Boston University
Center for
Archaeological Studies

Fall/Winter, 2000/2001
Vol. 15, No. 1

CONTEXT

Polychrome stucco head—the face is red, the headband is blue, and the eyes, nose, and mouth emphasized in black—found at Louisville, Belize, by Dr. Thomas Gann in 1936, and now in the British Museum. *See page 26 of this issue.*

INSIDE THIS ISSUE:

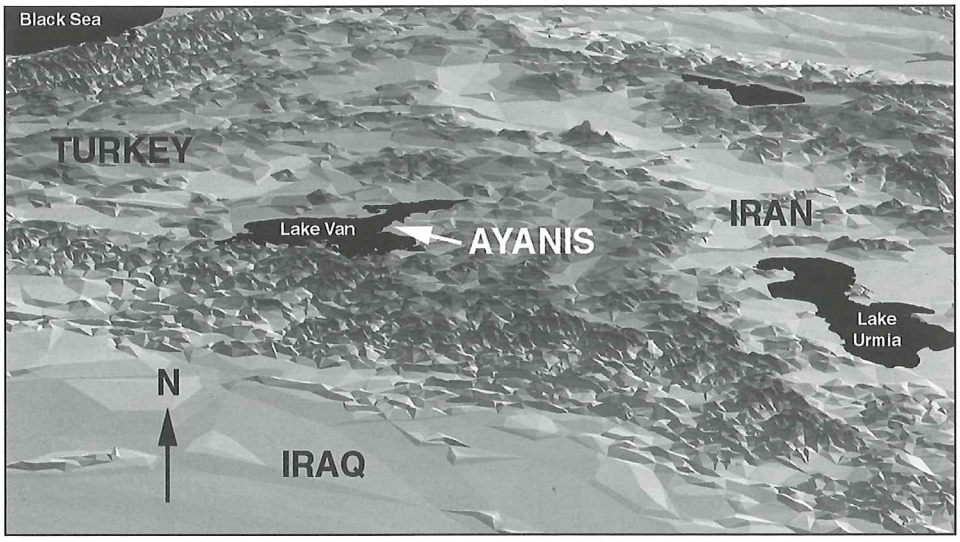
A City of an Unlikeable Empire

by Paul Zimansky

At a coffee break during a conference last March, after I had presented some of the materials from my excavations in Turkey, an eminent linguist approached me and remarked, "No matter how hard I try, I don't think I can ever like the Urartians." I was struck by this—not because I felt that the inhabitants of this Iron Age kingdom were particularly loveable, but because it had never occurred to me that anyone knew enough to dislike them. In a career-long involvement with the archaeology of this Iron Age empire, I have had a great deal of difficulty figuring out who its citizens really were and under what conditions they lived.

On the other hand, it is easy to see how the Urartian king and the Urartian army could have generated some serious antipathy—particularly among their neighbors in the eighth and seventh centuries B.C. Urartian fortresses, filled with weapons and armor, dotted the mountainous lands of eastern Turkey that formed the core of the kingdom and provide us with ample evidence of its military preoccupations and prowess. Several hundred cuneiform inscriptions boasting of conquests and royal construction projects document the history of Urartu's rise to power in the singularly brutal world of the Iron Age. Excavation in Urartu, however, has focused almost exclusively on citadels and left our archaeological understanding of the kingdom as something of a head without a body: we know a good deal about leadership, official art, and language insofar as it is transmitted to us through royal decrees, but almost nothing about the daily life of the citizenry. A

continued on page 2



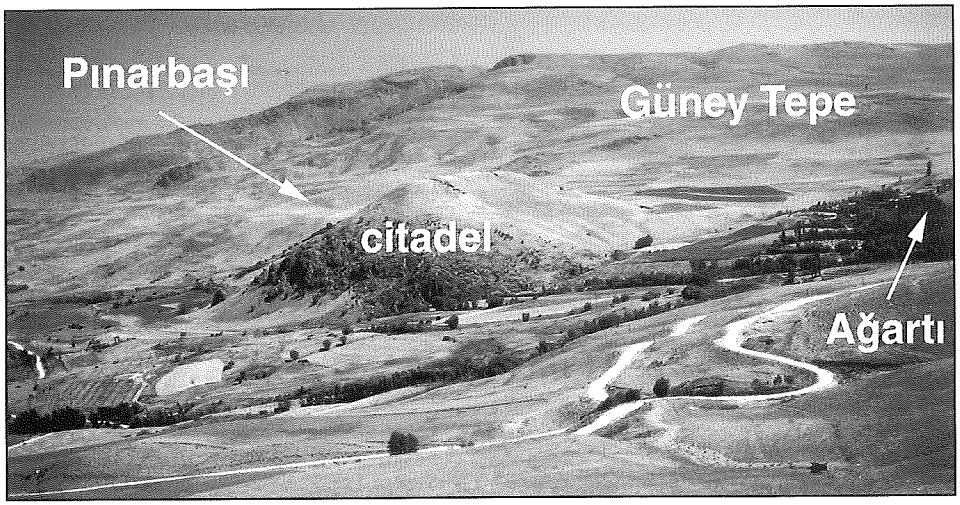
A composite image from Digital Elevation Maps (DEM) showing southeastern Turkey and surrounding regions, including Ayanis and Lake Van.

continued from page 1
civilization known only by its fortresses is not really known at all.

The sources of Urartian power have always been mysterious. For one thing, the empire emerged in a land that seems to offer little encouragement to political coherence and economic stability. Its winters are notorious, blanketing the landscape in a thick layer of immobilizing snow that can last from September into May. Even in summer, communications are difficult because the terrain is broken by intersecting mountain chains and volcanoes like Süphan and Ararat. This is the least densely populated part of Anatolia, where there are only small and isolated areas to be irrigated in the dry summer months and pastoralism is one of the dominant modes of rural production. How is it that for two centuries this land was able to maintain its status as a world power—the only kingdom in the Near East that could stand up to Assyria? I have long felt that some of the clues for resolving this enigma might be found in an archaeological investigation of what was going on at the bottom of the social hierarchy. If one could look at a whole Urartian settlement, it might be possible to say a little more about who the Urartians were and how they held their empire together.

In 1996, Professor Altan A. Çilingiroğlu of Ege University, Izmir, provided me with an opportunity to do just that. He was on lecture tour of the United States, talking about his excavations at the Urartian citadel of Ayanis. When I mentioned my interests to him, he responded, "We have a settlement. Come have a look!"

