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Cover by Penny Mauro. Petroglyph figures from the
Hodgdon Site (69-4) Embden, Maine.

EDITORIAL POLICY

All manuscripts and articles should be submitted to the Editor. Originals will be returned if requested. Any article not in good taste or plainly written for the sake of controversy will be withheld at the discretion of the Editor and staff.

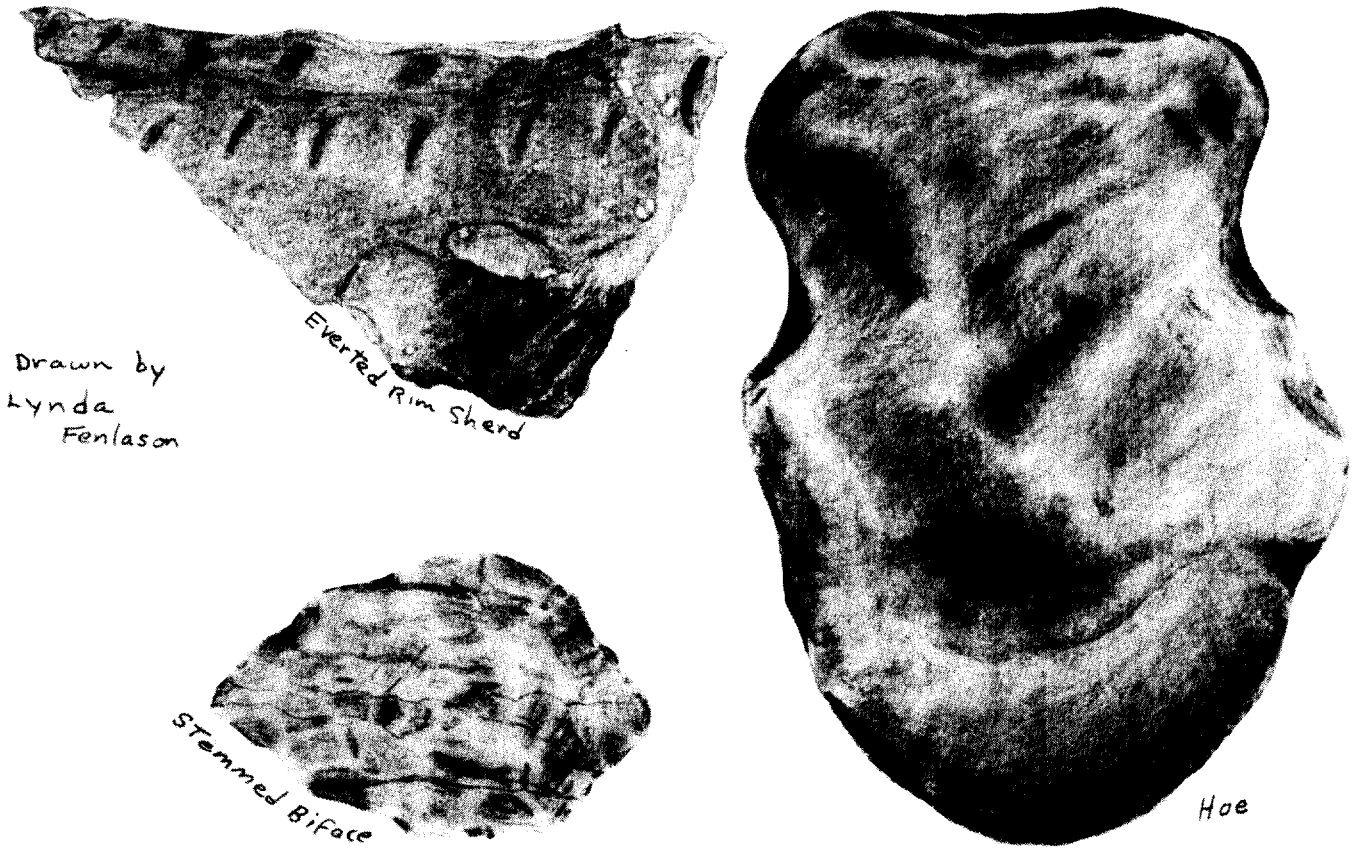
The author of each article that is printed will receive two copies of the Bulletin in which his work appears. Deadlines for the submission of manuscripts and articles are March 1st for the Spring issue and September 1st for the Fall issue.

Original manuscripts should be typewritten and single spaced with double spacing between paragraphs. Illustrations and photographs should be planned for half or full page reproduction. Line illustrations should be done on white paper with reproducible ink.

Please send exchange bulletins to the Editor.

TABLE OF CONTENTS

Letter from the President.....2
Fall Meeting Notice.....3
Meeting Minutes.....4
Book Review.....5
Letter to the Editor.....6
News and Notes.....8
Maine's New Antiquities Legislation.....11
The Excavation and Stabilization of
Pemaquid's Officers' Quarters.....12



Drawn by
Lynda
Fenlason

LETTER FROM THE PRESIDENT

On Sunday, June 7, 18 MAS members and family participated in a tour of archaeological sites in the Pemaquid region. The group assembled at the Darling Center in Walpole before noon for a picnic. Dr. Dave Sanger, a MAS trustee and our trusty guide spoke briefly about coastal archaeology and the University of Maine's research facility donated by the late Dr. Ira C. Darling. The weather was most cooperative, being warm and sunny.

Shortly after noon we visited the Pemaquid restoration where we listened to Dr. Robert Bradley synthesize the intriguing history of Pemaquid's fortifications. The visit to the museum, adjacent to the fort, was intriguing. Our thanks go to the Pemaquid Restoration Staff.

After Pemaquid, we viewed the Damariscotta shellheaps. These massive middens are most impressive. Dave Sanger and Art Spiess provided the group with background information and perspective.

This field day proved to be of great benefit to those in attendance. The M.A.S. is eager to participate in such activities in the future and will inform interested members in advance. The M.A.S. is grateful to the Darling Center and Pemaquid restoration for allowing such a visit and particularly to Bob Bradley and Dave Sanger. Dave was the motivating force behind the field trip and did much of the preliminary work.

This summer I had the opportunity to participate in two archaeological investigations from which I gained far more than I contributed. During the last two weeks of July, I accompanied Drs. Dave Sanger and Arthur Spiess on a survey of the Aroostook River near Ashland. Plans for the construction of a dam downstream at Castle Hill necessitated such a preliminary reconnaissance of the area to be "flowed out" by the project. Later, for 3 weeks in August, I was a member of the West Branch Archaeological Survey led by Dr. Steve Cox. The objective of this expedition was to locate whatever archaeological resources remain on the West Branch Penobscot below Ripogenus Gorge. This project was a preliminary to a possible Great Northern Paper hydro project at Big Ambejackmochanus Falls--more correctly known as Gullivers Pitch. This stretch of the West Branch is most beautiful. The river is swift and frequently broken by rapids and falls.

During these projects I learned much and am most grateful for the opportunity to participate.

Impressions have remained, but two stand out in my mind. First, I was impressed with the preparation, and backgrounds of my professional colleagues. Maine archaeology is being well served by people like Dave Sanger, Art Spiess and Steve Cox.

My second impression - especially reinforced in the archaeologically fertile and virtually unknown Aroostook valley - is the positive role that can be played by Maine's amateur archaeologists. Our work on the Aroostook was advanced immeasurably by the cooperation of several Ashland natives who have made collections of Indian artifacts taken from plowed potato fields bordering the river in that region. These men - Pete Sawyer, David Dow, and John Gibson - were forthcoming, hospitable, and in large measure, responsible for the success of our efforts.

It is my strong belief that there are many people in Maine who have, and will, provide vital assistance to future archaeological efforts if they can be identified and contacted. One apparent problem is that, in most Maine communities, many of the most knowledgeable and helpful people are also among the oldest. The valuable historical and archaeological information will pass on with them unless groups like the M.A.S. strive hard to preserve it. I encourage MAS members to contact such people of their acquaintance and photograph their collections, or interview them about

archaeological sites, travel routes, or local history. This information could then be made available to others laboring in the field. The Bulletin is the perfect vehicle for reporting such material.

The M.A.S. has the opportunity to make invaluable contributions in the effort to preserve our history. It must be realized that to participate in Maine archaeology is to join a group effort. Cooperation, the sharing of information, accepting guidance and criticism is fundamental to an effective effort. Those who would, literally, dig into our past must understand that they are assuming a responsibility to be the stewards of such history and work within their limitations.

Dave Cook
August, 1981

NOTICE OF FALL MEETING

Date: Sunday, 25 October, 1981.
Place: Room 180 Jewett Hall, University of Maine at Augusta.
Time: 11 A.M.-12. Set up displays and social hour.
12-1P.M. Lunch- Coffee and dessert snacks will be provided.
12:30. Trustees meeting.
1:30. Business meeting followed by program.
Program: Dr. David Sanger will speak on the "Archaeology of Acadia National Park"

Meeting Minutes

The Maine Archaeological Society, Incorporated

April 26, 1981

The fall meeting was held at Husson College, Bangor.

Old Business: President Dave Cook reported on progress of Fannie Hardy Eckstorm paper.

New Business: Dave Sanger offered members a tour of the Darling Center in Walpole, Pemaquid, and the Damariscotta shell heaps. Twenty-five members expressed interest.

Program: Dr. Steven Cox of the Maine State Museum presented a talk and slides on the Goddard Site at Blue Hill.

MAS Directors' Meeting: August 30, 1981, Waterville, Maine.

Fall meeting tentatively scheduled for October 25th at U.M.A.

Nominating committee will present the following slate of officers at fall meeting:

President: David Cook
First Vice-President: Dick Doyle
Second Vice-President: Jules Arel
Secretary (1 Year): Sue Lahti
Treasurer: Meg Cook
Trustees for 3 Years: Rick Faulkner
Paul Husson
Trustees for 2 Years: Steven Cox
Trustees for 1 Year: Mark Hedden
(Margaret Cook
Secretary pro-tem.)

