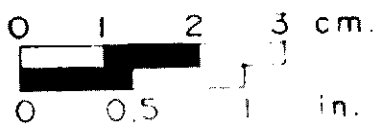
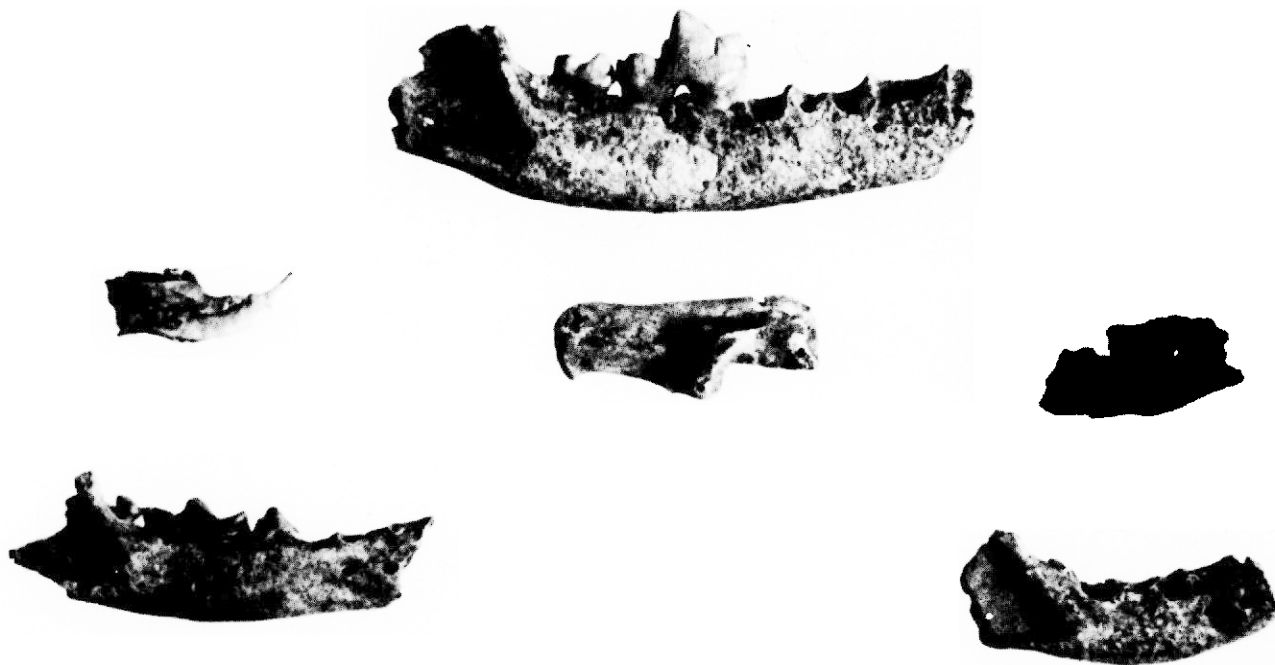


THE MAINE ARCHAEOLOGICAL SOCIETY INC.



BULLETIN



VOLUME 36:1

SPRING 1996

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DEDICATION

Bruce L. Davis

1950 — 1995

The membership of the Maine Archaeological Society, Inc., acting through its Board of Directors, would like to dedicate this Spring 1996 issue of the *Maine Archaeological Society Bulletin* to the memory of our friend, Bruce L. Davis. At the time of his death in May of 1995, at the age of 45, Bruce was a student at the University of Maine working toward a B.A. in Anthropology. As a fieldworker, Bruce participated in Cultural Resource Management survey projects at the Milford Dam impoundment and at mitigation excavations at the Eddington Bend and Gilman Falls sites. Bruce brought a boundless enthusiasm for the joys of archaeological discovery to his work and never allowed the vicissitudes of fieldwork to dampen his good humor. He will be missed by his family and many friends and co-workers in archaeology.

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THE LADY SLIPPER MIDDEN SITE (14.31)

Dave Backman

"...for the soil is rich with the life of our kindred."
- Chief Seattle, 1854

INTRODUCTION

The Lady Slipper Midden site is on one of the many islands located at the juncture of Maine's midcoast and southwest coast at Casco Bay. The island's owner has requested that the island's identity remain confidential. The site's name is derived from a solitary lady slipper plant which grew adjacent to the excavated units. I look forward to the plant's return next year.

My interest in Maine archaeology was kindled by Nate Hamilton as he provided a variety of field trips and lectures through the Maine Audubon Society. This interest led to my subsequent involvement with this project, conducted under Nate's auspices. Extreme erosion at this midden site was the principal factor in site selection.

ISLAND CHARACTERISTICS

The island is less than 600 yards long running along a northeast/southwest axis. Its width is roughly half its length, and the island has a fairly steep slope towards its center. A portion of the shoreline is tidal with clam-rich mudflats exposed at low tide. No existing structures exist on the island nor is there any evidence of older structures. There are only three existing midden sites. Two of these are quite close together, located at the island's northeast end. The midden there is very sparse. These two sites may have been part of a larger site which experienced significant erosion over the centuries. The Lady Slipper Midden is the third site and is located on the southeast/south end of the island. The entire island is wooded, consisting of various types of birch and maple along with copious white pine, oak, and balsam fir. The vegetation growing at the Lady Slipper Midden is described below.

This island and its midden sites coexist with many others in Casco Bay. In 1978, MHPC provided a grant to David Yesner to begin locating all known Casco Bay midden sites. This survey has continued under the direction of Nate Hamilton and includes over 500 sites. Radiocarbon dating for many of these sites was accomplished by extracting and testing burned clamshells from eroding midden embankments. The resultant date for the Lady Slipper Midden was 950 ± 160 years B.P. (Before the Present).

LADY SLIPPER MIDDEN CHARACTERISTICS

The site has a total oceanside perimeter length of 283 feet as measured at the top of a steep embankment above the water. Approximately 80% of this embankment rests upon a granite rock ledge which runs down the southeastern portion of the island. As the embankment curves around the southern end of the island, it transitions into an 8 foot vertical cliff of eroded, sandy-brown soil. The shell midden extends upwards of 40 feet back from where the granite embankment transitions to the cliff. This portion of the midden was used for study in 1995.

Regarding the oceanside perimeter, there are several locations on the southeastern embankment where the midden is washing out onto the granite ledge. Additionally, a 28 foot section of this ledge has fallen into the sea, thereby eliminating whatever midden had existed there. Since the southern embankment cuts vertically through the midden, a cross section of the midden is visible in the upper few feet of the embankment.

The segmentation of the vegetation at this midden site is interesting. The oceanside perimeter consists of scarlet hawthorn, poplar, bayberry, along with an occasional rugosa rose, spruce, and thistle. However, growth upon the midden area itself consists of a very dense combination of broad-leaf dogwood and balsam fir. On the island, the broad-leaf dogwood exists only in midden area, but dominates it.

LOGISTICS AND TECHNIQUES

A small, low horsepower aluminum boat was used for island access. Since there was no sheltered area for mooring the boat at the southern end of the island, I continually repositioned the boat to accommodate the rise and fall of the tide. From a small-boater's perspective, Casco Bay can be notorious for suddenly and frequently providing strong southerly winds and relatively high, choppy waves. My boat took a continual pounding this past year, suffering a two inch crack in the fall. Bailing sea water became a continual island transit activity.

The tools I utilized at the site consisted of a quarter inch wire mesh basket, a mason's trowel, a circular plastic pot, wirecutters for small roots, an expandable wooden ruler, a compass, a 100 foot tape measure, notebooks, and a few plastic baggies.

I established a permanent datum reference point at a large boulder overlooking the site. Bearing and range for the initial units were referenced to this datum point. I learned, however, that since I was using a hand-held compass to establish a unit's bearing, the accuracy of the bearing diminished as the unit's distance increased from the datum point. As a result, I placed four 12-inch iron spikes into the ground at key locations. Bearing and range for all subsequent units were referenced to the closest spike and to two other nearby units. A total of 65 units were dug and mapped (Figure 1).

Since the midden was extremely overgrown, the location of a unit was largely a function of ease of access. I would mark off a 2 foot by 2 foot area with string and nails. I would use the trowel to scrape midden within a particular quadrant of the unit. Any significant finds (e.g., artifacts, bones, lithic debi-

tage) would be recorded in the notebook and placed in a plastic bag.

I would then pick up several handfuls of the scraped midden and sift it into the plastic pot, again removing and recording any discoveries. When the pot was a third full, I would dump its contents into the wire mesh basket and shake it over the plastic pot, such that the smaller midden content would sift back into the plastic pot. The basket contents, followed by the pot contents, would be searched and any finds noted and bagged. The containers would then be dumped adjacent to the unit and I would commence troweling again.

Each unit was diagrammed in the notebook, highlighting location and size of fire-cracked rock (FCR), cobbles, artifacts, etc.. If the walls of the unit presented some stratigraphic differentiation, I would diagram the walls in the notebook. I also photographed seven of the units due to the complexity of FCR and cobbles contained in those units. The depth of a unit was determined by digging until it became clear that I had reached glacial till or base rock. Unit depths ranged from a minimum of 4 inches to a maximum of 23 inches.

Upon completing a unit, I placed all extracted rocks into the unit's northwest corner and then refilled the unit with clams and dirt. After replacing the extracted soil, care was taken to insure the site kept an "untouched" look. A lone white beach cobble was placed at the center of each unit in order to aid in relocating the unit if necessary. The buried spikes and datum reference point would also serve in this regard.

METHODOLOGY FOR ANALYSIS

All artifacts and faunal remains were reviewed at both the MHPC and USM archaeology labs. MHPC was the principal lab for mammal and bird analysis. This was accomplished by comparing the excavated bones with those of species maintained at the lab. Liz Trautman provided the direct supervision and support for these analyses. If the MHPC did not have a particular species in its collection, we would attempt to locate and utilize another collection. For example, we used the Maine State Mu

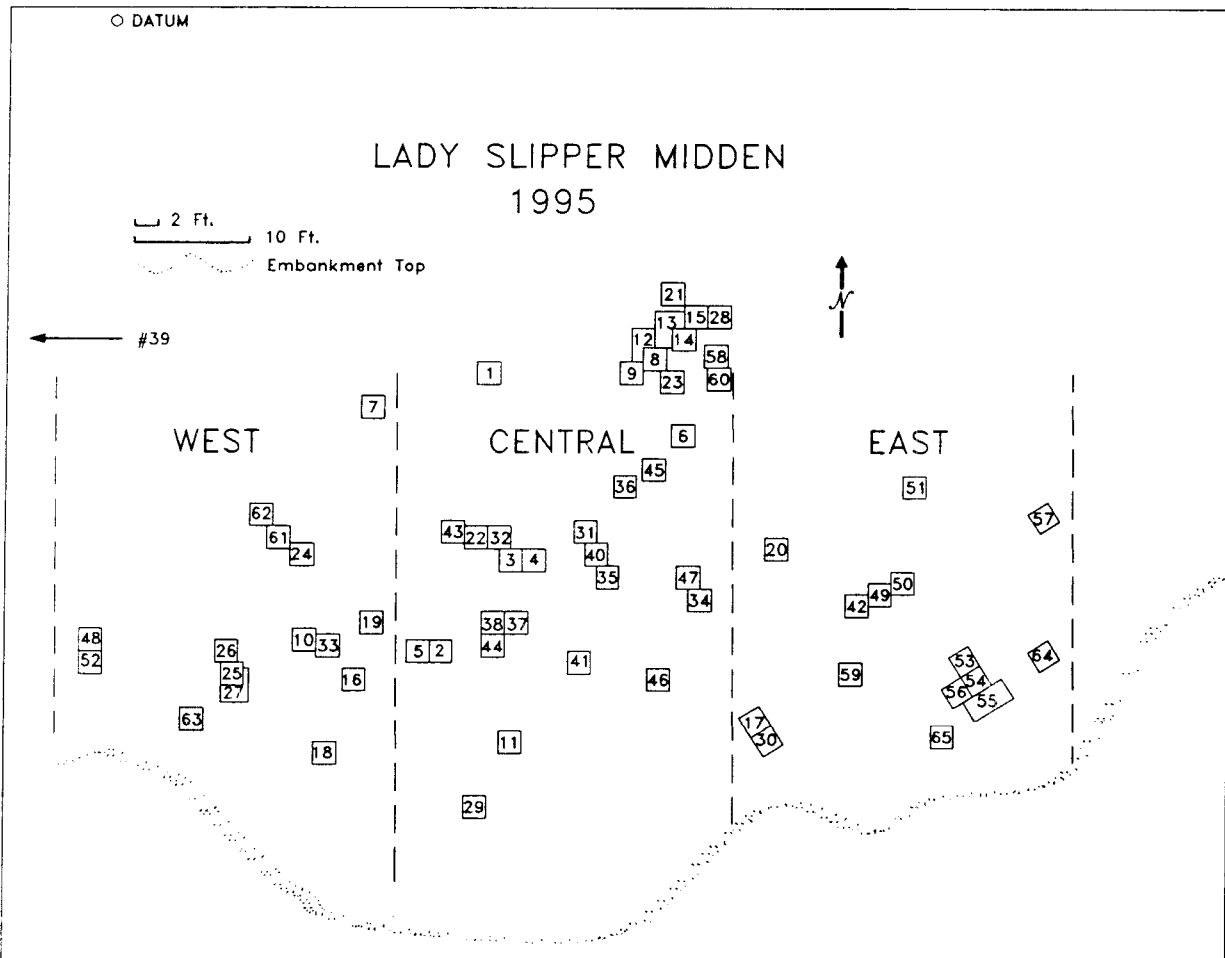


Figure 1. Site map of the Lady Slipper Site.

seum lab to confirm identification of a marten mandible. The analyses of fish and shellfish were performed at USM.

ANALYSES OF FAUNA

An initial review of all faunal remains resulted in the identification of the species listed in Table 1. The number appearing in parentheses indicates the number of species-specific bones which have been identified at this time. The identity of the bone is provided if the species-specific number is one.