I did not need any persuading to visit Ayanis. Quite aside from the potential offerings of its settlement, it is perhaps the richest and most spectacular Urartian site ever discovered. It lies 38 kilometers north of the provincial capital of Van, on a rocky outcrop overlooking the lake of the same name. The citadel rock was fortified by a massive wall of dressed stones, reinforced by buttresses and entered by a single gate on its southeastern side. In 1994 Çilingiroğlu discovered an inscription in this gateway in



Ayanis area from the southwest.

which King Rusa II records that he built the fortress in previously uninhabited territory and named it "Rusahinili below Mt. Eiduru." The text also states that he built a temple, a city, and an orchard at the same time. Within the citadel walls Çilingiroğlu excavated several large storerooms, each containing hundreds of storage jars large enough for a tall man to hide in. Other rooms on the south side of the citadel were full of shields, swords, arrows, and quivers —more than fifty of the latter were discovered in last year's excavations alone. The rooms of the citadel are organized around a large rectangular court that was partially roofed. Within this stand rectangular basalt pillars beside which were discovered bronze shields and weapons presumably fallen from where they had once been suspended. The surrounding walls were painted, although most of the decoration did not survive the conflagration that consumed the citadel. The most spectacular discoveries in this area, however, came after we had joined the Ayanis team. In July, 1997, Çilingiroğlu discovered a temple on the southeast side of the courtyard, across the entrance of which was carved the longest known Urartian inscription of the seventh century, and the third longest of any era.

This inscription was a great help to us because it offers information directly relevant to the question of who lived in the settlement. After the usual prologue naming the site and listing sacrifices performed to various gods of the Urartian pantheon, Rusa II cataloged all the great deeds he had performed throughout his kingdom, mentioning many previously unknown places. He then continued: "Rusa the son of Argishti speaks, 'I conquered the enemy lands: the land of Assur, the land of Targu, the land of Etiuni, the land of Tabal, the land of Qairanu, the land of Hatti, the Land of Mushki, and the land of Siluquni.'" This list reads like a gazetteer of his neighbors. The reference to Assyria (Assur) is a particular surprise. The Urartians and Assyrians had been bitter enemies in the eighth century, but the few Assyrian references of the seventh suggested the two powers later had come to some sort of an understanding. Rusa was clearly having none of it. The lands of Hatti, Mushki (generally felt to be Phrygia), and Tabal lay to the west; Targu and Qairanu are unknown; and Etiuni and Siluquni lay north and northeast of Urartu. This list is followed by a passage–not completely intelligible—that appears to say that he settled captives of these lands here, in the palace and the "cities," by which he presumably means the settled areas around Ayanis.

One other discovery on the citadel was very important to our analysis of the materials of the outer town—Ayanis was not occupied for very long. Rusa II was the last great king of Urartu, and we know from Assyrian sources that he was gone by 640 B.C. Tree rings show that the timbers used for roofing in the citadel

were all cut between 655 and 651 B.C., so Ayanis was probably created relatively late in his reign. It is unlikely that there would be any reason for the settlement to exist without the citadel, which was violently destroyed by fire not long after Rusa died. It would appear that we were looking at an occupation of a generation at most rather than an urban environment that had evolved over time.

These pieces had not all fallen into place when Elizabeth Stone (of SUNY, Stony Brook) and I made our initial visit to Ayanis in 1996. On that occasion we spent about ten days walking around the countryside, inspecting the ground for pottery and other signs of settlement, and planning a strategy for exploration in future seasons. It was obvious that the outer town was both extensive and covered some quite varied terrain. The citadel towers more than 200 m above Lake Van, which lies about a kilometer to the west. To the east, however, it is much less imposing and stands less than 100 m high. As one walks eastward from the foot of the citadel, the ground rises on a slope known as Güney Tepe, eventually reaching a summit from which the Urartian capital, ancient Tushpa, at Van can be seen in the distance. It was on Güney Tepe that the primary residential area at Ayanis was apparently built. North of the citadel, there is a terrace which appears also to have been densely settled. It takes its name, Pınabarşı ("head of the spring"), from a powerful water source located there. Below the citadel to the south, sherds revealed another area of settlement beside a dry stream bed, beyond which lies the modern village of Ağarti.

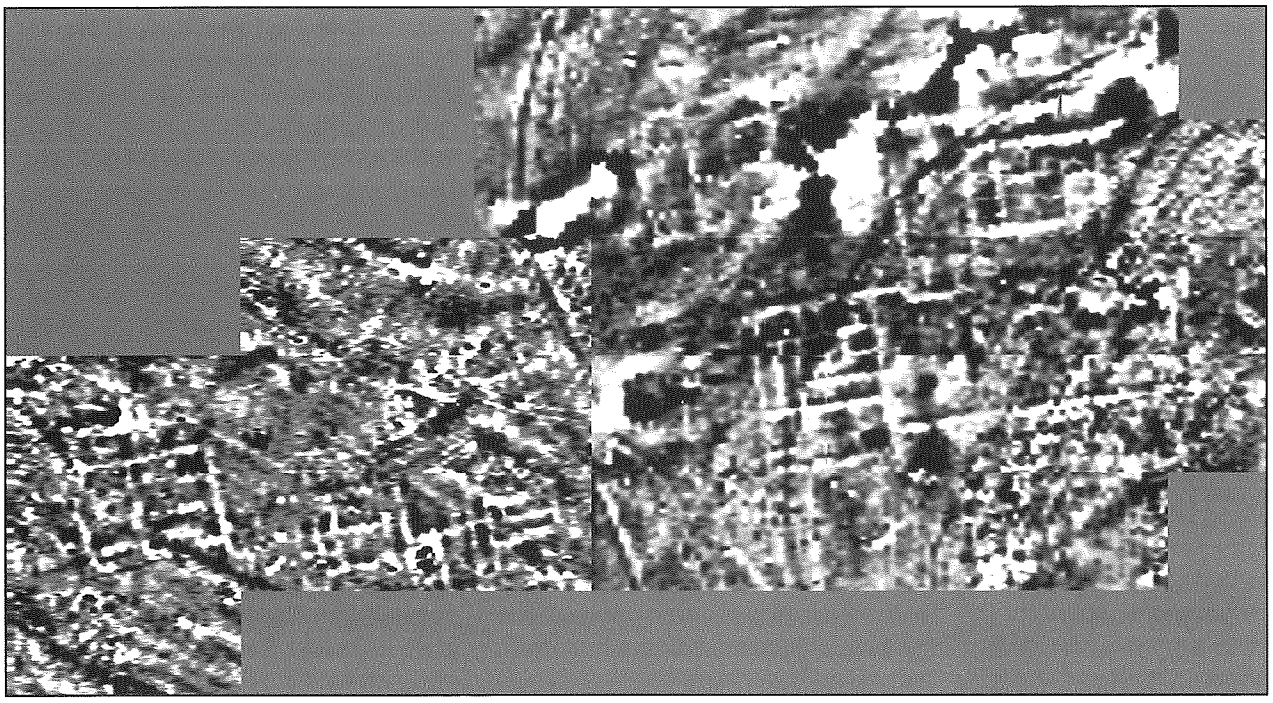
We settled on a three-phase strategy of exploration involving shovel testing, magnetic field gradient survey, and excavation which we have now pursued for four summer field seasons. From 1997 through 1999 our work was supported by the National Geographic Society and a generous private donation; in 2000 we were awarded a grant from the National Science Foundation for two more seasons, most of which will be used for analysis of ceramic, metallurgical, and biological remains.