Treasurer's Report August 30, 1981

Members: 172 single or family
39 institutions

211 Total

Savings Account #1	\$ 610.64
Savings Account #2	390.37
Checking Account	416.43

Income: April 26--August 30 (Dues, Interest)	233.48
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Expenses: Bank Charge, Phone Calls, Bulletins	643.29
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Margaret G. Cook
Treasurer

BOOK REVIEW

The Archaeology of New England. by Dean Snow. Academic Press, Inc., New York 1980. 380pp., illus. \$32.50.

With the publication of this book a drought in New England archaeology has been broken. Since 1935 (Antiquities of the New England Indians by C. Willoughby) there has been no general treatment of the prehistory of this region. Tracing the cultural sequences from 13,000 b.p. through the Contact period, Snow has produced a volume that at once enlightens and entertains. Snow's clarity and easily flowing narrative style make this an interesting introduction to the complexities of modern archaeology.

The book begins with an introductory chapter outlining the analytical approach the author will take to the region. New England is defined not in political terms, but in a geographical context that considerably enlarges the area to include the Hudson Valley and New Brunswick. Following this groundwork, Snow takes an interesting turn and starts with the Historic period, which was the culmination of thirteen millenia. This is perhaps the best chapter of the book with population and mortality estimates and interesting ethnographic sketches written by early explorers. Snow then rolls the clock back to the end of the Pleistocene and, with a thorough description of the early environments, introduces the Paleo-Indian.

Snow proceeds to discuss each succeeding group in depth until the reader is lead back to the Contact period again. In each case the same descriptive format is followed which gives the book both continuity and an internal structure.

There are, however, serious problems which detract from the effectiveness of the book. First, Snow attempts to apply new terminology to several cultural periods that does not appear to be acceptable throughout New England. For example his use of Early and Late Horticultural periodsignores the fact horticulture never developed north of 45 degrees of latitude in prehistoric times, making this designation totally for a large portion of the region. Another annoying, if not critical, bit of editorial license is Snow's arbitrary change from B.P. dates to B.C. dates at the beginning of the Late Archaic. The author states that the change is for "convenience";the reader finds it confusing.

A serious criticism of the book is the apparent lack of thoroughness in some areas. Snow states on pp. 59-60 that "... Indians of the Penobscot also used various cherts, including a distinctive red chert from somewhere in the upper reaches of the Penobscot drainage." Also that "...they will probably continue to frustrate ourefforts to pin down quarry sources." It would seem that a diligent researcher would have found that these sources have been known and documented for several years. In the same light Snow's discussion of Paleo-Indian and Early Archaic periods in Maine is woefully out of date.

Overall the book seems to be heavily weighted toward somewhat dated work on the Maine coast and the Hudson-Mohawk drainage in New York. The interior areas and Southern New England

are rather sketchily presented. This is perhaps understandable since the author's professional appointments have been at the University of Maine at Orono in the late 1960's and presently at the State University of New York at Albany.

The book, with noted exceptions, is a disappointment. It appears to be under-researched, inaccurate in some instances, and couched in terminology that lacks widespread acceptance. This reviewer cannot give it a solid recommendation for the above reasons and its rather high cost.

Eric R. Lahti

LETTER TO THE EDITOR

The last issue of this Bulletin contained an editorial which questioned the different cataloguing systems used in Maine when dealing with prehistoric sites as opposed to sites of the colonial or later periods. This is a fair question which deserves a detailed answer. In the fall, 1980 issue of the Bulletin there were articles which explained the differences in the systems, but they only briefly defined the reasons and needs for these differences.

The Historic Preservation program is concerned with identifying and protecting a wide array of resources, from existing buildings of the 1920's to the sites of entire villages destroyed in 1676; from objects and structures, like steam locomotives and early truss bridges, to prehistoric shell middens and quarry sites. In theory, everything on (or under) the landscape bearing the hand of man (and at least 50 years old) is subject to survey, documentation, and evaluation. The four classes of historic resources can broadly be defined as buildings, objects, historic sites, and prehistoric sites, and they involve the disciplines, respectively, of architectural history, industrial archaeology, historical archaeology, and prehistoric archaeology.

On occasion these various resources overlap, as in an historic district which contains the archaeological sites of lost buildings along with above-ground architecture; or as in the case of a contact period site which contains both aboriginal and European assemblages. Generally, however, the various historic/prehistoric resources of Maine are in fact remarkably exclusive of each other. Of some 3,000 sites catalogued to date in Maine (two-thirds prehistoric, one third historic), a mere handful (a couple of dozen) are found in both inventories as relating to both prehistoric and historical archaeology. In such cases the Historic Archaeological Sites Inventory consistently carries a cross-reference, to avoid confusion. Furthermore, historic site numbers always carry the prefix "ME", whether used on slides, artifacts, documents, or notes. This is not the case with the prehistoric inventory.

There are vast differences between prehistoric and historic archaeological resources, and they require very different skills and methodologies. The most fundamental distinction is that historical archaeology must make the fullest possible use of documentary sources to complement field evidence. Prehistoric archaeology, by definition, cannot do so; this dimension arises for prehistorians only when dealing with the contact period. Today, perhaps half of Maine's inventoried historic sites are known only archivally, and in due course there will be many thousands of such sites awaiting field inspection. On the shoreline of the Town of Kittery alone nearly 150 sites of historic structures dating from the 17th century have been so identified by exhaustive research in the York Deeds. Never mind the 18th and 19th centuries. As time goes by the prehistoric inventory and its 15-minute topo maps would be swamped by such a volume, were both historic and prehistoric resources combined.

The historic sites inventory is based upon a numerical code based on towns and townships, because the town has always been the key political (hence, historical) unit immediately following the Euro-American settlement of an area. Town histories, town records, town tax maps, town insurance maps...the list goes on and on. A catalogue of historic sites within a modern town represents the entire evolution of that unit, covering a span of up to nearly four centuries. Topographic map quadrangles pay no attention to political boundaries, and their edges routinely slice through historical divisions which are centuries old.

There are a host of cataloguing systems which can be used to inventory our diverse cultural resources. Some systems are more useful than others, depending on the resource in question. Although they are both "archaeological", the sites of a 19th-century farmstead and an early ceramic shell midden have less in common than the Vinalhaven Galamander and Portland's Victoria Mansion.

If I were a prehistorian, I would not want my Bangor 15-minute quadrangle to contain a blur of numbers representing the sites of hundreds of privies, wharves, and warehouses of the 1840's. As an historical archaeologist, I would not use such an imprecise system. Likewise, if I were a prehistorian, I would not want a quadrangle full of suspected historic sites; but these must be taken into account in assessing the impact of modern construction in an historic landscape.

It is hoped that within a year or two the Maine Historic Preservation Commission can acquire a computer; at such time both inventories will be combined within one program, probably using UTM's as a common denominator and allowing retrieval of information on both a quadrangle and town basis. Meanwhile, when possible artifacts from sites containing both historic (European) and prehistoric (aboriginal) components are being labelled with both catalogue numbers. This, along with a conscious effort to maintain clear records, has ensured that confusion can be kept to an absolute minimum.

Robert L. Bradley
Maine Historic Preservation Commission

Alaric Faulkner
Department of Anthropology, UMO

NEWS AND NOTES

Preservation Archaeology in Maine - 1981 Field Season

Arthur E. Spiess
August, 1981

This column, which appears here for the first time, is intended to present a brief synopsis of survey activity partially funded by the Maine Historic Preservation Commission as well as major contract surveys required by law.

A crew under the direction of Robson Bonnichsen and Mr. George Nicholas, University of Maine at Orono, has begun survey in the vicinity of a proposed coppermine development near Clayton Lake, west of Ashland in Aroostook County. The work is under contract to Superior Mining Company. An Indian stone quarry site and flaking station has been located at the time of this writing.

Bruce Bourque, Maine State Museum, is proceeding with archaeological survey work in central Penobscot Bay, north of North Haven. In conjunction with past work on North Haven and Vinalhaven, and future work planned for upper Penobscot Bay, reconstruction of prehistoric use of the entire bay should be attainable.

Theodore Bradstreet, University of Maine at Augusta, is continuing work at Agry's Point, Pittston, in conjunction with a field school open to the public. Ted's work has demonstrated prehistoric, 17th, 18th, and 19th century uses of the point.

Steven Cox, Maine State Museum, is directing an archaeological survey of the West Branch Penobscot below Ripogenus Dam, under a study grant from the Great Northern Company. This work is part of the environmental studies package for the "Big A" Dam Project.

Stuart Eldridge, a Ph. D. candidate at University of Pennsylvania, Bates College graduate, and veteran of work in Penobscot Bay with Bruce Bourque, has completed six weeks of survey on the St. George River system. He has located many heretofore unrecorded shell middens, as well as other sites upriver.

Alaric Faulkner, University of Maine at Orono, has concluded test excavations in Castine which were successful at locating the curtain wall and some interior structures at 17th century Fort Pentagoët. His work at Castine promises to be an extremely exciting focus for historic archaeology research in Maine for the next few years.

David Sanger, University of Maine at Orono, has completed a third year of survey for prehistoric archaeological sites in the Boothbay Region. Dave's work has located over 200 sites in the lower Sheepscot and Damariscotta estuaries, and accomplished test excavation at many sites. At least four U.M.O. Masters of Science theses dealing with Indian subsistence and settlement in the Boothbay area should result from this project.

David Sanger and Arthur Spiess have completed the first stage archaeological survey for Maine Public Service Company's proposed Castle Hill dam project, on the Aroostook River near Presque Isle. Assisted by David Cook and his canoe, we found that the river flood plain between Ashland and Masardis contains many sites, some deeply buried, some possibly as old as Early Archaic. Much more work will be necessary on the area, which is one that could provide a key sequence of post-Pleistocene human occupation in Aroostook County.

In addition to the above, many short-term field surveys have been accomplished by Robert Bradley, Arthur Spiess and several other archaeologists. Bob Bradley provides further details on historic archaeology work in Maine elsewhere in this issue.