An evaluation of this species data provides some insight regarding the island's inhabitants. First of all, there is quite a breadth of species recovered at the site. This probably indicates that the inhabitants

had a broad diet rather than a highly specialized diet. For example, even the moon snails show evidence (i.e., broken tops or apertures) of having been eaten. Secondly, there are many fur-bearing species which would be prized for their pelts (i.e., beaver, marten, red fox, river otter, sea mink, and the large canid, if it was a wolf). It should be noted that the fox's right rear leg's calcaneus bone has a deep incision which most likely reveals a skinning cut (Figure 2). Thirdly, the island's inhabitants probably utilized a wide variety of species gathering technologies, listed in Table 2.

Lastly, the island appears to have been occupied in all seasons. During the winter, the great auk would have been present in the bay. Although some

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Table 1. Faunal remains from the Lady Slipper Midden site.

Mammals

Beaver (10), White-Tailed Deer (40*), Gray Squirrel (1=mandible), Marten 91= mandible), Moose (1=lumbar vertebra), Red Fox (11), River Otter (4), extinct Sea Mink (2), Seal (1=femur). Note - Two additional but more general identifications were for a Large Canid (5) and for an immature Canid, larger than a fox (1=radius). Mammal mandibles can be seen in Figure 2.

*The minimum number of individuals (MNI) for the deer is 2 from two different perspectives. First of all, since a deer has only one right carpal cuneiform bone in its body and since two of these were recovered, the MNI for deer equals two. Secondly, wear on a recovered deer's M3 molar indicates it was roughly 3 to 4 years old. On the other hand, a recovered deer's phalange #2 bone was unfused at its end (i.e., epiphysis). Consequently, this lack of epiphyseal fusion reveals the age of this deer to be less than 14 months. Therefore, MNI = 2 based upon the age difference of the two deer.

Birds

Canada Goose (10), Common Eider (23), extinct Great Auk (6), Loon (8). Great Auk remains can be seen in Figure 3. Note: Anatid (duck) species are classified by size ranging from 1 to 4, smallest to largest respectively. The common eider is anatid 4. Anatid bones associated with all size classifications have been recovered but species identification has not yet been completed. Therefore, listed below are anatid species and their corresponding size classification which have been observed around the island. Most likely, some of these species are represented by the recovered bones.

Anatid 4 - Common Eider

Anatid 3 - Black Duck, Mallard, White Winged Scoter

Anatid 2 - Common Goldeneye, Old Squaw, Red- Breasted Merganser, Surf Scoter

Anatid 1 - Bufflehead

Fish

Alewife or Shad (2), American Eel (1=dentary), Cunner (35**), Cod (37), Flounder (46; MNI = 33, based on unique interhaemal spine, i.e., one per flounder), Long Horned Sculpin (6), Sturgeon (5). Sturgeon scute fragments can be seen in Figure 4.

** This number probably reflects one individual, as these vertebrae were recovered from one unit.

Shellfish

Boat Shell, Common Periwinkle, Dogwinkle, Fresh Water Clam, Little Dog Whelk, Moon Snail, Mussel, Quahog, Soft Shell Clam, Yellow (Smooth) Periwinkle, Waved Whelk.

Table 2. Food collecting techniques inferred used by the inhabitants of the Lady Slipper Midden.

Hook and Line - Cod

Note: The annular rings on one recovered cod vertebra revealed the cod to be at least 10 years old with an estimated weight of 60 to 100 pounds.

Harpoon / Spear - Seal, Sturgeon

Traps - Beaver, Marten, Otter, Sea Mink

Fish Weir - Flounder, Sculpin, Alewife or Shad

Note: A portion of the island has an intertidal channel between it and another island. Convenient access to the channel and the prevalence of fish remains at the site suggests the possibility of a weir. The fish would be speared and gathered from the weir.

Bows and Arrows - Deer, Moose

Nets - Fish, Ducks

Gouge / Digging Tool - Clams, Quahogs

Slingstone / Sticks - Ducks

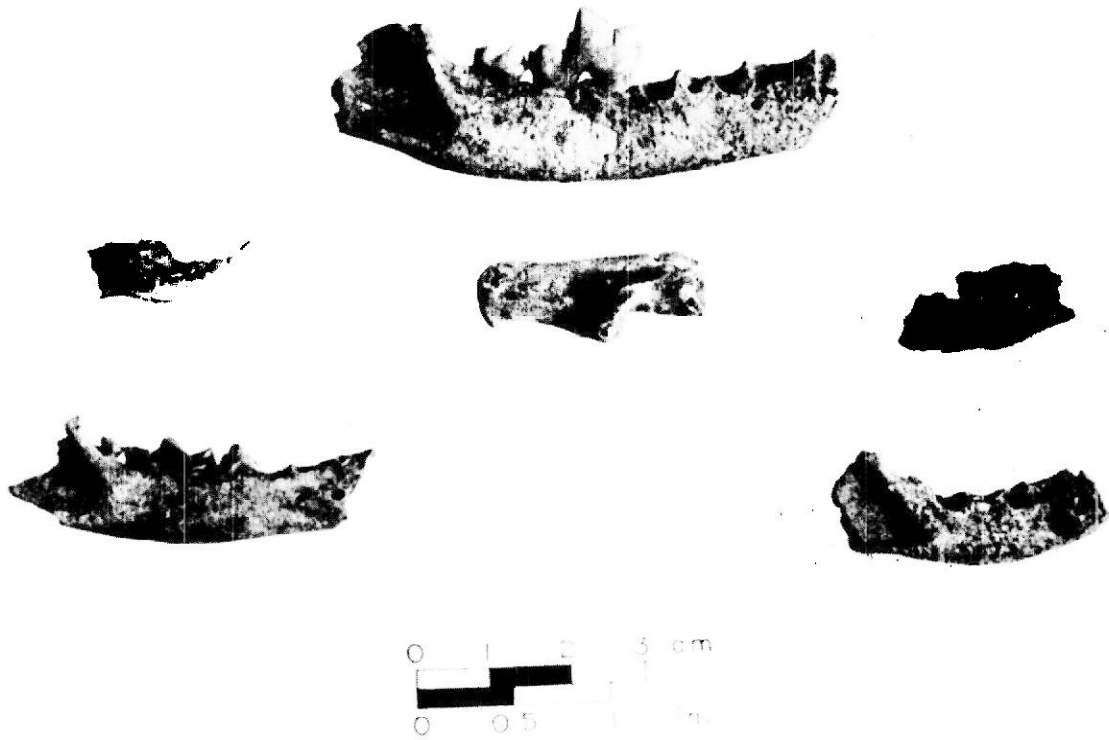
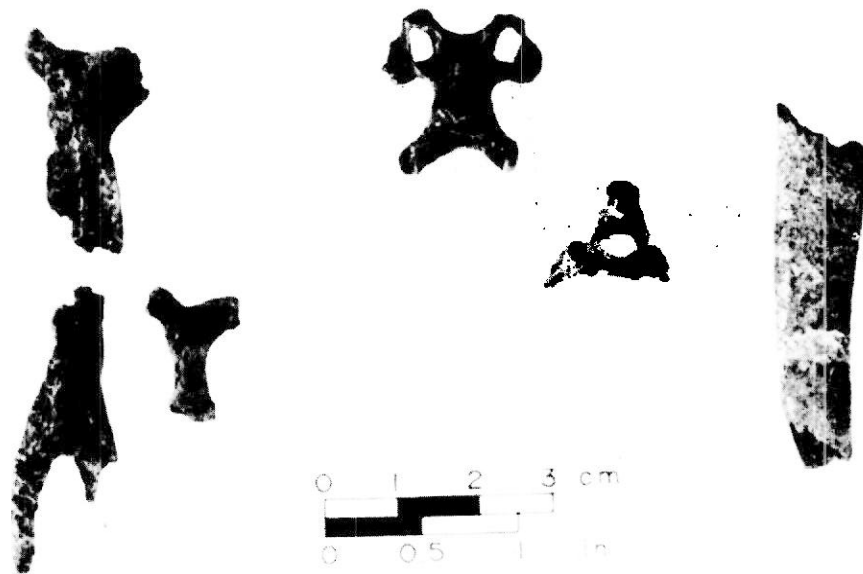


Figure 2. Starting clockwise from the lower left are mandibles for the marten, gray squirrel, red fox, beaver and the extinct sea mink. Center: fox's calcaneus with a probable skinning cut across the upper surface as pictured.

Figure 3. Extinct great auk bones. Left top: skull fragment. Left bottom: mandible fragment on the left and a quadrate to its right. Center top: cervical vertebra at the top. Center right: axis (vertebra). Right: humerus fragment.



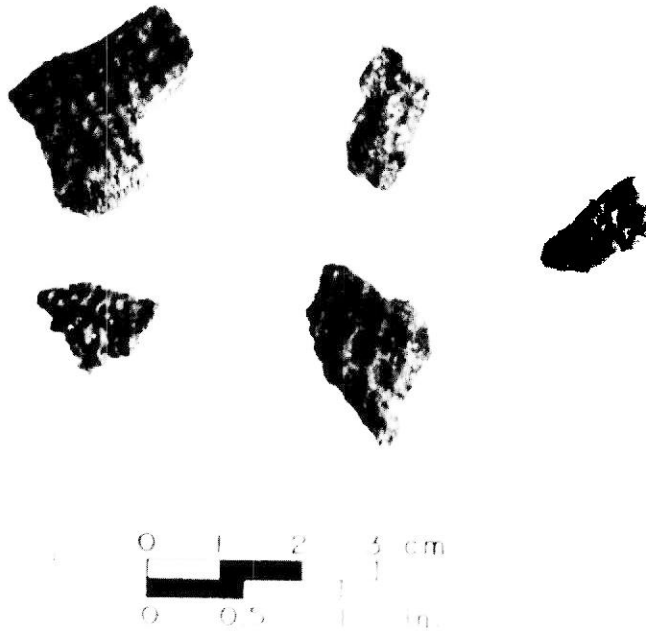


Figure 4. Sturgeon scute fragments.

loon occupy the coastal salt waters year round, the predominant occupation occurs from late fall through early spring. Additional winter sustenance could have been provided by deer, moose, beaver, and winter ducks. Backing up all of these winter food sources would be the readily available clams and quahogs.

Spring would see the cod return to the warmer waters. The Canadian goose traverses the Atlantic Flyway to and from its breeding grounds in early spring and late fall. The alewife, or shad, would be heading from the ocean toward the river to spawn in the spring.

The summer's warm waters would provide bountiful flounder and sculpin; the sturgeon would also be present. The seal and common eider would be most accessible during the summer as they congregate around the islands in raising their young.

A numeric analysis of the recovered faunal remains reveals the following data. A total of 240 cubic feet (6.8 m³) of midden and soil was excavated from which 1365 bones or bone fragments were recovered. Of this total, 342 (25.1%) are mammal,

533 (39.0%) are bird, 473 (34.7%) are fish and 17 (1.2%) cannot as yet be conclusively identified.

Interestingly, the percentages of total mammal and total bird bones which have been burned are almost identical; i.e., 19.3% (66) and 18.2% (97) respectively. Calcined bones are those subject to heat in excess of 600°C which results in some bone shrinkage and a change in color to a white or gray-white. The number of calcined bones at the midden was minimal with only 9 (2.6%) calcined mammal fragments and 6 (1.1%) calcined bird fragments.

In Spiess and Hedden (1983) regarding Kidder Point and Sears Island, they stated that large mammal long bone fragments which are greater than 5 cm were representative of long bone splintering in order to access the marrow. A total of 14 large mammal long bone fragments met this criterion.

ANALYSIS OF CERAMICS

Native Americans in Maine started to manufacture ceramic vessels about 3000 years ago. The predominant characteristics of these ceramic vessels changed with the passage of time. Examples of a vessel's characteristics would include the decoration on the vessel's surface, the type of temper contained in the pottery, and its shape and thickness.

For Maine and the Maritime Provinces, James Petersen and David Sanger correlated the predominant characteristics of recovered ceramics with their associated radiocarbon dates. This correlation led to the definition of seven ceramic periods (CP), each of which has its own set of characteristics. CP1 is the oldest period which began about 3000 years ago while CP7 is the youngest, occurring about 400 to 300 years ago during the earliest historic period.

At the Lady Slipper Midden, a total of 10 vessel lots (pottery shards which are thought to belong to the same vessel due to common characteristics) were recovered from 15 of 65 excavated units. These vessel lots (VL) are associated with ceramic periods

Table 3. Vessel lot descriptions.

VL1, CP6 - 24 shards including the vessel's base disk. Light-brown exterior and interior; 3.9 mm average wall thickness; corded exterior which has been smoothed; fine grit temper (less than 1 mm) which must have been sifted; two repair holes, each of which is 3 mm in diameter which Nate Hamilton indicates is the same size as 2 ply basswood fiber cordage. (Figure 5)

VL2, CP6 - 66 shards. Gray-black/gray-brown exterior with a black/gray interior; 3.7 mm average thickness; corded exterior and interior which has been smoothed but residual fabric impressions appear to be Z-twist; intermixed fine to medium grit; significantly curved shards probably indicate a collared vessel.

VL3, CP6 - 15 shards. Orange-brown exterior with a dark gray interior; 3.5 mm average thickness; exterior surface is degraded but shows an incision; medium, dense grit temper.

Note: Nate Hamilton believes VL's 1,2, and 3 were manufactured between 1400 and 1550 AD.

VL4, CP5 - 2 shards. Gray exterior and dark gray interior; 7.7 mm average thickness; smooth, semi-gloss exterior surface with a very bold incision (possibly chevron) which is similar to historic period bold incisions; shell temper (Figure 6).

VL5,CP5 - 5 shards. Light brown exterior and gray brown interior; 8.5 mm average thickness; smooth exterior and interior but rim shard has fabric impression; large, very dense shell temper.

VL6, CP5 - 4 shards. Light brown exterior and interior; 6.5 mm average thickness; smooth, high gloss exterior and interior surface (possibly leather burnished); shell temper.

VL7, CP5 - 2 shards. Oxidized orange exterior and a high gloss gray interior; 8 mm average thickness; fabric-impressed exterior (Z-twist); shell temper.

VL8, CP4 - 55 shards. Brown exterior with a dark gray/brown interior; 9.2 mm average thickness; the exterior surface was rolled with a tightly woven, Z-twist fabric paddle which created "channels" on the surface; the interior was smoothed with a fabric paddle; very coarse grit temper (Figure 7).

VL9,CP4 - 12 shards, including the vessel's base disk. Orange exterior and black interior; 7.2 mm average thickness; fabric-impressed exterior and a smooth, burnished, fabric paddled interior; fine to medium grit temper.