The shovel testing was more or less dictated by the heterogeneity of the ground cover in the settlement area. We wanted to mark out uniform areas and compare quantities of sherds collected from them, but just picking things up from the surface did not work well when some of the ground was under cultivation, some plowed but uncultivated, and some almost denuded. We set out a grid of fifty-meter squares over an area measuring 1,000 x 1,500 m around the citadel; excavated and sifted forty liters of soil from each; and counted and classified all the sherds we found. Since most were small fragments of body sherds and the numbers involved were not large, the primary value of the survey was to establish the extent of the settled area. If one uses the criterion of five sherds per sample as the minimum for defining an inhabited square, the figure for the Urartian settlement comes out to be around eighty hectares.

The distribution of wares showed that the settlement was anything but uniform. One of the most distinctively "Urartian" types of pottery is a highly polished red ware that was used for wine jars and small bowls. It has long been recognized that this pottery, which never makes up more than a small part of an assemblage, is sometimes found outside of citadels, but we were unprepared to discover that it actually appeared in higher percentages on the upper slopes of Güney Tepe than it did in the excavated materials from the fortress. It was relatively uncommon on Pınabarşı, and almost entirely absent in the lower elevations of settled areas south of the citadel.

The magnetic field gradient survey was an overwhelming success, revealing large amounts of subsurface architecture of quite varied character.

continued on page 4



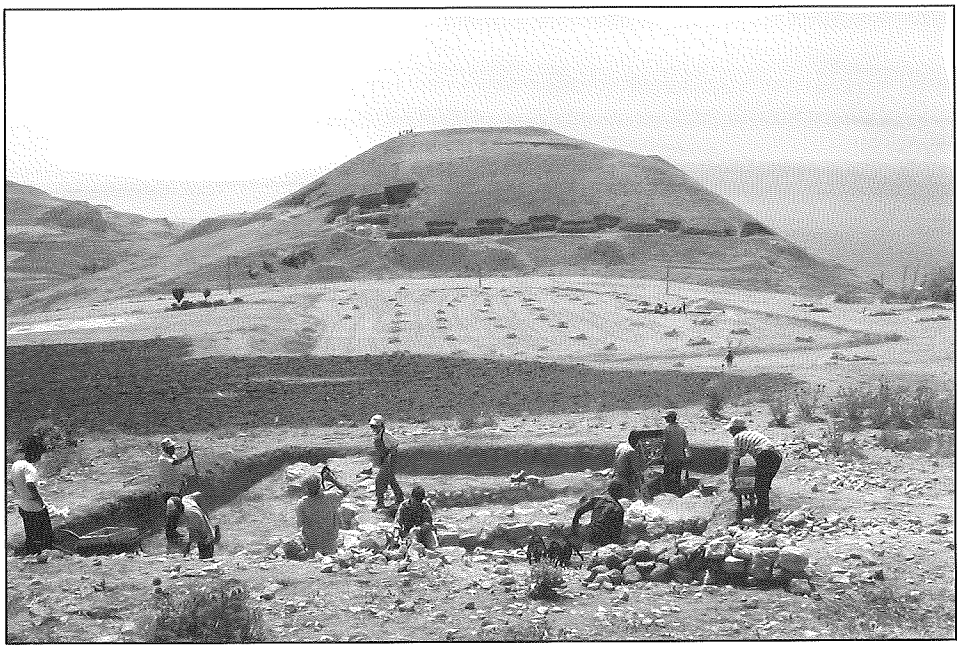
Magnetic field gradient survey of Pınabarşı, showing large public buildings. Coverage is 220 x 120 m.

continued from page 3

In some ways, Ayanis is almost a perfect site for magnetometry, because the soils are magnetically conductive while the limestone foundations on which the Urartians built their walls were not. Since it is essentially a single period site, one can draw most of the ground plans of major buildings with the magnetometry results alone. In the summer of 1997, Louis Somers of Geoscan taught us the basic technique of collecting the data, covering a little more than six hectares in Güney Tepe and Pınabarşı in two weeks of work. In 1999, we were provided with a slightly different magnetometer by the Glen Dash Foundation and spent the whole season working with it to increase the coverage to over twenty hectares from areas on all sides of the citadel. The resulting imagery revealed some very large public buildings on Pınabarşı and smaller, yet still substantial structures which appear to be houses all over the slope on Güney Tepe. The largest single building we found, however, was south of the citadel in the area we have come to designate Köy ("village") because of its proximity to modern Ağarti.

The soundings we have opened on Güney Tepe show us how the Urartians went about building their city. At intervals along the contours of the slope, they constructed large, freestanding houses with stone. The lower parts of their walls were roughly 1 m thick and constructed by carefully fitting unworked stones to form the faces while packing the interior of the wall with smaller rocks and debris. They were solid enough to have supported structures of several stories, but the upper parts were made of mud brick which has not survived. At the corners and at intervals along the exterior walls there were buttresses.