THE 1981 FIELD SEASON IN HISTORICAL ARCHAEOLOGY

Robert L. Bradley
Maine Historic Preservation Commission

1981 was an exceptionally profitable year for historical archaeology in Maine. In March, Alaric Faulkner and I made a successful trip to London for ten days to confer with colleagues in "post-medieval archaeology" and to study collections of early maps and western European ceramics.

Ric Faulkner's preliminary survey of Castine's mid-17th-century Fort Pentagouet revealed dramatic structural features, including parts of a bastion nearly seven feet high, constructed of slate from the Mayenne district of France, along with a cobbled parade-ground. Future work will prove that this site is of the highest national significance.

Theodore Bradstreet of UMA began to uncover a construction trench and daubing from the walls of a 17th-century trading post or homestead in Pittston, a site which may have at least an indirect connection with very early Kennebec trade activity by the Plymouth Colony.

David Switzer of UNH directed the completion of the underwater excavation of the "Defence", a victim of the disastrous 1779 Penobscot Expedition. This final phase of work has ensured the fullest recovery of scientific data on the brigantine's structure and its artifact assemblage.

Coburn Currier of Olivet College (Michigan) has completed his survey of the upper Penobscot drainage for 19th-century sites relating to the logging industry.

As usual, my activities have been diverse. I have been involved in a one-hour videotape program on Maine's early settlements, a UMA production. The Pemaquid excavation and stabilization is now completed (see elsewhere in this Bulletin), and I anticipate a final major field season there in 1982 in advance of park development. This development, dependent upon passage of a bond issue in November, would provide a new museum/visitor center, permanent access roads and parking, buried power lines, and a new park-wide sewerage system. I have finished The Forts of Maine, 1607-1945: An Archaeological and Historical Survey. This 40-page illustrated booklet, which will be available by the time you read this, is being co-published by my Commission and the Maine Bureau of Parks and Recreation. Finally, assisted by graduate intern Emerson Baker of UMO, I conducted another successful round of test excavations at Fort Western in Augusta and Province Fort in Windham. Reports on these may appear in future issues of this Bulletin.

We can all only hope that 1982 will see further such advances in the archaeology of historic Maine.

Note from Munsungun
by Eric R. Lahti

Dr. Robson Bonnichsen of UMO continued his work at Munsungun Lake with the help of graduate students, volunteers, and Earth-watch volunteers. Despite competition from the elements, heavy rains and flooding streams, much was added to the picture of early man in Maine. Sites ranging from the Paleo-Indian to the Ceramic period were excavated during this field season. One day was spent at Round Mountain where several new quarry sites were located. A series of three articles in the Bangor Daily News under the byline of Wayne Reilly (September 21-23, 1981) provide excellent coverage of this project.

Editor's note: It is hoped that this column can be expanded and serve as a clearinghouse for work being done in Maine by both amateur and professional archaeologists. We earnestly solicit your contributions.

Maine's New Antiquities Legislation

Arthur Spiess
Maine Historic Preservation Commission

The 110th Legislature enacted a revision of Maine's antiquities legislation which becomes effective on September 18, 1981.

The new law (27 M.R.S.A., Sections 371-377) divides responsibility for Maine antiquities between the State Museum and the Historic Preservation Commission. This law is NOT INTENDED TO DISCOURAGE ARTIFACT COLLECTING when the artifacts can be found on the surface. IT IS INTENDED TO DISCOURAGE LOOTING AND UNAUTHORIZED DIGGING AT IMPORTANT SITES and contains a provision for a fine of up to \$1,000.00 per day for such activity.

Only those sites listed on the National Register of Historic Places are protected by this legislation. Although many sites worthy of protection are either undiscovered or not yet listed on the National Register, we found it unworkable to protect all "archaeological sites" without further definition for two reasons. First, National Register listing is accompanied by a detailed description of site boundaries, making it relatively simple to differentiate between "on-site" and "off-site", if necessary, for legal purposes. Secondly, although cellar holes of houses that have disappeared since, say, 1850, and World War II-era cargo vessel wrecks are certainly archaeological sites, we are not certain that they all are worthy of the effort of legal protection at this time. The sites that most deserve protection are those already on the Register, or those that will be put on the Register in the near future.

In addition to being listed on the National Register, sites must be posted for this legislation to be effective. Posting is intended to keep people from unwittingly breaking the law.

This law applies automatically to all state-owned sites that meet the National Register and posting criteria. In addition, private owners can extend this protection to their property by signing a "preservation easement" with the Maine Historic Preservation Commission.

Section 374 establishes a permit procedure for lawful excavation on protected sites. Section 375 established a civil penalty of \$50.00 to \$1,000.00 per day for unlawful excavation.

Note that the private property owner has the right to control legal digging on his site through the permit process and a voice in disposition of the recovered artifacts. We feel that this legislation adequately balances the rights of the private property owner, the interests of legitimate artifact collectors, and the responsibilities of the state.

Editor's note: The complete text of this legislation will be available at the Fall meeting of the MAS.

THE EXCAVATION AND STABILIZATION OF PEMAQUID'S OFFICERS' QUARTERS

Robert L. Bradley
Maine Historic Preservation Commission

On June 7, 1981 the author conducted a guided tour of Colonial Pemaquid for members of your Society as part of David Sanger's day-long view of archaeological research in the mid-coastal region. However, most of the membership was unable to be present, so it is fitting that I should submit this article for their benefit. There is another reason why this paper is timely. The excavations on the superimposed officers' quarters of two forts (1692, 1729) have been completed, and their remains will soon be fully stabilized in situ as a permanent outdoor exhibit. At the time of writing (June, 1981), we face a summer of intensive laboratory analysis, research, and writing in preparation for a major, multi-disciplinary site report on the project, which I hope will be published in 1983.

Many research areas and specialists are involved, and the analysis has and will cover such topics as: structural features, room use, wood analysis, faunal analysis (vertebrate and invertebrate), site use (prehistoric to present), history, history of research, feature stabilization, artifact conservation, and more than a dozen major classes of artifacts. Although at this point much research remains to be done, enough data have been collected to warrant this preliminary report. And because the Maine Archaeological Society has been very interested in and supportive of the project, it is more than appropriate for this report to be published here.

Brief History of the Site

The Pemaquid region, south of Damariscotta in Maine's mid-coastal region, was early a target for English explorers from Thomas Hanham and Martin Pring in 1606 to John Smith in 1614. Indeed, during that contact period trade with the aborigines of the area is well documented (cf. Nahanada Settlement Site, MAS Bulletin, Vol. 20, No. 1, Spring, 1980).

It was not until c.1625, however, that a permanent English village was established at Pemaquid. This village grew and prospered during the 17th century but it was defenseless and had to be quickly abandoned in 1676 when the first of nearly a century of Indian wars broke upon English Maine.

In the following year Pemaquid, now under the jurisdiction of New York, was resettled and a wooden redoubt, named Fort Charles, rose on the landscape. For twelve years the plantation once again thrived; but in 1689 the combination of political turmoil (the fall of Governor Andros) and the beginning of another Indian war led to another disaster for the settlement. With urging from the French a force of local Indians attacked Pemaquid with complete surprise, killing a number of villagers, and attacking the fort. Fort Charles surrendered after token defense, its garrison depleted by many recent desertions.

The site was abandoned by the English for three years until in 1692 another fort was constructed. This work, named Fort William Henry, was probably the first stone fort built in New England, and cost the Massachusetts Bay Colony the sum of £ 20,000 (half of the colony's budget for that year). The major proponent of Fort William Henry was Sir William Phips, the first Royal Governor of Massachusetts--and a native of Maine--, who wrote to the Earl of Nottingham that "the fort is strong enough to resist all the Indians in America".

Four years later, in 1696, a force of some 500 Penobscot Indians and 100 French descended upon Fort William Henry and accepted its surrender within a day and a half. Why had it failed? There were three reasons. The French fired mortar bomb-shells over the fort which was demoralizing to the defenders in that the internal structures were wooden (and thus not bomb-proof). The mortar used to build the fort was low-grade, consisting of ground clamshells (mya arenaria) and beach clay--indeed, one of the stone cannon-mounts shuddered and cracked when its cannon was first fired. And finally, the well for drinking water lay beyond the curtain (outer wall).

This was Pemaquid's lowest ebb, and for more than thirty years the entire region was all but abandoned by the English. Although many plans were proposed for rebuilding Fort William Henry (some of them strongly endorsed by Queen Anne), Massachusetts refused to spend one more shilling on the place.

In 1729 Fort Frederick was built in stone on the ruins of Fort William Henry by Scotch-Irish immigrants. This was a hasty construction of even poorer quality than the work of 1692; and although the outline of both forts agreed, there were major differences in interior layout. Fort Frederick survived until local residents razed it in 1775 to deny the British its use in the impending Revolution.

Why was Pemaquid attacked and fortified on so many repeated occasions? The answer is that it was England's northeasternmost outpost of the Thirteen Colonies. East of Pemaquid was New France. And France claimed all of Maine west of Pemaquid to the Kennebec River. This site--and its forts--constituted the front line in over a century of colonial struggle.

History of Research at Pemaquid

The site of the Pemaquid settlement and forts was never forgotten, given its prominent geographical setting and important history. James Sullivan's History of the District of Maine, published in 1795, noted the rubble remains of the forts and "the cellars of nearly thirty or perhaps forty houses", representing the civilian settlement. William D. Williamson in his The History of the State of Maine (1832) reported that some of the fort's walls still stood three feet high. On numerous occasions from the mid-19th century on Colonial Pemaquid was the destination for pilgrimages and annual meetings of august historical societies.

From the 1850's on, much fiction parading as fact began to be published about Pemaquid, a tradition which, alas, continues to this day: "Earlier than Jamestown"; "First City in America"; "Vinland of the Sagas"; "Site of an early Spanish fort"; "Basque or Portuguese fishing station". And so on. The fragmentary cobble pavements were early heralded as our nation's first streets. Actually, they date from the mid-17th century to the 1730's.