VL10, CP2 - 1 shard. Orange exterior and an orange/gray interior; 5.2 mm average thickness; smooth, non-blemished surface with delicate rocker dentate stamps; fine grit temper (Figure 6).

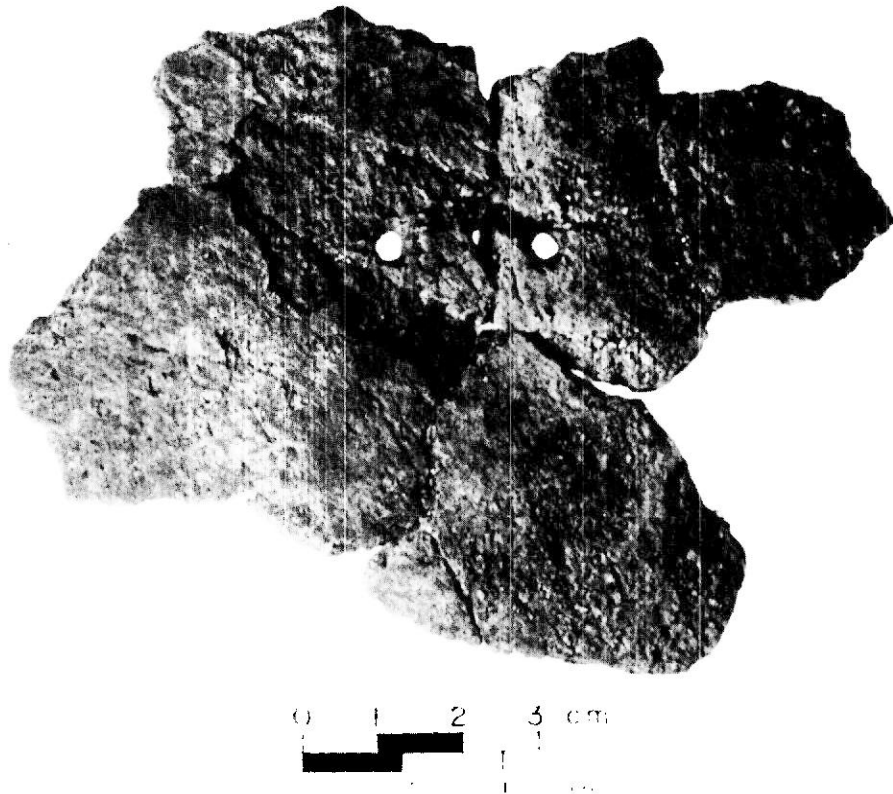


Figure 5. CP6 sherds revealing two repair holes (Vessel Lot 1).

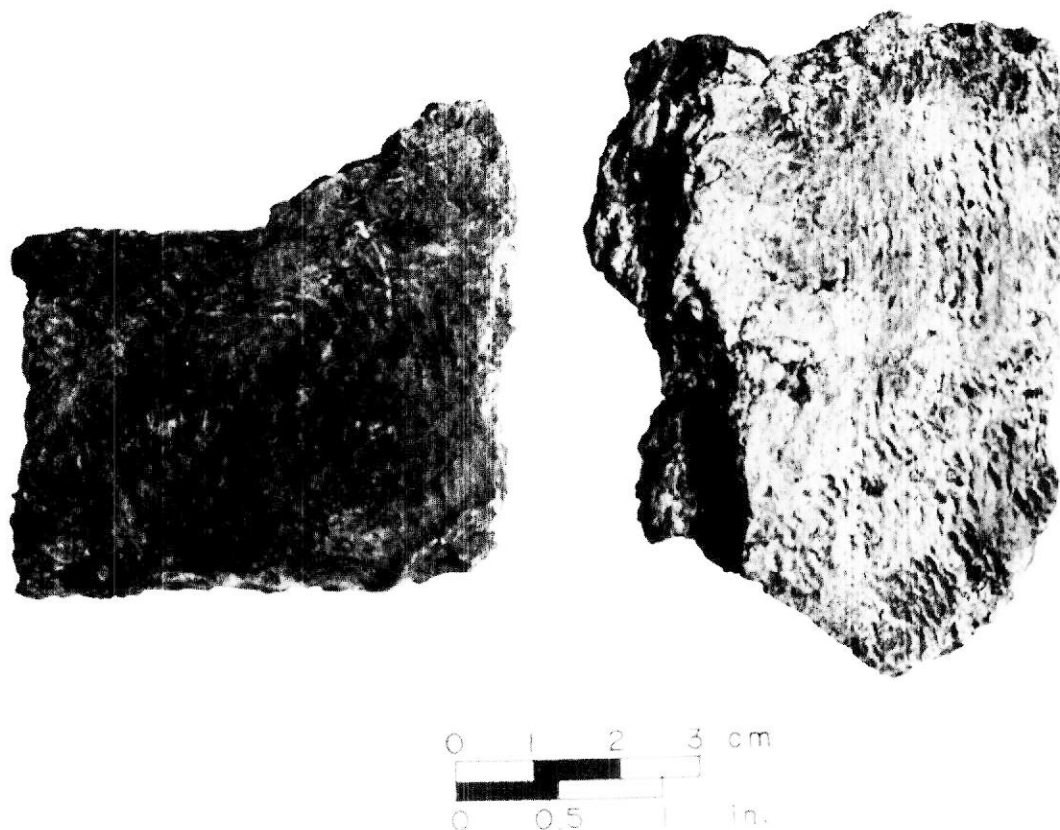


Figure 7. CP4 sherds revealing fabric padding and “channels” (Vessel Lot 8). Left: sherd was brushed but not washed. Right: sherd was thoroughly washed.

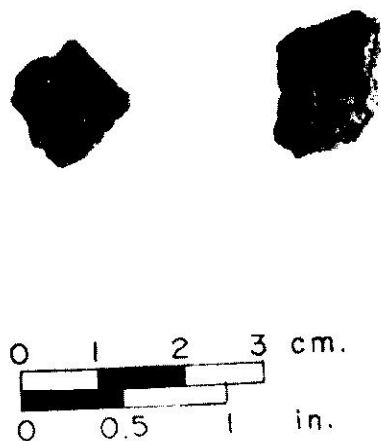


Figure 6. Left: CP5 sherd continuing possible chevron (Vessel Lot 4). Right: CP2 sherd with delicate rocker dentate stamps (Vessel Lot 10).

as follows: 3 VL's for CP6, 4 VL's for CP5, 2 VL's for CP4, and one VL for CP2. This association is based upon the principal characteristics of the vessel lots as follows: CP6 - thinness of vessel walls, CP5 - shell temper, CP4 - fabric padded decoration, CP2 - delicate rocker dentate stamped decoration. Other vessel lot characteristics that also applied in making these associations appear in the vessel lot description listed in Table 3.

The physical location of the vessel lots varies with the ceramic period and therefore needs description. All of the CP6 VL's, comprising 105 shards, were found clustered in three contiguous units on the west side of the site. One of the two CP4 vessel lots was clustered (50 of 55 total) in two contiguous units in the middle of the site. The other CP4 VL shards, 12 in number, were clustered in one unit on

will hopefully shed light on these questions.

ANALYSIS OF LITHICS

Recovered lithic artifacts will be discussed in the artifacts section below. The lithic debitage, i.e. remains from stone tool manufacture, is straightforward regarding the lithic materials which were used. A total of 193 flakes of debitage were recovered. Of this amount, 91 (47%) were Kineo felsite, 71 (37%) were quartz of which 67 flakes were clear and only four were white, and 28 (15%) were blue/gray rhyolite. The remaining three flakes consisted of one Munsungun chert which was a medium brown color with some light brown swirls and two rhyolite flakes which were a medium to dark brown color with black speckles.

The total weight of the debitage is 180.2 grams; of this the kineo felsite is 126.4 grams (70%), the quartz is 39.7 grams (22%), the blue/gray rhyolite is 12.7 grams (7%), and the other flakes are 1.4 grams (1%).

Debitage distribution seems to highlight a tool manufacturing area. Of the 65 excavated units, 31 units yielded at least one flake and these units were distributed across the entire excavated area. However, 6 contiguous units yielded 155 flakes (80% of the total). This apparent tool making area lies at the north central edge of the excavated midden area about 44 feet back from the southern embankment. Two other points regarding the lithic debitage should be made. First, the debitage material is similar to materials recovered at sites along the Kennebec and Penobscot drainages. This suggests a direct association of the island's inhabitants with the population of this larger geographic area. Second, at this time no Kineo felsite or blue/gray rhyolite artifacts have been recovered. This suggests that tools manufactured from this material were not utilized on the island, e.g. spear points or arrowheads used for hunting large mammals on the mainland.

FAUNAL/LITHIC ARTIFACT DESCRIPTION

If the excavated area is divided into three equal segments along its 75 foot east/west axis, the west

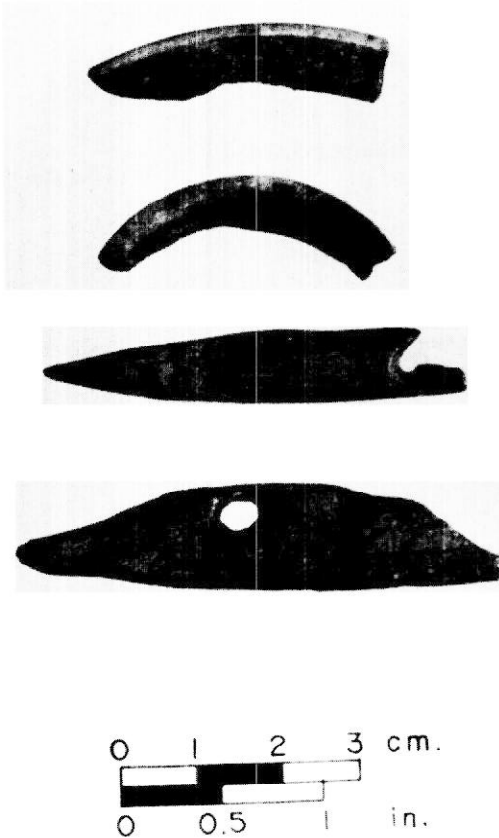


Figure 8. Top to bottom: two utilized beaver incisors, a spearpoint and harpoon.

the east side of the midden at a distance of 46 feet from the CP6 cluster. This same eastern unit also held the CP2 vessel lot.

The CP5 VL's, on the other hand, were widely dispersed across the site and there were relatively few shards. Specifically, there were four CP5 VL's comprised of only 14 shards which were recovered over an east/west lateral distance of 56 feet.

This vessel lot physical positioning prompts a few questions. Does the CP6 cluster identify a dwelling site and is the west side of the excavated midden site a CP6-specific occupation site? Do the co-located CP4 and CP2 VL's indicate an older occupation on the east side of the midden area? What accounts for the CP5 VL distribution and volume differences? Future excavation and analysis



Figure 9. Top: goose humerus whistle. Lower left: deer phalange with drilled hole. Lower right: blackened, very dense pin, needle or awl fragment.

segment has 16 excavated units, the central segment has 34 units, and the east segment has 15 units. The recovered faunal and lithic artifacts were fairly evenly distributed across the central and east segments whereas none were found in the west segment.

A brief description of the faunal artifacts is as follows: (1) the base of a bone harpoon which contains a line hole and could have been used to hunt seal and sturgeon. (2) the tip of a bone spear. (3) a beaver incisor which was used as a crooked knife in carving wood. (4) a beaver incisor with a blunt, polished concave tip probably utilized in woodworking. (5) a whistle carved from a goose humerus, perhaps utilized as a child's toy or as a way to mimic a bird's call; the elliptical hole which was carved to enable a person to blow into the whistle is identical to those carved into the swan whistles at the Abbe Museum, Bar Harbor. (6) a heavily oiled, blackened, polished fragment of what might have been a pin, needle, or awl; this piece may possibly

be made from walrus ivory. (7) a deer's first phalange which has a hole drilled in one end and was perhaps used as ornamentation. The aforementioned faunal artifacts are pictured in Figures 8 and 9.

The following is a description of the small lithic artifacts. First, six end-scrapers were recovered. End-scrapers are ubiquitous at sites in Maine and were used for scraping hides, shaping wood by scraping charcoal from it, and probably many other utilizations. Of these six end-scrapers, three were clear quartz, one was white quartz, and two were waxy Munsungun chert, both dark brown but one with black linear slashes throughout it, the other with an occasional orange vein within it. Additionally, another clear quartz end-scrapers was partially developed but probably rejected due to an inability to eliminate its very high back at what would have been its proximal end.

A single Late Woodland side-notched arrowhead was recovered. It is broken and is made from dark brown Munsungun chert which contains a light

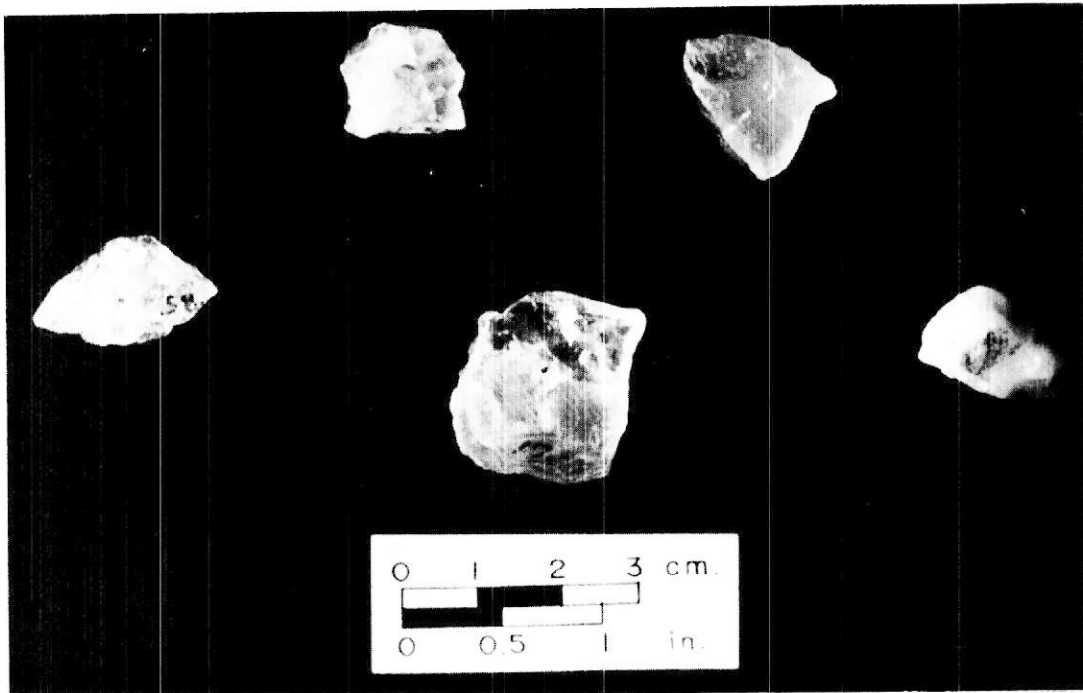


Figure 10. Quartz endscrapers with partially developed scraper in the center. The scraper furthest to the right has a very steep distal end.

