition of aboriginal lifeways in both local and regional contexts.

REFERENCES CITED

Allen, Patricia M.

1980 The Oxbow Site : An Archaeological Framework for Northeastern New Brunswick, In: Proceedings of the 1980 Conference on the Future of Archeology in the Maritime Provinces. Occasional Papers in Anthropology 8:132-146. D. M. Shimabuka, Ed. Department of anthropology, Saint Mary's University, Halifax.

1981 The OxBow Site: Chronology and Prehistory in Northeastern New Brunswick. New Brunswick Manuscripts in Archeology Series 2 1. Historical Resources Administratio Fredericton.

Banasiak, Chester F.

1961 Deer in Maine. Game Division Bulletin 6. Maine Department of Inland Fisheries and Game, Augusta.

Benmouyal, Jose

1978 La Gaspesie. In: Images de la Prehistoire du Quebec. Recherches Amerindiennes au Quebec 7 (1-2): 55-62. C. Chapledaine, Ed. Montreal.

Berry, George S.

1898 The Great Shell Mounds of Damariscotta. New England Magazine 19: 178-188.

Bloom, Arthur L.

1960 Late Pleistocene Changes of Sea Level in Southwestern Maine. Report for the Maine Geological Survey, Augusta.

Bock, Philip K.

1978 Micmac. In: Handbook of North American Indians, Vol. 15, Northeast. pp. 109-122. B. G. Trigger, Ed. Smithsonian Institution, Washington.

Bolian, Charles E.

1980 The Early and Middle Archaic of the Lakes Region, New Hampshire. In: Early and Middle Archaic Cultures in the Northeast. Occasional Publications in Northeastern Anthropology 7: 115-134. Man in the Northeast, George's Mills.

Bonnichsen, Robson
1977 Investigating Lithic Sources for Stone Tool Manufacture. Maine Archaeological Society Bulletin 17(1): 11-14.

Bonnichsen, Robson and David Sanger
1977 Integrating Faunal Analysis. Canadian Journal of Archaeology 1: 109-133.

Bonnichsen, R., V. Konrad, V. Clay, T. Gibson, and D. Schnurrenberger
1980 Archaeological Research at Munsungan Lake: 1980 Preliminary Technical Report of Activities. Institute for Quaternary Studies, University of Maine, Orono.

Borns, Harold W.
1973 Late Wisconsin Fluctuations of the Laurentide Ice Sheet in Southern and Eastern New England. In: The Wisconsin Stage. Geological Society of America Bulletin 86: 99-104. R. F. Black and R. P. Goldthwait, Eds.

Borstel, Christopher L.
1982 Archaeological Investigations at the Young Site, Alton, Maine. Occasional Publications in Maine Archaeology 2. Maine Historic Preservation Commission, Augusta.

Bourque, Bruce J.
1971 Prehistory of the Central Maine Coast. Unpublished Ph.D. Dissertation. Harvard University, Cambridge.
1973 Aboriginal Settlement and Subsistence on the Maine Coast. Man in the Northeast 6: 3-20.
1975 Comments on the Late Archaic Population of Central Maine: The View from the Turner Farm. Arctic Anthropology 12(20): 35-45.
1976 The Turner Farm Site: A Preliminary Report. Man in the Northeast 11: 21-30.

Bradstreet, Theodore E. and Ronald B. Davis
1975 Mid-Postglacial Environments in New England with Emphasis on Maine. Arctic Anthropology 27 (1): 8-12.

Bruce, Walter G.
1965 Long Cove: A Maine Shell-Deposit Site. Bulletin of the Massachusetts Archaeological Society 27(1): 8-12.

Butler, Eva L. and Wendell S. Hadlock
1962 A Preliminary Survey of the Munsungan-Allagash Waterways. Robert Abbe Museum Bulletin 8. Bar Harbor.

Byers, Douglas S.
1954 Bull Brook - A Fluted Point Site in Ipswich, Massachusetts. American Antiquity 19(4): 343-351.
1955 Additional Information on the Bull Brook Site, Massachusetts. American Antiquity 20(3): 274-276.
1959 The Eastern Archaic: Some Problems and Hypotheses. American Antiquity 24(3): 233-256.
1979 The Nevin Shellheap: Burials and Observations. Papers of the R. S. Peabody Foundation for Archaeology 9.

