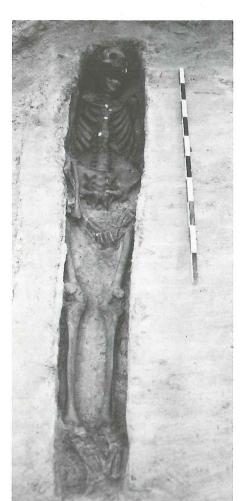


Boston University
Center for
Archaeological Studies

CONTEXT



Although the wood of the coffins was largely decomposed, the skeletal remains were often well preserved.

INSIDE THIS ISSUE:

Paleoethnobotany: the Human Use of Plants through Time 5

Historical Archaeology of the Household and Homelot in Mass. 8

The First AFAR Season in Southern New Mexico 12

Historical Plantations on St. John in the Virgin Islands 14

Death and Burial at a 19th-Century Almshouse

by Ricardo Elia

Burial customs in 19th-century New England evolved into something very different from the customs of the colonial period. Rows of slate headstones, carved with stern death's heads and moralistic admonitions, such as memento mori ("Remember death") and tempus fugit ("Time flies"), were replaced by new limestone and marble tombstones that presented a softer, even romanticized, view of death. Beginning in the 1830s, cemeteries like Mount Auburn in Cambridge and Green-Wood in Brooklyn were established as landscaped, pastoral parks where the public was invited to stroll among the tomb monuments and picturesque beauty of a garden-like set-

Still, the basic function of burial and the burial place in 19th-century New England had not significantly changed since the colonial era. A resting place for the earthly remains of the deceased, a marker announcing the basic facts of the individual's existence on the earth to serve as a reminder to the living—these simple requirements had not changed in the evolving society of 19th-century New England.

When we think of New England's cemeteries, we tend to picture the illustrious historical burial grounds whose gray and white stones populate the old churchyards and town greens. It is sometimes easy to forget that these cemeteries represent only one type of burial place in use during the historical period. Family plots, for example, were also commonly

used, especially in rural areas; some of these survive today as small, overgrown enclosures surrounded by modern residential or commercial development.

Another important type of underdocumented burial place is the almshouse burial ground. Almshouses, also known as poorhouses, town farms, or poor farms, were an early form of institutionalized welfare. By the mid-19th century, most towns in Massachusetts had established almshouses to deal with the needs of the dependent poor. These institutions were often notoriously unhealthy, offering dreadful living conditions and only minimal subsistence, while requiring the labor of their inmates.

It is clear from contemporary evidence that people did not live in the almshouses for very long if they could at all help it—in fact, intolerable conditions were deliberately fostered in the almshouses in order to deter freeloaders. In short, one lived at the almshouse only if one had nowhere else to go. The population of an almshouse generally consisted of an unsettling mixture of transients and more or less permanent residents. As one historian has noted, "they housed little children with the prostitute, the vagrant, the drunkard, the idiot, and the maniac."

Death in the almshouse must have been no less dismal than life in the almshouse. Inmates who were supported by the town while alive were also buried at the town's expense when they died. The same meager and anonymous features that characterized almshouse life, therefore, also continued into the burial itself. To the towns, which viewed the death of a pauper as an additional burden

and expense, elaborate coffin furnishings, a carved headstone, and a burial plot in the town cemetery were unnecessary luxuries. Instead, the dead were buried quietly and cheaply on almshouse land. If grave markers were used at all, simple, uncarved stones

were the rule.

Gradually, the 19th-century almshouses were closed, and the land of the poor farm was sold off. The small almshouse burial grounds quickly fell into disuse; their rude gravestones were removed, fell down, were buried, or were simply forgotten. The locations of many such graveyards and they belonged not only to almshouses, but to the other common institutions of the 19th century, such as prisons, hospitals, and asylums—simply disappeared over time.

A rare and fascinating glimpse into life and death in a Massachusetts almshouse has been emerging as a result of a recent excavation of the 19th-century almshouse cemetery in Uxbridge, in southern Worcester County. The project, conducted by the Office of Public Archaeology (OPA) last May and June, resulted in the excavation of the entire cemetery, totaling 31

graves.

The circumstances that led to the excavation of the site are interesting because they relate to one of the most controversial issues in American archaeology today—the treatment of human burial remains. The Uxbridge cemetery was located in the path of a new highway construction project being planned by the Massachusetts Department of Public Works (MDPW). An earlier archaeological survey of the project area conducted by a Brown University team failed to detect the presence of the burial ground. The site was first noticed when a MDPW survey party discovered a number of unmarked stones, apparently grave markers, in the right-ofway.

At first the site, which consisted of 9 to 12 probable grave markers visible on the surface, was thought to be a Quaker family plot. Later, however, members of



Surface evidence of the graveyard consisted of a row of unmarked stones. The burial ground was later found to contain the remains of 32 individuals in 31 graves.

the Nipmuck Indian tribe expressed the opinion that the graves might be those of native Americans. They also cited an informant who recalled seeing the carved headstone of one Sarah Adams on the site; according to the informant's recollection, the stone dated to the 17th century, and the epitaph called the deceased "a fine pioneer colored woman." The Nipmuck Indians, stating that blacks and Indians, as social outcasts, were often buried together, apart from the white cemetery, believed that some of the graves at the site might be those of Indians.

The treatment of the human remains at the Uxbridge cemetery was determined by the provisions of the 1983 Massachusetts Burial Law, which calls for the archaeological excavation, rather than simple disinterment and reburial, of any human remains determined or suspected to be native American or 100 years old or older. In the Uxbridge case, the burials were known to be over 100 years old and were suspected to be native American. In addition to the discovered burial ground, the Nipmucks also identified three earthand stone-covered mounds in the vicinity as possible Indian burial sites.

In April the MDPW contracted with the OPA to excavate all human burials at the Uxbridge site, including the three suspected Indian grave sites. The OPA team worked on the sites during May and June. Our work was closely observed by representatives of the Nipmucks, including Chief Wise Owl, Princess Loving One, and

White Bear, who shared their ideas and concerns with us, and cheerfully assisted us throughout the project. Our first task was to survey the bounds of the recorded burial ground, which, according to deed records, measured about 75 by 50 feet. The MDPW then erected a fence around the perimeter of this area in order to provide security for the site. Fritz Hemans and Don Jones initiated field mapping of the site, while the OPA excavators began to test the three mounds suspected of being Indian graves. Two days of testing, however, revealed that there were no graves present at these sites, and we turned our attention back to the recorded cemetery.

Historical research conducted by Lauren Cook provided the identification of the burial ground as the Uxbridge almshouse cemetery. According to deed records, the town of Uxbridge bought the land in 1831 for use as the "Town Farm"; the land was owned by the town until 1872, when it was sold to a Joseph Blanchard. At the time of the 1872 sale, the town reserved the burial ground and a right of passage to it through Blanchard's

Excavation at the site began at the row of visible grave markers, which appeared to represent headstones and footstones for at least six graves. The topsoil around the graves was stripped off until the lighter colored soil of the backfilled grave pits appeared. After the top of each grave pit was drawn and photographed, the pit fill was shovelled out until the top of the coffin was reached. The burials were then exposed by

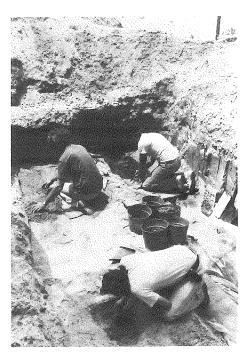
trowel and other small hand tools.