Figure 11. Left: two chert end-scrapers. Top: pigment stone. Lower right: fractured, side-notched arrowhead. Lower center: broken drill bit.

blue vein and several light blue spots. Interestingly, the chert end-scrapers, the arrowhead, and the chert flake were the only chert lithics recovered at the site and they were recovered from the same unit in the eastern segment.

Additionally, a broken drill bit and a pigment stone were recovered. The drill bit is flaked on both sides and is made from a brown material, possibly siltstone, which contains small quartz grains. The pigment stone is quite soft and writes with the texture of a crayon on paper; its color is yellow brown. All of the aforementioned small lithic artifacts appear in Figures 10 and 11.

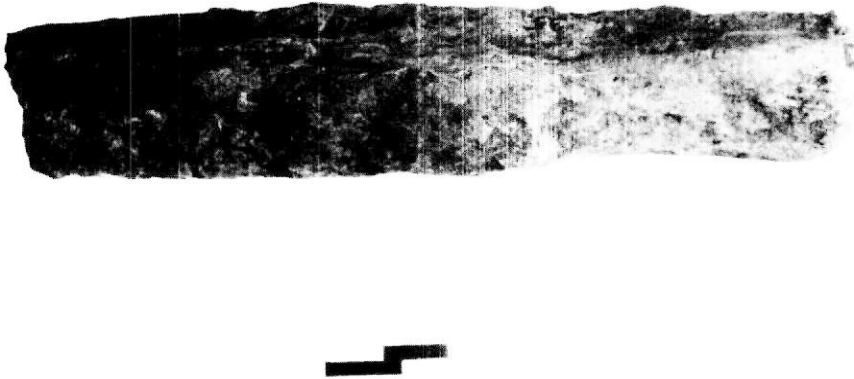
The larger lithic artifacts recovered from excavated units consist of an adze, a stone rod, and a hammerstone. These are pictured in Figures 12 and 13. The adze is from the Late Woodland period and has been pecked and ground to a fairly sharp edge at its distal end. It might have been used as a





Figure 12. Top: hammerstone. Bottom: adze.

Figure 13. Fractured stone rod, perhaps utilized for digging clams.



bark peeler. The stone rod has been pecked on its sides and has a transverse fracture across one end. It may have been utilized for clam digging.

A hammerstone consisting of two articulating parts was recovered from two units which were 16 feet apart in the eastern segment of the site. The depth within these units was quite different; the hammerstone base was 22 inches while the tip was at 6 inches. The position of these articulating parts helps in establishing stratigraphic linkages. This hammerstone is made of a very fine, 400 to 600 grit material. There is a 2.5 cm chip missing from one edge at its tip and this chipped section terminates in a transverse fracture which caused the stone to split. Hammerstones were used for a variety of functions including lithic tool manufacture, pounding dried meat for pemmican, splitting ribs from the sternum of deer and moose, separating plant fibers for cordage, and removing hair from rawhide. This hammerstone was probably used in pestle-like fashion. Its distal end appears to be identical in size and shape to a Middle Archaic abrader/whetstone/hammerstone (Petersen 1991: Figure 70, left) recovered at the Sharrow site. Its recovery reinforces James Petersen's statement that "the long persistence of these forms, ca. 7000-6500 B.C. to A.D. 1000 and later, likely related to their fundamental importance for flaked stone tool manufacture and other activities" (Petersen 1991:95).

Three island tools were recovered from the beach directly below the eroding southern embankment (Figures 14, 15 and 16). The first is a white quartz wedge. The second is either an abrader or a biface grinder. The abrader could have been used for grinding with a grit intermediary; the biface grinder could have been used for dulling the edges of knives or points in preparation for pressure flaking. In either case, the tool has many striations. It is made from a very dark brown rhyolite-like material. Interestingly, this artifact has possible red ochre staining.

The third beach find appears to be a small maul. It is a pear-shaped natural stone and has a man-made groove which is up to 7 mm in width encircling the surface near the stone's tip. This groove was then

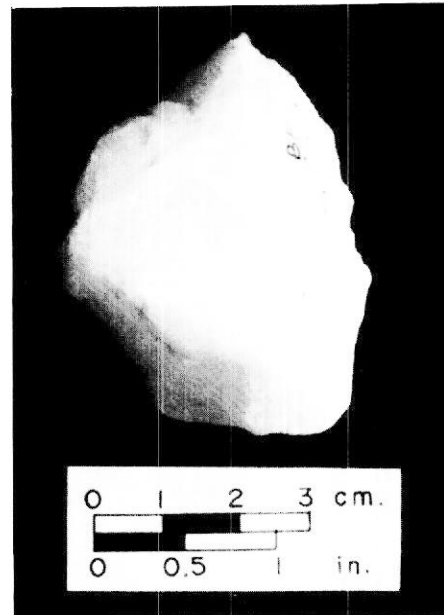


Figure 14. White quartz wedge; beach find.

Figure 15. Biface grinder/abrader with many striations. This beach find was recovered at the base of the southern embankment.



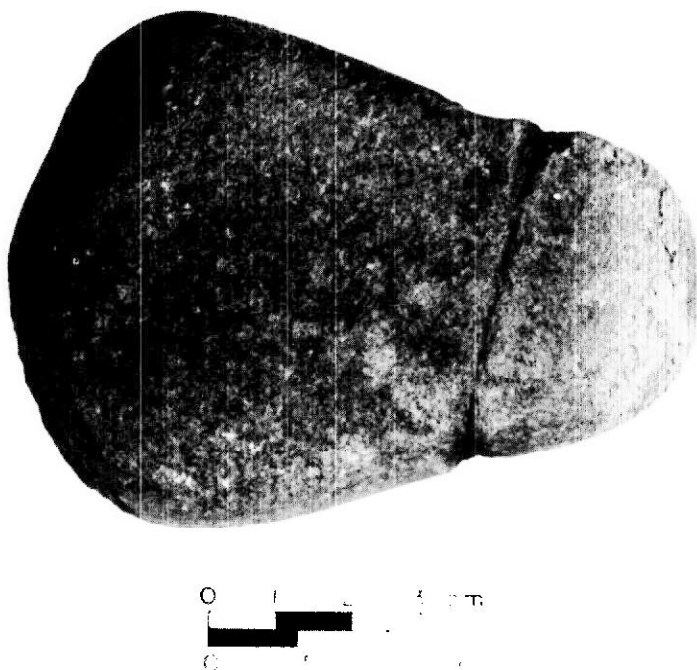


Figure 16. Maul; beach find.

wrapped in something like a leather thong since there is a residual stain about 1.5 cm in width which overlaps the entire groove. Both ends of this maul appear to have been utilized.

POINTED STICKS AND QUAHOGS

Two additional findings should be discussed. First, seven pointed sticks were recovered from the predominantly rocky center of the excavated midden. C. Keith Wilbur's book (1978) indicates that midden sites often produce pointed sticks which are the remains of poles driven into the ground. Wilbur states these poles would be used as supports for drying racks, firescreens or windbreaks, and temporary frameworks for wigwams and smokehouses. Since we cannot discern cut marks on these pointed sticks, they may be of natural origin. The two largest widths for these sticks are 2.4 cm and 1.8 cm respectively.

The second finding could be significant regarding this site. The 51st excavated unit contained a

solid layer of quahog shells starting at a 5 inch depth continuing to glacial till at 11 inches. No previous units had yielded a quahog layer; only two units had yielded several quahog fragments. Subsequently, an additional 5 units yielded quahogs in volume starting at an average depth of 8 inches. All of these quahog yielding units are in the eastern segment of the midden. This may be significant regarding occupancy segmentation of the site. Quahogs and oysters (none thus far have been found) are prevalent in older middens (2000+ years ago) when waters were warmer. Subsequent cooling of the water led to the predominance of soft shell clams and mussels.

SITE STRATIGRAPHY

As inhabitants live and work in a location, strata of residual materials accumulate over time upon the ground. The value of a shell midden site is that the discarded clam shells help to preserve artifacts in the strata. This is due to the fact that a midden drains water effectively and the calcium carbonate from the shells helps neutralize the acids and salts contained in the soil which would otherwise accelerate decay and disintegration. The stratigraphy at a midden is complex because of the varied uses of a particular location over time, e.g. the location of a dwelling in one time period might become a refuse dump in another. The rate of residue buildup vertically above the ground is very much a function of how a location is used, e.g. the refuse dump receives more residue than the living floor of a dwelling. Understanding the stratigraphy at Lady Slipper Midden is also difficult because extensive overgrowth precludes digging many contiguous units.

Two features at the site can be discussed with regard to stratigraphy. First, a zone of large, principally flat rocks exists in the center of the excavation area. Eleven units reveal this rock zone which is an estimated 200 square feet in area. This layer of

rocks lies at the bottom of the midden, at an average depth of 12 inches, resting on top of the sandy-brown glacial till, although in a few cases, some of the rocks are dug into the till. Additional flat rocks and cobbles were placed above this rock zone stratum; in many cases smaller rocks were wedged between larger rocks. This rock zone could be a roasting area for collecting fat and oil from ducks, geese, and seals or it may be an area for baking clams in seaweed. Interestingly, this rock zone area yielded all but one of the recovered pointed sticks. Second, five units which are clustered in the eastern segment of the midden have a one to two inch stratum of rich, black soil running through the midden at an average depth of 6 inches. Additionally, a layer of large clams exists directly above this black soil layer. Karen Mack discussed the Todd Midden site at a recent MAS meeting and indicated that the presence of an organically rich, black soil stratum in a midden often indicates the presence of the floor of a habitation. The hammerstone tip was recovered from the black soil of one of these units.

CONCLUSION

This report is being concluded with great anticipation for the arrival of spring and the renewal of investigation at the Lady Slipper Midden. There appears to be both functional and occupancy discrete patterning at the site.

The eastern segment appears to be older based upon (1) ceramics extending back to the rocker dentate period, (2) quahog prevalence, (3) being the only location where chert was found, and (4) the mammal bones seem to be older and more worn. The western segment calls for more investigation given the concentration of CP6 shards and the apparent lack of faunal and lithic artifacts.

In 1996, Nate Hamilton will perform carbon dating on material which will be recovered from the eastern segment. Additionally, more effort will be expended in establishing the dimensions of the site. My current perception is that only two to three families ever occupied the site at any one time; other families would reside on other islands.

ACKNOWLEDGMENTS

This project could not be conducted without the exceptional support of Ms. Elizabeth Trautman, Nate Hamilton, and their associates at the Maine Historic Preservation Commission (MHPC) in Augusta and the University of Southern Maine (USM) in Gorham. In addition to Nate Hamilton and Liz Trautman, I want to thank Mark Hedden, John Mosher, Maxine Collins, Arthur Spiess, and Maggie Tinker for their assistance and support. Additional thanks to my son Tom for his assistance with this manuscript.

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THE CHANDLER COLLECTION

Michael Brigham

INTRODUCTION

The late Hugh V. Chandler of Brewer, Maine was an avocational archaeologist and collector who surface collected prehistoric and historic artifacts over a large part of Maine. Mr. Chandler also did a limited amount of excavation at sites on the lower Penobscot River. Mr. Chandler's notes and correspondence indicate that he kept abreast of regional archaeological literature and shared the information he obtained with other avocational and professional archaeologists. He was also generous in providing access to his collection and loaned a part of it to the Penobscot Museum of Living History in 1968. In 1972, Mr. Chandler loaned artifacts from one of the red ocher features he excavated in 1961 at site 74-8 to the Department of Anthropology at the University of Maine. A February 11, 1972 letter from Richard G. Emerick, then Chairman of the Department of Anthropology and Director of the Anthropology Museum, expressed the Department's appreciation for this loan. In another 1972 letter, this time to Dean R. Snow, Mr. Chandler expressed his opinion that Maine artifacts should remain in Maine.

On February 2, 1974 Maine archaeology lost a friend when Hugh V. Chandler was killed in a tragic accident on Brewer Lake. He was 54 years old at the time of his death. In accordance with a provision of Mr. Chandler's will, the Maine Archaeological Society, Inc. became the recipient of Mr. Chandler's collection of artifacts and related items. Through the good offices of Robert G. MacKay it was arranged for personnel of the Department of Anthropology of the University of Maine to catalogue the collection, make metric measurements of most of the Chandler artifacts, and curate the collection until such time as it might be housed in a Maine Archaeological Society, Inc. museum.

With the exception of three slate "bayonets" (which are currently on loan to the Maine State Museum) the Chandler collection has remained at

the University of Maine where it is available to researchers of Maine's early history and prehistory.

The purpose of this paper is to simply describe the Chandler collection in order to acquaint the membership of the Society with this valuable asset. It is hoped this description will stimulate interest in using the collection for research purposes.

THE CHANDLER COLLECTION

The Chandler collection contains 1297 items, a few of which are multiple artifact lots listed under single catalogue numbers. Accompanying Mr. Chandler's large collection were his field notes, maps, sketches of features and personal catalogue of artifacts as well as the correspondence mentioned above. From this documentation it can be determined that the Chandler collection artifacts were obtained from twenty two sites listed in the Maine Archaeological Survey records, and twenty one sites and/or find spots for which a lake, river drainage or town location was provided in Mr. Chandler's notes. Three artifacts were accompanied only by the cryptic notation "M" as their site provenience, and sixty three of the artifacts in the collection were accompanied by no provenience information at all.

