

# MAINE ARCHAEOLOGICAL SOCIETY

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# ANNUAL FALL MEETING

# MAINE ARCHAEOLOGICAL SOCIETY

Hostesses:	Frances SoperOrland, Me. Meg CookWinthrop, Me. Sue LahtiSkowhegan, Me.
REFRESHMENTS:	Meg CookWinthrop, Me. Jean MacKayStillwater, Me. Sue LahtiSkowhegan, Me.
DISPLAYS:	Judy HussonEast Holden, Me. FEATURING - Fossils, Minerals, Artifacts.

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## FALL MEETING

WHERE:

# Unity College, Unity, Maine

UNITY TRIBAL MUSEUM WILL BE OPEN

"Our fine collection of American Indian artifacts and arts is a display of the work of Maine Indians of the Malaceet, Micmac, Passamaquoddy and Penobscot Tribes. Also, included is the work of other Indian craftsmen living in Maine as well as that of tribesmen throughout the United States. Some examples of the displays in the Museum are porcupine quillwork, birch-bark boxes, ash and sweet grass baskets, Indian jewelry and paintings."

WHEN:

October 23, 1977

WHAT AND WHO: PROGRAM

Business: Election of Officers

<u>Nancy Eaton</u> will show slides and tell about an archaeological excavation in Jordan.

<u>Steve Brooke</u> will be gining us more information about the Penobscot Restoration.

<u>Bruce Borque</u> will bring us up to date and show artifacts from the Turner Farm Excavation.

BRING YOUR ARTIFACTS, MINERALS AND FOSSILS. We want to see them.

COME AND ENJOY THE UNITY TRIBAL MUSEUM.

# LETTER FROM THE PRESIDENT

As outgoing president, I would like to take this opportunity to express my appreciation for all the assistance, advice and cooperation that  $\perp$  have received for the past three years. It has been an interesting and rewarding experience.

Looking toward the future, I feel that the society has great potential to take an important leadership role in the developing field of archaeology in Maine and the Northeast. Evidence of this is readily seen in the increasing concern for a professional approach among our membership, the continued high quality of the "Bulletin", and our good fortune in attracting outstanding speakers to our meetings. Our society has increasingly become a clearinghouse for the latest archaeological information, a common ground where both professional and amateur can exchange ideas and interests.

Problems do exist however. We still have no permanent home for our meetings or where society collections can be displayed. Even if suitable quarters could be obtained, There reamin the expensive problems of maintenance, security and utilities. I do not feel that we should give up the idea though as this could serve as a focus for all society activities.

Another problem that should be easier to solve is society sponsored training sessions where both old and new members could receive much desired training and field experience. This should be actively pursued as the need for trained personnel is critical in many areas of Maine.

The Fall Meeting is shaping up nicely at this point and should be another interesting and informative session. One of our Trustees, Lloyd Varney, is curator at the Unity Museum and will have it open for us. Hope to see you there. If any of you would like to be more active in society business please contact me or any of the officers or trustees. We can always use volunteers for committees. Announcements of vacancies.will be made at the general meeting.

> Sincerely yours, Eric R. Lahti

# 50,000 OPPOSE DICKEY

#### Bangor Daily News

AUGUSTA -- The Natural Resources Council of Maine has collected 50,000 signatures on its petition opposing the construction of the Dickey-Lincoln hydro-electric dam.

The organization hopes to use the signatures to show members of Congress and Gov. James Longley that there is strong opposition to the project. The council has been circulating the petitions since June of last year.

16 August, 1977

#### MAINE ARCHAEOLOGICAL SOCIETY, INC.

Trustees' Meeting: Kominsky Auditorium, Husson College, Bangor 24 April, 1977 Present: Lahti, Tufts, Wing, Rice, Cook, Husson, Husson, Soper, MacKay & MacKay.

Treasurer's Report: on hand, 30 September 76 394.16 dues and back issues 510.25 904.41 Printing Fall Bull., Vol. 16, No. 2 261.61 Mailing 54.46 Stamps 26.00 Mailing Permit 60.00 402.07

On hand 24 April, 1977

502.34

All bills not in yet. Approximate cost of Vol. 17, No. 1, \$200.00

President Lahti reported: He attended a hearing on the Legislative Bill to authorize the addition of a prehistoric archaeologist to the Maine Historic Preservation Commission.

Trustees approved a motion to go on record as opposing the Dickey-Lincoln School Dam proposal since the project would endanger numerous prehistoric and historic sites. The motion was presented to the general meeting for member approval.

It was voted to extend an Honorary Life Membership to John Hill; the oldest charter member of the Society.

Lloyd Varney volunteered to check with the State Library re Bulletins housed there; he will also inquire about Exchange Bulletins. Secretary to forward such Exchanges as he has on hand.

Fall meeting to be on 23 October, 1977 -- place to be decided at the Fall Directors Meeting.

Secretary to extend vote of thanks to John Cliche for his presentation.

Regular Fall Meeting (45 members and guests present)

Approved resolution regarding Dickey-Lincoln School Dam Project.

Program: Mr. John Cliche, Lac Megantic, Quebec, introduced us to the post glacial history where Quebec adjoins the western border of Maine. He also discussed prehistoric Indianoccupation in the Quebec area.

Dr. Robson Bonnichsen spoke on his work in the Yukon; which included excavated bone artifacts dating back to more than 25,000 years before present.

Robert G. MacKay, Secretary

Pakert J. Mar Kay --

RGM/sdb

## ANCIENT BONES HELPING TO SOLVE EARLY MYSTERY

#### Bangor Daily News

Pieces of bone from long-extinct mammals are helping scientists understand the mystery of how man first came to the New World more than 20,000 years ago, a University of Maine archaeologist told the semi-annual meeting Sunday of the Maine Archaeological Society at Husson College.