Although we knew from the deeds that the burial ground measured about 75 by 50 feet, we had estimated from the number of stones visible on the surface that the site contained only about 10 to 20 graves. As we dug exploratory trenches throughout the site, however, we quickly realized that we had underestimated the number of graves. By the time we had finished, a total of 3l graves in six rows had been excavated.

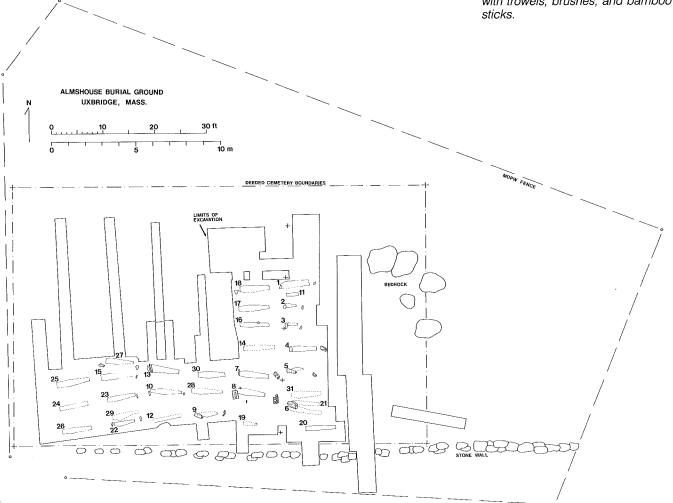
All the graves were oriented east—west, with the heads at the west end. The majority of the coffins were of the traditional hexagonal shape, although a few were rectangular, which may reflect a trend toward burial in simple rectangular caskets that has been detected elsewhere in the country around the middle of the l9th cen-

tury. The coffins themselves were very simple; coffin hardware typically consisted of hinges, nails, and lid screws without any ornamental elaboration. Two of the coffins, however, contained glass viewing plates at the head end. No coffin handles were found in any of the graves. In general, the simplicity of the coffins and grave hardware is consistent with what one would expect from an almshouse burial ground, where the cost of burial was assumed by the town.

After each grave was exposed, physical anthropologist Al Wesolowsky examined the skeletal remains, which were then carefully removed for laboratory analysis. The remains comprise 32 individuals from 31 graves. One grave



The dirt fill of the grave pits was removed by shovel. The excavation of the skeletal remains was conducted with trowels, brushes, and bamboo



The plan of the excavated burial ground shows the locations of the stone grave markers superimposed over the outlines of the coffin remains.

Continued from previous page.

contained the skeleton of an adult female together with a newbornprobably a woman and infant who had died during childbirth. Preliminary analysis of the skeletal remains indicates a population that is consistent with an institutional sample. One quarter of the graves contained children 7 years of age or younger-perhaps orphans or abandoned children. About half of the sample are individuals over 40 years of age. No adolescents were buried in the cemetery. One must remember, of course, that our sample reflects not those who lived at the Uxbridge almshouse, but those who died there.

One fascinating piece of evidence turned up soon after we be-

gan digging. Removing topsoil from the site, excavator Dan Finamore discovered a carved marble slab with lettering resting a few inches below the surface. When the stone was exposed, we were surprised to find a typical carved headstone inscribed "Nancy Adams. A respectable colored woman..." Here was the tombstone mentioned by the Nipmucks A check in the Uxbridge death records revealed that Nancy Adams, described as "coloredslave," had died in 1859 at the age of 100.

The discovery of the tombstone is a good object lesson on the usefulness of oral sources in archaeology. The informant who had recalled seeing a carved stone here had made a number of factual errors, but was essentially correct on the basic facts. He recalled the name as Sarah Adams, not Nancy Adams, and he dated the marker to sometime in the l7th century. He also remembered the epitaph as reading "a fine pioneer colored woman," instead of "a respectable colored woman." Concentrating on the details of the informant's memory instead of the essence of his recollection, we had discounted the story entirely, until, much to our surprise, we found Nancy Adams' gravestone.

The analysis of the skeletal materials from the Uxbridge almshouse burial ground is continuing. The remains are being studied to determine the sex, age, and living stature of the deceased. Other studies will inform us about disease processes and racial traits of the individuals. This information will be compared to other data on 19th-century populations in the Northeast and elsewhere in the country.

Historical research is also being pursued. We are attempting to learn more about the Uxbridge almshouse, and about almshouses in general. Lauren Cook's research is providing census data on individuals who lived and died at the almshouse, and it may be possible to identify specific individuals among our sample. Selectmen's records are also being studied; these contain lists of expenditures for coffins and burials of people who died at the almshouse.

Our study, once completed, should be a useful contribution to our knowledge of 19th-century populations and institutionalized welfare. Both subjects are poorly documented phenomena of the recent past, and can be elucidated by the type of archaeological data that are resulting from the excavation and analysis of the Uxbridge almshouse cemetery.

Further Reading

For 19th-century burial customs, see M. V. Pike and J. G. Armstrong, eds., A Time to Mourn: Expressions of Grief in Nineteenth Century America (New York, 1980). Almshouses are described in R. W. Kelso, The History of Public Poor Relief in Massachusetts 1620–1920 (Boston, 1922). The OPA report of the Uxbridge excavation will be available next year.



Lauren Cook and Dan Finamore expose a fragment of Nancy Adams' headstone in the burial ground.



Tradition held that one Sara Adams, "a pi-oneer black woman," was buried here. The headstone found above reads: "Mrs. Nancy Adams A respectable colored woman was born in Louisiana . . ."

Palaeoethnobotany: the Human Use of Plants through Time

by Julie Hansen

Julie Hansen joined the Department of Archaeology last fall as Visiting Assistant Professor and brings with her an impressive background in archaeology and the study of human interaction with plants. She received her Ph.D. in Classical Archaeology from the University of Minnesota in 1980; her doctoral dissertation concerned the plant remains from the prehistoric site of Franchthi Cave in the Southern Argolid, Greece, which covers a time span from the Upper Palaeolithic, around 25,000 BP, through the Final Neolithic, ending at approximately 5,000 BP. She has also studied the palaeoethnobotany of prehistoric and historical sites in Greece. Cyprus, Crete, and Egypt. The following brief account provides an overview of the types of data that can be collected and interpretations that can be made in the field of palaeoethnobotany.

Tracing the development of the human use of plants through time is known as the study of palaeoethnobotany. Combining botanical subdisciplines such as anatomy, genetics, ecology, and phytogeography with archaeological method and theory, palaeoethnobotany reconstructs the human-plant interrelationships that were and still are essential to human existence.