Mr. Chandler's notes indicate that the vast majority of his collection was found in Maine in the 1950's and early 1960's, but there is a single black chert stemmed biface recorded as collected in Connecticut in 1928. This may be the side-notched biface listed in the U. of M. catalogue as #4848, but this cannot be confirmed. All other artifacts are assumed to have been found in Maine.

In order to facilitate the description of such a large collection it was deemed necessary to subdivide the collection into manageable "classes" of artifacts which share significant attributes of outline form, technology of manufacture, raw material or, in the case of Historic artifacts, temporal placement in the culture history of Maine. For the purposes of this

paper, therefore, the Chandler collection is described in terms of stemmed bifaces, non-stemmed bifaces, unifaces, celts, gouges, grooved axes, plummets, slate points, miscellaneous ground stone artifacts, abraders, miscellaneous prehistoric items, and Historic period artifacts. This description broadly follows Borstel (1982) in determining which artifacts are included in each class, but some latitude has been taken in placing artifacts which are poorly represented in the collection into the classes of Miscellaneous Ground Stone Artifacts and Miscellaneous Prehistoric Items. Figures are provided to illustrate some of the variability among the artifacts within each class, and Table 1 is used to show numeric counts of artifacts of each class by site or general location. As the Chandler collection artifacts were surface collected or excavated without stratigraphic controls the cultural affiliations suggested for artifacts shown in figures must be regarded as "best guesses".

PREHISTORIC ARTIFACTS

Stemmed Bifaces

Number: 118

The flaked stone artifacts included in this class are projectile points or knives preserving remnants of side-notching, corner-notching, corner-removal, or other modifications which form well formed "stems" for hafting these implements to shafts. Chandler collection stemmed bifaces shown in Figure 1 are: (A-D) Ceramic period projectile points; (F) Early Ceramic Period projectile point consistent with the Meadowood type in New York; (G) Late Archaic Small Stemmed Point; (H and I) Late Archaic Moorehead Phase points; (J and K) Susquehanna Tradition bifaces (J may be a preform, knife or cache blade); (L) Early Ceramic Period biface of yellow and red jasper possibly indicating Adena contact with the contemporary people of Maine and (M) a Laurentian-related Late Archaic side-notched point.

Non-Stemmed Bifaces

Number: 535

The class of Non-stemmed bifaces, as used in

this paper, is somewhat of a catch-all as it includes all of the flaked stone bifaces and biface fragments not enumerated in the class of stemmed bifaces described above. In this class are the Chandler collection fluted points, triangular points, preforms, bifacial scrapers, scrapers made on biface fragments, bifacial drills, distal biface fragments, medial biface fragments and all of the proximal biface fragments which show no evidence of modifications to produce a stem. Non-stemmed bifaces shown in Figure 2 are: (A and B) possible Paleoindian ovate bifaces; (C) miniature Fluted Point; (D) rare Fluted Point made of rhyolite and (E) possible Paleoindian unfinished biface with an unremoved platform remnant on the tip. Non-stemmed bifaces in Figure 3 are: (A) a scraper made on a biface distal fragment; (B) Early Ceramic Period bifacial scraper; (C) an unusual biface with steeply retouched lateral and distal margins and shallowly retouched proximal end (a nearly identical tool from the same site is a uniface); (D) triangular preform; (E) drill; (F) small non-stemmed point or preform; (G) Late Ceramic Period triangular projectile point; (H-J) preforms or knives; (L) possible Paleoindian or Late Paleoindian lanceolate biface and (M) preform or lanceolate point. Non-Stemmed Biface fragments shown in Figure 4 are: (A and B) distal biface fragments; (C) distal drill fragment; (D) Fluted Point distal fragment; (E) Susquehanna medial biface fragment of banded rhyolite; (F and G) medial biface fragments and (H-K) distal biface fragments.

Unifaces

Number: 261

The flaked stone tools included in this class are unifacially retouched along utilized margins and exhibit little or no bifacial modification. These artifacts are often described in functional terms as scrapers, scraper/gravers, core/scrapers and flake knives. The Chandler collection Unifaces shown in Figure 5 are: (A) large scraper or flake knife with a shallowly retouched (70 degree) working edge; (B and D) end scrapers; (C) crystal quartz scraper/graver; (E) Middle Archaic thick quartz core/scraper.

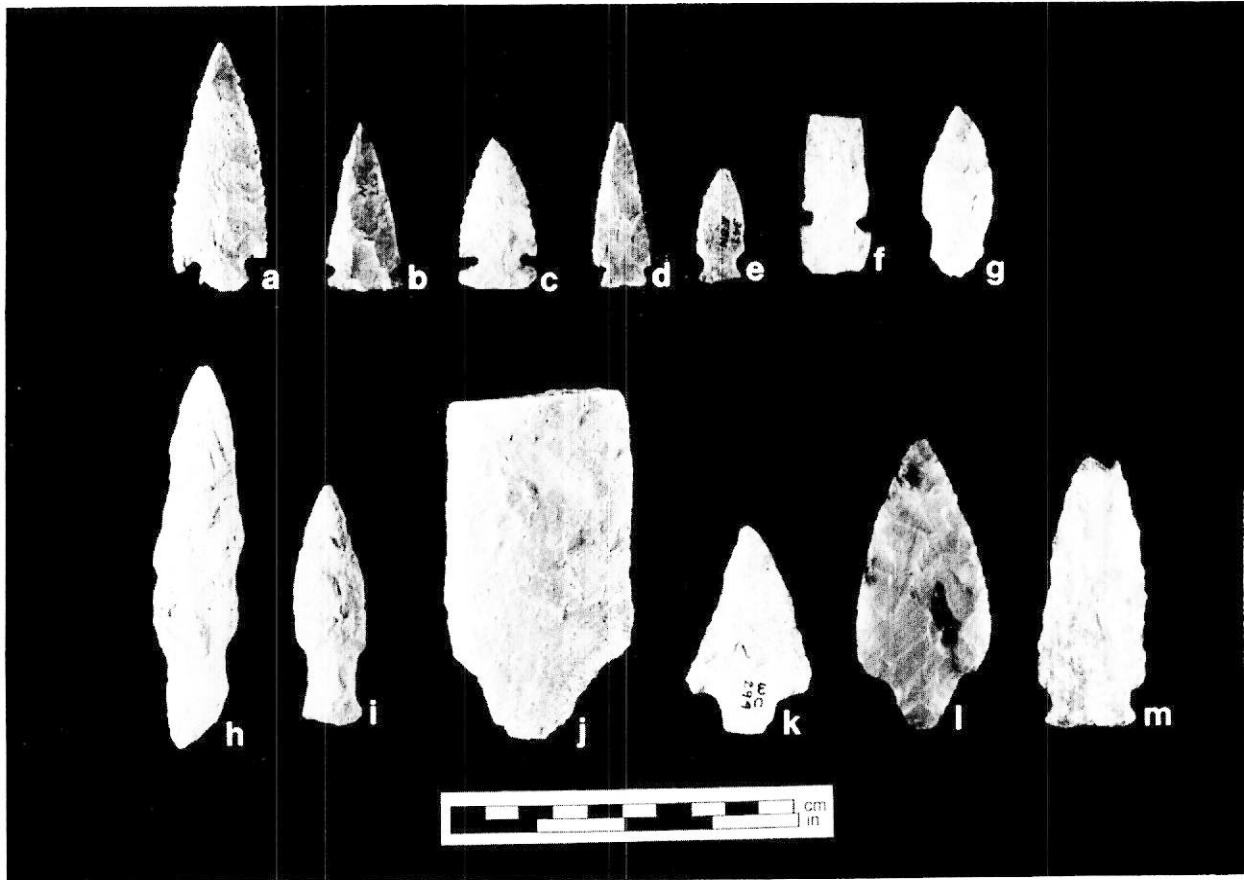


Figure 1. Stemmed Bifaces: (A) #001:site 117-4, (B) #035:site 58-15, (C) #040:site 58-18, (D) #033:site 58-18, (E) #037:site 58-18, (F) #093:site 58-15, (G) #015:site 58-15, (H) #4793:Big Machias Lake, (I) #001:site 117-2, (J) #039:site 58-15, (K) #036:site 58-15, (L) #4789:Cross Lake, (M) #026:site 58-15.

Celts

Number: 84

The ground stone artifacts included in this class are assumed to have functioned as wood-working tools. Finished artifacts in this class have straight or slightly curved bit elements which often exhibit a high degree of polish. Several of the artifacts in this class appear to be unfinished. Chandler collection celts in Figure 6 are: (A) small flaked and ground celt; and (B-E) pecked and ground celts. Similar small to medium sized celts are not often useful as diagnostic indicators of cultural affiliations when found un-associated with other artifacts as they may be found in both Archaic and Ceramic Period assem-

blages. Chandler collection celts in Figure 7 are: (A) Late Archaic large flaked, pecked and ground celt made of a volcanic material commonly called "greenstone"; and (B-C) large Archaic flaked, pecked and ground celts.

Gouges

Number: 16

The ground stone tools in this class have straight or curved bit elements (when present) with concave channels extending for varying distances on one surface. These artifacts are assumed to have functioned as wood-working tools and some of the Chandler collection gouges have highly polished

The Chandler Collection

Sites	Stemmed Bifaces	Non-Stemmed Bifaces	Unifaces	Celts	Gouges	Grooved Axes	Plummets	Slate Points	Misc. Ground Stone	Abraders	Misc. Items	Hist.	Site Totals
117-1			1										1
117-2	3	17	17						1				38
117-4	1												1
117-5	2	6	2	1	1			1	1				14
145-1	8	47	24	6		1			1	15	3	11	116
154-1		2											2
43-4											2		2
58-03		1		3					1		1		6
58-09	1												1
58-12	14	55	16	10	2		1		11	5	12	1	127
58-13	2	11	2	3	2				3		1		24
58-15	36	151	62	35	6	3	7	1	14	12	34	6	367
58-16	11	29	13									2	55
58-17				1					1				2
58-18	5	142	81	14					9	13	13	2	279
58-19		2											2
58-20					1								1
58-56								1					1
74-1											1		2
74-13	1			1						1			3
74-8	6	2	1	3			1	13	4	1	28		59
75-1	1			1									2
Alamoosook Lake	1												1
Ashland					1								1
Brassua Lake	1	17	8			2						1	29
Bradley Beach		1											1
Big Machias Lake	3												3
Churchill Lake			2	1				1	4				8
Ellsworth Falls	2	12	5	3	2		1	2	13		2		42
"M"	3												3
Mooseleuk Lake	4	8	7										19
Millinocket Lake			1										1
Masardis			1										1
P.V. Country Club		1									3		4
Sebec Lake		1											1
St. Froid Lake			1										1
Spencer Lake		3											3
Sunkhaze Stream		1							1				2
Lancaster Brook	1												1
Cross Lake	1			1									2
Veerie		1									1		2
Green Lake											1		1
Flagstaff Lake											1		1
Boyton Shell Mid.		1											1
Unknown	10	24	17	1	1			2	5		3	1	64
Totals	118	535	261	84	16	6	10	21	69	47	106	24	1297

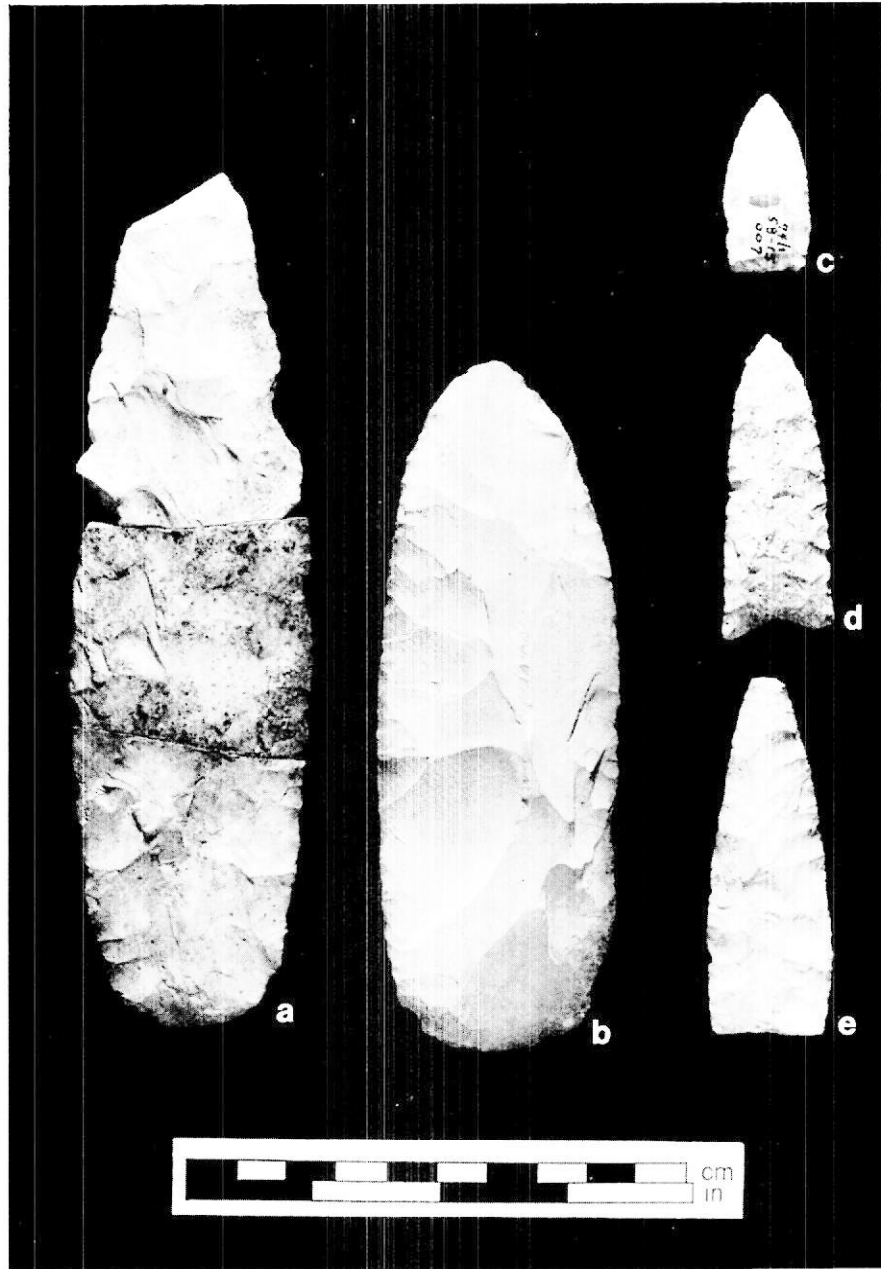


Figure 2. Non-Stemmed Bifaces: (A) #040:site 58-15, (B) #035:site 58-15, (C) #007:site 58-15, (D) #4815:Brassua Lake, (E) #018:site 58-15.