The bones, which show evidence of being worked into tools by early nomadic tribesmen, help to establish a date for the migration, Prof. Rob Bonnichsen said.

Like a sleuth out of an English novel recalling one of his toughest cases, Bonnichsen shared with the Archaeological Society the groundwork experimentation that led to the bone artifact for dating when man first came to the New World across the Bering Sea land bridge.

There are, Bonnichsen said, many ways that bones from mastodons and other extinct large herbivores can be broken other than by man.

So he studied what happens to a bone when a large carnivore chews on it, and what happens when a bone is swept away by a river.

Most importantly, though, he experimented with fresh bones and mineralized bones to see if there was any difference in the way they broke.

"When a fresh bone is smashed by a hammer rock," Bonnichsen said, the break is dramatically different from the break in an old, mineralized bone.

Then too, certain types of bone, such as ivory, cannot be chipped once they become old. So if ivory is found with chips taken out of it, the chipping must have been done while the ivory was still "green."

And if the ivory comes from an animal that has been extinct for more than 20,000 years, it is reasonable to assume that the artifact was made while the species still existed.

The smashed and chipped bones were used by the early hunters in much the same way that stone artifacts were used -- to scrape hide, cut meat, and so forth, Bonnichsen explained.

The University of Maine scientist has been participating in a massive, three-year project to determine the way early man migrated and lived in the New World.

The project is being funded by the National Geographic Society and the National Park Service.

Bonnichsen explained that when man crossed the land bridge, much of the world was uninhabitable because of the Ice Age. But such was not the case in what is now Alaska.

There were more animals, more plants and more insects in Alaska then than now, and so the migrant hunters were able to survive.

"You knock down an elephant at the beginning of the winter, and you don't have to worry much about food for the rest of the year," Bonnichsen said, "and you'd probably be able to make a house out of the hide.

Most of the bone tools found to date in the Arctic were used to process hides, he said.

Earlier in the semi-annual meeting, the society voted to go on record as opposed to the

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Dickey-Lincoln hydro-electric project.

Society President Eric R. Lahti said about 40 archaeological sites already have been discovered in the area that would be inundated by the proposed dam, and that once the sites were under water, they would be forever lost to investigators.



25 April, 1977

# The scientist and the evidence

Eric Lahti, president of the Maine Archaeological Society, presides over semi-annual meeting of group Sunday at Husson College. The society voted to oppose con-

struction of Dickey-Lincoln dam because of about 40 archaeological sites so far discovered in the area that would be flooded. (NEWS Photo by Mickey Blanchette)

# NOTES FROM THE ARCHAEOLOGY LAB (UMO)

## David Sanger

The 1977 summer was one of the busiest on record at UMO, involving a large number of workers spread over the state in excavation and in survey activities.

In early June a crew of 6 began work at the Young site, opposite the Hirundo site on Pushaw Stream. The work was jointly sponsored by a grant from the Maine Historic Preservation Commission and UMO. Graduate student Chris Borstel directed the project that struggled through the muddy conditions, brought about by the rains of June. The Young site has been protected from high waters of Pushaw Stream so that very little erosion has occurred over the past 4000 years. This has meant that the upper deposits are intact. Especially nicely preserved is a component that follows the Laurentian-related component in time. Ar unexpected find was preservation of bones that will assist in determining the diet of the time. A number of firehearth features were found in the 7 week dig.

In August, Bob MacKay led a group of 9 workers for another 4 weeks of excavation at the Hirundo site. The object of the 1977 season was the excavation of an area rich in bones discovered in the 1975 season. The bones appear to be coming from deposits of the last 2000 years, but at the time of writing the excavation is only half over. Beneath the later artifacts Bob and crew are finding ground stone objects of the Laurentian-related component, now called Assemblage 2 at Hirundo.

In June Bob and Jean MacKay conducted a 1 month survey in the western part of the state with the goal of locating collectors and collections and setting the basic ground work for more detailed surveys in future years. Interest in prehistory seems less in that part of the state than elsewhere, perhaps in part due to the lesser amount of systematic work done there in the past. The work was sponsored by the Maine Historic Preservation Commission and UMO.

In 1974, UMO had a small contract with the National Park Service to check into the damage being done along the shoreline of Acadia National Park by rising sea levels. The survey crew identified a number of eroding sites and last year UMO had a contract to test these and prepare a report evaluating the sites and the need for further work. The report emphasized the critical nature of erosion at Fernald Point and in Duck Harbor (Isle au Haut) and recommended salvage operations of at least parts of the sites. This past summer, urder another contract with the National Park Service, Barbara Johnson led a crew of 7 on a 6 week excavation of the front (seaward side) of the Fernald Point site. Now that the front has been well tested the NPS will place boulders along the front of the site in an effort to restrain the erosion, thus making it possible for future archaeologists to excavate at this important location. The excavations proved very productive, recovering artifacts spanning about 2500 to 3000 years. A bonus was the discovery of a nearly intact semi-subterranean house structure, similar to those found in Passamaquoddy Bay. It is the first well-documented occurrence

on the Maine coast. In size the house is a little larger than those described from Passamaquoddy Bay, but shows basically the same overall form and content. It is to be hoped that funding will be available in future to allow for the recovery of information from other sites being destroyed in the Park.

In the spring students Anita Crotts and Margaret Shaw conducted a survey of the Penobscot from Bangor to Frankfort for the State Planning Office. A few new sites were found.