Caldwell, Dabney W.
1972 The Geology of Baxter State Park and Mt. Katahdin, Maine Geological Survey Bulletin 12, Augusta.

Carr, Patricia G., Ian A. Worley and MIchael Davis
1977 Post-Lake Vermont History of a Pond and Wetland in the Champlain Basin. In: Proceedings of the 4th Annual Lake Champlain Basin Environmental Conference, pp. 71-111.

Cook, David and Arthur Spiess
1981 Archaeology of the Piscataquis Ahwangan: Preliminary Results. Maine Archaeological Society Bulletin 21(1): 29-37.

Cooper, Gerald P. and John L. Fuller
1945 A Biological Survey of Moosehead Lake and Haymock Lake, Maine. Fish Survey Report 6. Maine Department of Inland Fisheries and Game, Augusta.

Curran, Mary L. and Dena F. Dincauze
1977 Paleoindians and Paleo-Lakes: New Data from the Connecticut Drainage. In: Amerinds and their Paleoenvironments in Northeastern North America. Annals of the New York Academy of Sciences 288: 333-348. W. S. Newman and B. Salwen, Eds.

Cutting, Richard E.
n.d. The Penobscot. In: Maine Rivers. pp. 40-43. Thorndike Press, Thorndike.

Davis, Margaret B.
1969 Climatic Changes in Southern Connecticut Recorded by Pollen Deposition at Rogers Lake. Ecology 50: 409-422.

Davis, R. B., T. E. Bradstreet, R. Stuckenrath, and H. W. Borns
1975 Vegetation and Associated Environments during the Past 14,000 Years Near Moulton Pond, Maine. Quaternary Research 5: 435-465.

Davis, Stephen A.
1978 Teacher's Cove. New Brunswick Archaeology Series I 1. Historical Resources Administration, Fredericton.

Day, Gordon M.
1978 Western Abenaki. Handbook of North American Indians, Vol. 15, Northeast, pp. 148-159. B. G. Trigger, Ed. Smithsonian Institute, Washington.
1981 The Identity of the Saint Francis Indians. Canadian Ethnology Service Paper. National Museum of Man, Ottawa.

Descartes, Rene M.
1974 The Cabot Site. Maine Archaeological Society Bulletin 14(2): 6-17.

Dincauze, Dena M.
1968 Cremation Cemeteries in Eastern Massachusetts. Papers of the Peabody Museum of American Archaeology and Ethnology 59(1). Harvard University, Cambridge.
1971 An Archaic Sequence for Southern New England. American Antiquity 36(2): 194-198.
1976 The Neville Site: 8,000 Years at Amoskeag. Peabody Museum Monographs 4. Harvard University, Cambridge.

Dincauze, Dena F. and Mitchell T. Mulholland
1977 Early and Middle Archaic Site Distributions and Habitats in Southern New England. IN: Amerinds and their Paleo-environments in Northeastern North America. Annals of the New York Academy of Sciences 288: 439-456. W. S. Newman and B. Salwen, Eds.

Doyle, Richard A., Nathan D. Hamilton and James B. Petersen
1982 Early Woodland Ceramics and Associated Perishable Industries from Southwestern Maine. Maine Archaeological Society Bulletin 22(2): 4-21

Doyle, Richard A., Nathan D. Hamilton, James B. Petersen and David Sanger
1983 Late Paleo-Indian Remains from Western Maine and Their Correlations in Northeastern Prehistory. Paper Presented at the 48th Annual Meeting of the Society for American Archaeology, Pittsburgh.

Dumais, Pierre
1978 Le Bas Saint-Laurent. In: Images de la Prehistoire du Quebec. Recherches Amerindiennes au Quebec. 7(1-2): 63-74. C. Chapledaine, Ed.

Dunn, Gerald C.
1960 The Eel Bridge Site and Its Relationship to the Sebasticook River Route. Bulletin of the Massachusetts Archaeological Society 21(3&4): 33-38.

Emery, K. O., R. L. Wigley, A. S. Bartlett, M. Ruben, and E. S. Barglison
1967 Fresh Water Peat on the Continental Shelf. Science 158: 1301-1307.