The first authoritative research on Pemaquid was published by John Johnston in History of the Towns of Bristol and Bremen, Including the Pemaquid Settlement (1873). This work attracted the attention of John Henry Cartland, an antiquary who conducted field research on Pemaquid's forts for two decades on either side of the turn of the century. Although by no means an archaeologist, Cartland labored hard to uncover the outer walls of Fort William Henry and tirelessly promoted the historical significance of the site. The State of Maine at last took notice, acquired the site of the forts, and in 1908 it built an accurate replica of the great bastion of 1692 as an interpretive monument.

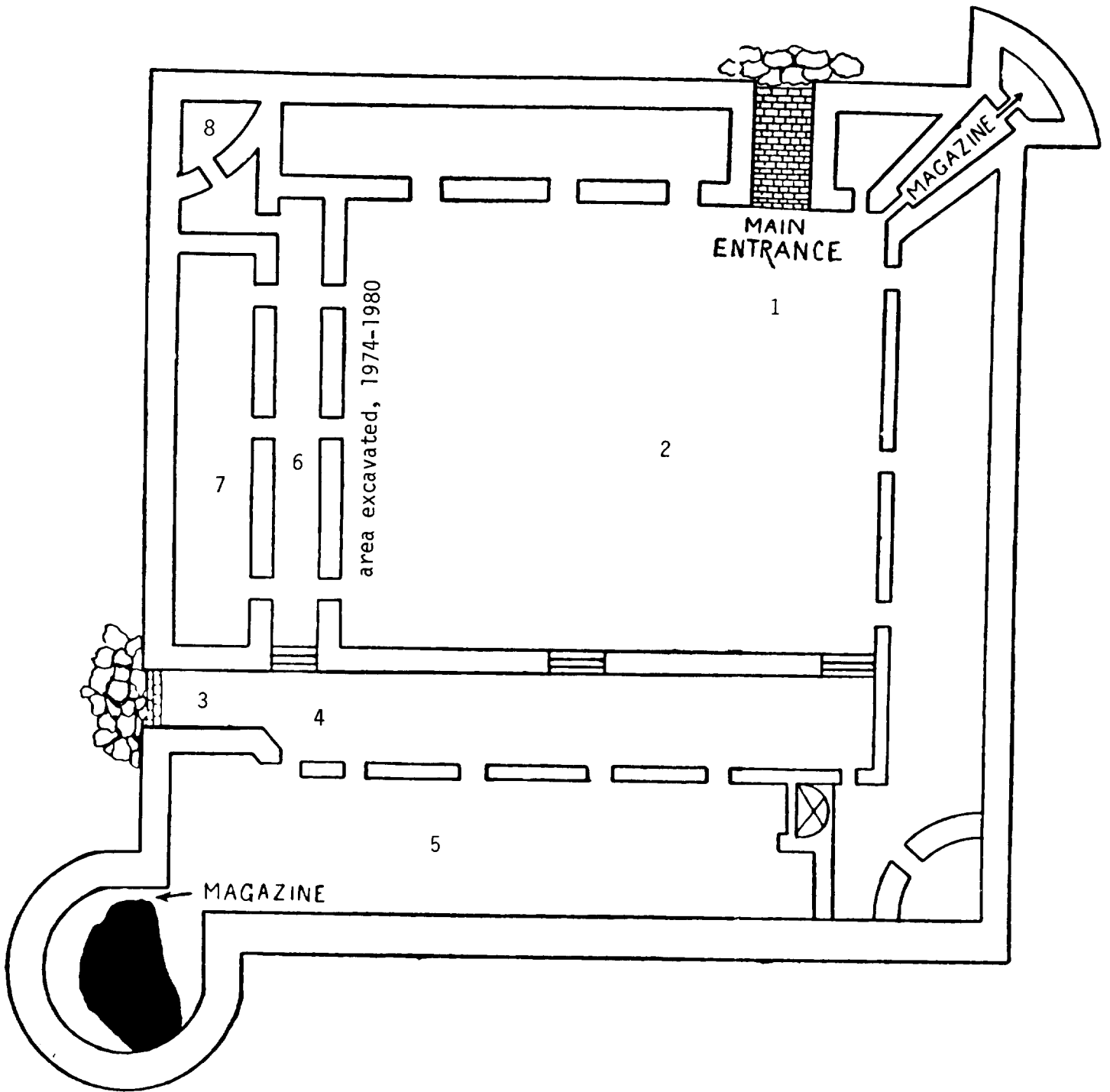
The site lay dormant until the summer of 1923 when Warren K. Moorehead, sponsored by the Maine Historical Society, hacked and chopped his way through the enlisted men's barracks of 1729. His search for Vikings was a failure, and it is fortunate that he never returned to the site.

The modern era of Pemaquid fieldwork began in 1965, when Helen Camp exposed primitive fieldstone cellars over several summers under private auspices (including the Maine Archaeological Society). Her efforts ultimately attracted State attention, and in 1969 the Maine State Bureau of Parks & Recreation assumed control of most of the site of the settlement. Mrs. Camp's work continued on the settlement until 1974, when she turned her attention to the fort site. Painstaking progress proceeded on the remains of superimposed officers' quarters until 1976. In 1978 the present writer joined forces with Mrs. Camp to complete this excavation and (for the first time) to stabilize the impressive structural features uncovered. The project was jointly funded by the Maine Historic Preservation Commission and the Maine State Bureau of Parks & Recreation.

The Excavation

A map of the ruins of Fort William Henry, drawn in 1699 by the military engineer, Col. Wolfgang William Romer, is preserved in the Public Records Office in London. This document shows in plan and profile what was left of the structure three years after it was razed by the French. Fortunately, Romer was able to trace the stone footings not only of the curtain and bastions, but also of the internal buildings of 1692-96.

Combining this invaluable primary source with eyewitness English and French descriptions of Fort William Henry provided a reasonably clear picture of what structural features to expect--if not in detail, at least in general. Fort Frederick (1729) was more problematical, as no plans showing internal structures have been found, and there is only one detailed eyewitness description on record. Here, however, topography was an ally, as anomalies in the vegetation on the fort site clearly showed the positions of stone walls and cellars when viewed from above.



Fort William Henry (1692-96), after Romer.

All excavation was by means of trowelling, with all back-dirt passed through quarter-inch screens. The grid was in 10-foot squares. These were excavated by quadrants to increase stratigraphic control and to allow for maximum sections for profiles. Excavation was by historic strata, rather than by arbitrary levels. These strata were designated as follows:

- A: Turf and Topsoil (20th-century)
- B: Post-Fort Frederick (1775-ca. 1900)
- C: Fort Frederick Occupation and Demolition (1729-1775)
- D: Fort William Henry Demolition (1696)
- E: Fort William Henry Occupation (1692-96)
- F: Pre-Fort William Henry Occupation (before 1689)

These strata were uniformly easy to recognize, thanks to the several layers of rubble, brick fragments, and wall plaster occasioned by the violent demise of each fort. And because the internal plans of Forts William Henry and Frederick had practically nothing in common, identifying the date of structural features was likewise a relatively simple task. This process was additionally facilitated by the often great vertical separation between the two forts (usually 3 feet or more), exceptions being garbage pits dug in the years following 1729 which penetrated the rubble of 1696.

The Fort House adjacent to the site was converted into a spacious and well-equipped field laboratory, to which artifacts were taken, bagged by square and stratum for processing (washing, measuring, drawing, and labelling). All recovered iron objects were temporarily transferred to the Historic Archaeology Laboratory at the University of Maine at Orono for electrolytic reduction and other appropriate conservation measures under the direction of Professor Alaric Faulkner. Recognizing the perennial problems of artifacts lacking climate control, the Maine State Bureau of Parks and Recreation is now planning the construction of a modern visitor center and museum complex to house the artifacts in a benign environment.

One of several rules of thumb that characterize the science of archaeology is to expect the unexpected. If, as archaeologists, we always knew what we would encounter below turf, there would be little need to excavate. The officers' quarters project was meant to be completed by the fall of 1978, but excavations continued two years beyond that time. Why? There were three reasons. First, a prominent cellar (11), which we correctly deduced to date from 1729, was incorrectly deduced to have been excavated by Cartland or Moorehead. In fact, it had never been fully filled in the years following 1775, and its controlled excavation greatly increased the number of man-days. Second, a natural cleft in the balsaltic bedrock, forming a shaft some eleven feet deep, was found beneath this cellar. This feature was filled to level the site in 1692, and held a large deposit of artifacts dating from Fort Charles (1677-89) and earlier. And third, it was discovered that the stone walls of 1729 contained artifacts dating from their construction (the author picked up an English penny of 1729 which had washed out in a storm), as well as vast quantities of artifacts of 1692-96. The explanation



Above: Excavations at rear entrance of 1692.
Below: Stratigraphy on east side of site (see text).

A
B
C
D
E
F



for the latter is that Fort Frederick (1729) was built by scooping together the uppermost rubble of Fort William Henry (1692). All of this is the stuff of which schedules are broken and budgets are burst.

In any case the officers' quarters of two periods have now been fully excavated, and their remains provide detailed information on the layout of the buildings by period.