Plant remains are recovered from archaeological sites in a number of different forms and conditions, and each must be treated in a specific manner to extract the maximum amount of data from them. Macrofossils are the seeds, wood, and other plant parts that may be preserved through dessication, waterlogging, or carbonization. Dessicated remains are usually recovered through careful excavation and dry sieving to separate the plant parts from the soil matrix and artifacts. Waterlogged material is often treated with hydrogen peroxide to break down the mineral component of the matrix while leaving the plant tissue intact, and then stored in alcohol. Microfossils in the form of pollen, spores, and phytoliths are naturally preserved under certain soil conditions. They must be extracted from the soil matrix through the use of chemical processes and analyzed under very high magnification.

The most common form of plant preservation at sites in the Eastern Mediterranean, where I have conducted my research, is carbonization. This occurs when organic matter such as seeds, wood, or other dense plant parts are brought into contact with heat of sufficient intensity and for an adequate length of time as to cause the organic carbon to change to inorganic carbon. In this state the material is stable and cannot be decomposed further except by additional heating which will turn the plant material to ash, by mechanical means such as abrasion, or by exposure to alternately very wet and very dry conditions which will break up the seeds and wood into minute unidentifiable fragments. The gross morphology of the seeds or wood is changed relatively little as a result of carbonizaton. They become black and shrink in size generally, but their basic structure or shape does not change and thus they resemble their modern counterparts to the extent that they can be identified using modern comparative examples. By comparing various minute details under the microscope we can identify the seeds and wood at least to the genus level and sometimes to the species level. Thus we can identify barley and oat grains (Figs. 1 and 2) or cypress and wild almond wood (Figs. 3 and 4) from an Upper Palaeolithic (14,000 BP) context in Greece.

Until about 20 years ago carbonized plant remains were occasionally found as large caches of seeds in storage jars or heaps on floor surfaces. These were easily seen during excavation and needed no special techniques for recovering them. They nearly always consisted of cereals such as wheat and barley or legumes such as lentils or peas which had been stored in antiquity and were awaiting processing when disaster struck and they were carbonized. It was not until the 1960s that carbonized botanical material was consciously sought and recovered on excavations in the Eastern Mediterranean. It is extremely difficult to discern small black seeds in a deposit, and without some special methods of extracting the seeds and other plant remains from the soil much of the botanical information was, and still is, lost.

Before this material could be consciously sought, however, it was necessary first to understand the circumstances under which plant parts can become carbonized and incorporated into the archaeological record. The most obvious place for carbonization to occur is in the hearth or oven where wood is burned for fuel and food is processed and prepared for eating. Wood charcoal will be the most common find in this type of feature, but seeds or fruit dropped during food preparation may also be preserved. The kinds of wheat and barley common in the early periods of agricultural communities in the Eastern Mediterranean had to be parched and then pounded or rubbed to remove the husk before they were ground for flour or boiled for soup. The parching would invariably lead to some of the grains being burned. Weed seeds removed from among the grain before processing may have been thrown into the hearth for quick disposal and thus become carbonized.

Floor surfaces were generally not as clean and well swept as most of ours are today, especially in houses that were suddenly abandoned. Floor sweepings are often caught in post holes, along the walls of a room and under benches. In the event of the destruction of a house by fire, much of the wooden structure as well as furniture and tools was preserved as charcoal, while stores of seeds and fruit escaped complete destruction by being carbonized beneath the bulk of the house debris or in storage containers. Refuse burning outside a house preserved many species of weed seeds from crop cleaning and threshing waste. Catastrophic destruction of whole villages by fire preserved stores of grain in pits or granary bins, fodder in animal enclosures, or piles of wood for fuel.

In essence nearly all areas of a site could yield carbonized plant remains, even areas that do not appear to be rich in carbon. Because the seeds and other plant parts are generally very small they are not easily seen during most normal excavation. Something the size of an olive pit may be picked up in the trench, but a grain of wheat would not usually be detected. For this reason a special method of recovering the carbonized plant remains has been devised. Basically it consists of pouring the excavated earth into water and stirring. Because the carbon is lighter than water it floats to the surface while the dirt, stones, and heavy objects in the soil sink. The carbon is then scraped off the surface of the water and dried. Such a system is know as flotation.

Ónce it is dried the carbonized plant material is sorted under low power magnification into its various components using a comparative collection of plants from the same type of environment and geographical area as the site. Once the sorting and identification have been completed the interesting and challenging task of interpretation must begin.

Until recently archaeologists were primarily concerned with a reconstruction of the diet of prehistoric populations, and to this end desired only a grocery list interpretation from the palaeoethnobotanist. Thus, the species were grouped into edible and non-edible categories. Non-edible species were usually considered weeds of

cultivation or accidental inclusions in the botanical assemblage and not investigated further. In recent years the types of questions asked of archaeological material in general, and botanical material in particular, have expanded beyond this basic interpretation to include such problems as environmental change, crop-processing activities, and the variety of uses for plants beyond food resources.

Environmental changes are best evidenced through pollen cores, which can show relatively subtle vegetational and climatic changes over long periods of time. In the absence of adequate pollen preservation, however, we must rely on the plant and animal remains recovered from archaeological sites. Because most of the plants found on a habitation site were deliberately brought in for some purpose (that is, they were selected from the vegetation), they do not represent a general sampling of the regional vegetation and thus do not give an overall picture of environmental change.

The wild plants represented on a site provide the best data on the past natural vegetation and thus something of the climate during the period or periods of occupation of the site. With a long sequence of habitation covering several millennia, changes in the vegetation and climate may be identified by major changes in the types of wild plants represented.

An examination of the wood charcoal found on excavations may give an indication of the de-

fuel. A change in these species may indicate a depleted supply of favored wood. By examining plant remains from different parts of the site and the associated artifacts we can suggest certain crop-processing activities that may well have been carried on in prehistoric times. In addition, by studying modern-day peoples still practicing more primitive forms of agriculture and identifying the crops grown in early agricultural sites, we can hypothesize how prehistoric peoples dealt with their crops. For example, as many as 28 different steps may be taken during the processing of one of the primitive forms of wheat commonly found on excavations in the Eastern Mediterranean. Each of these steps, from harvesting to threshing, winnowing, and grinding into flour, may result in carbonized refuse. Depending on where we find the seeds on the excavated site, we may be able to reconstruct some of these activities. The combinations of species of crop and weed seeds indicate how pure the crop was in the field. Even in modern day agriculture in the Eastern Mediterranean we see a wide variety of weeds among the crops. When the crop is harvested the wild seeds are collected too and must then be removed before the grains can be consumed. When the cleaning of the grain takes place just prior to parching, many of the weed seeds will be thrown into the hearth as refuse. From the remains of cereals and

crease in certain species of trees.

Species such as pine and oak are

preferred for building material or

From the remains of cereals and legumes on archaeological sites in the Near East, botanists have been able to trace the history of the major cultigens (wheat, barley, lentils, and peas) to their wild progenitors. By tracing the change in the plant assemblage on archaeological sites through time in the Eastern Mediterranean, we can show how populations moved from gathering wild plants to cultivating various species, many of which are the cultigens on which we depend today.