The above projects represent a combination of research interests plus providing needed services to Federal and State agencies. Fortunately, all the projects will lead to a better understanding of Maine prehistory. An unhappy personal note is the amount of time required of Dave Sanger to organize and provide the needed administrative details to keep this many projects going.

In July, Rob Bonnichsen took a crew of 3 up to Munsungan Lake to work with sites reported by Milt and Brad Hall. Lying in the main chert deposits in the state, Munsungan Lake is surrounded by sites where Indians mined the chert and reduced it to blanks for later use. So far no large habitation sites have been located - most are of the workshop variety. The potential for a long range program is excellent and Rob is justly delighted with the results. In August Rob went to Montana to see about starting up a similar program there in the chert sources of the Rockies. The Munsungan Lake work was also sponsored by the Maine Historic Preservation Commission. June was writing time and Rob and Dave Sanger finished up a manuscript describing methods for faunal analysis.

The close working relationship between the Maine Historic Preservation Commission and its Director Earle Shettleworth and UMO is paying large dividends for archaeology in Maine. UMO has the manpower and the MHPC has access to Federal monies for survey. Earle is committing generous amounts of his budjet to archaeology thus beginning to get a balance between the preservation of historic structures and the prehistoric period. We still have a long way to go to catch up. A major disappointment this year was the decision on the part of the legislature to deny the MHPC a position of archaeologist on staff. A number of people worked hard to convince the lawmakers that this position was important but it did not survive the final appropriation deliberations. Until something can be worked out, the archaeologist position required by Federal regulation will be filled by Sanger, Bourque, and Bonnichsen acting as an advisory committee to Earle Shettleworth. Rob chairs the group which has worked hard this year to keep up with the various environmental impact statements and applications for land modification proposed in the state.

On the academic side, the graduate program for archaeology at UMO is entering its third year officially. This year we hope to graduate three master's students with theses related to Maine prehistory. In keeping with our "limited numbers" philosophy we have admitted two new students for the fall bringing our total to 5. The degree is a Master of Science in Quaternary Studies, the only degree of its kind in the country to date. Students are expected to have good backgrounds in

the sciences, especially geology and biology, before entering. While here we try to expose them to glacial geology, paleoecology, as well as local archaeology. We also have a number of excellent undergraduate students majoring in the anthropology program at UMO. Without these undergraduates we could not put 20 plus student workers into the field each summer.

A professional post in archaeology was lost this year with the resignation of Steve Perlman from the University of Maine at Portland-Gorham. Steve will take up a new job in South Carolina and we wish him well. Hopefully, UMPG will see fit to replace Steve with an archaeologist interested in Maine prehistory. Finally the returement of Bob MacKay from full time staff at UMO will not result in the loss of his services. Recently approved for Bob is the position of Research Associate in the Maine Archaeological Preservation Program at UMO.

A copy of the environmental impact statement on archaeology in the proposed Dickey Lincoln Dam area is now available through the Corps of Engineers office, Trapelo Road, Waltham, MA. Its title is "Cultural Resource Management in the Dickey-Lincoln School Reservoir, Maine". For reasons of site security specific details have been omitted.

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# PROJECT HERITAGE RESTORED 2293

## Maine State Museum

## ANNOUNCEMENT

The recovery of the Revolutionay War privateer, DEFENCE, has sparked great interest and enthusiasm.

This Newsletter will contain general information about the recovery and conservation of artifacts from the DEFENCE and news of talks and other related events.

#### HISTORY

In the summer of 1779 an American task force of 40 ships and more than 2,000 men was sent to attack a British garrison at Castine, on the coast of Maine. The British Navy intervened, bringing about the worst naval defeat in American history, and creating an underwater "time capsule" of major historical importance.

One of the 40 ships was the sixteen gun privateer DEFENCE. The remains of this ship and her cargo are, for the moment, the main focus of Project: Heritage Restored. This project is a coordinated series of programs aimed at investigating, recovering and preserving historical artifacts of the American Revolution from the wreckage of American privateers, state and continental naval vessels, and transport vessels sunk in Maine's Penobscot River.

The project is being carried on as a joint effort of the American

Institute of Nautical Archaeology (A.I.N.A.), the Maine Maritime Academy, and the Maine State Museum. A.I.N.A. provides operational supervision and professional expertise relating to the specialized technology of underwater archaeological search and recovery; the Maine Maritime Academy provides field support through the use of its faculty, equipment and facilities; and the Maine State Museum provides for the registration, preservation and eventual use of recovered materials.

# PRESERVING THE ARTIFACTS

One question people ask when they visit the laboratory which was set up for the conservation of the DEFENCE and its contents, is "Why don't you take the ship and the things on it up and just let them dry? I think I heard of someone doing that somewhere..." What seems like a simple solution is the worst possible treatment for the objects. In the past this was tried, but the metals, wood, bones, etc. gradually fell apart due to the destruction of cellular or alloy structure. Because of these failures, a new field of study and treatment has developed to preserve water-deteriorated artifacts.

All objects under water for a long time become water deteriorated. Artifacts from the DEFENCE have undergone considerable degradation from erosion, oxidation, and various organisms living in that environment.

Metals which seem so durable to most of us, can become completely oxidized in sea water. Metals also absorb salts. Unless removed, these salts produce internal corrosion until the metal eventually disintegrates.

Waterlogged wood becomes highly decomposed through the action of various organisms. When recovered, although the wood may look sound, the cellular structure can be deteriorated to such an extent that the wood is supported primarily by the absorbed water. Failure to replace the water with another supporting substance during drying will allow the cells structure to collapse. This shows up as shrinking, cracking, and disintegration.