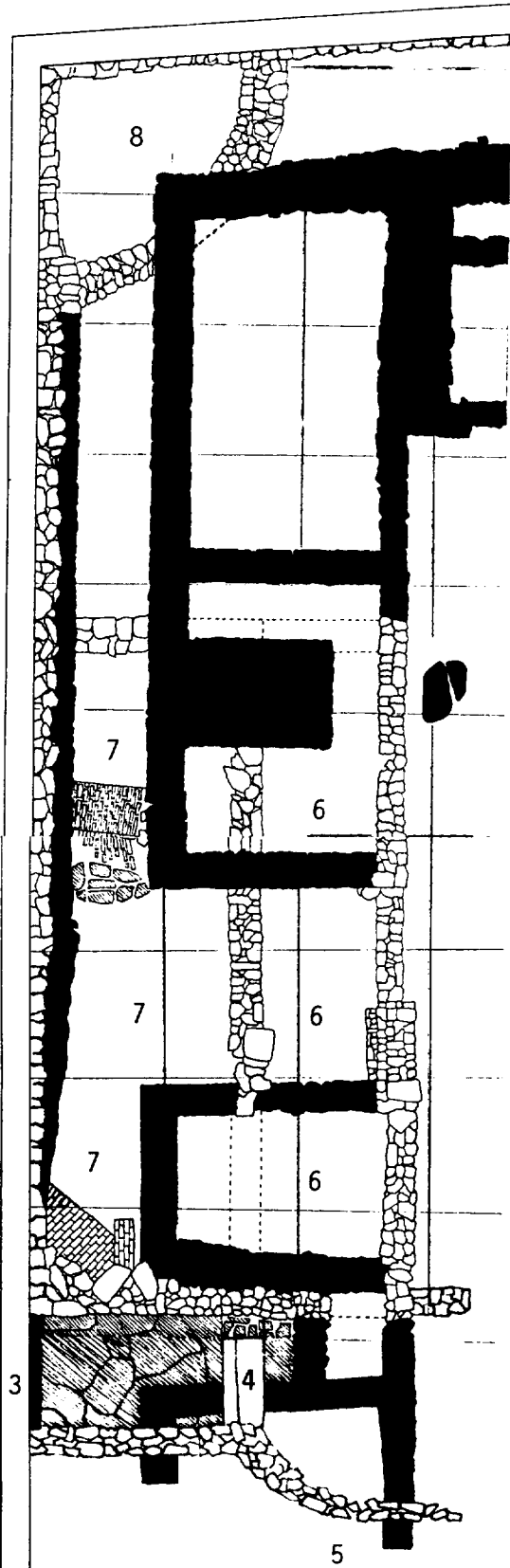
Entering Fort William Henry through the main entrance (1), one walked through a covered passage and directly entered the open parade-ground (2), on all four sides of which were doors providing access to the flat-roofed or shed-roofed buildings attached to the curtain. Entering via the rear entrance (3), one could walk straight down a long, stone-paved corridor (4), ultimately turning left to reach the parade-ground or right to enter the enlisted men's quarters (5); turning immediately to the left upon passing through the rear entrance, one walked down a short set of steps which led to a covered passage (6), to the left of which were the officers' quarters ranged along the north-west wall of the fort (7).

The excavations have uncovered the base of the fort's northern internal tower (8), the paved rear entrance (3), and the stone footings of the officers' quarters (7) and the long corridor which serviced them (6). Both the officers' quarters and the corridor were at least 55 feet long, the widths being 15 and 10 feet, respectively. The quarters were serviced by three fireplaces, implying the existence of three rooms which Romer's plan corroborates by showing three doorways. The northern two rooms were heated by a pair of back-to-back fireplaces, while the fireplace for the southern room was fitted into its western corner. The northern room would have measured some 16 by 12 feet, and the other two, if symmetrical, would each have been about 19 by 12 feet. The rooms were well finished, with diamond-paned leaded casement windows and plastered walls. They were not bomb-proof, however, and the French mortars were an effective threat.

Among the burnt floor-boards and overturned walls of 1692 have been found such items as silver teaspoons and fine glassware, testimony not only to a high standard of living for the stronghold's officers, but also to a hurried departure planned just minutes in advance. The scorched remains of Fort William Henry are symbolic of the wreckage of English Maine in the aftermath of the first wars with the French and Indians.

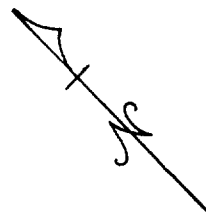
Fort Frederick's officers' quarters (1729), overlying those of Fort William Henry, were about 55 feet long and 18 feet wide. The entrance (9), marked by two large stepping-stones, faced the parade ground. Passing through the door one entered a small passage with a chimney servicing back-to-back fireplaces beyond. To the left was a small room measuring about 11 by 17 feet (10), while to the right was a large dormitory 35 feet long and 17 feet wide. Beneath most of the latter was a deep cellar for the frost-free storage of food in the winter (11). A cross wall just to the north of the fireplaces was originally built for structural reinforcement and does not mark the position of a partition.

Running from the northern end of this building along the north-east side of the parade-ground was another building, of which only a small part attached to the officers' quarters has been excavated (12). This may have been a storehouse or additional sleeping quarters. Between the officers' quarters and the great western bastion were one or two other small buildings (13).

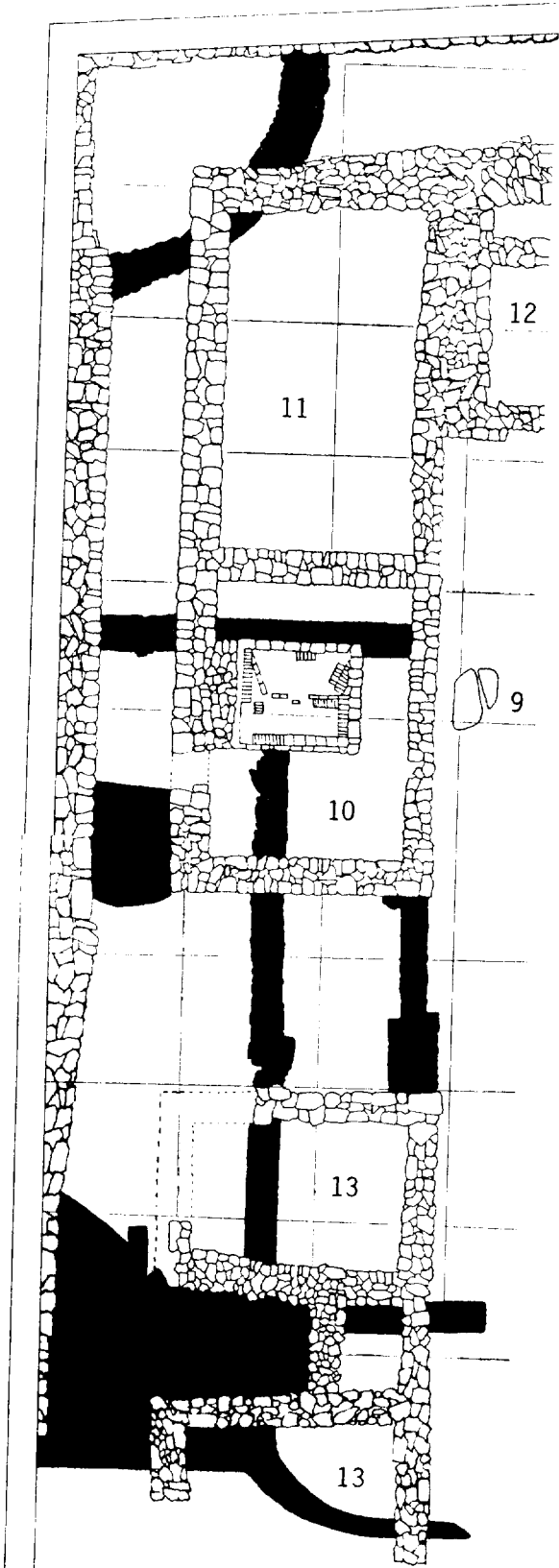


FORT WILLIAM HENRY
1692-1696

Later features in black
(1729)

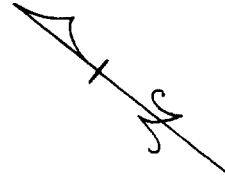


Scale 1:160
(3/4 in. = 10 ft.)



FORT FREDERICK
1729-1775

Earlier features in black
(1692)



Scale 1:160
(3/4 in. = 10 ft.)

Bedrock cleft
beneath cellar.



Below: Corner tower of 1692, during excavation.



Examination of the plans of 1692 and 1729 reveals clear contrasts. The north internal tower of 1692 (8), was not rebuilt in 1729, and indeed the Fort Frederick quarters substantially overlapped it. The 1692 quarters were connected to a rear entrance (3) and were attached to the northwest curtain (thus probably being covered by a shed roof). In 1729 the rear entrance was blocked and the quarters were free-standing, probably best compared in form to a center-chimney cape cod style house.

The Stabilization

Completion of the excavation of the officers' quarters of two periods was one issue; what to do with the ruins once fully excavated was another problem altogether. With the excavated sections and masonry features undergoing rapid deterioration there were only two responsible courses of action available: backfill immediately upon completion of excavation or stabilization of the ruins in situ.

The former course of action--backfilling--was recognized as the simpler, easier, and less expensive option. It was also recognized as less satisfactory for a simple reason. The excavations which exposed these features had been funded entirely with public monies, both State and Federal. When impressive archaeological features are excavated on public land courtesy of the taxpayer, it is highly desirable (not to say necessary) to preserve such features as a permanent exhibit for the public benefit.