In addition to the obviously edible plants, a wide variety of other species could have been used for food in ancient times. To under-

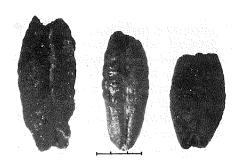


Figure 1 Hordeum cf. Spontaneum Wild Barley

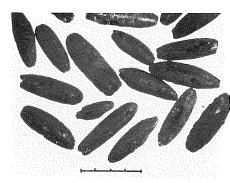
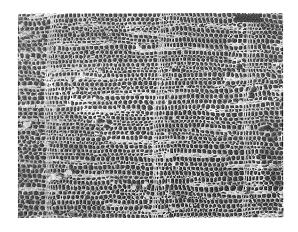


Figure 2 Avena sp. Wild Oats



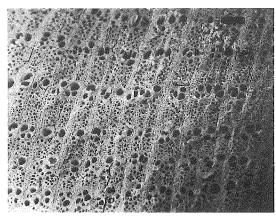


Figure 3 Cupressus sp. Cypress Upper Paleolithic (14,000 BP)

Figure 4 Prunus amygdalus Wild Almond Upper Paleolithic (14,000 RP)

stand the full potential of the human-plant interrelationship with respect to food resources, we must go to the ethnobotanical literature and ancient documentary evidence as well as to the people living in the areas today to collect information about how the different plants in the natural vegetation might have been used. A wide variety of leafy greens, mushrooms, roots, and tubers serve as food resources, but are rarely preserved on archaeological sites. These resources must be taken into account when we assess the total botanical diet of the prehistoric population.

There are numerous other uses for plants besides food, however, and these must also be addressed when we analyze and interpret the archaeological remains. These various uses can be put into four categories: building/structural, ceremonial/ritualistic, medicinal, and craft. Certainly wood of different species was used for construction of houses. The long straight trunks of pine were ideal for major structural supports while harder wood, such as oak or olive, was preferred for smaller supports such as lintels or doors. Reeds would often have covered the roofs, and we now have clear evidence of this type of roof construction from the early Neolithic site of Khirokitia in Cyprus where reed impressions are preserved in mud packing from a collapsed roof. Many of the tools used by prehistoric peoples were probably made of wood: plows, threshing sledges, flails, and winnowing forks. We have no actual archaeological evidence of many of these uses, but modern ethnographic

evidence and the literature of the ancient authors provide us with enough information to make some valid assumptions.

We must make similar assumptions when we try to assess the ceremonial or religious uses of plants. In this case, however, the funeral pyres at the Classical site of Salamis give some archaeological evidence for plants most likely used in a ritualistic context. Here the offerings to the dead included all the season's fruits such as grapes, almonds, hazelnuts, olives, figs, wheat, barley, and lentils. In addition, clay offerings in the form of pomegranates and rosettes were found. The pomegranate is well known as a symbol of fertility, and as an offering at death it may represent immortality. The rosettes may be representations of the crown daisy so common in the fields of Cyprus. This daisy is sometimes called "Lazarus" in Greek because the flowers are gathered at Easter time and used to color eggs. It is thus a plant associated with the resurrection and appropriate in a funeral

What medicinal uses plants had in prehistoric times is wholly speculative. We can assume that these people were well aware of their botanical environment and the properties, both good and bad, of most of the plants. For information on the medicinal uses of plants we must turn to ancient authors such as Dioscorides, as well as to modern works on pharmacognacy. Even today plants are a substantial source for many of the drugs produced by pharmaceutical companies. Examples of some medicinal uses of common Mediterranean plants include a decoction of the root of the caper which can be used against blotchy skin and for scalp treatments. Wild pistachio resin was used to fill cavities in teeth or, according to Dioscorides, was mixed with white sweet wine and applied to the temples for a headache. Almonds were ground and mixed with rosewater and vinegar in a poultice for a headache. Almond oil was used as an emollient and laxative.

Finally, a wide number of plants can be used as dyes or for various crafts. The insect galls formed on oak trees were used in tanning and as a brown dye. The roots of several species of borage yield blue or red dye. Basketry, jewelry, and clothing all required some part of a plant for their production.

The study of palaeoethnobotany can yield an abundance of information on ways people interacted with their vegetational environment in the past. New insights into these interrelationships will be gained as better recovery techniques and new means of analyzing the data are developed.

Historical Archaeology of the Household and Homelot in **Massachusetts**

by Mary C. Beaudry

Throughout the spring, summer, and fall of 1985, historical archaeologists from Boston University have undertaken several projects at historic houses; each of these houses is owned by a local historical society and is listed on both the State and National Registers of Historic Places. Although excavations around historic homes are not unusual, the Boston University projects have differed from many earlier digs in that they involve the local community, adults as well as high school students, in excavation. Under the direction of trained archaeologists, people have been able to become directly involved in local history by helping to recover bits of it from the earth. What is more, each project is guided by a research design aimed at delineating the archaeological signature of the household, as reflected in the treatment of spaces around the home, for wealthy and not-so-wealthy residents of urban and rural areas of Massachusetts.

The Jason Russell House in Arlington

Spring blizzards may not be an unusual occurrence in New England, yet it was far from the wished-for weather on the Monday morning last March when work on the Jason Russell House was scheduled to begin. The project had been in the planning stages for almost a year, and, as things turned out, it would take more than a little snow to dampen the spirits of the students and members of the Arlington Historical Society who participated in the

The excavation was only one of many ways in which the town of Arlington observed its 350th anniversary (other events included historical reenactments, a Town Day Harvest Festival, and a number of lectures and special events). Don Bockler, a teacher at Arlington High School and long-time member of the Boston University Center for Archaeological Studies, first



Arlington High School Students observe their friends engaged in the Jason Russell House excavations. Photo by Cheryl Collins.

thought of the dig as part of the anniversary celebration; the 350th Anniversary Committee, chaired by Mrs. Margaret Spengler, approved the idea and appointed Philip Hagar, president of the Arlington Historical Society, to organize the project. Phil approached me in the spring of 1984 and we began to sort out possible sites which we might excavate. Arlington has a rich legacy of both prehistoric and historical sites, and this was no easy task. By fall, we had settled on the Jason Russell House, home of the Arlington Historical Society. The house, built ca. 1740, is of considerable architectural interest, and had been the home of patriot Jason Russell, who lost his life defending his family against British troops retreating from the battles of Lexington and Concord.

We hoped that archaeological investigation could discover whether the house had been moved from its original foundation and could provide clues about the lifestyle and possessions of the residents of the house during the Colonial era. The fact that the Russell House is within walking distance of the high school made the site all the more attractive as a laboratory for teaching archaeological techniques to local students.