Erikson, Vincent O.
1978 Maliseet-Passamaquoddy. In: Handbook of North American Indians, Vol. 15, Northeast, pp. 123-136. B. G. Trigger, Ed. Smithsonian Institution, Washington.

Farrar, Charles A. J.
1889 Farrar's Illustrated Guide Book to Moosehead Lake. Lea and Shepard, Boston.

Fitting, James E.
1970 The Archaeology of Michigan. Natural History Press, New York.
1978 Regional Cultural Development, 300 B.C. to A.D. 1000. In: Handbook of North American Indians, Vol. 15, Northeast, pp. 44-57. B. G. Trigger, Ed. Smithsonian Institution, Washington.

Fobes, Charles B.
1945 Climatic Divisions of Maine. University of Maine Technical Experiment Bulletin 40.

Foulkes, Ellen
1980 Foulton Island: A Stratified Site in the Saint John River Valley of New Brunswick. Unpub-M.A. Thesis. Trent University.

Foye, Robert E., Charles F. Ritzi, and Roger P. AuClair
n.d. The Kennebec. In: Maine Rivers, pp. 26-30. Thorndike Press, Thorndike.

Fitzhugh, William W.
1972 Environmental Archaeology and Cultural Systems in Hamilton Inlet, Labrador. Smithsonian Contributions to Anthropology 16. Washington.
1975 A Maritime Archaic Sequence from Hamilton Inlet, Labrador. Arctic Anthropology 12(2): 17-138.

Funk, Robert E.
1976 Recent Contributions to Hudson Valley Prehistory. New York State Museum and Science Service Memoir 22.
1978 Post-Pleistocene Adaptations. In: Handbook of North American Indians, Vol. 15, Northeast, pp. 16-27. B. G. Trigger, Ed. Smithsonian Institution, Washington.

1979 The Early and Middle Archaic in New York as seen from the Upper Susquehanna Valley. Bulletin of the New York State Archaeological Association 75: 23-38.

1982 Introduction. In: The Vail Site: A Palaeo-Indian Encampment in Maine. Bulletin of the Buffalo Society of Natural Sciences 30: xii-xiv.

1983 The Northeastern United States. In: Ancient Native Americans (Revised Edition), pp. 303-371. J. D. Jennings, Ed. W. H. Freeman, San Francisco.

Funk, Robert E. and Bruce Rippeteau

1977 Adaptation, Continuity and Change in Upper Susquehanna Prehistory. Occasional Publications in Northeastern Anthropology 3. Man in the Northeast, George's Mills.

Gramly, Richard M.

1981 Eleven Thousand Years in Maine. Archaeology 34(6): 32-39.

1982 The Vail Site: A Palaeo-Indian Encampment in Maine Bulletin of the Buffalo Society of Natural Sciences 30.

Gramly, Richard M. and Kerry Rutledge

1981 A New Paleo-Indian Site in the State of Maine American Antiquity 46(2): 354-360.

Hadlock, Wendell S.

1939 The Taft's Point Shell Mound. Robert Abbe Museum Bulletin 5. Bar Harbor.

Hadlock, Wendell S. and T. Stern

1948 Passadumkeag, A Red Paint Cemetery, Thirty-Five Years after Moorehead. American Antiquity 14: 98-103.

Hamilton, Nathan D. and Richard Doyle

1980 Archaeological Survey and Testing on Sebago Lake, Southwestern Maine. Unpublished M.S., Department of Geography/Anthropology, University of Southern Maine.

Hamilton, Nathan D. and David Yesner

1981 Early and Middle Woodland Ceramic Assemblages from the Great Diamond Island Site. In: Ceramic Analysis in the Northeast. Occasional Publications in Northeastern Anthropology 9. Man in the

1983 Maritime Adaptations in Western Maine: The Great Diamond Island Site. Paper Presented at the 48th Annual Meeting of the Society for American Archaeology, Pittsburgh.

Hanson, Lindley S. and Dabney W. Caldwell

1977 Late Wisconsin Moraines in Northwestern Vermont which Postulate the Maine Transgression into the St. Lawrence Valley. Geological Society of America Abstracts 9(3): 272.

Haviland, William A. and Marjory W. Power

1981 The Original Vermonters: Native Inhabitants Past and Present. University Press of New England, Hanover.

Kennedy, Clyde C.