These initial foundations were built with techniques that one would not hesitate to call "Urartian" in the sense that they have been observed at other Urartian sites like Bastam, Iran, and Karmir Blur in Armenia—the two other locations where some attention has been given to Urartian houses. At Ayanis, however, these well laid-out



Excavations in Square 0064 on Güney Tepe citadel. Lake Van is in background.

structures were almost immediately modified and supplemented by builders who had very different standards. This change is seen most clearly in our largest exposure, the six contiguous 10 × 10 m squares designated LL-NN 68-69. The northern part of this area was occupied by one of the original constructions. It was relatively clean itself, but its inhabitants had dumped their debris in an alleyway to the south, including a large number of animal bones. On top of this debris, there was another, much more flimsy, structure with thinner stone walls that were not invariably grounded on the bedrock and did not meet at right angles. There appears to have been no coherent plan or consistency of building technique in this second house. Further to the south is another alleyway, also full of bones and, mysteriously, burials of two children. Across this alley, just appearing in the extreme southeastern corner of our excavations, is the edge of another house of comparable elegance to the first one we found in the north.

In another square area on Güney Tepe, OO64, we saw major modifications within and around one of the original structures. It, too, began with solidly constructed, buttressed walls to which smaller walls were added to create new rooms as time passed. One of the new walls even had a blocked doorway in it, so it is clear that the occupants changed the building several times in its brief occupational history.

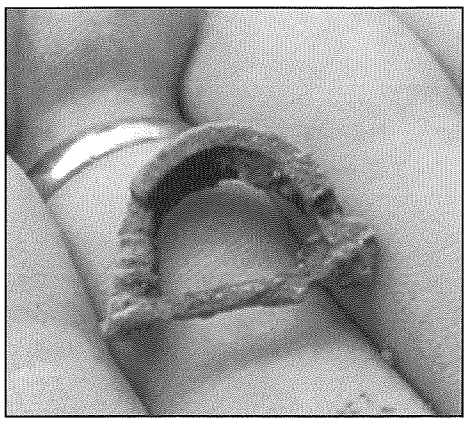
One of the striking things about the people who lived on Güney Tepe is that at least some of them had access to luxury goods. Not only is the percentage of fine polished ware here just as great as in the citadel itself, but there are also pieces of "Egyptian Blue" pigment (used for wall decorations), fragments of jewelry, one cuneiform and numerous hieroglyphic inscriptions, and even a piece of what must have been a fairly substantial bronze sculpture. We also found a small bronze fibula in the OO64 house, the only such piece of jewelry so far found at Ayanis. The cuts of meat attested by the bones in the alleyway suggest the people who lived here ate quite well, with a large amount of beef in their diet as well as sheep and goat.

Closer to the citadel, but still on Güney Tepe, we excavated part of a building that had a massive outer wall and a paved courtyard. The pavement is laid out in a way that is consistent with tripartite plans generally associated with large stables in the Iron Age Near East. This was undoubtedly a public building, as were structures that we excavated north of the citadel in the Pınabarşı area. It is clear that the state was creating many establishments outside

Sweeping the stable floor in Square PP 51.

the walls of the fortress. In all of these areas, however, it appears that people were living at a lower standard than they were in the houses on the upper slope of Güney Tepe: their pottery is generally unburnished and cruder and the animal bones reflect the least desirable parts of sheep and goat.

The largest single building that we found in our magnetometry lay to the south of the citadel where the ground begins to rise again as one approaches the modern village. We opened one 10×10 m square here at the end of the last field season, placed in such a way as to include both interior and exterior space. A wall nearly 2 m thick was revealed by this trench, and the interior space was divided by small mud-brick walls that had not been visible in the magnetometry. In one room, relatively near the surface, we found a large collection of more or less complete pots and several grinding stones. The wares are for the most part crude, but it is interesting to note that there was also a broken trefoil wine jar with a hieroglyphic inscription on its handle. This originally "palace" item was apparently being used, upside down, as a funnel. While it is difficult to make unimpeachable judgments from so small an exposure, it appears to us that this room may have been inhabited by squatters after the citadel had been consumed in a conflagration.



Bronze fibula (2.0 × 1.5 cm) from Square 0064. No fibulae have been found on the Ayanis citadel.

We are only beginning the planned analyses of bones, metal, phytoliths, and ceramics that will enable us to say something about the conditions under which people lived in and around this late Urartian center. It is already clear, however, that the state had an overwhelming impact on their daily lives—if they weren't living in large state-created structures, they were using standard Urartian pottery. Yet everywhere we look in the outer town at Ayanis, things seem to be a little different; the settlement is by no means homogeneous. All this is consistent with the idea that the population of the outer town was made up of a very mixed group of people who had been imported from the frontiers of the empire and forcibly settled here. I am very much inclined to believe that most Urartian settlements were similarly composed, since the tradition of bringing in outsiders seems to have been a policy of the underpopulated Urartian state from the beginning.

So how likeable were these "Urartians"? While I am not ready to follow my linguistic colleague in finding them entirely unlikeable, I do note one thing that would have made me reluctant to accept a dinner invitation to a party on Güney Tepe: they were eating a lot of dogs up there.

Paul Zimansky is an Associate Professor in the Department of Archaeology and co-director with Elizabeth Stone of the Outer Town Project at Ayanis.

"Girls Dig It!" at Boston University

by Margo Muhl Davis

The College of Arts and Sciences' Room 230 at Boston University is just a classroom, but on August 14, it was transformed into part of Boston's "Big Dig." On that day, eight girls from Lynn descended on the Department of Archaeology's temporary laboratory to take part in the simulated excavation of a fortuitous Big Dig find.

The girls, all between ages 12 and 15, were told that they were there to test a newly discovered site from Boston's North End. Construction workers, they saw, had boxed up a small portion of the site to be tested and moved it to the lab where working conditions were safer. Because Boston University was in its summer session, we pretended there were no college students available for the job. Thus, the responsibility of excavating the site, writing up the findings, and presenting a recommendation on the future of the site at a town hearing fell to these girls. All of this had to be accomplished in just three days.

The girls were taking part in Girls Dig It!, a national archaeology program being tested by Girls Incorporated of Lynn. The program targets junior high school girls and exposes them to new career options

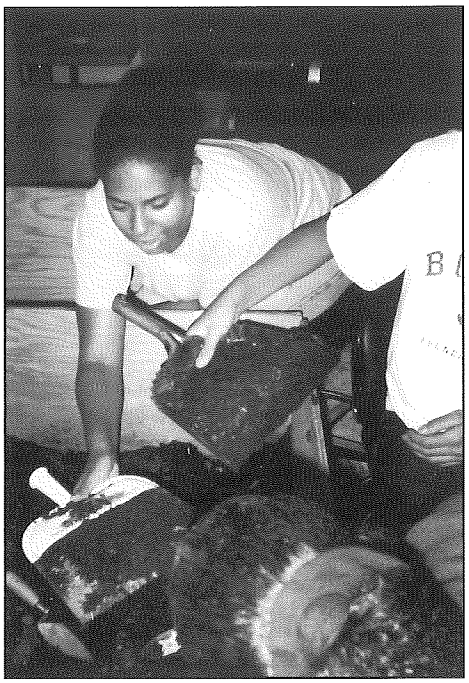
continued on page 6

continued from page 5
while exercising their critical thinking skills. Mickie McGee, a curriculum specialist, developed the national curriculum in conjunction with professional archaeologists. The result is a set of fun but instructive activities that keep the girls interested throughout the program.