Figure 3. Non-Stemmed Bifaces: (A) #193:site 58-15, (B) #247:site 58-15, (C) #248:site 58-15, (D) #001:site 58-18, (E) #145:site 58-18, (F) #004:site 58-18, (G) #4851:Site Unrecorded, (H) #032:site 58-15, (J) #033:site 58-15, (K) #161:site 58-18, (L) #001:site 58-16 and (M) #010:site 58-15.

bits. Figure 8 gouges are: (A and B) Middle Archaic full-channeled gouges and (C-E) Archaic short-channeled gouges.

Grooved Axes

Number: 6

The artifacts in this class are nearly or completely encircled by deep pecked grooves toward their proximal (poll) ends and have sharpened or tapered bits. Grooved Axes (A-C) shown in Figure 9 are all believed to have been made by people of the Terminal Archaic Susquehanna Tradition.

Plummets

Number: 10

The Chandler collection Plummets exhibit a wide variety of shapes and sizes. All are made from metasedimentary stone and all but one have pecked necks. Late Archaic plummets in Figure 10 are: (B-D, F and G), (G) may be unfinished.

Slate Points

Number: 20

The Chandler collection ground stone artifacts included in this class are assumed to functioned as projectile points or knives, but several may have been used exclusively as burial offerings. The use of



Figure 4. Non-Stemmed Bifaces: (A) #057:site 58-15, (B) #068:site 58-15, (C) #144:site 58-15, (D) #056:site 58-15, (E) #111:site 58-15, (F) #112:site 58-15, (G) #061:site 58-12, (H) #061:site 58-18, (I) #077:site 58-18,(J) #122:site 58-15, and (K) #081:site 58-18.



Figure 5. Unifaces: (A) #242:site 58-15, (B) #071:site 58-12, (C) #221:site 58-15, (D) #238:site 58-15, (E) #231:site 58-15.

the term "slate" in the title of this class is reflective of common usage rather than raw material as some of the artifacts in this class are made of chert, phyllite or other fine-grained stones rather than true slate. Slate points shown in Figure 11 are: (A-C and E) Late Archaic slate points and (D) knife or "dagger" of red chert or other fine-grained metasedimentary stone with a well made ground handle. Chandler collection slate points in Figure 12 are: (A) Archaic knife made of phyllite and (B-D) Middle to Late Archaic points or knives.

Abraders

Number: 47

The artifacts included in this class exhibit evi-

dence of use as abrading tools. Most are fine to medium-grained sedimentary or metasedimentary stones only a few of which show any deliberate modification by any process other than use wear. None of the abraders in Figure 13 exhibit attributes which would make them useful as diagnostic tools for determining cultural affiliations.

Miscellaneous Ground Stone Artifacts

Number: 69

Many of the artifacts in this class are items which are recognized as diagnostic of Maine culture periods or phases but are poorly represented in the Chandler collection. Other artifacts in this class are too fragmentary to warrant their inclusion in any of

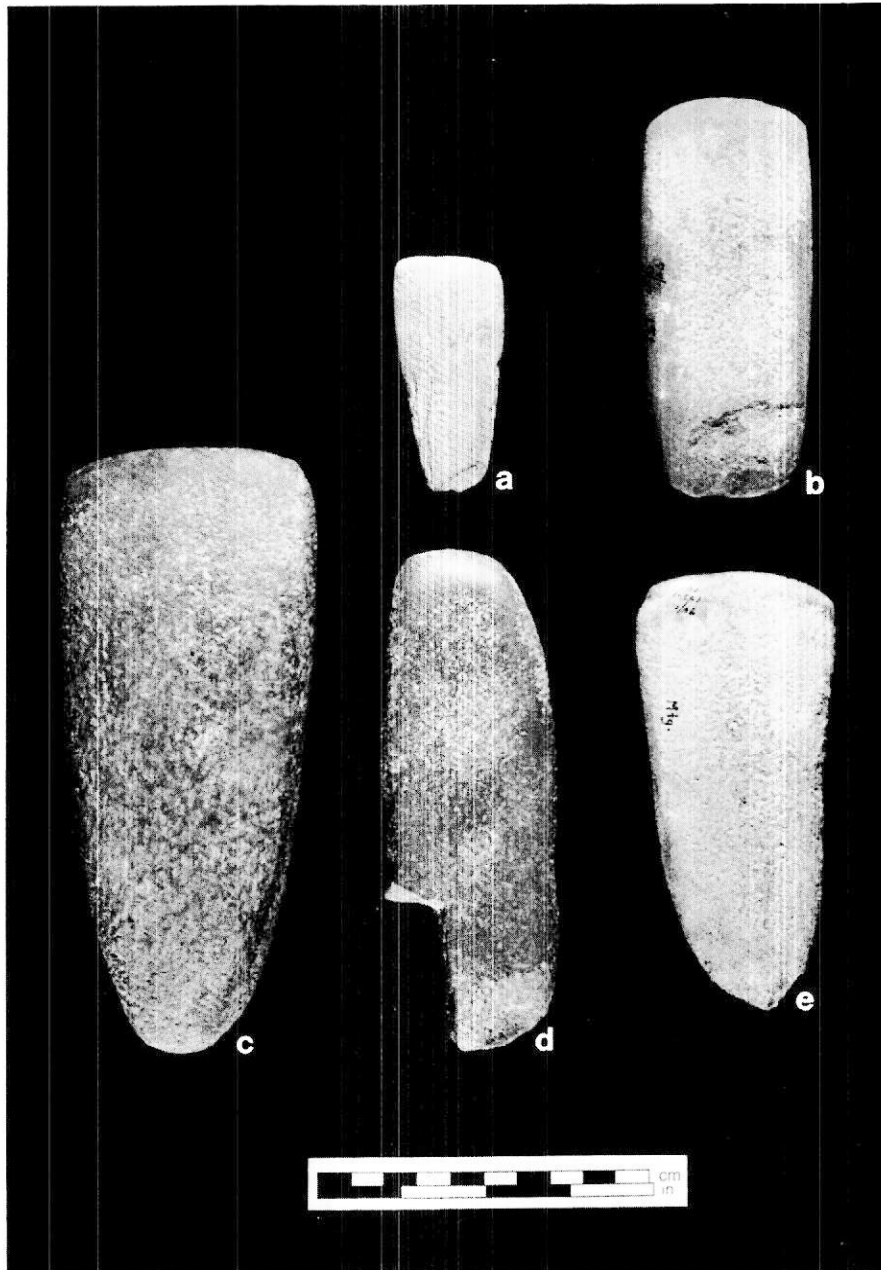


Figure 6. Celts: (A) #102:site 58-12, (B) #122:site 58-12, (C) #276:site 58-15, (D) #4932:Ellsworth Falls, and (E) #107:site 145-1.



Figure 7. Celts: (A) #119:site 58-12, (B) #002:site 75-1, and (C) #275:site 58-15.

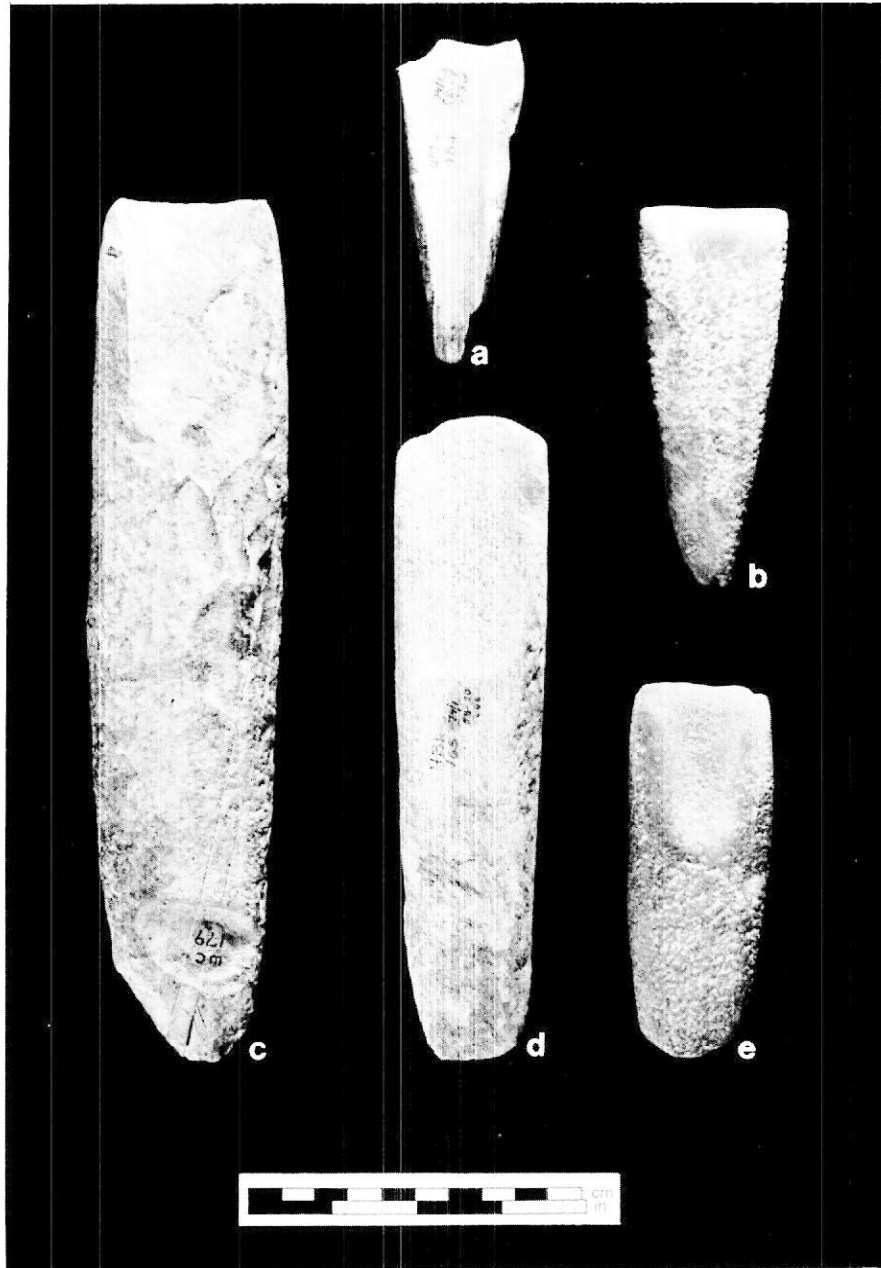


Figure 8. Gouges: (A) #286:site 58-15, (B) #4947:Ellsworth Falls, (C) #283:site 58-15, (D) #002:site 58-20 and (E) #099:site 58-12.

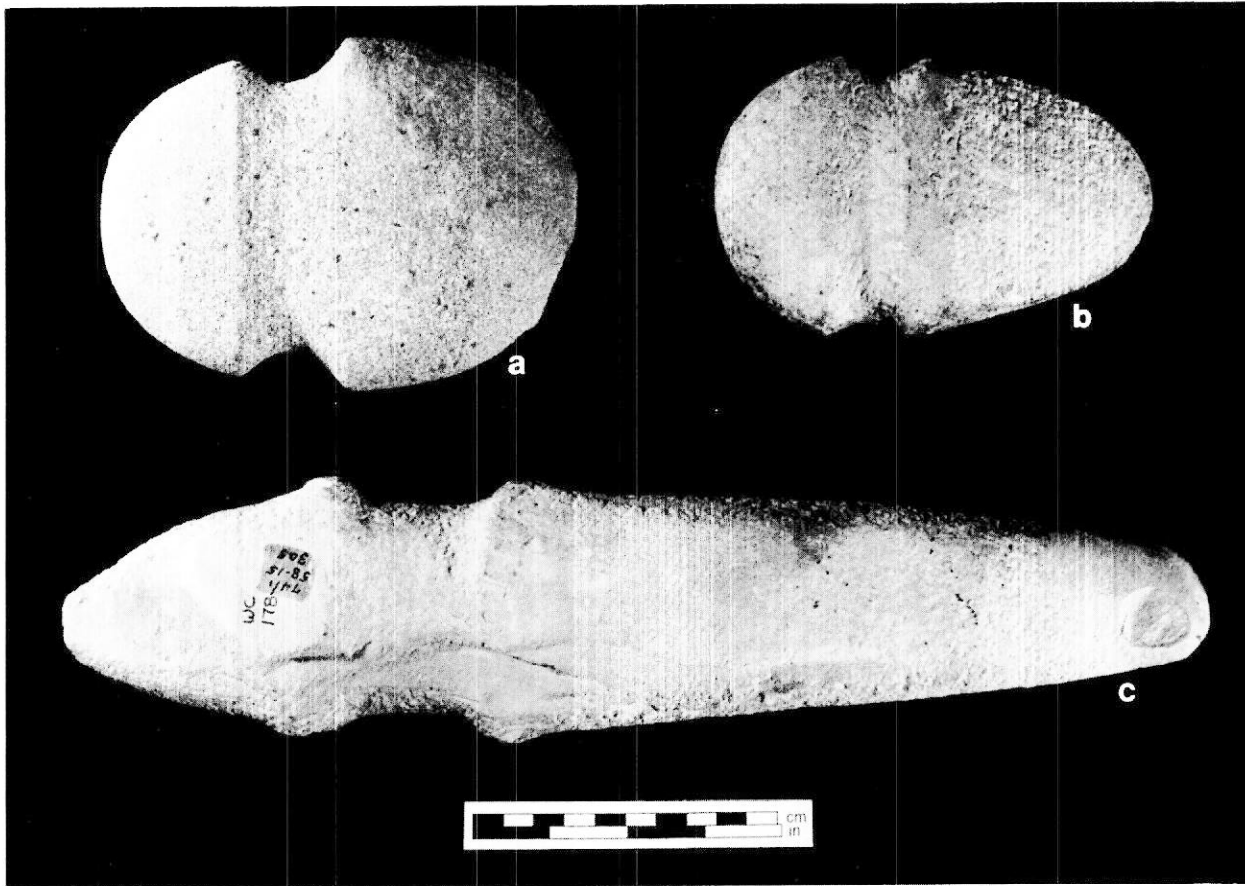


Figure 9. Grooved Axes: (A) #4841:Brassua Lake, (B) #307:site 58-15 and (C) #305:site 58-15.

the other classes of ground stone artifacts above. Grooved cobbles (A and E) shown in Figure 10 are included in this class. Miscellaneous ground stone artifacts in Figure 14 are: (A) perforated pendant; (B) Terminal Archaic or Early Ceramic period stone bowl fragment; (C and E) perforated "gorgets"; (D) pitted anvil stone and (F) undrilled (perhaps unfinished) Archaic "banner stone".