1967 Preliminary Report on the Morrison's Island-6 Site. National Museum of Man Bulletin 206: 100-125. Ottawa.

Kirkland, J. T. and D. R. Coates

1977 The Champlain Sea and Quaternary Deposits in the St. Lawrence Lowland, New York. In: Amerinds and their Paleoenvironments in Northeastern North America. Annals of the New York Academy of Science 288: 498-507. W. S. Newman & B. Salwen, Eds.

Kite, J. Steven, Thomas V. Lowell, and George P. Nicholas
1982 Quaternary Studies in the Upper St. John River Basin: Maine and New Brunswick-Guidebook for the 1982 NBQUA Fieldtrip. New Brunswick Quaternary Association and the New Brunswick Department of Natural Resources, Fredericton.

Kopper, J. S., Robert E. Funk, and Lewis Dumont
1980 Additional Paleo-Indian and Archaic Materials from the Dutchess Quarry Cave Area, Orange County, New York. Archaeology of Eastern North America 8: 125-137.

Lahti, E., A. Spiess, M. Hedden, R. Bradley, and A. Faulkner
1981 Test Excavations at the Hodgdon Site. Man in the Northeast 21: 19-36.

Leadbetter, Helen M.
1978 Iroquoianesque Pottery at Pequawket. Maine Archaeological Society Bulletin 18(1): 25-41.

Lothrop, Jonathan C. and Richard M. Gramly
1982 Pieces Esquillees from the Vail Site. Archaeology of Eastern North America 10: 1-22.

MacDonald, George F.
1968 Debert: A Paleo-Indian Site in Central Nova Scotia. National Museum of Canada Antrhopological Paper 16. Ottawa.

Marois, Roger and Rene Ribes
1975 Indices de Manifestations Culturelles de L'Archaique: La Region de Trois Rivieres. Archaeological Survey of Canada Paper 41. National Museum of Man, Ottawa.

McDowell, L. L., R. M. Dole, H. Howard, and R. A. Farrington
1971 Palynology and Radiocarbon Chronology of Bugbee Wildflower Sanctuary and Natural Area, Caledenia County, Vermont. Pollen et Spores 13: 73-91.

McGhee, Robert and James R. Tuck
1975a An Archaic Sequence from the Strait of Belle Isle, Labrador. Archaeological Survey of Canada Paper 34. National Museum of Man. Ottawa.
1975b Archaic Cultures in the Strait of Belle Isle Region, Labrador. Arctic Antrhopologist 12(2): 76-91.

McGuire, Joseph D.
1908 Ethnological and Archaeological Notes on Moosehead Lake, Maine. American Anthropologist 10: 549-557.

Mellgren, Guy
1960 The Bradley Site on the Penobscot. Bulletin of the Massachusetts Archaeology Society 21(3 & 4): 43-45.

Mott, R. J.
1975 Palynological Studies of Lake Sediment Profiles from Southwestern New Brunswick. Canadian Journal of Earth Science 12: 273-288.

Moorehead, Warren K.
1922 A Report on the Archaeology of Maine. Department of Anthropology, Phillips Academy, Andover.

Nicholas, George P.

1982a A Model for the Early Postglacial Settlement of the Central Merrimack River Basin, New Hampshire. In: Prehistoric Archaeology in the Merrimack River Valley. V. B. Kenyon, Ed. Occasional Publications in Northeastern Anthropology (In press).

1982b The Archaeology of the Upper St. John River Basin. In: Quaternary Studies in the Upper St. John River Basin: Maine and New Brunswick - Guidebook for the 1982 NBQUA Fieldtrip. pp. 16-20.

Ogden, J. G.

1977 The Late Quaternary Paleoenvironmental Record of Northeastern North America. In: Amerinds and their Paleoenvironments in Northeastern North America. Annals of the New York Academy of Sciences 288: 16-34. W. S. Newman and B. Salwen, Eds.

Petersen, James B.

1980 The Middle Woodland Ceramics of the Winooski Site, A.D. 1-1000. Vermont Archaeological Society New Series Monograph 1.