Before the scheduled week of excavation the Project Archaeolo-

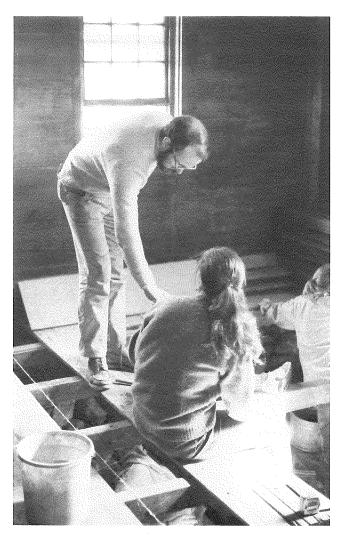
gist for the dig, Mark Boulding, a Ph.D. student in New World Historical Archaeology at Boston University, gave a series of slide-illustrated lectures to the townspeople who had signed up to take part. Mark was a bit surprised when over 70 people showed up for his initial talk This was concrete evidence of the town's enthusiasm. Mark also spent many hours researching the history of land use at the Jason Russell houselot so that he would know what to expect and could interpret what we might find.

The digging was to take place inside and outside the house, in the cellar of the kitchen, and in the front yard. Before the first day of formal excavations, students from the Arlington High School carefully removed the colonial floorboards of the kitchen, exposing the cellar hole beneath. The Boston University graduate students directing the high school were, in addition to Mark, Dino Zamanis, Sara Mascia, Dan Finamore, Elizabeth Shapiro, Julie Ernstein, Katy Bond, Bill Barnett, Lauren Cook, and Brendan Mc-Dermott. I spent a Saturday preparing the site by establishing a datum for the site grid and taking transit readings for a base map of the entire lot.

An indoor dig proved to be an excellent means of working despite the March snowstorm, but the kitchen cellar was not big enough to hold everyone. So a number of students braved the falling snow to help Dino finish the site map, measuring the girths of the trees in the yard (as well as that of the flagpole) and the dimensions of the stone wall at the yard's perimeter. The students looked like they were hugging the trees for warmth as they struggled to stretch tapes around the broad trunks of the trees surrounding the Jason Russell House.

By the second day of work most of the snow had disappeared, and we were able to open squares directly in front of the house. The students from Arlington High School, most of them enrolled in Don Bockler's Earth Science class or in Gerry Tremblay's Latin class, dug in morning and afternoon shifts of four hours each. At three each afternoon, local adults, some with young children, took up trowels for their shift. Over the course of the day, Phil Hagar and David Baldwin, Phil's assistant, led tour groups through the house, with the excavation as the featured highlight of the tour. In all, over 200 people participated in the excavation, a figure that must be a world record for a dig that lasted only one week

The cellar beneath the Jason Russell House kitchen proved to contain mostly twentieth-century refuse, including two car batteries dated 1929. The recent nature of the material in the cellar fill may be an indication that the house was shifted on its foundation, a theory proposed by an architectural historian who studied the house. Our work in the front yard was meant to confirm or disprove this theory, with evidence of an earlier foundation at a different alignment than that of the present structure. We didn't find evidence of that nature, but we did find quite a lot of broken pottery, window glass, and nails, as well as an almost intact stub-stemmed, white clay pipe from the early nineteenth century. One of the squares excavated right against the foundation turned up some eighteenth-century material, including a musket ball of the type used during the American Revolu-



Mark Boulding consults with Julie Ernstein as Arlington High School students excavated beneath the Jason Russell House kitchen. Photo by Cheryl Collins.

tion and several flakes of red felsite that testify to the presence of native Americans at this spot long before it was settled by English colonists.

No features such as trash pits or post holes were found in the front yard, probably because the entire area had been bulldozed and graded in the 1950s, when nearby nineteenth-century homes were razed. We found ample evidence of this destructive activity—activity that would have obliterated archaeological evidence in the same way it eliminated the nearby houses.. But we knew that other excavations at colonial houses have turned up very little in front yard areas as opposed to side and rear yards, so, apart from the fact that we failed to solve the architectural puzzle about whether or not the house had been moved, we were not too disappointed.

The greatest reward of the Jason Russell House project was the enthusiastic participation of scores of local residents. Seeing how excited people become when they unearthed even the tiniest fragment of pottery or animal bone reminded us why we 'professionals' decided to become archaeologists in the first place: the thrill of uncovering artifacts left behind by people long dead links us to the everyday world of the past in a way that no history book ever can ever hope to do.

The Hooper-Lee-Nichols House in Cambridge

We began our work at the Hooper-Lee-Nichols House (c.1685) in Cambridge, the home of the Cambridge Historical Society, in April, under far more auspicious weather conditions than those we had in Arlington in March. The Project Archaeologist, Nancy Seasholes, and her Field Assistant, Elizabeth Shapiro, were aided in the field by volunteers

from my Introduction to Archaeology class as well as by students from Cambridge Rindge and Latin and from Lexington High School. Many Boston University archaeology graduate students likewise volunteered their time.

The excavations at the Hooper-Lee-Nichols houselot were designed primarily to assess the overall nature and integrity of the archaeological deposits there; Bettina A. Norton, Director of the Cambridge Historical Society, initiated the project as part of a longrange plan for restoration, construction, and landscaping activities on the Society's property. She realized that an archaeological study could provide her with a management plan for the belowground resources that would assist her Board of Directors in making decisions about other projects that might disturb archaeological deposits.

Mrs. Norton got a Preservation Fund grant from the Massachusetts Historical Commission, and I was retained as the Preservation Consultant. Before we began our testing program, we first determined what historical documentation about the house existed. Many people had done research on the Hooper-Lee-Nichols House before us, but archaeologists tend to be interested in topics overlooked by historians, such as the history of utilities, waste and water management at a site, and activities that altered the landscape. Often maps and pictures are the richest sources for this sort of information, but diaries and account books often record episodes of construction, demolition, landscaping, and even the installation of utilities. It is necessary, therefore, for the archaeological researcher to look over all of the sources for clues about how people in the past disturbed the earth as they attempted to accommodate the changing needs of the household as well as the changing fashions in landscape (or even plumbing).

The next phase of the project was a remote-sensing survey, which was conducted as an aid in locating subsurface features not known to us from the documents. We used an electrical resistivity

meter that measured the conductivity of the soil around the house. Remote sensing is often less expensive than digging and, most important, it does not disturb whatever lies in the ground (see the article by Ricardo Elia on the use of remote sensing at Fort Griswold, Connecticut, in "History and Tradition at a Connecticut Fort," Context 4:1–2 (1984) 16–19). The readings from our meter, of course, did not tell us whether an anomaly (an extremely high or low reading) was a buried wall or a tree root—we had to dig to find out that kind of information—it only helped to locate areas of ar-

chaeological promise.

After Nancy had plotted all of the resistivity readings on a base map of the houselot, we combined these data with the historical accounts to decide where to place our test units. We first chose an area of especially high resistance; this was also a spot mentioned in a nineteenth-century diary as having always given off a hollow, reverberating sound when someone walked over it. Although we hoped that this meant that we would uncover a colonial well on the first day of the dig, we soon found that the cause of our high reading was a cobbled surface lying about 15 cm below the present ground surface. Obviously, a dense layer of cobbles would conduct little or no electricity

The cobbled surface extended over much of the side yard of the house, in an area directly in front of a long-vanished stable. Use of cobbles as yard surfaces, walks, courtyards, or driveways was not uncommon in colonial times or even in the nineteenth century (see R. Elia, "Urban Archaeology at the Paul Revere House," Context 3:1-2 (1983) 5-7, and M. Beaudry, "Beneath the Blackstone Block," Context 3:1-2 (1983) 8-10). Finding such a surface gives us clues to earlier grade levels, and we know that a layer of cobbles effectively seals off the deposits below it. Both as a landscape feature and as a piece of evidence for establishing a chronology of land use at a site, therefore, a cobbled surface is an important find. The Cambridge Historical Society, in fact, is so interested in the pave-

ment, which we were able to date to the era of Tory occupation of the site, that they intend to uncover it fully and use it as part of the interpretive exhibit on the history of the house.