As can be seen, the solution to the treatment of water deteriorated objects is far from simple. It takes continued testing and experimentation. Treatments of materials from the DEFENCE and testing are now ongoing in the conservation laboratory. Tours of the laboratory will begin soon. We hope all will visit the Maine State Museum Conservation Laboratory during the Open Houses scheduled during May.

#### A DAY ON THE SITE

6:15 a.m., there is a knock at the door and the day begins for the students and staff of the 1977 DEFENCE project. Although the backgrounds are varied, the interest this summer is singular: to methodically excavate as much as possible of the 1779 Revolutionary brig, scuttled during the Penobscot Expedition.

After breakfast we begin the daily ritual of loading our expedition vessel GRAND CANYON. This involves packing twenty-five scuba tanks, diving gear of students and staff, drinking water, gasoline, food and conservation supplies. After a fifty-minute ride across Penobscot Bay from Castine we arrive in Stockton Harbor, unload and prepare the barge for the day's work.

The DEFENCE rests in water twenty-five feet deep. We use precise

archaeological methods in the underwater environment. A plastic frame grid, placed over the part of the vessel to be excavated, enables us to pinpoint finds. Each artifact is drawn on a plastic sheet before being brought to the surface.

Several divers "suit up". This means putting on a wet suit, fins, SCUBA tanks, etc. The assignments are varied. They include: triangulation of the structural members of the ship, sketching, measuring and the recovery of artifacts.

A typical day's assignment might be airlift in the A5 grid square. Two divers descend. The visibility, as usual, is about three feet. Many times we depend on our sense of touch. The average water temperature is  $45^{\circ}$  F. At times it has been as low as  $40^{\circ}$ .

An airlift is the tool we use to remove accumulated layers of dense mud which covers the wreck. The lift runs from power generated by a five horsepower compressor. To begin the operations, first a 35 foot long, 4 inch wide plastic pipe is lowered to the sea floor. Divers then insert the end of a garden hose, carrying air from the compressor, into the opening at the bottom. Air bubbles pumped through the hose create a suction in the pipe. Handfuls of mud and silt are fed into the lift and sent up to a floating sieve box made of wood, styrofoam and  $\frac{1}{4}$ " wire mesh. One person manning the sieve mushes through the slimy ooze, finding artifacts visible in the murky water. Small personal objects such as buttons and shoe leather add a humanistic dimension to the daily lives of the men who served on the DEFENSE. Equally important, airlifting is uncovering the structure of the vessel's hull.

While searching through the mud being sucked up the airlift. a form is felt. Visibility is now nil, due to disturbed mud and silt. Probing cautiously we uncover the artifact from the gooey mud. It is handled with much care. Ascending above the mud clouds, visibility improves. All the pieces of a collapsed bucket have been found. After the initial excitement abates, we draw the staves as they lay and note their grid location; south east corner of A5. Measurements are taken, giving the artifact's position below the grid. This is called depth below datum. On top the pieces are handed to the conservators who clean the find with water and soft brushes, register the find, giving it a museum number, then quickly place it in one of their holding tanks. The preservation process has begun.

Following lunch, another aspect of excavation work is begun. This time we lift ballast. Ballast stones are placed in a plastic bucket. Two jerks on the line, and a person on the barge pulls the bucket up to the surface. The bucket is emptied on wet burlap and the contents are thoroughly sifted. This particular afternoon, we lift only stones, mussel shells and worms. Sometimes small artifacts are found mixed in with the ballast.

After each day's work we are closer to revealing the hull of the entire vessel. Questions of design and shipbuilding practiced in 1779 are slowly answered, giving us insight into an important part of American history. The drawing below depicts the method of working the wreck and gives an idea of the grid system written about in the article.



#### URNS ENTICE DIVERS TO CASTINE'S WATERS

Bangor Daily News

It seems that the cold, murky water around Castine is littered with treasures of old.

For five years divers representing the American Archaeology Institute of America and the Maine State Museum have been clearing away mud from the underwater remains of the Defence, a Revolutionary War brig, which sits in Stockton Cove.

And now, a Boston group is planning to launch an underwater search in Castine Bay for a much older wreck, one that might explain how two ceramic jars found in the bay could bear striking resemblances to jars found in Portugal that have been classified as of the Roman period.

James Whittall, director of the Boston-based Early Sites Research Society, called this summer's search for an ancient shipwreck a "gamble." But the group is intrigued about two jars found by a Castine man in 1971, he said.

"We're looking for any evidence of a shipwreck," that might perhaps prove the existence of European contact in the New World prior to its discovery by Christopher Columbus.

The Early Sites Research Society will be joined by the Scientific Exploration and Archaeological Society of Washington, D.C., Whittall said. Their two-week underwater survey planned for late August will be funded from the treasuries of the two groups, he said. And, of course, they are looking for other financial assistance.

The plan is to have a research party of 25 to 30 people, 20 of whom would be divers.

"We can cover quite a bit with these (diving) teams that we've got," Whittall said.

Norwood Bakeman, who found the two jars that have prompted the survey, is working with the groups, Whittall said, and has the spot where he found the jars pretty well pinpointed.

If that site should pan out, the group has another place that they will survey, Whittall said, but he did not elaborate as to where in the area it was. He did say it was not around Monhegan Island, where a Harvard professor has said that a rock inscription reads, "cargo platforms for ships from Phoenicia."

Earlier in the summer, before the Boston group plunges into the chilly water around Castine, divers will again be descending to the Defence. The brig was scuttled in Stockton Cove in 1779. It was part of the ill-fated Penobscot Expedition of American vessels which attempted to assault a British fort at Castine.