Petersen, James B. and Marjory W. Power

1981 Three Middle Woodland Ceramic Assemblages from the Winooski Site. In: Ceramic Analysis in the Northeast. Occasional Publications in Northeastern Anthropology 9. J. B. Petersen, Ed. Man in the Northeast, George's Mills (In press).

1983a The Winooski Site and the Middle Woodland Period in the Northeast. A Report for Interagency Archaeological Services, Philadelphia, DOI. Department of Anthropology, University of Vermont.

1983b A Middle Woodland Exchange Network in Northern New England. Paper Presented at the 48th Annual Meeting of the Society for American Archaeology, Pittsburgh.

Power, Marjory, Frank L. Cowan, and James B. Petersen

1980 Artifact Variability at the Multi-Component Winooski Site, Man in the Northeast 19: 43-55.

Ritchie, William A.

1953 A Probable Paleo-Indian Site in Vermont. American Antiquity 18(3): 249-258.

1957 Traces of Early Man in the Northeast. New York State Museum and Science Service Bulletin 358.

1965 The Archaeology of New York State. Natural History Press, New York.

1968 The KI Site, the Vergennes Phase and the Laurentian Tradition. Bulletin of the New York State Archaeological Association42: 1-5.

1969 The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England. Natural History Press, New York.

1979 The Otter Creek No. 2 Site in Rutland County, Vermont. Bulletin and Journal of the New York State Archaeological Association 76: 1-21.

Ritchie, William A. and Robert E. Funk

1971 Evidence for Early Archaic Occupations on Staten Island. Pennsylvania Archaeologist 41(3): 45-59.

1973 Aboriginal Settlement Patterns in the Northeast. New York State Museum and Science Service Memoir 20. Albany.

Rowe, John H.

1940 Excavations in the Waterside Shell Heap, Frenchman's Bay, Maine. Papers of the Excavators Club 1(3). Cambridge.

Sanger, David

1971a Deadman's Pool - A Tobique Complex Site in Northern New Brunswick. Man in the Northeast 2: 5-22.

1971b Passamaquoddy Bay Prehistory: A Summary. Maine Archaeological Society Bulletin 11(2): 14-19.

1973 Cow Point: An Archaic Cemetery in New Brunswick. Archaeological Survey of Canada Paper 12. National Museum of Maine, Ottawa.

1974 Recent Meetings on Maine-Maritimes Archaeology: A Synthesis. Man in the Northeast &: 128-129.

1975 Culture Change as an Adaptive Process in the Maine-Maritimes Region. Arctic Antrhopology 12(2): 60-75.

1977 Cultural Resource Management in the Dickey-Lincoln School Reservoir, Maine. A Report for the U. S. Army Corps of Engineers.

1979a Introduction. In: Discovering Maines's Archaeological Heritage. pp. 5-9. D. Sanger, Ed. Maine Historic Preservation Commission, Augusta.

1979b The Ceramic Period in Maine. In: Discovering Maine's Archaeological Heritage, pp. 83-98. D. Sanger, Ed. Maine Historic Preservation Commission, Augusta.

1979d Some Thoughts on the Scarcity of Archaeological Sites in Maine between 10,000 and 5,000 Years ago. In: Discovering Maine's Archaeological Heritage, pp. 23-34. D. Sanger, Ed. Maine Historic Preservation Commission, Augusta.

Sanger, David and Robert G. Mackay

1973 The Hirundo Archaeological Project - Preliminary Report, Man in the Northeast 6: 21-29.

Sanger, David, Ronald B. Davis, Robert G. MacKay and Harold W. Borns, Jr.

1977 The Hirundo Archaeological Project - An Interdisciplinary Approach to Central Maine Prehistory. In: Amerinds and their Paleoenvironments in Northeastern North America. Annals of the New York Academy of Sciences288: 457-471. W. S. Newman and B. Salwen, Eds.

Sanger, David, Barbara Johnson, James McCormick, and Marcella H. Sorg

1980 Archaeological Salvage and Test Excavations, Fernald Point, Acadia National Park, Maine. Report for U.S. National Park Service, Denver.

Schnitker, D.

1974 Post-Glacial Emergence of the Gulf of Maine. Geological Society of America Bulletin 85: 491-494.

Snow, Dean R.