Miscellaneous Prehistoric Items

Number: 106

The artifacts in this class defy inclusion in any of the classes above. These items include bulk samples of red ocher feature fill, fire making kits from red ocher features, organic items, hammer stones, battered nodules, cores and flakes. Prehistoric

ceramics, which are among the most useful diagnostic artifacts in many Maine collections, are also included in this class due to their poor representation in the Chandler collection. Prehistoric ceramics shown in Figure 15 are: (A) broad-toothed dentate stamped sherd and (B-D) pseudo-scalloped shell stamped sherds from a single vessel. The only Chandler collection potsherd not shown in Figure 15 is from the same vessel as (A) and all of the potsherds in the collection belong in the CP-2 division of Petersen and Sanger's (1991) Aboriginal Ceramic Sequence.

HISTORIC ARTIFACTS

Number: 24

The wide variety of artifacts in this class all show

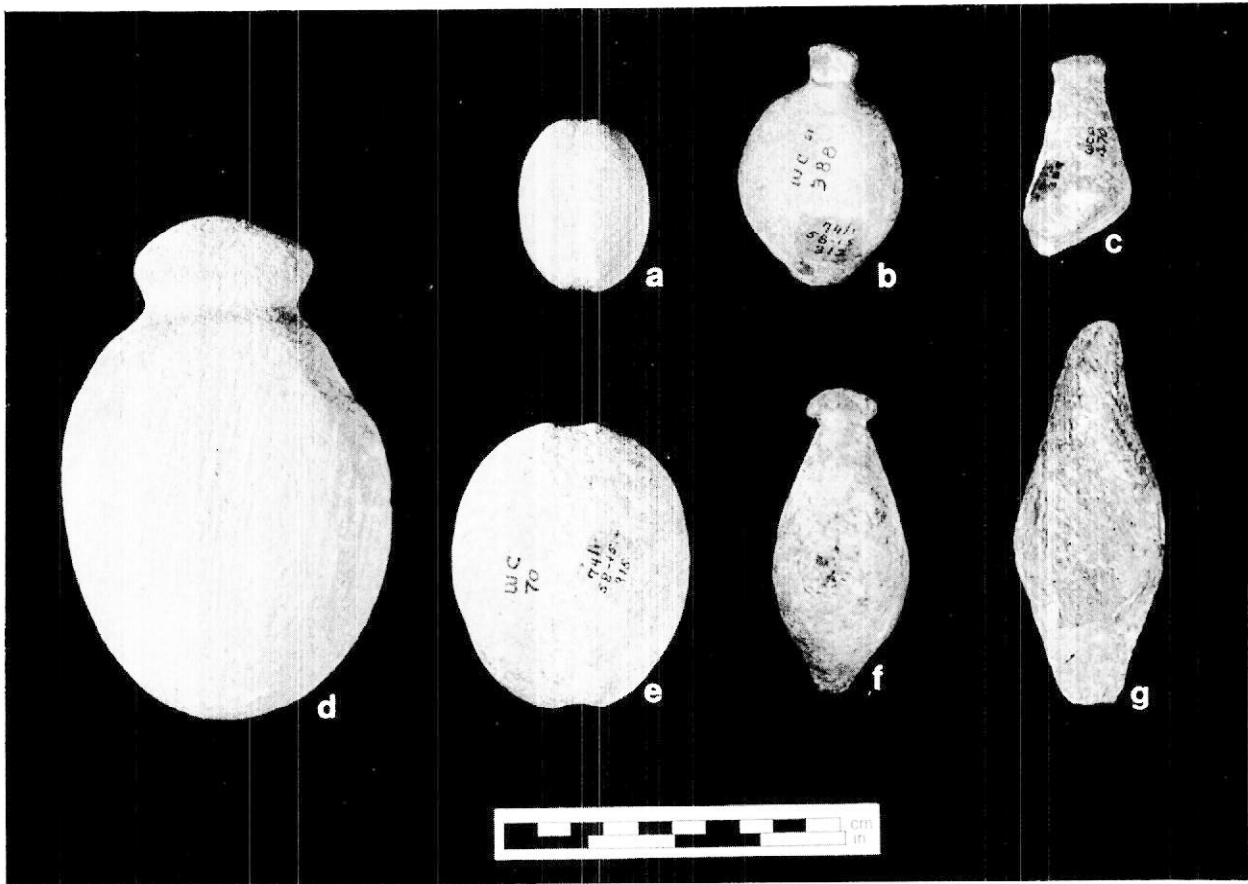


Figure 10. Plummets: (B) #312:site 58-15, (C) #309:site 58-15, (D) #4938:Ellsworth Falls, (F) #367:site 58-15, and (G) #314:site 58-15. (A)and (E) are grooved cobbles classed as Miscellaneous Ground Stone Artifacts.

evidence of European or Euro-American origin, manufacture or raw materials. This is not to say these items may not have been used or modified by Native American people. Historic artifacts in Figure 16 are: (A) Rupert shot; (B) historic pipe stem fragment; (C) historic pipe bowl fragment; (D) trade beads; (E) 3 musket balls 14.6-16.1 mm in diameter; (F and K) "spall" gun flints; (G and L) "blade" gun flints; (H-J) assorted musket balls and (M) iron trade ax.

DISCUSSION

While Mr. Chandler's collecting activities were wide-ranging, the majority of his collection (862 artifacts) was recovered from sites in the Union

River drainage system. In fact, 773 of the Chandler artifacts, representing 59.4% of the collection, were found at just three sites. All three of these sites are currently submerged but, prior to inundation by the waters of Graham Lake, site 58-15 was located on both sides of a portion of the main channel of the Union River while sites 58-12 and 58-18 occupy lower portions of tributary streams near their confluences with the Union River. With 367 artifacts, 127 artifacts and 279 artifacts, respectively, the combined assemblages from sites 58-15, 58-12 and 58-18 contain artifacts from all or, at least, most of the cultural occupations known to be present in Central and Eastern Maine.

An unequivocal Paleoindian occupation of the

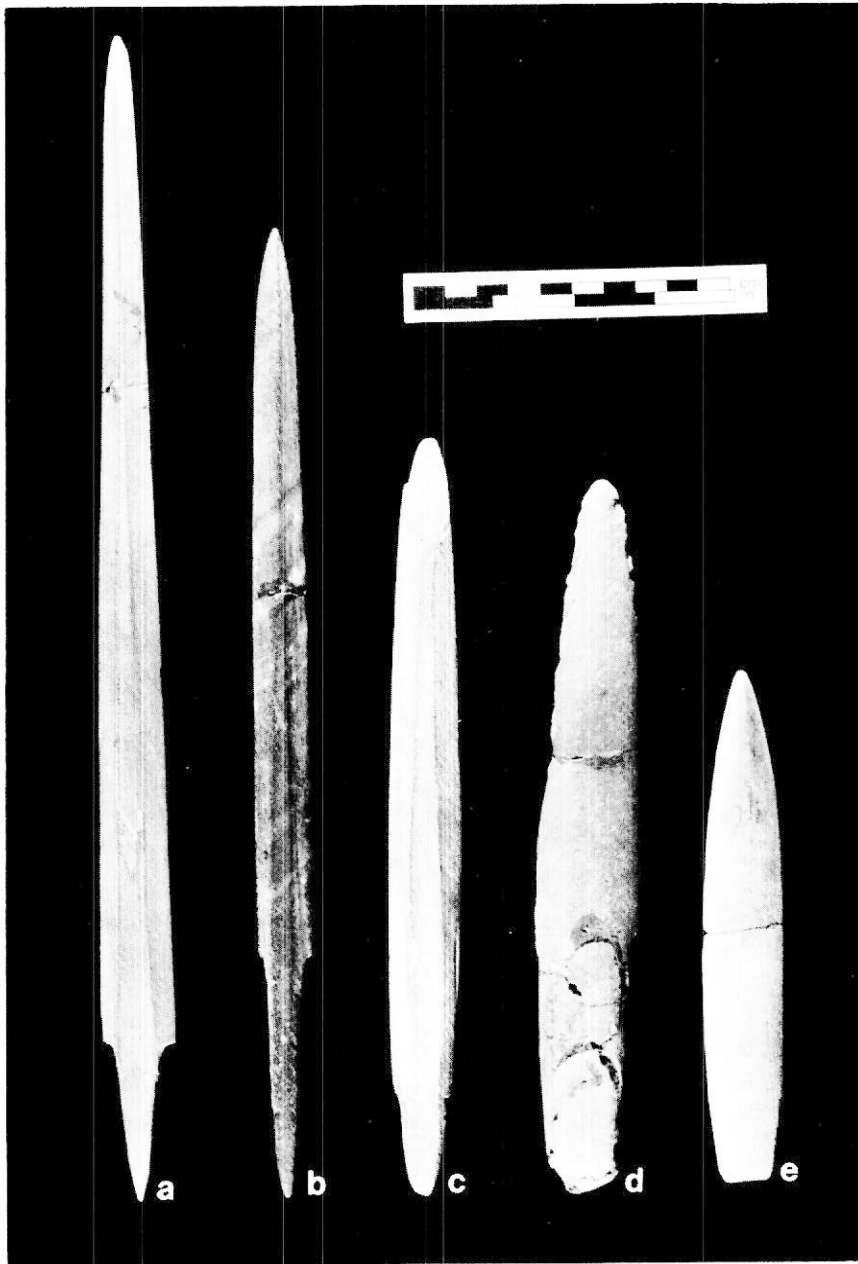


Figure 11. Slate Points: (A) #325:site 74-8, (B) #317:site 74-8, (C) #332:site 74-8, (D) #200:site 58-18, and (E) #011:site 117-5.



Figure 12. Slate Points: (A) #4845:Site Unrecorded, (B) #4904:Ellsworth Falls, (C) #254:site 58-15 and (D) #4905:Ellsworth Falls.

Union River drainage system is evidenced by the fluted points in the 58-15 assemblage and some scraper/gravers and wedges in the 58-12 and 58-18 assemblages may be of Paleoindian origin as well. A Late Paleoindian presence at the Union River sites is less certain, but several well-thinned lanceolate non-stemmed bifaces in the collection may be attributable to this period.

No diagnostic stemmed bifaces of the Early or Middle Archaic Periods are present in the collection's Union river assemblages but a narrow, asymmetrically-beveled distal biface fragment with serrated blade margins may indicate an Early Archaic occupation at 58-15. Middle Archaic period occupation of this site is also indicated by the

presence of three full-channeled gouges in this assemblage. The comparative under-representation of flaked stone projectile points in Northern New England Early and Middle Archaic site assemblages is noted by Petersen and Putnam (1992) and may be reflected in the Chandler collection.

Later Archaic artifacts are well represented in the Chandler collection. Projectile points of several forms, plummets and short-channeled gouges indicate the Late Archaic occupation of the Union River sites and Terminal Archaic Susquehanna Tradition Broadspears are present in all three of the Chandler collection's major Union River assemblages.

As is to be expected, Ceramic period unifaces (many of which are made of exotic lithic materials)

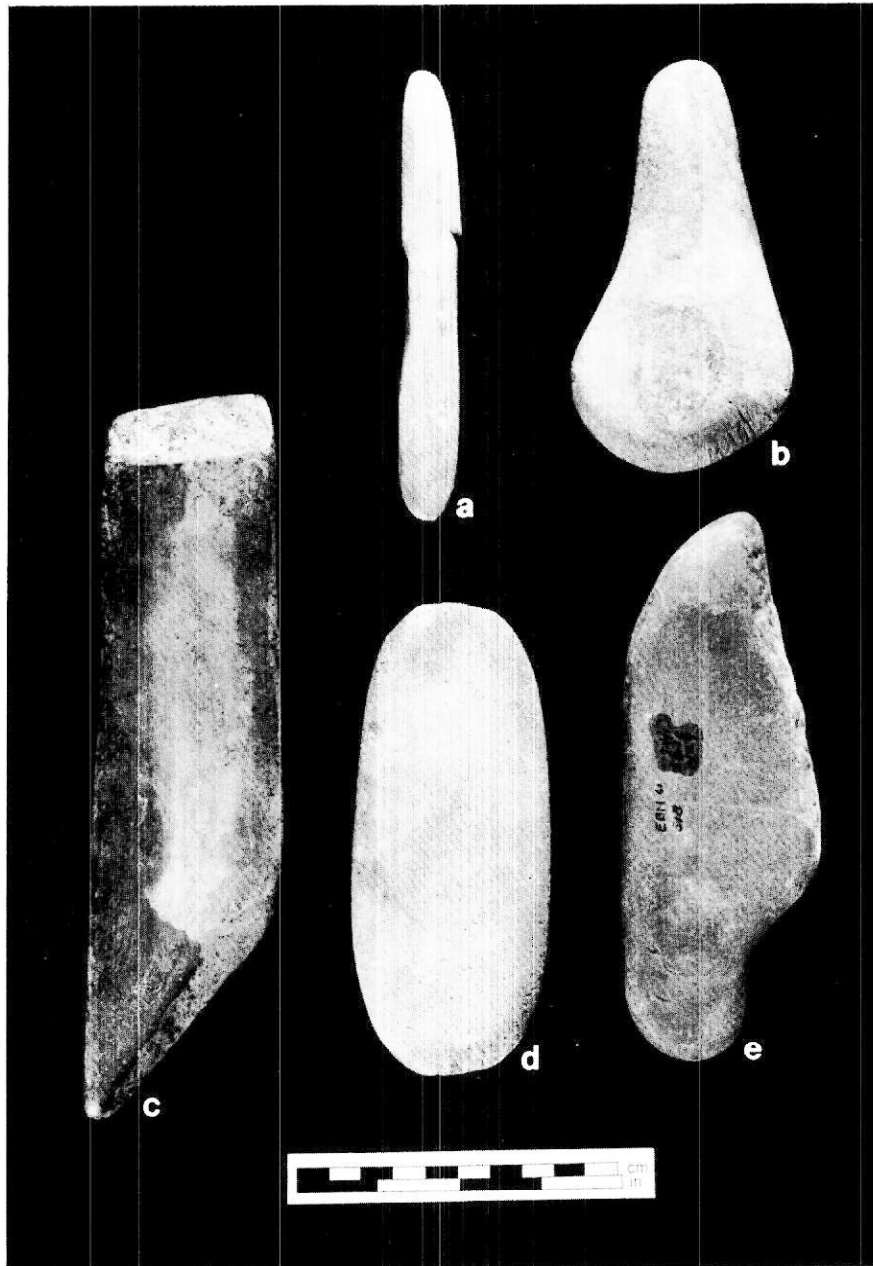


Figure 13. Abraders: (A) #425:site 58-18, (B) #328:site 58-15, (C) #323:site 58-15, (D) #112:site 58-12, and (E) #429:site 58-18.