Girls Dig It! started its second year of pilot testing last summer. One of the best features of the program is that it requires Girls Inc. staff to work with archaeologists when implementing the curriculum. My involvement as the program archaeologist, however, is not the first connection of Girls Dig It! to Boston University. Ellen Berkland, who recently received an M.A. from the Department and is Boston's City Archaeologist, was the project archaeologist on the first two pilot tests during the summer of 1999 and the following fall. She is currently the national administrator of the program's new on-line component. Additionally, both Dr. Mary Beaudry, Professor of Archaeology at Boston University, and Alexka Chan, a graduate student in the Department, share their research with, and answer questions for, the girls on-line.

The simulated dig is a central component to the Girls Dig It! curriculum. But, unlike many kids' programs, the simulation is not an isolated component. In Lynn, aspects of the dig knitted together the eleven-day program, even though the girls only got dirty once. When the girls entered the lab at Boston University, they had already looked up the archaeology of the Big Dig on-line and seen what archaeologists had found under the streets of Boston. Afterwards, they spent several days analyzing the artifacts, writing an on-line report, and simulating a public hearing to decide the fate of the site.

"Is this stuff really from the Big Dig?" the girls asked repeatedly—knowing that it isn't, but willing to play along. They studied the 1-m square wooden boxes with a mixture of skepticism and anticipation. When I lifted the wooden covers off of the "trenches" to reveal the soil packed into one half of the trench, they all began talking fast. "It's a sidewalk,"



The "Girls Dig It!" taking part in a simulated excavation in a classroom at Boston University.

one girl said knowingly, when a row of concrete patio blocks came to light. They wanted to dig.

Before picking up trowels, however, they picked up pencils. As half of the girls mapped the surface of the trenches, the other half toured one of the Department's real research laboratories, STO 250. When they walked into the lab, their reaction was immediate. The chattering, laughing, and "cool" behavior stopped as they stared at the Maya pots on display by the door. They were both thrilled and repulsed by the half-completed plan of Maya burials on the drawing table. As we moved through the lab, they saw my work and held in their hands Native American fishing plummets. They saw the artifacts from Alexka Chan's work at the Royal House in Medford; they saw Mary Beaudry's Spencer-Pierce-Little artifacts; they saw Caroline White's dissertation in progress. They were impressed and asked questions. What impressed me was suddenly realizing that women headed up all of the research in this lab.

Back in the teaching lab, the girls started digging. They hesitated at first, not sure where one soil layer ended and another began, but they quickly got the hang of it. They screened the soil into a waiting trash-barrel. Even with the windows open, though, it got dusty. In the top soil layer, they found broken plates. These were planted for an exercise in mending artifacts that we would do in the afternoon. The girls took the plates and rushed to the table. "Can we put them together now?," they asked. As the excavation continued, they found animal bones, ceramics, coins, and in one trench, a brick wall. All the artifacts were carefully placed in labeled bags. After lunch, we processed artifacts, washing them with the toothbrushes the girls had seen and asked about in the lab.

During the next two days, at the North Shore Community College, the program's home base, the girls cataloged the artifacts, redrew their profiles, and interpreted their findings while representatives from Girls Inc. and the National Endowment for the Humanities, which helps sponsor the program, watched. They were preparing for two things: to

Processing and washing artifacts in the teaching lab.

Husbandry, Hides and Hunting: Zooarchaeological Examination at Torre de Palma, Portugal

by Michael MacKinnon

In his volumes about Roman Portugal Jorge de Alarcaõ notes that "we know very little about life in the country and about agriculture in Roman Portugal" (*Roman Portugal,* Warminster, 1988, p. 62), adding that the "archaeological remains are too scarce for us to attempt an essay on the history of Roman agriculture in Portugal, or to distinguish, for example, the areas that were able to produce wine or oil, cattle or horses, pigs, sheep or goats" (p. 71). Animals assumed important roles for the Romans in Portugal as they did throughout the empire; to date, however, almost no zooarchaeological research has been conducted on ancient sites there. Consequently, Alarcaõ's desire to retrieve more archaeological evidence about animal husbandry and agriculture in rural Portugal went unfulfilled—until recently.

Since 1983, the University of Louisville, under the direction of Stephanie Maloney and John Hale, in collaboration with several Portuguese universities and archaeological agencies, has been involved in the excavation of Torre de Palma. The site, located in east central Portugal, is one of the largest Roman villas in Iberia (Fig. 1). Sprawling over six hectares (14.8 acres), it encompasses both a *villa rustica* and *villa urbana,* two bath complexes, a basilica and baptistery, and cemeteries. The project included re-excavation and analysis of these main structures with new excavation in other parts of the site. One of these spots was a midden, discovered in the south field, in an area between the South Hall complex of rooms and the series of structures emerging in what is dubbed the Industrial Quarter. This undisturbed garbage dump, dated to the fourth-fifth centuries A.C. on the basis of coins, contained much bone waste, which I examined during the summers of 1998 and 1999 at Torre de Palma. Their analysis provides the first direct account of the contribution of animals to the diet and economy of this important villa, and sheds light on how these aspects differed from those shown elsewhere in the Roman world.

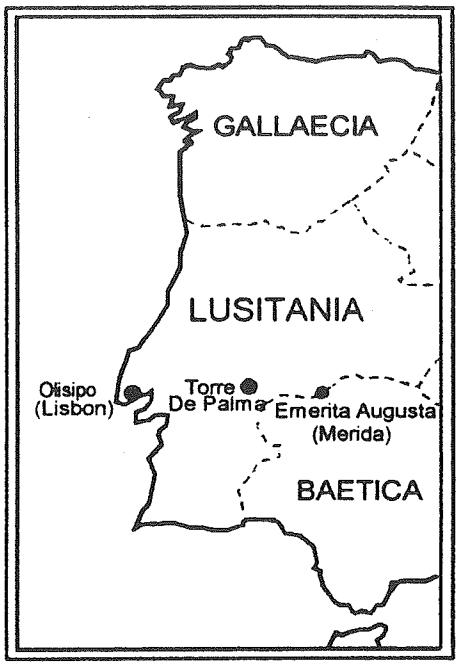


Figure 1. Map of Portugal locating Torre De Palma.