Our work produced other evidence about landscaping, including layer after layer of coal ash spread evenly over the rear yard during the nineteenth century. Beneath the coal ash, layers of brick dust and rubble mixed with domestic artifacts appeared. Each of these had been sealed off with a deliberate application of clean fill. We were able to correlate the deposits of building debris with known episodes of renovation to the house in the early eighteenth century, and if the quality of ceramics and glassware found is considered, we can conclude that the eighteenth-century occupants of the house lived in a fashionable and comfortable manner. We also recovered sparse but tantalizing evidence of the seventeenth century in the lowest levels of our excavation.

Our brief project at the Hooper-Lee-Nichols House was successful primarily because we were assisted daily by high school students who hurried to the site after school let out. We were able to recruit students from a variety of schools—including several from Arlington who had been unable to participate in the excavations at the Jason Russell House. Without their contributions and those of our own students from Boston University, we would have been able to accomplish far less than we did in the two weeks allotted for digging.

The John Balch House in Beverly Our third historical houselot study, at the John Balch House in Beverly, began last spring when Edward Bell, an M.A. student in historical archaeology at Boston University, conducted a documentary study of the property. This summer Ed, who will serve as Project Archaeologist, myself, Lauren Cook, Carroll Conquest, and Brendan McDermott initiated an electrical resistivity survey of the houselot and took transit readings for the topographical map of



The John Balch House 1922 (from Cummings 1979).

the lot. Although we are still only in the planning stages for excavations at the Balch House, we are optimistic that the project will be an exciting one. The house was probably built sometime after 1650 and has a long history of occupation. Ed's research indicates that we should expect to find many interesting features, including privy pits and outbuilding remains, in the back yard. We will, of course, be interested in learning what we can of the treatment of the lot over time, since we want to know if a houselot that was the focus of subsistence-level farming activities received the same sort of elaborate attention as did the Hooper-Lee-Nichols houselot, which served more as a gentleman's country seat. In conducting our research, we intend to invite the members of the Beverly Historical Society to participate. Daniel Hoisington, Director of the Society, has been most congenial, and there is every indication that the residents of Beverly will welcome the opportunity to get their hands dirty in pursuit of their town's early history.

The Parson Barnard House in North Andover

In October, I was given the unexpected opportunity to dig around yet another early Massachusetts

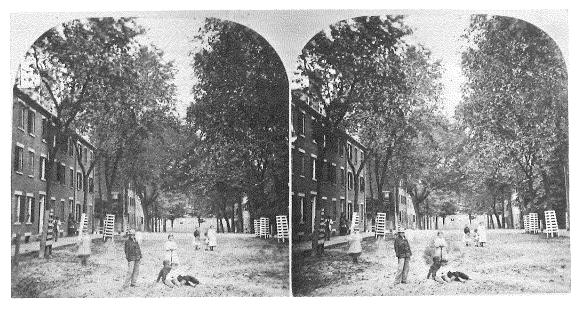
home, the Parson Barnard House (ca. 1715) in North Andover. The project came about because restoration activities funded by the Massachusetts Historical Commission were likely to disturb archaeological remains. The Barnard House was the home of three successive ministers of the North Parish Church in Andover, all graduates of Harvard College; it was subsequently occupied by other ecclesiastical figures including the Preceptor of the Franklin Academy (which was on the grounds) and in the nineteenth century by two butchers, who used the back yard as a slaughtering area.

Our excavations, however, were restricted to the area directly adjacent to the foundation of the house, where a perimeter drain system would disturb the ground. We did not expect to find a great deal so close to the house, especially because we thought that the modern utilities (gas, water, sewer, and electricity) would have disturbed much of this area. With Nancy Seasholes serving as Project Archaeologist, a crew of Boston University archaeologists excavated a series of 50 cm-square shovel test pits at a distances of 70 cm and 200 cm from the house on the three sides where the drainage trench would be located. We were pleasantly surprised when to find that the side yard and a portion of the front yard had once been paved with cobbles, like the side yard of the Hooper-Lee-Nichols Houselot, and the artifacts below the cobble level date it to approximately the same time period, the third quarter of the eighteenth century. Along the eastern corner of the house, we also uncovered a buried topsoil horizon some 50 cm below the surface. The amount of clean fill above this layer leads us to conclude that the ground surface originally sloped so precipitously that it had to be built up with fill before the house was

Although our work at the Parson Barnard House was limited in scope and of only two day's duration, we hope that we will be able to return in the future to perform more extensive excavations. The site seems likely to reveal much about the treatment of the houselot and the ways in which such treatment reflects the occupations and lifestyles of the site's inhabitants.

The Boott Mill Boarding/Tenement Houses in Lowell

In the future, our study of the treatment of domestic spaces around and behind dwellings will incorporate multi-unit urban residences in Lowell. Boston University has recently entered into a five-year cooperative agreement with the North Atlantic Region of the National Park Service for a study of the Boott Mill Boarding/ Tenement Houses (in addition to the mill yard and agent's house). Ricardo Elia and I are Co-Principal Investigators for the project, working closely with Stephen Mrozowski, Supervisory Archaeologist for the Park Service. Katie Bond, Ed Bell, and Greg Clancy (a Preservation Studies student working under the direction of Richard Candee, Director of the Preservation Studies Program) have begun work as research assistants for the study. They are focusing on the quality of material life in the boarding houses, on sanitation and hygiene in residential and industrial settings, and on the architectural history of the Boott Mill complex. Students in my Indus-



A stereopticon view taken in ca. 1889 shows boarding houses on either side of Brookings Street; Boott Mill No. 6 can be seen at the end of the street.

trial Archaeology class have begun work on a number of small projects that will also contribute to our study.

All of this work is aimed at compiling a comprehensive picture of what life was like for mill girls and the immigrant operatives who replaced them. We hope to

David Landon, a Boston University Ph.D. student, draws a plan of the features uncovered in one of the excavation units at the Lowell Boott Mill Boarding House site. The feature in the foreground is a well that was in use until ca. 1890, when the boarding houses were con-

nected to city water.

establish a firm ethnographic and documentary basis from which to construct a model of what archaeology can reveal about the lives of mill workers. This fall we will conduct limited field testing in the backlot areas of two Boott Mill boarding house blocks to learn about the archaeological record in

the area slated for a full-scale excavation next summer.

We hope that the Boott Mill study will shed light not only on the lifeways of millworkers, but also on the ways archaeologists can best study complex urban deposits formed by large numbers of unrelated and transient individuals. The Lowell study will prove to be a difficult challenge for historical archaeologists more accustomed to finding evidence that can be tied to the traditional household unit, the family.