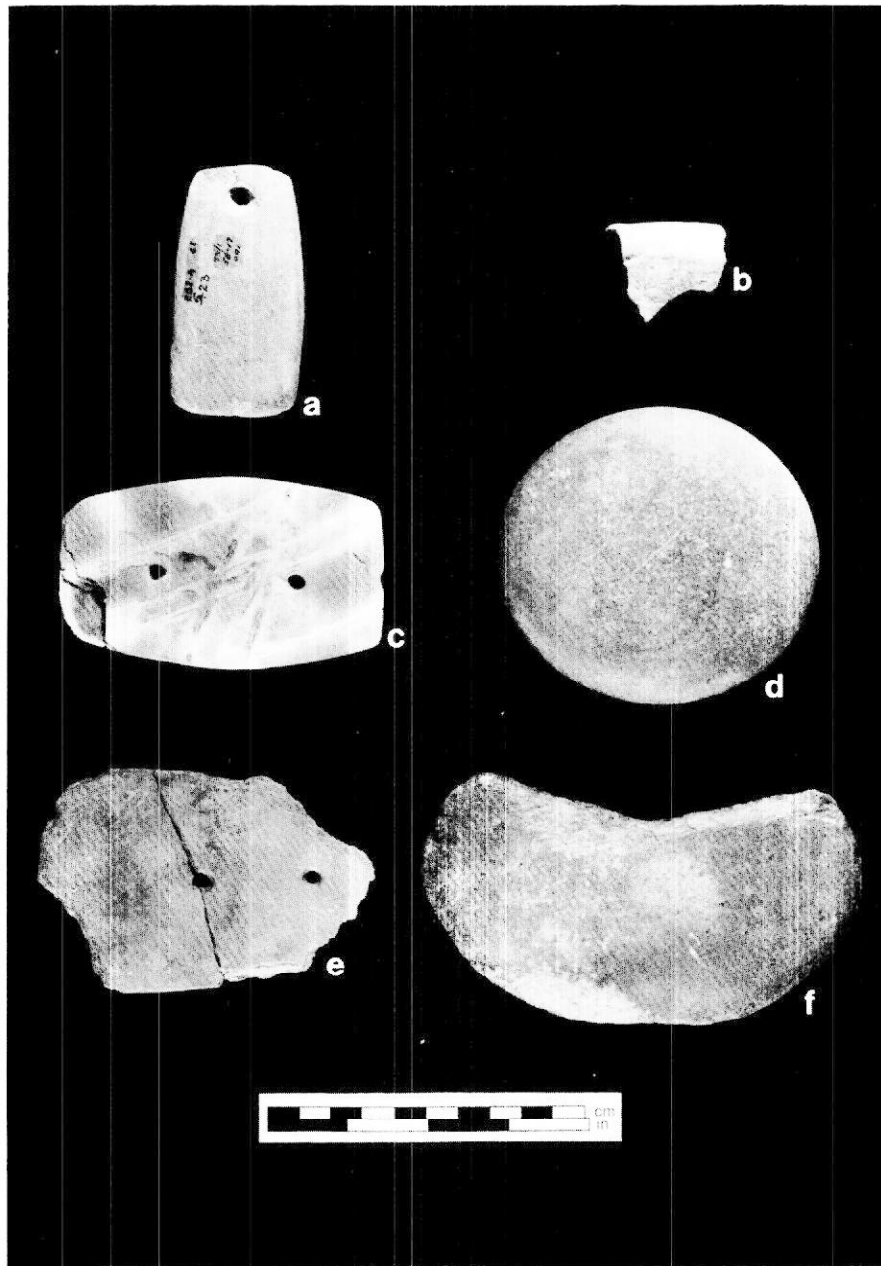


Figure 14. Miscellaneous Ground Stone Artifacts: (A) #001:site 58-17, (B) #087:site 145-1, (C) #014:site 117-5, (D) #349:site 58-15, (E) #201:site 58-18, and (F) #001:site 58-3.

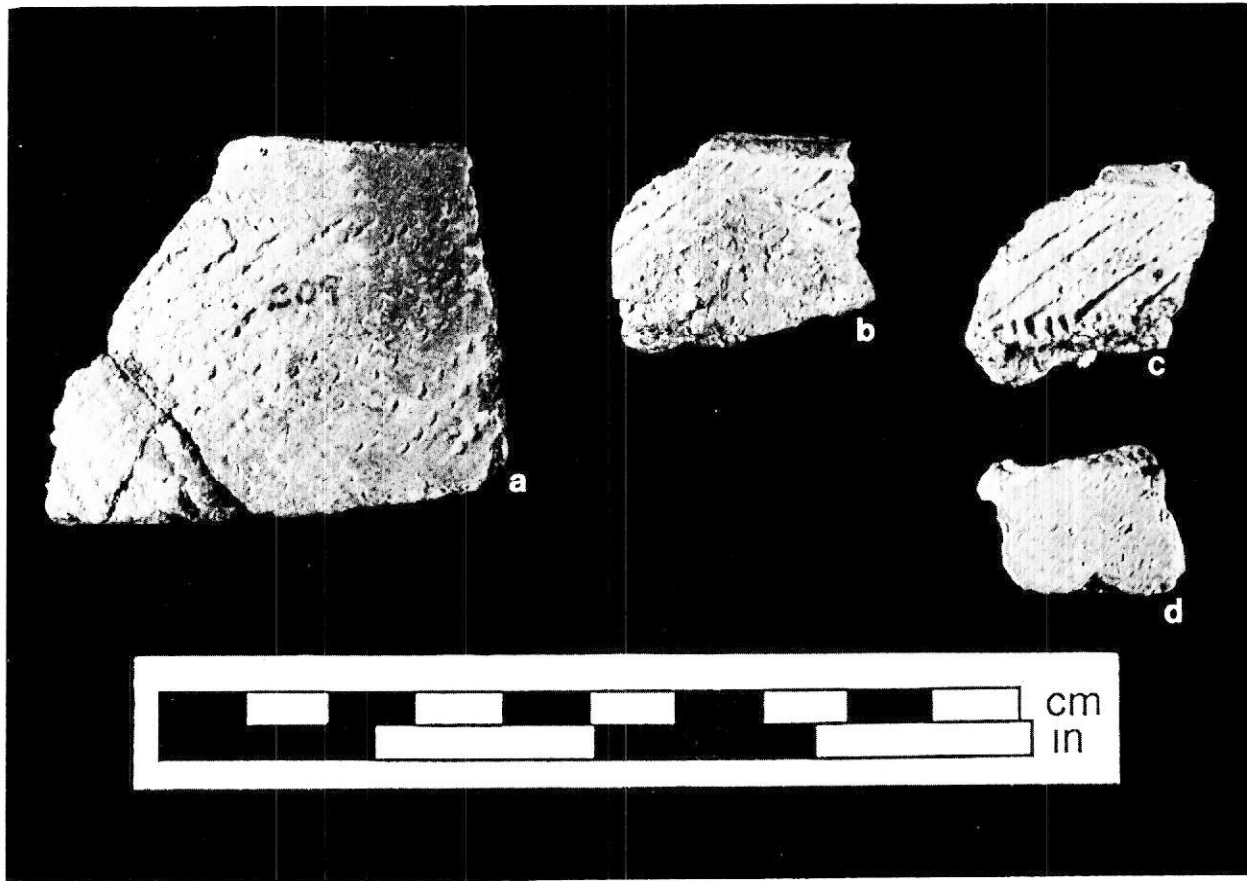


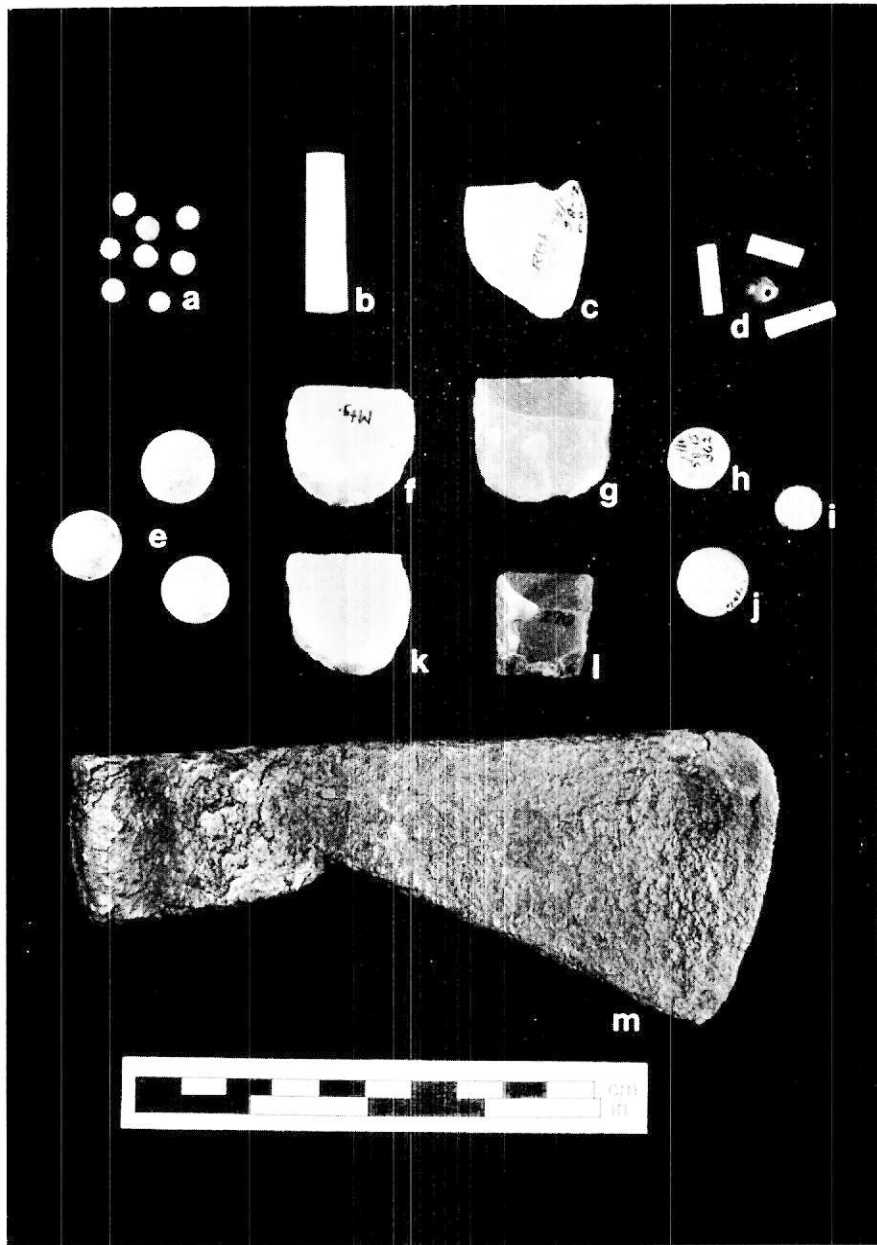
Figure 15. Ceramics from Miscellaneous Prehistoric Items Class: (A) #4746:Flagstaff Lake and (B) #119:site 145-1.

comprise the largest class of artifacts in the Chandler collection's Union River assemblages. Early Ceramic period occupations of 58-12, 58-15 and 58-18 are primarily indicated by distinctive side-notched projectile points similar to those associated with the Meadowood phase in New York (Ritchie 1965:180-201). Middle and Late Ceramic period occupation of these three major Union River sites is demonstrated by numerous side-notched, corner-notched and triangular projectile points.

Contact period occupation of the Union River drainage is indicated only by three white cylindrical beads and one blue glass bead in the Chandler collection assemblage from 58-18. Lead shot, a gun flint and a pipe bowl from 58-15 are probably of 19th century origin.

CONCLUSION

The Chandler collection has received some recent professional attention. William Belcher examined the Chandler collection site assemblage from 74-1 for a recently published article in the *Canadian Journal of Archaeology* (Belcher et al., 1994). In the fall of 1995, in order to insure that the Maine Archaeology Society, Inc. was in compliance with the Native American Graves Protection and Repatriation Act of 1990, the Society's directors requested Brian Robinson and Dr. Marcella Sorg to examine the Chandler collection for the possible presence of human remains and ascertain any associations of such remains with the Chandler artifacts. Additionally, some site assemblages from the collection have been used by students as study aids in learning



analytical methods. The Chandler collection as a whole, however, has never been comprehensively analyzed.

Many of the known sites from which the Chandler collection artifacts are derived are submerged except in periods of very low water or, for other reasons, have never been tested. During one such period of low water in 1992 this author visited several of the Chandler collection sites in the company of late Maine Archaeological Society, Inc. member Bruce Davis who was very familiar with the Union River area. In the course of our visit we noted relatively intact prehistoric hearths eroding from the

exposed surfaces of four sites. If and when these sites become a focus of professional attention the Chandler collection will more fully realize its potential as a valuable asset to Maine archaeology.

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