About 14 students and eight to 10 staff will start this year's excavation work on the mid-section of the vessel about June 20, said David Wyman, ocean engineer at Maine Maritime Academy and co-eirector of Project Heritage Restored, the name of the archeaological research on the Defence.

Last summer the group worked on the bow, removing mud and debris down to the keel, Wyman said. Over the winter, three conservationists have been working on the artifacts brought up from the Defence, treating them so that they won't disintergrate now that they have been removed from the protective environment of the cold mud of the sea bottom.

Funds are short this year for the excavation work on the Defence, Wyman said. He said the operation would be "bare bones."

Also in some doubt is continued funding for the conservationists, whose financial support from the National Endowment of the Arts ends in September, said Ronald Kley.

This shortage might become a factor in how many artifacts are brought up from the Defence this summer, because the project directors and the Maine State Museum staff are committed to taking proper care of objects; otherwise they leave them in the deep.

27 April, 1977

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# FIRST INHABITANTS

## Maine Sunday Telegram

The first know inhabitants of Maine were the Paleo Indians. They came in as the Ice Age was receding, says State Museum archaeologist Bruce Bourque, and when most of Maine was covered by an arctic type tundra.

Evidence of a strong Paleo presence has been discovered from northern Mexico, throughout the United States and in much of Canada.



Paleo spear

are hollowed

tip. All the Paleo tips

so that the

into them.

shaft fits

The Paleo, says Bourque, were a highly nomadic people whose diet consisted largely of meat and whose game included the now extinct giant bison, the giant beaver, giant sloth, mommoth and mastidon. They also hunted reindeer and other smaller animals.

They left behind some simple stone tools and many large spear tips. The uniformity of the spear tips is "almost unnerving", says Bourque, with no discernible difference between a tip found in Maine and another found in Mexico, except sometimes in the type of stone used.

The Paleo lasted in North America from perhaps 7,000 to 11,000 years ago and probably existed in Maine 8,000 to 10,000 years ago.

28 November , 1976

Anita Crotts\*

#### Introduction

Evidence of a significant population increase in Maine and in the Maritimes, dating from roughly 5,000 to 3,500 years ago, is revealed in the numerous cemetery and habitation sites of this period that have been discovered. Increased environmental exploitation by these prehistoric inhabitants is suggested by the variety and abundance of faunal remains recovered from coastal midden sites. Generally, archaeological and paleological data support a period of heightened environmental productivity, with resulting heavy utilization of both terrestrial and marine resources by man. Similarities in technologies and religious activities inferred from these sites, as well as from those in Labrador and Newfoundland, have led to efforts to amalgamate these cultures under all-encompassing terms. For example, the "Laurentian Tradition," a name used to define the culture of this area, has little value in describing the lifeways of those who lived north of the St. Lawrence River. On the other hand, the term "Maritime Archaic Tradition" is better suited to describing the cultural tradition of these northern areas--Labrador and Newfoundland--as it has little applicability to cultures in Maine and in the Maritime Provinces of this Finally, until recently, the Moorehead burial subsystem, the distime. tinctive mortuary complex associated with this period, had been erroneously applied to entire cultural traditions in areas both north and south of the St. Lawrence. Not surprisingly, much debate has been devoted to settling the resulting confusion. Accordingly, current origin hypotheses and descriptions of representative sites of these populations will be discussed in this paper.

#### Origins

Two major conflicting hypotheses, proposed by David Sanger and by James Tuck, attempt to explain the processes leading to increased population density during this time. Sanger (1975) postulates a population replacement model for the appearance of these people in the Maine-Maritimes region sometime around 5,000 years ago. Similarities in the tool kit, mortuary complex, and ecology of these and of the Laurentian people in the Lake Forest belt of the Great Lakes region suggests linkage between these two areas. According to William Ritchie (1968), the original Laurentian population was adapted to a forest of pine, hemlock, maple, oak, and birch, subsisting as hunters, gatherers and fishers. At the KI site in Vermont, a Laurentian site of Ritchie's Vergennes phase, artifacts recovered included gouges, adzes, whetstones, stone rods, plummets, atlatl weights, and diagnostic Otter Creek points. A red ochre burial overlain by a low earth mound was also discovered. The nearby Otter Creek

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site, dated at about 5,100 years old, and the Alumette Island site in Quebec, dated at about 5,200 B.P., contain similar artifacts (Ritchie 1968). Since these people were already adapted to a forest-riverine economy, they may have migrated into western Maine, which shared a corresponding environment and would have afforded similar hunting, fishing, and gathering opportunities. Coincidentally, at the Hirundo site near Alton, the earliest-dated interior Maine site at 4,300 B.P., artifacts resembling those of the Vermont and Quebec sites have been recovered (Sanger 1975). These include Otter Creek and slate points, plummets, whetstones and adzes. The Hirundo site was probably a fishing station, supporting a populace well-adapted to forest and riverine resources. Later, as the Laurentian eastward movement continued, settlements along the coast and coastal interior were established for the exploitation of marine resources. West-to-east migration is implied by the association of forest-oriented artifacts with sites dated at prior to 4,000 B.P., and with marine-oriented implements becoming more common somewhat later in the Maine-Maritimes region. It is in the coastal-interior sites that the Moorehead burial tradition is most pronounced.