The First AFAR Season in Southern New Mexico

by Laura Leach-Palm

Edited by Dr. Richard S. MacNeish

The American Southwest, an area familiar to most archaeologists, still holds many secrets. With the intention of disclosing some of those secrets, Dr. R. S. MacNeish, of Boston University and the Andover Foundation for Archaeological Research (AFAR), returned to the Southwest this last spring for his fiftieth season in the field. Working with Dr. Steadman Upham of New Mexico State University at Las Cruces, Dr. MacNeish began the first of a three year investigation of the rock shelters in the Las Cruces area. Dr. MacNeish and Dr. Upham are pursuing different but complimentary lines of research aimed at providing the foundation for an

enlightened exploration of the Archaic cultures of this southeastern edge of the American Southwest.

Richard (Scotty) MacNeish has achieved an international reputation for his work on the origins of agriculture and this year began a new field project seeking the beginnings of agricultural practices in the Southwest. Current evidence indicates that domesticated plants and techniques of cultivation were introduced from Mesoamerica then spread across the Southwest. This process would be in accord with Scotty's "Tertiary Development Model" of the origins of agriculture. One of the most important factors of this model is the idea that contact and interaction occurred between the people living in the Southwest and those living in Mexico, who already had domesticated plants and practiced agriculture. It is generally believed that these latter people had all of the most common of the known domesticates from that area: corn, beans, and squash.

MacNeish postulates that the Archaic people of the Southwest developed specialized subsistence practices based on desert resources. Varied and often abundant food stuffs could be found, especially near water sources. This relative abundance was enough to encourage an increase in the size of the population, but the increased demand also diminished the carrying capacity of the lush locale. This process continued for centuries until eventually the number of people was too great to be supported by the ever diminishing resources. This situation, Scotty speculates, would have pressured the Southwesterners to begin to use Mesoamerican domesticated plants. Subsequently factors of wild resource availability, concommitant climatic change that caused environmental deterioration, population demands, the availability of crop foods, and the organization of necessary labor for food production (in addition to social factors the model can not define) encouraged more and more intensified agricultural practices. This scenario did not happen uniformly or consistently in all places, but in some areas agriculture did become the major economic base of a few communities.

In the Las Cruces area, Scotty is looking for evidence that can be used to test his tertiary developmental model. He hopes to find foodstuffs in datable contexts that will answer a variety of questions: When did people in this area of the Southwest start using domesticated plants? Is there evidence of a change from a desert resource specialization that depended on hunting and gathering to one that relied more on horticulture? If evidence of agriculture is found, can it be determined that wild resources were diminishing, that population was increasing, or that a combination of these factors occurred before agriculture was adopted? If no major reliance on agriculture is indicated, how did these people integrate the new subsistence practices into their way of life? An answer to this last question, which implies a choice between natural resources and production techniques, may shed some light on the decision-making processes of these prehistoric peo-

A natural complement to Dr. MacNeish's inquiries is the investigation directed by Dr. Steadman Upham in the Organ Mountains near Las Cruces, New Mexico. The research of Dr. Upham, who has excavated thirteen rock shelters since 1982, is aimed at exploring the diversity of human adaptation on the southeastern portion of the Mogollon culture area. While other investigations in the region have produced a variety of phase sequences that are not in agreement, Dr. Upham sees these sequences as a direct reflection of the differing lifeways of the peoples of the region. His research is designed to explain this diversity. In addition, Dr. Upham recognizes that the most visible archaeological remains in the Southwest have been given more attention than those that are less obvious and less visible. These less visible remains are likely to contain much undiscovered information about human adaptations in the area. They may provide information about changes in the adaptive strategies used by prehistoric people in this area.

This inquiry into the adaptive strategies of the prehistoric Southwest ties neatly into Dr. Mac-Neish's questions about the introduction of domesticated plants and agricultural techniques. Was there a change from hunting and gathering to agriculture or was agriculture only one of the available adaptive strategies? What were the factors that affected the development of these strategies? Should this area of the Southwest be lumped with the Mogollon culture unit or does the area require separate consideration? Did the introduction of domesticated plants change other aspects of the cultures in this area, and did that consequently affect this area's integration with the larger Mogollon cultural area?

To address these questions, a chronology for the region must be agreed upon and an environmental reconstruction of the region around the rockshelters needs to be completed. Excavations directed toward these goals have already begun. Six of the rockshelters that Dr. Upham has investigated have yielded artifactual and ecofactual data believed to be from the Middle and Late Archaic temporal periods. The AFAR excavation began with the Tornillo rockshelter last spring. Interdisciplinary research on the complex questions about human adaptive strategies is planned for the seasons to come. These investigations will be carried out by Dr. Uphams's field school and Dr. MacNeish's AFAR participants.

This year's investigation was in a rockshelter that was discovered by Dr. Upham's crews but had not been excavated. Prior to our arrival the shelter had been vandalized, although not entirely destroyed, and a preliminary evaluation of the site seemed to offer hope that there might be good preservation of organic materials and stratified soils within the site. The hope of finding a definable stratified site was, however, disappointed. The site exhibited only an ephemeral stratigraphy and confusing archaeological signals that speak for the need of continuing with subtle and flexible inves-

tigations. Excavation did, however, uncover interesting perishable materials such as early types of corn cobs, squash rind, yucca, and cotton fiber cotton cordage, basket fragments, and a possible sandal fragment. Very few lithic artifacts and no artifacts diagnostic of any temporal period were recovered. It is not yet known if the limited artifact assemblage reflects the temporal period or season the rockshelter was used, the type of activities that occurred there, or a combination of these factors.

Dr. MacNeish did, however, construct a tentative chronology of the region that is based on data from over 400 sites in the Fort Bliss Military Reserve. The data are from a very fine report by Dr. David Carmichael of New Mexico State University. This tentative sequence, which evoked much discussion and assistance from archaeologists in the area, is as follows: Gardner Springs or Fort Bliss Complex—5,000 to 4,000 B.C.; Keystone Complex—4,000 to 2,000 B.C.; Fresnal Complex—2,500 to 1,000 B.C.; Heuco Complex—1,000 B.C. to 300 A.D.

The earliest Archaic complex, Fort Bliss, is characterized by Bajada projectile points, grinding stones, and a subsistence system based on foraging. Keystone, the second complex, is also based on foraging but has new point types and grinding stones as well as evidence of very early pithouses. The third complex, Fresnal, is characterized by new grinding stones and scraper planes, a new Chiricahua-like point type, and evidence of corn perhaps by 1,600 B.C. In the final Hueco complex many more sites occur as well as distinctive perishable items such as sandals, baskets, and mats. The appearance of these latter items may be a function of preservation and not a change in the artifact assemblage. The Hueco complex, in addition, has evidence of incipient agriculture of corn, squash, beans, and perhaps sunflowers. True village agriculture does not develop until much later, perhaps even later than 1,000 A.D. This tentative sequence will be used as a basis for testing and further research in the Las Cruces area.