Over 4,000 bone pieces were collected, 1,237 of which could be identified to element and species. Domestic mammals comprise 68.4% of the sample, wild mammals register 29.1%, bird bones account for 2.0%, while shells amount to 0.6% (Fig. 2). The high value of wild fauna is significant. I shall develop this point later. First, however, let us consider the domestic animals.

The relative frequency of the principal domestic animals—cattle, caprines, pigs, and chickens—in zooarchaeological assemblages provides information about the meat portion of the diet and indirect evidence for husbandry, fowling, and agricultural pursuits. On the basis of their poor representation it appears that domestic fowl contributed little to the economy at Torre de Palma, although bird bones do not survive as well as those of mammals, and they may be underrepresented. Nevertheless, bones of sheep/goat and pig occur in fairly equal quantities, while cattle register about two-thirds that amount (Fig. 2). This trifold distribution supports the hypothesis that the Torre de Palma occupants practiced a mixed farming and husbandry regime with no apparent specialty.

The fairly balanced age and sex distribution for caprines suggests a generalized scheme with exploitation of meat, milk, and wool. In light of the fact that sheep remains

continued on page 8

---

write a real archaeological report (it can be found soon on-line at www.girlsinc.org) and to debate the fate of their site in a simulated town meeting.

The girls role-played parts varying from themselves to the state archaeologist, to a female construction worker, and an irate commuter during an exciting town meeting. Each girl constructed a short argument about whether further excavation should or should not happen at the site, and why. The meeting was full of feeling, but the city councilors gave the site a two-week stay of execution so that archaeologists could finish the excavation.

During the program the girls also completed the lessons in the Girls Dig It! curriculum, learning about everything from categorizing objects to taking oral histories, which we did at the local senior center. The program culminated in a visit to the Commonwealth Museum to see the actual Big Dig artifacts.

Most of these girls will not become archaeologists. That wasn't the point. They did, however, learn about archaeology: they practiced their critical thinking skills, and they saw women excelling in an exciting career. Best of all, they loved the experience, and so did I.

Margo Muhl Davis is a Ph.D. candidate in the Department of Archaeology.

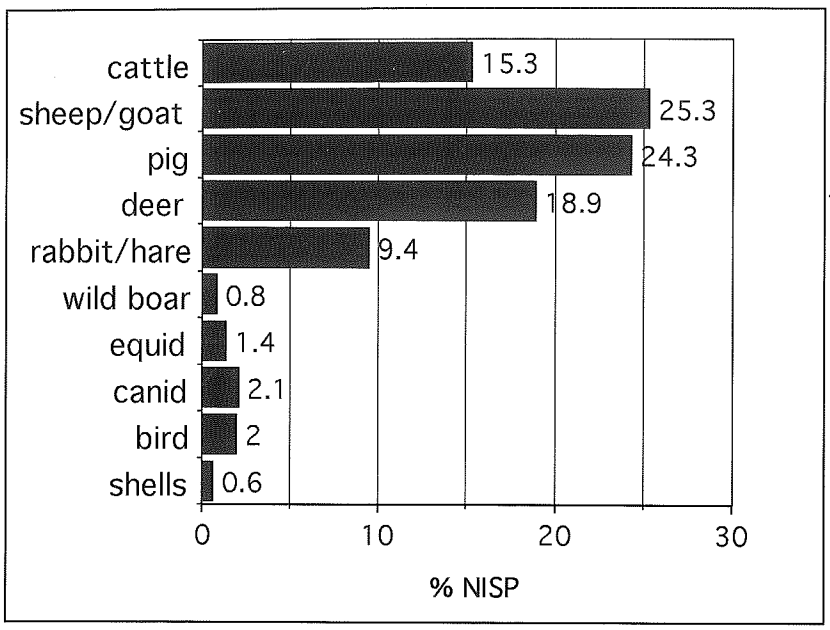


Figure 2. NISP (number of identified specimens) frequency of animals at Torre de Palma. NISP is the minimum number of individual specimens of each animal species.

continued from page 7

outnumber those of goats by a ratio of about 5 to 1, however, it would seem that wool took precedence over milk. Female goats produce more milk than ewes, but sheep yield far superior wool. Some caprines were killed after achieving maximum weight between one and two years of age. Those surviving this early cull were allowed to reach at least 4-8 years to yield several coats of wool and serve as brood stock. There is inconclusive faunal evidence for seasonal schedules or transhumance among caprines. No distinctive peaks in the age distribution occur which can be correlated to specific times of the year. It would appear that the Torre de Palma sheep and goats never grazed too far from the villa, at least not on the scale of the large-scale, long-distance transhumant operations noted in other parts of the Roman world, such as Italy. Consequently, the occupants could cull sheep and goats as required throughout the year. The distribution of skeletal parts (Fig. 3) suggests whole caprines were killed and consumed at the site, with little import or export of meat cuts. There is, however, a predominance of the choice primary and secondary cuts, indicative of table scraps and consumer-level waste as opposed to butchery waste. In other words, more caprine remains in this midden derive from the household-level cooking activities. Moreover, the high level of primary cuts suggests some measure of wealth, since these are generally associated with better-quality, expensive meats.

Pig bones comprise about the same percentage as those of caprines—around 25% of the total sample (or about 35% of the consumable domesticates). Pigs provide no other important resource aside from their meat, which was usually preferred by most Romans. If one considers the aggregate Roman demand for pork, pig husbandry could bring great wealth, provided costs could be minimized. Pigs can forage rather cheaply in oak forests, feeding off of acorns and other woodland materials. The occupants at Torre de Palma probably exploited the forests in the vicinity of the site to some degree, but not to their full potential, to judge from the relatively low frequency of pigs.