An alternate hypothesis supporting an in situ development is offered by James Tuck. He suggests that as long as 9,000 years ago, descendants of the Paleo-Indians settled along the northeastern Atlantic coast. Although they concentrated on taking fish, sea mammals and birds, interior resources, especially caribou, moose and deer, were seasonally exploited. This pattern of adaptation diffused through time, as reflected in sites from Labrador to Maine. For example, at the 7,530year old L'Anse Amour burial mound in Labrador, harpoons and a walrus tusk, indicating utilization of marine resources, were interred with the body of a child. Red ochre was also spread throughout the grave. Tuck postulates that the familiar Moorehead cemetery complex, consisting of special grave goods and red ochre, is only part of an even greater Maritime Archaic cultural tradition uniting these marine-oriented people, especially 4,500 to 3,000 years ago (Tuck, 1975). A shared hunting technology is revealed by the occurrence of harpoons in archaeological sites throughout this region. Gouges, celts, ground slate points, stone rods, chipped implements and animal effigies are additional shared items. Summing up, in this origins model, a homogeneous cultural tradition, modified only by local environmental conditions, arose from settlements possibly as old as the Paleo-Indians and eventually spread and flourished as far south as Maine and as far north as Labrador until nearly 3,000 years ago.

In these models of origin and development, there remain several inconsistencies that deserve consideration. First of all, outgrowth from a Paleo-Indian tradition seems unlikely since forests, as well as the Gulf of Maine, were probably not rich enough to support large human populations. Likewise, in the Northeast, there is little evidence for extensive occupation after 10,000 B.P. until 5,000 B.P. However, because of steady sea level rise since about 10,000 years ago, any coastal Early and Middle Archaic sites may have since been eroded or drowned. Nevertheless, one pattern of adaptation is insufficient to explain the variety of adaptive measures required in this area of many different local environments. It would be taxing the models too much to credit early marine-oriented populations with the genesis of forest-, lakeand river-based traditions, just as it would be to attribute coastal traditions to woodland origins in this wide-ranging area, and in the given time span. Although there may be some similarities between Newfoundland and Labrador's and Maine's coastal artifacts--in particular, harpoons-interrelationship based on the occurrence of similar artifacts is risky, especially if the same resource medium is involved. Further linkage through the use of red ochre is equally tenuous, since red ochre in a burial context is a widely-distributed phenomenon, occurring in many cultures. Consequently, there are too many technological, adaptive, and mortuary differences in this vast area that hinders their recognition as products of one homogeneous, far-flung culture.

#### Selected Site Descriptions

The location of archaeological sites from 5,000 to 3,500 B.P. suggests that settlements in coastal Maine and in the Maritimes were established in those areas with access to both marine, or riverine, and terrestrial resources. A total dependence on marine animals seems unlikely, since terrestrial faunal remains have been recovered from coastal shell midden deposits. For example, the Turner Farm site, situated on North Haven Island in Penobscot Bay, is in close proximity to both open marine and marsh biomes (Bourque 1975 and 1976). Faunal remains preserved in the midden represent the following species: beaver, deer, moose, seal, walrus, duck, Canada goose, loon, eagle, mink, otter, bear, cod, sturgeon, sculpin, swordfish and, of course, shellfish. Many of these remains are in the form of tools, such as antler knife handles, beaver incisor knives, fishhooks, harpoon foreshafts, swordfish sword bayonets, and needles. Stone tools found in association with these artifacts include chipped projectile points, plummets, adzes, gouges, hammerstones, whetstones and flaked knives. Woodworking, hunting and fishing activities are indicated by this variety of tools. Although there is no direct evidence of vegetable exploitation, it is assumed that gathering was also important in this plentiful region. Unfortunately, no hearths, house floors, or post-mold patterns have been excavated at this site to help explain settlement patterns. Likewise, no associated cemeteries have been discovered.

Interior settlements were established on major waterways, on smaller streams or on confluences, probably for the taking of anadramous fish and forest game. As previously mentioned, the Hirundo site, situated on Pushaw Stream near a set of rapids that andramous fish once surmounted, is presumed to have been a fishing station (Sanger and others 1977). The artifact assemblage includes woodworking, hunting and fishing equipment. Regrettably, the site's predominantly acidic soil limits preservation of faunal and floral remains so that subsistence inferences are not as well-

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founded as those made from coastal evidence. Hopefully, new findings awaiting analysis will be enlightening.

The elaborate burial complex that seemingly cross-tied inland, coastal, and some Maritime Archaic sites covered an area from the Kennebec River drainage, east to New Brunswick, Nova Scotia and Newfoundland, and was established by 4,500 B.P. (Sanger 1973a). Burial sites are usually clearly-defined cemeteries, located in gravelly or sandy terrain near water, but rarely in conjunction with habitation sites. Red ochre and a specific set of graves goods are nearly always included in these burials. Cremations are rare, as is evidence of ritual destruction of artifacts. Occasionally, boulders or slabs are found on or near the graves which are, for the most part, individual inhumations. Because of the region's soil acidity, actual skeletal remains are rarely found. To illustrate, at the Cow Point site in New Brunswick, only oval-shaped pits with grave goods remain of the original burials (Sanger 1973b). Artifacts include elongate, decorated slate points, chipped points, plummets, gouges, celts, and abrasives. No clear associational clusterings of either assumed maleor female-utilized tools with particular graves were determined. These implements are virtually identical to those found in inland and coastal habitation sites, with the exception of the fragile, apparently non-utilitarian slate bayonets. Red ochre lines the bottom of each pit, and was lavishly spread over the grave, goods and, presumably, the corpse. Judging by the small size of each pit, and because there is no skeletal material to suggest otherwise, burials are inferred to have been either flexed or bundle inhumations.