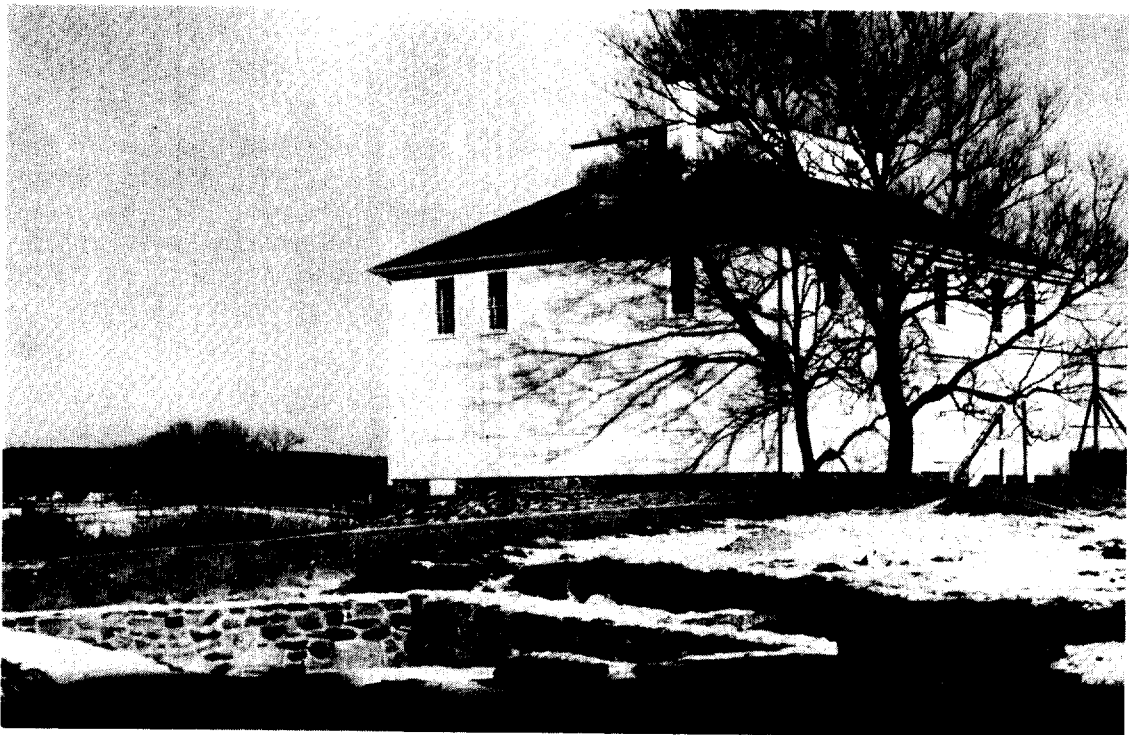
Once the decision to stabilize the features was made, the problems of methodology had to be faced. Because of Maine's severe climate, the field-stone footings at Fort Pownall in Stockton Springs (1759), stabilized in 1962, had seriously deteriorated in the ensuing years. The author, therefore, undertook to solicit advice on proper mortars to resist the freeze/thaw cycle. Morgan Phillips of the Society for the Preservation of New England Antiquities suggest the admixture of a steroid waterproofing compound to the mortar, while James Moore of Parks Canada made a similar suggestion. In November, 1977, the author launched a test stabilization using four different mortar compounds.

Project architect Sylvanus Doughty examined these test stabilizations in April, 1978 to determine how they had weathered the winter. It was found that all four tests had resisted the elements very successfully, with no exfoliation due to the freeze/thaw cycle. Accordingly, Mr. Doughty prepared specifications calling for a weather-proof mortar.

The actual mechanics of the stabilization were to be complex and varied. Where walls were free-standing on bedrock, they were to be cleaned and allowed to remain dry-laid; in other areas, where walls stood on a lens of soil, this wall-bearing soil was to be injected with pressure grout. Beyond this, proper drainage was to be provided by means of hidden PVC pipe of small gauge. Dismantling of walls prior to stabilization was a course of action to be avoided, if at all possible, in an effort to preserve the stabilized ruins as accurately as possible.



Above: Stabilization in progress; wall excavation (right), wall mortaring (left), completed treatment (rear).
Below: Stabilized features in January, with Fort House beyond.



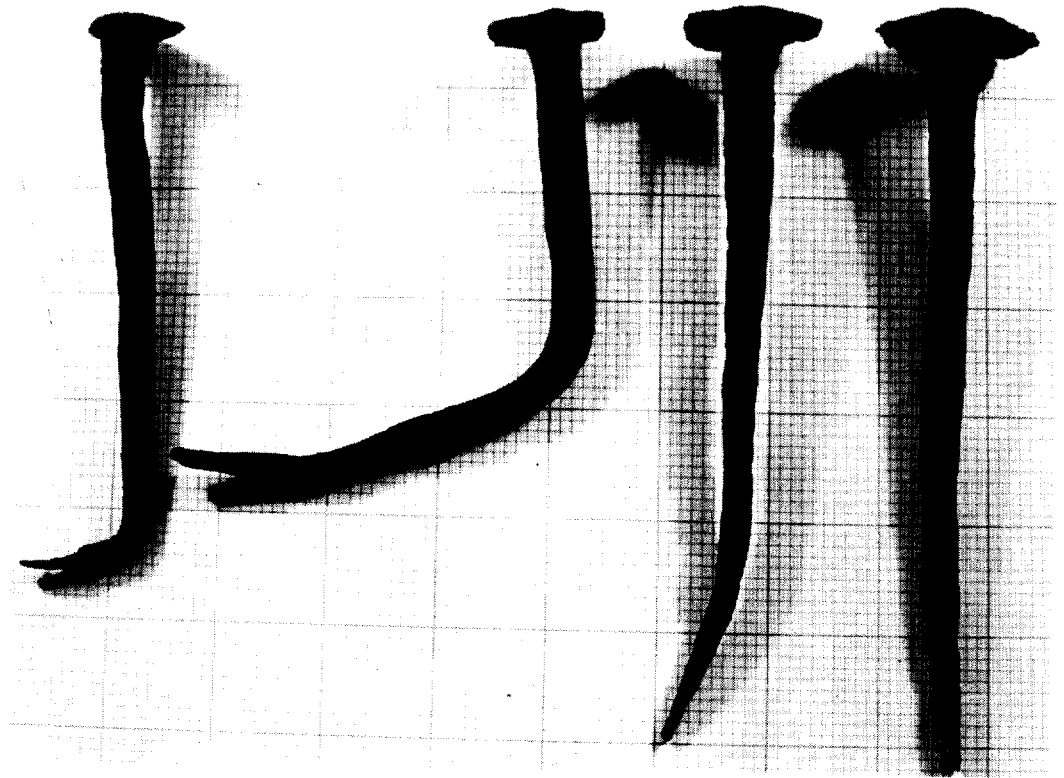
Unfortunately, as noted above, it was soon discovered that the earthen mortar in the walls of 1729 was filled with artifacts deriving from the occupation of 1692-96. It immediately became clear that the walls of Fort Frederick could not be stabilized in situ. This approach was reinforced in any case by the fact that many of the structural features of 1729 directly overlay those of 1692; in order to fully expose the earlier remains it was necessary to temporarily remove portions of 1729 walls. All walls to be dismantled once exposed were carefully documented by photography and measured drawings. Once excavation beneath them was completed, hidden concrete pads were poured on bedrock before the walls were carefully reconstructed and mortared by masons under direct archaeological supervision. The process caused major delays in the progress of both the excavation and stabilization components of the project.

The Artifacts

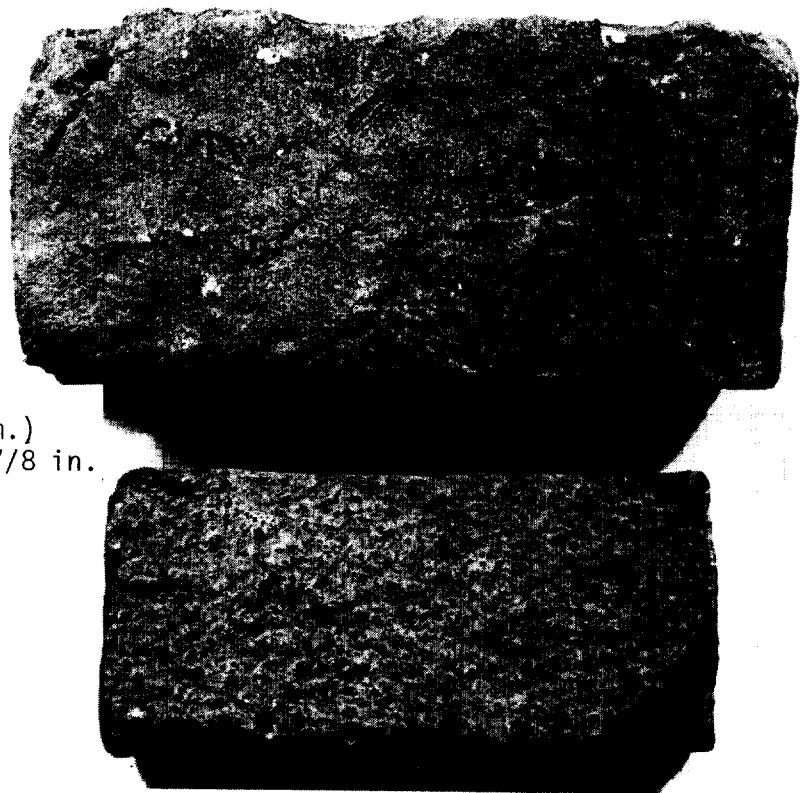
A far more serious problem than what to do with exposed structural features is how to handle the volume of artifacts which almost any historic site yields. This problem is unique in degree to historical archaeology, and if careful plans are not prepared in advance, the problem, quite simply, becomes a crisis. The officers' quarters of 1692 and 1729 have yielded thousands of ceramic sherds and window glass fragments, thousands of nails, thousands of bones and shells. A grand total of 4,860 white clay pipe fragments have been analyzed by the heroic efforts of Helen Camp. Hundreds of iron objects, from cannon balls to musket furniture to hinges and pintles have been recovered. No historic site should be excavated unless there are the trained personnel and funds to clean, catalogue, analyze, and conserve the enormous volume of artifacts which inevitably are encountered--artifacts of wood, stone, bone, iron, lead, brass, pewter, silver, copper, glass, and clay. Both an organized field laboratory and a full scientific laboratory are essential. Fortunately, these factors were all borne in mind before and during the officers' quarters project.

Accompanying this article are photographs of a small selection of artifacts recovered from the site, and efforts are being made to display many more for the public benefit at the Colonial Pemaquid Museum. As analyses of most classes of artifacts are currently underway, this preliminary report cannot and should not deal with the subject in any detail. What can be provided is an example of the kind of specialized expertise which is being drawn upon in this effort.