Historical Plantations on St. John in the Virgin Islands

by Ricardo Elia and Donald Jones

The Caribbean island of St. John, one of the U.S. Virgin Islands, today is largely an undeveloped and unspoiled tropical paradise. Hidden beneath the lush vegetation from the slopes of the mountains to the white sand beaches are stone ruins reminiscent of lost civilizations. These ruins are all that remain of the Danish plantations that dominated the island for almost 150 years, from the first Danish settlement in 1717 to the abolition of slavery in 1848. Today, nearly twothirds of the island is protected as a U.S. national park.

In July, 1986, Ricardo Elia and Donald Jones, Director and Assistant Director of the Office of Public Archaeology at Boston University, and Conrad "Mac" Goodwin, also of Boston University and co-director of the Galways Plantation Project on Montserrat, British West Indies, visited St. John to explore possibilities for archaeological research. Elizabeth Righter, State Historic Preservation Office archaeologist for the U.S. Virgin Islands, accompanied the Boston University team. Ms. Righter provided guided tours of the island and its plantations, and introduced us to the archaeological community of St. Thomas and St. John. We are grateful to Ms. Righter for her hospitality during our stay in the West Indies.

These photographs, taken by Ricardo Elia and Donald Jones, illustrate but a few of the rich and varied historical resources of St. John. Although several plantations have been partially restored by the National Park Service, most still remain in ruins. The OPA is currently hoping to establish an archaeological project at Concordia Estate on St. John in the near future.



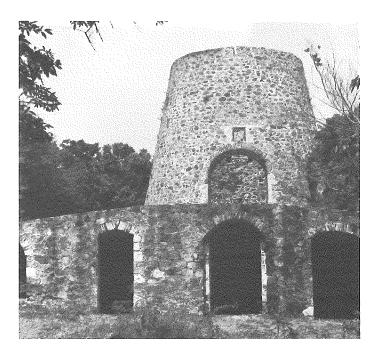
Coral Bay was the site of the Danish West India Company's first plantation, Carolina Estate, probably chosen more for its strategic qualities rather than its scenic beauty. The sugar plantation's windmill tower can still be seen in the midst of the dense tropical vegetation (in the right center of the photo).



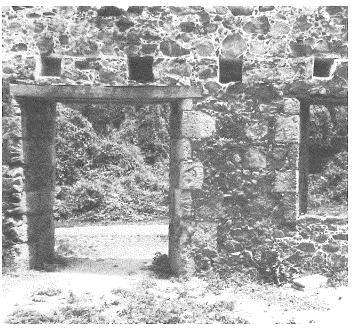
Windmill towers are perhaps the most easily recognizable structures of sugar plantations. Large wooden sails, powered by the wind, would drive rollers used to crush the juice from the sugar cane. The bake oven in the foreground was used for baking most of the bread consumed by the estate's slave population. These are located at Annaberg Plantation, a late 18th-century sugar plantation now owned and maintained by the National Park Service.



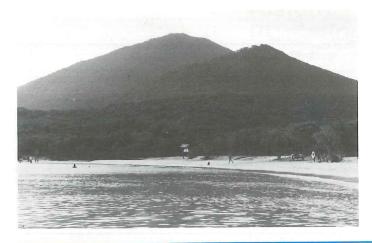
Looking more like a church than a factory, this gabled stone boiling house was the focal point of the industrial complex at Annaberg. Here, juice extracted from the sugar cane was boiled down to make sugar, molasses, and rum. These products, in high demand on the world market, were sold and traded at great profit.



Although sugar plantations were extremely lucrative, most of the profits found their way back to Europe and did not remain in the West Indies. Often the buildings did reflect the prosperity of the plantation, however, as is evidenced by this elaborate windmill tower at Catherineberg Plantation. Beneath the rollers is a labyrinth of barrel-arched storage bays.



Plantation owners had to adapt to a climate and environment that were very different from their northern European origins. Using locally available materials in a very creative way, builders often used coral as a building material. Here, also at Annaberg, coral was used to frame the windows and doors of the curing room.



Concordia Estate, an early 18th-century cotton plantation, is located on the low ridge overlooking Salt Pond Bay, known in the 18th century as one of the best sources of salt in the West Indies. Although sugar plantations dominated much of the island, cotton, tobacco, and indigo were also grown, but these industries have been little studied. Concordia is integrally tied to the history of St. John; the plantation was involved in the fierce slave revolt of 1733 that resulted in the annihilation of the majority of the white population of St. John. The OPA is hoping to develop a research project at Concordia in 1987.



CALENDAR

Weekends

Center Workshop: Lauren Cook will conduct a workshop on Documentary Archaeology. The course carries CEU credit. Contact Sara Mascia, Coordinator of Activities, at the Center (353-3415) for more information and to enroll.

Weekends

Center Workshop: Al Wesolowsky, Research Fellow in the Department of Archaeology and Managing Editor of the Journal of Field Archaeology, will conduct a workshop in basic human osteology, entitled "Bones for Beginners." The course carries CEU credit. Contact Sara Mascia, Coordinator of Activities, at the Center (353-3415) for more information and to enroll. Both workshops will be conducted at the Center for Archaeological Studies, Boston University.

The Center for Archaeological Studies, which was founded at Boston University in 1980, has as its chief aim the development and coordination of interdisciplinary archaeological programs in education and research on local, national, and international levels. The Center also seeks to increase national and international awareness of the importance of understanding other cultures, and of preserving the world's cultural heritage, by involving professional archaeologists, scholars in other fields, and the general public in the activities of the Center.

Context is the newsletter of the Center for Archaeological Studies and is published quarterly. Institutions and individuals may subscribe separately to Context at a cost of \$10 per year. Membership to the Center is

open to the public; annual dues are \$20 (\$10 for students): benefits include a subscription to Context, invitations to attend our fall and spring lecture series and other events, and the use of our library facilities. The Center also offers special seminars for the public during the academic year and summer field schools here in the Boston area and abroad. Other categories of membership are: Contributing Member, \$50; Institutional, \$50; Patron, \$100; Benefactor, \$500; Corporate, \$1000; and Life Member, \$400. These categories include a subscription to the Journal of Field Archaeology. Please make checks payable to the Center for Archaeological Studies and send to the Center office at Boston University, 232 Bay State Road, Boston, MA 02215. Gifts to the Center are tax-deductible.

Editorial Board: James R. Wiseman, Editorin-Chief; Frederick P. Hemans, Managing Editor.

Faculty of the Department of Archaeology: Mary C. Beaudry, Ricardo J. Elia (adjunct), Creighton Gabel, Julie Hanson, Frederick P. Hemans, Howard Kee (adjunct), Fred S. Kleiner, Richard S. MacNeish, Keith Morgan (adjunct), J. Wilson Myers, Karl M. Petruso, James Purvis (adjunct), Edwin Wilmsen, James R. Wiseman, Paul E. Zimansky.

Copyright 1986, Boston University, Center for Archaeological Studies

Boston University

Center for Archaeological Studies 232 Bay State Road Boston, MA 02215 Nonprofit Organization U.S. Postage **PAID** Boston University