The Port au Choix cemetery in Newfoundland, dated at approximately 4,000 to 3,700 B.P., is thought to have closer affiliations with the Maritime Archaic than with the Laurentian tradition (Tuck 1976). Nonetheless, mortuary customs resembling those of the southern sites seem to have been practiced. Fifty-three burials preserved by limestone coverings and crushed shell were exhumed. Red ochre covered the grave furnishings as well as the skeletal remains, which were predominantly flexed. An analysis of artifact distribution throughout the graves indicates that the sex and age of the individual was unimportant in selecting a suite of burial goods. Typical artifacts include ground bone points, slate bayonets, harpoons and foreshafts, gouges, beaver incisor tools, awls and needles. Nonutilitarian furnishings, such as whistles, pendants, bird beaks, and stone animal effigies were also abundant. Judging by the form and material of the items recovered, these people were more strongly oriented to the sea--hunting predominantly seals, whales, salt-water fish and sea birds--than were those cultures in Maine and the Maritimes.

# Disappearance of the Laurentian Tradition

Sometime after 4,000 and before 3,500 B.P., changes within the subsistence, settlement, technological, and mortuary subsystems of the Maine and Maritimes traditions took place. Cultural and/or environmental factors may be responsible for these disturbances but, at any rate, the Laurentian Tradition, with its accompanying Moorehead mortuary subsystem, disappeared from this area around 3,500 years ago, leaving little or no effects on the populations that followed.

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# MAINE COAST POTTERY 2295

# William J. Howes

Pottery from this area runs true to type; apparently was influenced less by outside contacts than that of any group located in southern New England, where creative ideas pressed in from Long Island. Construction of early Maine ware was evidently accomplished by some kind of plastering; there seems to be no evidence that the coiling process was used. Tempering was mostly of crushed stone, while some sherds indicate use of crushed shell. Maine clay does not appear to be as pure as that found in most clay deposits in southern New England, but seems to have extraneous matter mixed in. Pottery ware was apt to be thick and its large amount of impurities made it quite porous and brittle.

Early Algonkian potsherds have been found in the "Whaleback Shellheap" in Damariscotta, Maine. Some of these sherds are from a considerable depth in the heap. They appear to be part of an elongated type of pot with a slightly constricted neck, which tapered to a pointed base. Decoration on some sherds is rocker-stamp, or an allover zig-zag pattern accomplished by stamping the design with a rocking and progressive rotating movement of a dentate tool.

On later ware decorations became more diversified. Many different designs were introduced, including horizontal bands which encircled the upper portion of the pot. These were indented in various ways. On one sherd was used a most unusual type of manipulation in order to accomplish the desired effect. A band of linears around the neck seems to have been made with a blade having teeth of irregular lengths. The manipulation of the implement was unusual, for apparently it had to be



EARLY MAINE POTTERY, showing probable pot contours. Whaleback Shellheap, Damariscotta, Maine.

# MAINE COAST POTTERY



INTERMEDIATE MAINE WARE (probably Stage 2), from various Maine shellheaps.

LATE MAINE WARE, of Iroquoian Influence (Stage 4), from various Maine Shellheaps.

applied to the surface of the pot at an angle, then turned up at a right angle and pulled out. Just the reverse was employed to make the design on another sherd. Here a three toothed implement was pressed into the clay, then dragged out.

Another type of decoration characteristic of Maine pottery, perhaps more than any other, is that of a series of deep punctate holes punched into the outer surface of the ware at regular intervals. These were made by using a blunt ended implement. Punctate holes usually overlaid other kinds of decoration. Many times punctate bands were punched into the narrow collar at the rim, or spaced lower down around the neck. On one sherd, which had its whole exterior surface ribbed with horizontal half-round linears, one rib just below the neck was punctated with deep holes, while all the others were cross-hatched vertically throughout their whole length.

A later type of dentate work appears on a sherd where both coarse and fine toothed tools were used. The arrangement here is a triangular pattern, well balanced and executed with the most scrupulous care. Broad closely set rows of fine toothed dentate lines at the rim frame the triangle, which is flanked by zig-zag lines. This presents a most original conception of pottery art (probably Stage 3).

The stylus, a one pointed tool was used to some extent for pottery decoration, probably at a later date. It is found being frequently used in connection with deep undercut necks, wide collars, and castellated rims characteristic of Stage 4 ware of Mohawk influence, to be found throughout southern New England as well.

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## SOME FACTS ABOUT KINEO FELSITE

### Maine Archaeological Society

Many books written about the Maine Indian, state that Indians from all parts of the state visited the vicinity of Kineo to secure flint from which to make arrows, spears, and other implements. Shall we consider these statements as truths or half-truths? Let us analyze the facts as they are known today. We admit Kineo flint was much used and that material did come from the area as evidenced by the chips, rejects, etc. found at the base of Mount Kineo and Moosehead areas. However, there is another large out-crop of this material on Brassua Lake but, since it is nearby and similar in structure, we consider it part of the area. Artifacts of Kineo Flint are found all over Maine and in other New England states. Was it necessary to make a trip of several hundred miles in some cases to secure suitable material? What other sources of material were available?

Most projectile points from Maine are not argelite, quartz, slate, chalcedony, trap, jasper, flint, obsidian or material found in other parts of the country, but felsites. These are igneous in nature and are rich in ferro-magnesian minerals. Suffice it to say they are volcanic in nature, the same as the granite that makes up so much of

our state. It was not necessary to go to Kineo to get the material as it is found in stream and river beds and gravel pits over much of Maine. It is found in the form of pebbles and large boulders from Kineo southeast to the coast, in a band approximately from the Kennebec Valley to well beyond the Penobscot. Every site area visited in central Maine shows indications of this material, local in nature but originating in the Kineo belt and brought south by glacial action.