Quantities of shellfish remains have been found from both periods of occupation, usually in a random scatter (technically known as 'broadcast garbage disposal', typical of the earlier colonial period), but also in occasional thick concentrations. What is remarkable about these assemblages is that in 1692-96 oyster overwhelmingly predominated, while in the period following 1729 soft-shell clams were almost exclusively eaten. Why? Mary Hancock, a shellfish specialist from UMO is trying to find the answer. Was the oyster overfished in the 1690's? Did salinity of the in-shore waters change due to run-off from deforestation? Could water temperature have changed significantly between 1696 and 1729? Or was it just a difference in diet preference? The garrison in the 1690's was Anglo-American, while after 1729 it was mostly Scotch-Irish. The answer could be as simple as that.



Above: Hand-wrought nails from rear gate of 1692; maximum length $6\frac{1}{2}$ in. (17 cm.).



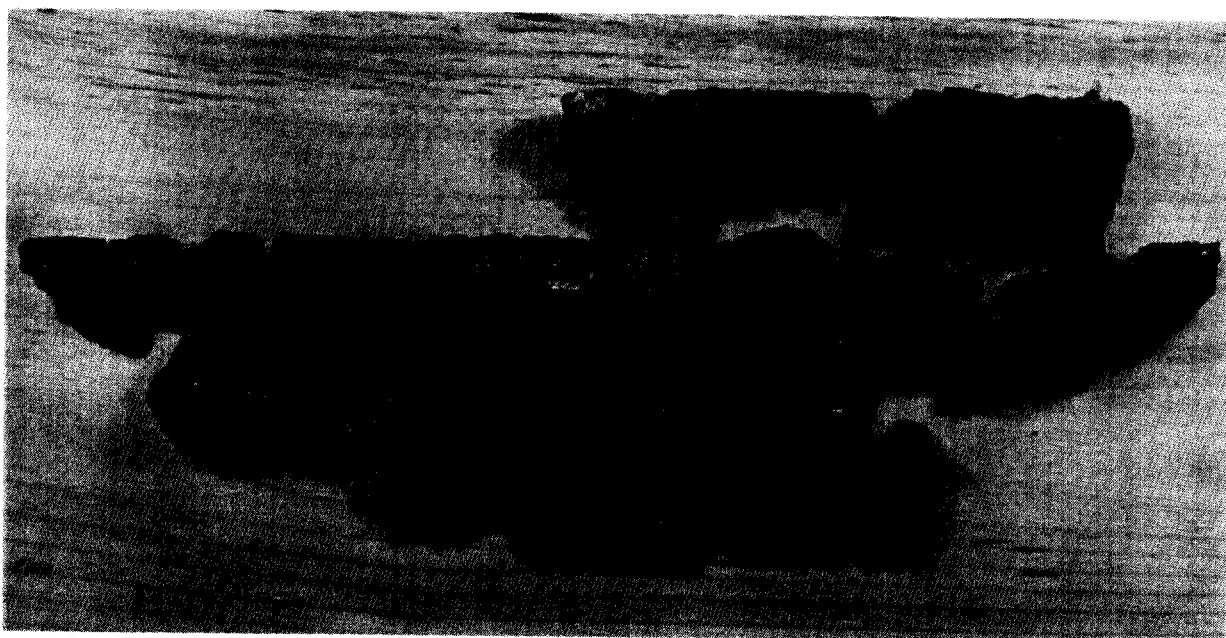
Right: Upper, 1692 brick,
 $9\frac{1}{4} \times 4\frac{1}{4} \times 2\frac{1}{2}$ in. (23.4 X 11 X 6.2 cm.)
Lower: 1729 brick, $7\frac{3}{8} \times 3\frac{1}{4} \times 1\frac{7}{8}$ in.
(19.2 X 9 X 4.8 cm.)

* * * * *

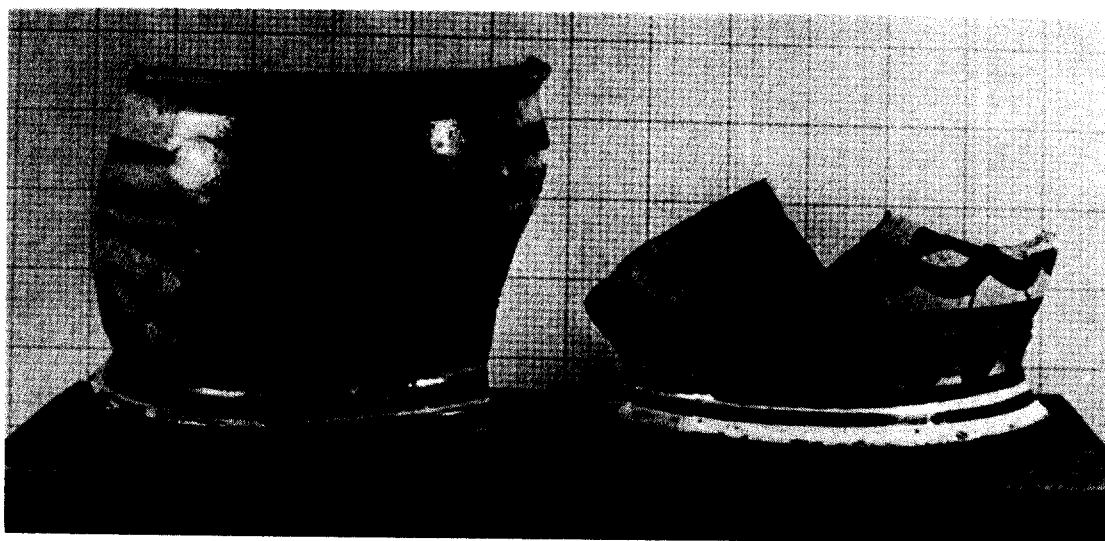
In any case the fieldwork is done and now we face seemingly countless man-hours of technical work beyond the public eye. It is not esoteric study. It is the scientific basics which make the difference between professional archaeology and Sunday afternoon treasure-hunting. Mistakes have been made and calculations have misfired. It is difficult to avoid these when approaching the unknown. The end result, however, will be permanently stabilized and interpreted on-site remains, modern museum displays of the artifacts, and a major publication. These will not only repay the taxpayer for his support, they will also aid in archaeological research at other sites in Maine and much of America.



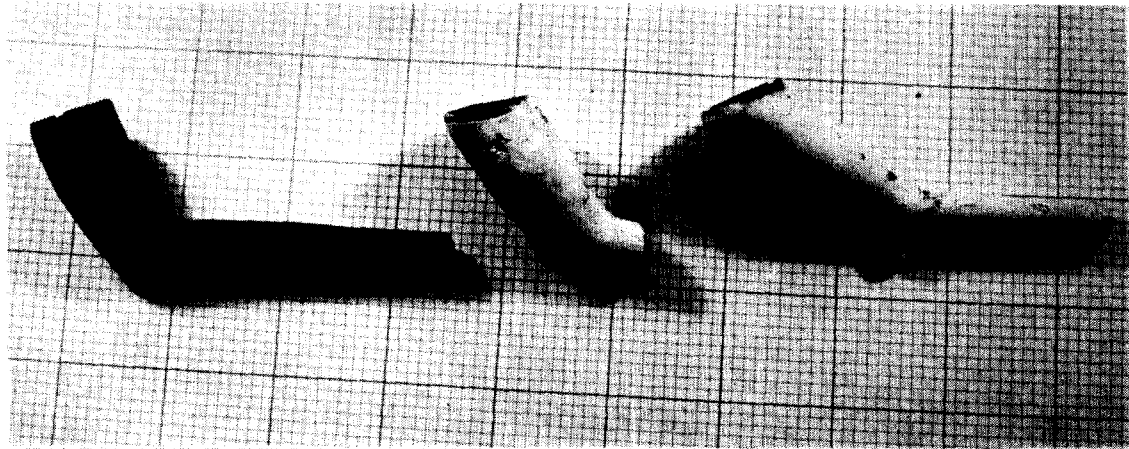
General view of project. Background structure stabilized. Foreground: paved rear entrance of 1692.



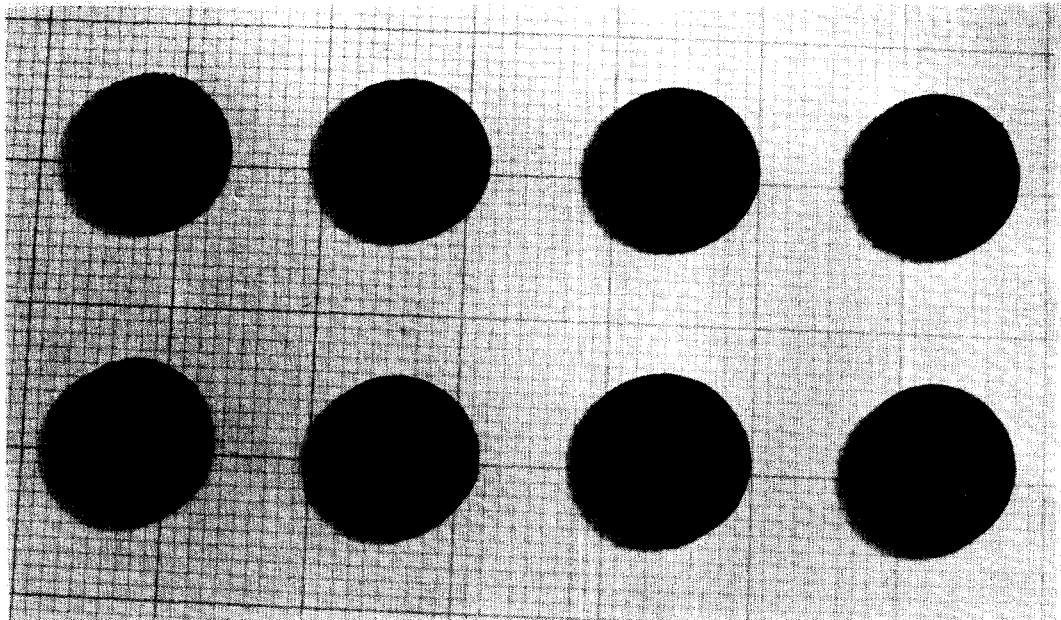
Wall plaster (1692), showing impressions of riven lathe



Drug Jars, English delftware, pre-1650.
Left: blue on grey, height 3 5/8 in. (9.2 cm.),
base diam. 5 1/8 in. (13 cm.)
Right: blue and purple on grey,
height unknown, base diam. 5 3/8 in. (13.7 cm.)