Survivorship data reveal that most pigs were slaughtered, at around 1.5 to 2.5 years. At this time pigs reach their maximum weight; keeping them to elderly ages is economically unsound because they eat more than they gain in pounds. This age pattern is fairly common among Roman sites throughout the Mediterranean. The absence of young suckling pigs up to six months of age in the Torre de Palma sample, however, is noteworthy since these provide succulent meat, particularly prized by the Romans. Immature bone is more susceptible to post-depositional destruction, but had the remains of any suckling pigs been interred in the midden, I would expect some to survive. Their absence instead suggests they were uncommon food-fare. Whether or not sucklings were consumed and deposited elsewhere or husbandry schemes were such that full-weight, brood-stock pigs were the herding focus requires more investigation. The latter scenario finds support in the nearly balanced boar and sow ratio, as shown by counts of the dimorphic canine tooth. The age distribution for these teeth reveals preferential slaughter of younger males, keeping females as breeders; but more males attained older ages than required as brood stock. Such a pattern suggests a more casual herding operation, with less control over the early slaughter of boars, but it is also possible they were castrated and allowed to reach older ages to increase their fat content. Body-part representation indicates disposal of all sections of pigs (Fig. 3), but with a predominance of waste bones from the head and limb extremities. Even if we allow for taphonomic and elemental biases (i.e., pigs have more bones comprising these skeletal sections, and more durable ones at that), the data suggest some movement of pork cuts with the choice meats taken elsewhere, leaving more refuse from initial butchery of pigs in this midden.

Cattle bones contribute about 20% of the sample, but in contrast to the other domesticates their distribution is skewed towards lower leg elements (see Fig. 3). The presence of some pathological conditions such as bowing, or curving of the toe bones, coupled with elderly ages as revealed in dental data, indicates that most of these cattle served work purposes—pulling plows or drawing carts. A number of these foot bones, however, also show cut marks indicative of skinning and hide removal. A similar pattern is exhibited on several of the deer lower leg bones, which incidentally predominate skeletal-part categories for that taxon too (see Fig. 3). Both lines of evidence support the hypothesis that hide processing occurred at the site. Cattle and deer

skins were probably brought to this area of the site with the feet still attached. These bones are associated with poor-quality meat and are generally ignored by butchers, but they are an excellent source of neatsfoot oil—a fine, thin oil ideal for treating leather. Although leather goods were recovered from some Roman sites such as Vindolanda in northern England, little is known about the leather and tanning industry in antiquity. Ancient texts provide sparse comment, and most modern discussion of ancient clothing focuses on wool and its production. The Torre de Palma bones remind us of the importance of leather to the Romans and add another dimension to the many uses of animals.

Equids and dogs are poorly represented in the Torre de Palma sample, but not unexpectedly since these unconsumed taxa were generally not discarded with food garbage but interred elsewhere. As yet, however, no complete horse or dog burials have been found at Torre de Palma. Horses were certainly popular at the site, and it is postulated that the owner amassed some wealth in their breeding. Several lines of evidence support this conclusion. First, a mosaic depicting victorious steeds decorates a room in the Peristyle House (Fig.4). Second, one structure, called the Portico House, is consistent with modern stable design in terms of paving and room dimensions. Third, an ancient hippodrome is outlined in the field to the southeast beyond the site. Finally, horse teeth outnumber those of donkeys and mules in the small collection of isolated equid dentition recovered in the midden.

Turning now to wild animals, I have already mentioned deer in relation to hide processing. Their skeletal distribution is indeed skewed towards lower limb elements, but there is also a concentration of bones associated with primary cuts, suggesting some degree of dietary wealth (see Fig. 3). About 30% of the midden derives from deer, wild boar, hare, and rabbit (see Fig. 2). This is the largest frequency of wild fauna from any Roman site in the whole western Mediterranean. Hunting certainly was a major activity at Torre de Palma. It was not a necessity for survival, since domesticates could always be consumed more easily; the high incidence of wild game suggests great wealth. Perhaps the site saw elite guests entertained with hunting expeditions, subsequently turning over excess pelts for processing, while dining on gourmet feasts of venison, boar, and hare. Dietary ostentation is further shown in the faunal remains in the form of imported oyster shells brought over 200 km from the coast.

In sum, zooarchaeological examination of the Torre de Palma midden covers the "three H's": husbandry, hides, and hunting. The occupants followed a "safe route" in terms of

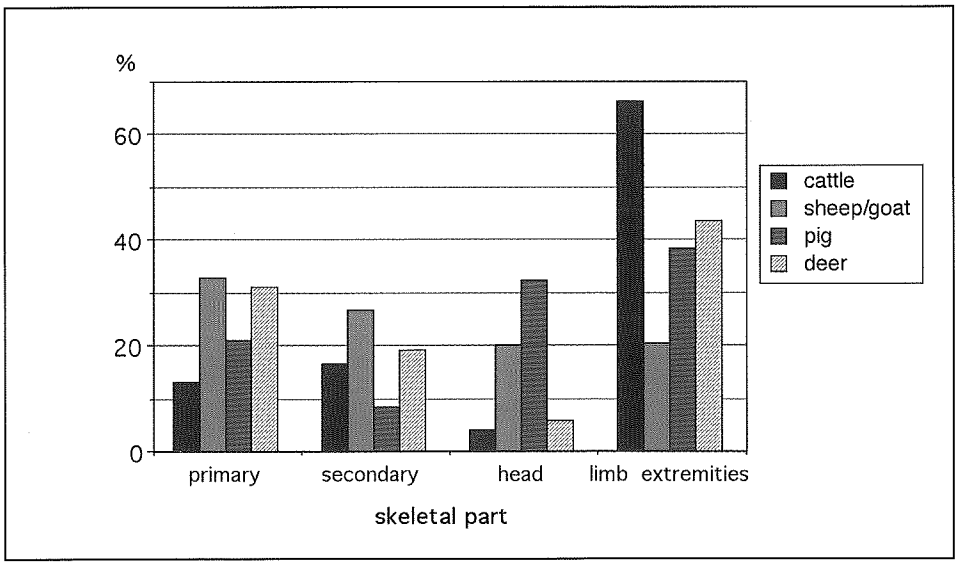


Figure 3. NISP distribution of cattle, sheep/goat, pig, and deer by skeletal-part categories at Torre de Palma.