1968 Wabanaki "Family Hunting Territories". American Anthropologist 70(6): 1143-1151.

1969 A Summary of Excavations at the Hathaway Site in Passadumkeag, Maine, 1912, 1947, and 1968. Department of Anthropology, University of Maine, Orono.

1969 A summary of Prehistoric Sites in the State of Maine, Department of Anthropology, University of Maine, Orono.

1970 A Middle Woodland Site on the Coast of Maine. Maine Archaeological Society Bulletin 10(4): 1-6.

1972 Rising Sea Level and Prehistoric Cultural Ecology in Northern New England. American Antiquity 37(2): 211-221.

1975 The Passadumkeag Sequence. Arctic Anthropology 12 (2): 46-59.

1977 The Archaic of the Lake George Region. In: Amerinds and their Paleoenvironments in Northeastern North America. Annals of the New York Academy of Sciences 288: 431-438. W. S. Newman and B. Salwen, Eds.

1980 The Archaeology of New England. Academic Press, New York.

Speck, Frank
1940 Penobscot Man. University of Pennsylvania Press, Philadelphia.

Spiess, Arthur E., Mary Lou Curran & John R. Grimes
1982 Arctic Garbage and New England Paleoindians: the Single Occupation Option. Paper delivered at the 479th Annual S.A.A. Meetings, Minneapolis, April, 1982.

Spiess, Arthur, Bruce J. Bourque, and R. Michael Gramly
1983 Early and Middle Archaic Site Distribution in Western Maine. North American Archaeologist 4(3): 225-244.

Spiess, Arthur E., James B. Petersen and Mark H. Hedden
1983 The Evergreens: 5,000 Years in Interior Northwest Maine. Maine Archaeological Society Bulletin 23(1): 9-26.

Starbuck, David and Charles Bolian, Eds.
1980 Early and Middle Archaic Cultures in the Northeast. Occasional Publications in Northeastern Anthropology 7. Man in the Northeast, George's Mills.

Stuiver, Minze and Harold W. Borns
1975 Late Quaternary Marine Invasion in Maine: Its' Chronology and Associated Crustal Movement. Geological Society of American Bulletin 86: 99-104.

Thomas, Peter A. and Brian S. Robinson
1980 The John's Bridge Site: Vt-Fr-69, Area I: Phase III Data Recovery. University of Vermont Department of Anthropology Report 28. Burlington.

Thomas, Peter A., Gina Campoli, Prudence Doherty, and James B. Petersen
1981 Phase I Archaeological Assessmet for the Missisquoi Hydroelectric Project. University of Vermont Department of Anthropology Report 34. Burlington.

Thoreau, Henry D.
1906 The Maine Woods. Thomas Y. Crowell & Co., New York.

Tuck, James A.
1976a Newfoundland and Labrador Prehistory. National Museum of Man, Ottawa.
1976b Ancient People of Port au Choix. Newfoundland and Social and Economic Studies 17. Institute of Social and Economic Research, Memorial University of Newfoundland, St. John's.
1978 Regional Cultural Development, 3000 to 300 B.C. In: Handbook of North American Indians, Vol. 15, Northeast, pp. 28-43. B. G. Trigger, Ed. Smithsonian Institution, Washington.

Turnbaugh, William A.
1975 Toward an Explanation of the Broadpoint Dispersal in Eastern North American Prehistory. Journal of Anthropological Research 31(1): 51-68.

Varney, Lloyd H.
1971 A Blue Hill Bay Coastal Midden Site. Maine Archaeological Society Bulletin 11(1): 14-32.

Whitehead, D. R.
1979 Late Glacial and Postglacial Vegetational History of the Berkshires, Western Massachusetts. Quaternary Research 12: 333-357.

Willoughby, Charles C.
1901 Prehistoric Workshops at Mt. Kineo. American Naturalist March, pp. 213-216.
1935 Antiquities of the New England Indians. Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge.

Wright, James V.
1972 The Shield Archaic. National Museums of Canada Publications in Archaeology 3. Ottawa.
1978 The Implications of Probable Early and Middle Archaic Projectile Points from Southern Ontario. Canadian Journal of Archaeology 2: 59-78.
1979 Quebec Prehistory. National Museum of Man, Ottawa.

Wyman, Jefferies
1868 An Account of Some Kjoekkenmoeddings, or Shell-Heaps, in Maine and Massachusetts. American Naturalist 1(11): 561-583.