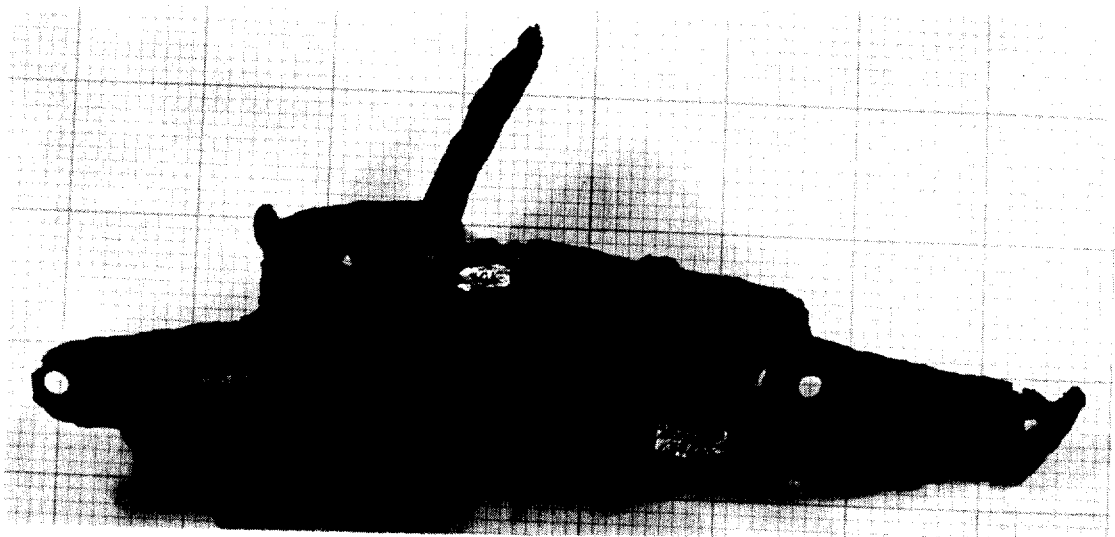
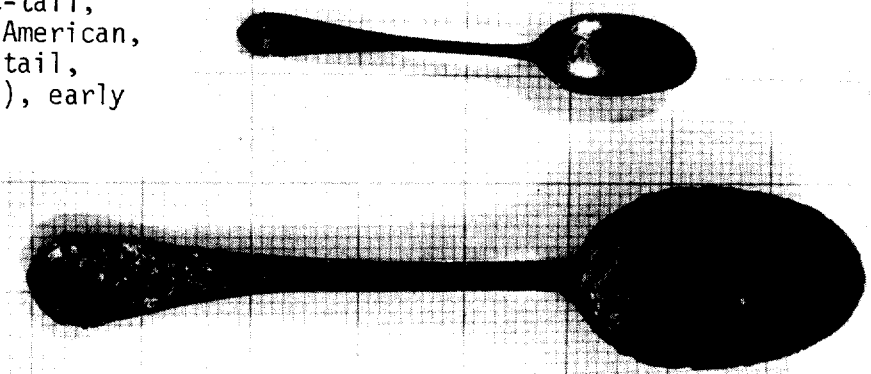


Clay pipes: Red w/ rouletted rim (pre-1692);
white 2/ rouletted rim, bore 6/64 in., mfg. Robert
Tippet I, Bristol, England (1660-ca.1680);
white 2/ rouletted rim, bore 6/64 in. (1690's),
Bristol style bowl.



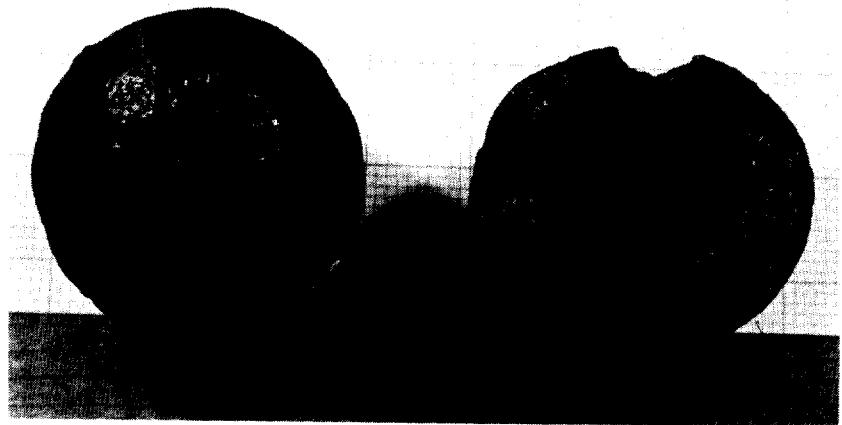
Coins: Ft. Frederick and later, all obverse.
Clockwise from upper left (all half-pennies,
except American cent): George I (1724), George II (1729),
George III (1772), George II (illeg.), George II? (illeg.).

Spoons: Upper, Silver rat-tail,
length 4¼ in. (10.1 cm.), American,
1690's; Lower, pewter rat-tail,
length 7 ¾ in. (19.5 cm.), early
18th century.



Dog-Lock, English, ca. 1650

Bomb-Shells, French (?), 1696,
diam. 3 in. (7.6 cm.), left
unexploded, right exploded



An Annotated Pemaquid Bibliography

PRIMARY SOURCES:

There are a host of documents, including deeds, grants, official reports, correspondence, depositions and diaries which chronicle the 17th and early 18th centuries at Pemaquid. These are thoroughly cited by Edwin Churchill in his introduction to Helen Camp's Archaeological Excavations at Pemaquid, Maine, 1965-1974 (Augusta, 1975).

SECONDARY SOURCES:

Many books, pamphlets and articles have been published over the past hundred years about Pemaquid. Some of these are good, but all too many are very bad. The reason that so much fiction parading as history has been written on the subject is that from its murky beginnings to the 1660's, reports of doings at Pemaquid are sketchy at best. Furthermore, traces of the site have from time to time been "excavated" and the significance of such features as cobbled roads has been grossly inflated. And of course there have always been writers anxious to place the Vikings and other early peoples in contexts where there is a complete void of evidence. The irony is that Pemaquid's documented history is impressive enough without fabricating myths.

Bradley, Robert L., Maine's First Buildings: The Architecture of Settlement, 1604-1700 (Augusta, 1978). An illustrated booklet which draws in part from Pemaquid primary sources and archaeological remains for evidence of the lost buildings of the 17th century.

Camp, Helen, Archaeological Excavations at Pemaquid, Maine, 1965-1974 (Augusta, 1975). A fine report on the excavation of the village area, with plans of fourteen foundations and analysis of the various classes of artifacts found, particularly white clay pipes; a detailed introduction by Edwin Churchill of the history of the site as told by 17th and 18th-century sources.

_____, Pemaquid Lost and Found (Pemaquid, 1967). A brief but useful account of the 1965 and 1966 seasons of work on the village, with good photographs of the various artifacts recovered.

Cartland, J. Henry, Ten Years at Pemaquid: Sketches of its History and Its Ruins (Pemaquid, 1899). Interesting account of the digging and promotion of the Pemaquid Improvement Association in the area of the forts. Contains a number of inaccuracies, but at least is a valuable source of material for work on the peninsula in the 1890's.

_____, Twenty Years at Pemaquid: Sketches of its History and its Remains Ancient and Modern (Pemaquid, 1914). Virtually a reprint of Ten Years at Pemaquid.

_____, and McCrillis, H. O., A Brief Sketch of Pemaquid (Pemaquid, 1912). A rambling pamphlet published for promotional purposes; some inaccuracies.

Castner, Harold W., The Story of Ancient Pemaquid, Metropolis of the New World (Boothbay Harbor, 1950). Extremely misleading account of the settlement's history which interweaves fact and fiction.

Johnston, John, History of the Towns of Bristol and Bremen, Including the Pemaquid Settlement (Albany, 1873). The first comprehensive history of the site, using early source materials; important in calling attention to the importance of 17th-century Pemaquid; an excellent local history, still the 'bible' for the subject.

McBride, H. O., "Ancient Pemaquid the Jamestown of New England" New England Magazine (1906). Popular and misleading account.

Moorehead, Warren K., "The Ancient Remains at Pemaquid, Maine: Some Observations", Old-Time New England, XIV, no. 3 (1924). A brief report of excavations carried out on the site in 1923 to determine whether or not the Norse (Vikings) had settled there in the 11th century or later; no evidence of this was encountered. Several village structures and a small part of the fort compound were excavated, to their detriment; a marginally useful source at best.

Parker, Arlita Dodge, A History of Pemaquid (Boston, 1925). A competent review of the site's history in some detail; not as useful a source as Johnston (see above).

Sewall, Rufus K., Pemaquid, Its Genesis, Discovery, Name and Colonial Relations to New England (Portland, 1896). A short paper which hopelessly misinterprets primary sources to argue that Pemaquid was developed by elements of the Popham Colony from 1608 on.

Sylvester, Herbert Milton, Ye Romance of Olde Pemaquid (Boston, 1908). Quasi-history, the title is appropriate.

Thayer, H. O., "Ancient Pemaquid", Collections of the Maine Historical Society, 3rd Series, II (1906). Concise and accurate review of the earliest references to the site.

Thornton, J. Wingate, "Ancient Pemaquid: an Historical Review", Ibid., 1st Series, V (1857). Apparently the first secondary source to concentrate on this subject; unfortunately, extravagant claims made of Pemaquid's age, among other things.

Addendum:

Bradley, Robert L., The Forts of Maine, 1607-1945: An Archaeological and Historical Survey (Augusta, in press). An illustrated booklet which concentrates on state-owned sites, while drawing on many others for context. Featuring largely unpublished graphics, this work contains detailed sections on Pemaquid's three forts.