Felsite has a dense texture. When fresh broken it varies from a very dark bluish gray to greenish or black. On long exposure it bleaches to a grayish white. It breaks with a conchoidal fracture and when hit with steel gives off sparks. For this reason, it could have been used for making fire or possibly for gun flints. In conclusion, it is our opinion that so called Kineo Flint was not transported long distances by ancient man but that much of it was obtained from the vicinity of their local habitation areas. We doubt that the many large pieces of core stone, reject, etc. found in camp site areas was anything but local in nature.

Gerald C. Dunn

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# FLOTATION

### Condensed by Steve Feher

This simple field technique, as described by Stuart Struever in <u>American Antiquity</u>, July 1968, has revolutionized knowledge of prehistoric subsistence in North America. Heretofore, little evidence of the kinds or quantities of plant foods collected, or their preparation or storage has been uncovered, especially in New England. This new technique makes possible the recovery of fragile organic remains scattered throughout habitation sites, particularly around features such as pits and hearths.

The original technique was modified by the Cohannet Chapter, Massachusetts Archaeological Society, for use on the stony soils of New England. It involves two separate operations:

1. Sample collection and initial reduction of the sample mass in the field.

2. Completion of reduction of the sample mass indoors.

In the first operation, a small pit or other feature is isolated and the uppermost component is sampled by placing a small amount of the material in a plastic bag which is labeled according to site, feature, square, etc. This is a control to be used for chemical testing, soil analysis or pollen recovery. Then a sample mass from the same component is water-screened by placing it in a screen-bottomed box, immersing the box gently into water and carefully agitating the cortents. The screen bottom of the box should be the finest grade of hardware cloth which will allow the passage of the smallest inorganic debris. This screening removes the bulk of sand and earth leaving a concentration of the organic remains. The washed sample mass is emptied into a clean container and labeled as was the sample. The screen is cleaned and each successive component of the feature is treated the same way. When excavating sites not adjacent to natural sources of water, a water supply will have to be improvised. After screening, the sample masses must be dried and stored for the second operation. Drying can be by air in a protected place or ir ar oven at 250° Fahrenheit or <u>less</u>. Heavy kraft paper bags were found to be ideal for storage.

The second operation is conducted indoors. The equipment consists of two 18 gallon washtubs, one of which has had its bottom cut out and replaced by a piece of 16 mesh bronze screen cloth carefully soldered to the upper edge of the tub's basal flarge. Two lengths of metal rod are secured to the tub to support the screen and prevent sagging. A dried sample mass is placed in the screen-bottomed tub which is then carefully lowered with a swirling motion into the intact tub which is three-quarters full of water. The light organic matter in the sample mass floats to the top and is skimmed from the surface with a six inch kitchen strainer and placed in newspaper-lined trays to absorb excess water. It consists of vegetable matter, seeds, etc. Stones, bone fragments, and nutshells sink to the screen and are thus separated from the light material. The Cohannet Chapter separated the bone and nutshells from the stones by tweezing them off the screen. Because of their respective specific gravities, the bone and nutshell fragments settle to the screen at a slower rate than the inorganic matter and so come to rest upon it. Most of the bone fragments will be unidentifiable but fish bones can be collected for identification in this manner. Seeds, charcoal and nutshells can be packed together and submitted to a botanist for identification. Bone material will of course be submitted to a different person or lab for identification and interpretation.

The recovered organic matter gives detailed information about plant use and food preparation habits. The degree to which bones are broken, ground or pulverized will tell much about cooking practices. Clues to the interpretation of seasonal diets and the ability of the aborigines to store food from seasons of abundance to seasons of scarcity may also be revealed.

Obviously, this technique makes possible the recovery of significant material that has heretofore been ignored or considered irretrievable. The equipment and technique are well within the means of any group engaged in excavation and the potential results certainly justify the effort. It is logical to conclude that flotation will be an indispensable part of every excavator's field method from now on. The variations and adaptations that can be devised in regards to equipment and operation without altering the overall results are limited only by the ingenuity of the excavators.

### Dear Judith:

The following is in response to your article in the Spring issue of the Maine Archaeological Society Bulletin.

My interest in archaeology dates back to the late 1950's. Most of my experience and study occurred in New Mexico, Arizona and Washington states. I have been living in the Houlton area for about a year. I have spent my spare time studying about the Indian cultures peculiar to this area. I plan to start survey work in this area as soon as the snow has melted.

As a newcomer to Maine and the archaeological society, the following types of articles I believe, would be very helpful to myself and other members throughout the State.

First, an article describing what areas of the State have already been surveyed for potential Indian sites. This need not be minutely detailed, but could contain information such as, "the Penobscot and Mattawamkeag Rivers were surveyed repeatedly during the past decade, for potential sites". This type of information would avoid duplication of effort.

I plan to start my survey in the Houlton area with the Meduxekeag River and its tributaries. For all I know, it may have already been thoroughly surveyed.

Secondly, an article which would concern itself with who and where the society members are and live. If I knew of other members in the Houlton area, we could possibly combine our knowledge and research, and again avoid duplication of effort.

You may have already covered these ideas; if not, it is the sort of information that would prove valuable to anyone who wishes to start a preliminary survey of an area.

Sincerely, /s/ Jules J. Arel Jules J. Arel

EDITOR'S NOTE:

Several members were pleased to make the aquaintance of Mr. Arel at the Spring Society meeting. At this time Mr. Arel had the opportunity to discuss surveyed sites with various members of the Society. The Executive Committee is presently researching and discussing new ways of introduction and sharing among members of the Society. Hopefully, the solution will be satisfactory to all. If you have an idea or suggestion as to how this may be accomplished, write a letter or speak out at the Fall business meeting. All opinions will be taken into consideration.

Sincerely,

J.H.

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