Yesner, David R.
1980 Archaeology of Casco Bay: A Preliminary Report. Maine Archaeological Society Bulletin 20: 60-74.

Yesner, David R., Nathan D. Hamilton, and Richard A. Doyle
1983 Early Holocene Lacustrine Adaptation in Southwestern Maine. Paper presented at the 48th Annual Meeting of the Society for American Archaeology, Pittsburgh.

NOTICE OF SPRING MEETINGS

This Spring the M.A.S. will participate in two meetings. On April 14th there will be a joint meeting of the Maine, New Hampshire, and Vermont societies in Manchester, New Hampshire. The regular Spring Meeting of the M.A.S. will be held on May 13th at Bar Harbor. A separate flier will be mailed containing details of both meetings.

Meeting of Northern New England Archaeological Societies, April 14th, Saturday.

The Archaeological Societies of Maine, New Hampshire, and Vermont will be meeting jointly for a full day. The meeting place will be on the New Hampshire College campus, Manchester, New Hampshire. Each society will provide speakers for two one-half hour sessions. Eric Lahti and Dave Cook will speak on canoe routes and the distribution of Munsungun chert in Northern New England. Bruce Bourque has agreed to speak on the Ethnohistoric Period. A fee of $9.00 per person will be charged to cover the costs of the meeting and lunch, which will be provided.

M.A.S. Regular Spring Meeting, May 13th, Sunday.

The M.A.S. will meet at the Jackson Laboratory auditorium, Route 3, south of Bar harbor, and at the Abbe Museum of Stone Age Antiquities just south of Jackson Lab. The Abbe Museum is scheduled to be open as an "open house" from 10 a.m. until noon for members who wish to see the exhibits. The Jackson Lab auditorium will be open for display set-up and a brown bag lunch from about 11:30 a.m. The business meeting will begin at 1 p.m. Following the business meeting, Mark Hedden will speak on Maine petroglyphs and their place in the prehistory of the Northeast. Coffee, tea and dessert snacks will be available.

Publications Available Through the Maine Archaeological Society

1. "Early and Middle Archaic Site Distribution in Western Maine" by Arthur Spiess, Bruce Bourque and R. M. Gramly. Reprinted from North American Archaeologist, 4(3):225-244.
2. The Young Site, by Christopher Borstel. Occasional Publications in Maine Archaeology, Number 2. (A scientific report on a site near Orono, Late Archaic and Ceramic Period in Age.)
3. "Pentagouet, First Look at Acadian Settlement in Maine", by Alaric Faulkner. (An article on the first season at a 17th-century fort site in Castine, reproduced by permission.)
4. Kidder Point and Sears Island in Prehistory, by Arthur Spiess and Mark Hedden. Occasional Publications in Maine Archaeology, Number 3. (Report on excavation of several small shell heaps in Searsport, accomplished in 1982.)
5. Back issues of the Maine Archaeological Society Bulletin, available as follows:

1976 Vol. 16:1	1980 Vol. 20:1
Vol. 16:2	Vol. 20:2
1977 Vol. 17:1	1981 Vol. 21:1
1978 Vol. 18:2	Vol. 21:2
1979 Vol. 19:1	1982 Vol. 22:1
Vol. 19:2	Vol. 22:2
	1983 Vol. 23:1

ORDER BLANK

			No. Copies	Sub-Total
1.	Early and Middle Archaic Site Report	$1.00	_____	_____
2.	The Young Site OPMA2 To Members:	$3.00	_____	_____
	To Non-Members:	$7.00	_____	_____
3.	Pentagouet Article (Xerox)	$1.00	_____	_____
4.	Kidder Point and Sears Island OPMA3			
	To Members:	$3.00	_____	_____
	To Non-Members:	$7.00	_____	_____
5.	Back Issues of the Bulletin	$3.00 each	_____	_____
	Volume Numbers: _____ _____ _____ _____ _____			
		TOTAL	_____	_____

PLEASE MAKE CHECK PAYABLE TO:

Maine Archaeological Society

MAIL ORDER TO: Mr. David Cook, Secretary, M.A.S.
Rt. #2, Box 1300; Winthrop, Maine 04364