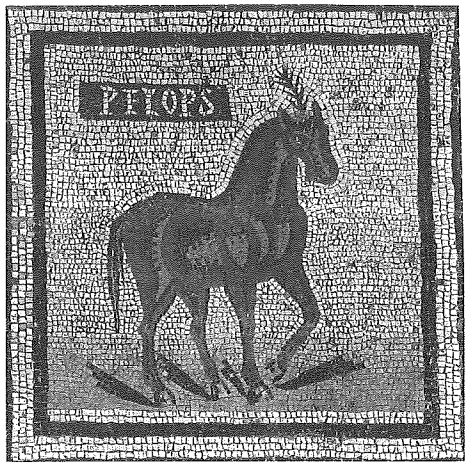


Figure 4. A closeup of the "Pelops" panel from the floor mosaic depicting victorious steeds which decorates one of the rooms in the Peristyle House.

husbandry, operating a mixed regime of raising some sheep and goats for milk, meat, and wool, coupled with a scheme of pig husbandry which stressed the production of quality brood stock. No specialization existed; instead, self-sufficiency in all animal resources seems key; there may have been no other option for this rural villa, otherwise removed from neighboring settlements and their markets. Hides, in the form of cattle and deer leathers, were processed at the site. Although no tanning facilities have been uncovered as yet at the site, there is evidence of other industrial activities such as smithing and smelting in the southern region. As a somewhat "smelly" enterprise because of the chemicals used, hide processing suits this zone of the site, which is outside and downwind of residential sectors. The final "H", hunting, presumably on horseback (a fourth "H"?) considering the evidence for equine breeding at the site, was an important and ostentatious activity at Torre de Palma. The high frequency of wild animal bones suggests that the villa may even have operated as a country hunting retreat for wealthy clients.

Authors often conclude with apologetic statements such as "more work is required to gain a greater understanding," and I can see no more fitting way to end this discussion of the Torre de Palma

continued on page 10

Graduate Student Conference

Siteless Archaeology: People and Their Landscape

by Eric Vrba, Ben Thomas, and Kevin Mullen

The sixth annual open forum for archaeology graduate students entitled "Siteless Archaeology: Contextualizing People and Their Landscape," was held on November 11, 2000, at Boston University. The conference dealt with landscape archaeology, exploring the latest theories and innovative approaches to understanding how landscape is an active player in shaping the social and symbolic aspects of human culture.

The keynote speaker was Dr. Carole L. Crumley, professor of anthropology at the University of North Carolina–Chapel Hill. A specialist in the historical ecology of complex societies, Crumley has carried out extensive research in Burgundy, France, aimed at understanding how the landscape there has been used, and how it has influenced cultural development from the Celtic Iron Age to the present. Her lecture was entitled "Landscape: The Role of Archaeology in Linking the Earth and Human Sciences." The first part of the address charted the development of archaeology in the mid-twentieth century, with a focus on how landscape became important in archaeology. In her opinion, it was not Lewis Binford, but Walter Taylor who provided the greatest impetus toward landscape studies. She then discussed her own work in France, where she has incorporated archaeological data with ethnographic studies. An interesting phenomenon that she reported was how some archaeological sites have remained within a community's common memory as places containing hidden treasures, but guarded by a monster known as the Revivre.

Six graduate students from various universities presented papers on a wide range of topics related to Landscape Archaeology. The first paper, entitled "A Historical Account of the Environment in Turkana, Kenya: Degradation versus Change," was presented by Alexia Smith of Boston University. The paper challenged the commonly held belief that the region around Lake Turkana has degraded over the past hundred years. Basing her argument on historical maps and textual accounts, along with pollen and oxygen isotope data, Smith showed that in fact the region has not degraded.

The next two papers by students from the University of Massachusetts, Amherst, were related to each other in that they both examined the use of landscape in Ireland by the Irish and the British for creating and controlling identity. The first paper was "Mapping Landscapes and Pasts in 19th century Ireland" by Angele Smith, who showed how the British Ordnance Survey maps of Ireland were used by both the British colonizers and the Irish to show a control of the landscape. The second paper, "Landscape of Conflict/Landscape of Identity," was by Jeffery McGovern, who discussed how the landscape in County Cork, southern Ireland, was used by the Irish to present national ideology and to create a national identity through the reuse and partial abandonment of British military barracks and the placement of memorials for the war of independence.

Donald Holly of Brown University presented "The Anthropogeography of Subarctic Hunter-Gatherers: A Critical Theory." In the past, the public and scholars have held that the subarctic was a desolate place devoid of significant cultural groups and outside of history, but archaeological data show that people of the subarctic had vibrant cultures and were in close contact with other cultures to the south.

"Patterns of Spatial Organization and Mobility During the Eemian Interglacial in the Rhineland: New Data from Wallertheim, Germany," was presented by Daniel Adler of Harvard University. The open-air site of Wallertheim contains lithic and faunal materials in primary

continued on page 19

Participants in the Graduate Student Conference, (l-r, first row): Alexia Smith, Polly Petersen, Mary Beaudry (faculty sponsor), Carole Crumley (keynote speaker), Angele Smith, Kevin Mullen; (l-r, second row): Daniel Adler, Jeffery McGovern, Donald Holly, Eric Vrba, Ben Thomas.

---

continued from page 9

fauna. Zooarchaeology is gradually shaping our knowledge of animals in antiquity, but it is just now taking the very first steps in paving this road in Roman Portugal. We may hope that the "door" opened up by Torre de Palma will soon become a flood gate waiting to burst forth with new and exciting zooarchaeological discoveries.

Michael MacKinnon is a Post-Doctoral Research Fellow in the Department of Archaeology.

Faculty News

Kathryn Bard presented a paper in July 2000 entitled "The IUO/BU Excavations at Bieta Giyorgis (Aksum), Ethiopia: Results of the Field Seasons 1993-1998" at the meeting of the Society of Africanist Archaeologists at Peterhouse, University of Cambridge, United Kingdom.

Although the war between Ethiopia and Eritrea broke out before Professor Bard could join her colleagues already in the country, an archaeological survey was carried out on Bieta Giyorgis hill, Aksum, Ethiopia in May-June, 2000. Led by a small team of archaeologists from Boston University, the Instituto Universitario Orientale (I.U.O.), Naples, and Simon Fraser University, Vancouver, survey was conducted by Michael DiBlasi (Boston University) and Andrea Manzo (I.U.O.).

During the week September 23-29, 2000, Bard accompanied Candice Millard, a staff writer for the *National Geographic Magazine*, to northern Ethopia to write a story on Ethiopia's Christian kingdoms (Aksum was the first of these kingdoms).

On September 28, 2000, **Patricia McAnany and Brian Norris**, Vice President of Surveying and GPS at James W. Sewell Co. in Old Town, Maine, presented an illustrated discussion, on their field work in the Maya heartland. The discussion, "Archaeological Survey and Excavation of Maya Caves and Settlements in the Sibún River Valley of Belize," was presented at the Bodwell Area of the Maine Center for the Arts. It was funded by the Cultural Affairs/Distinguished Lecture Series Commitee (Arthur R. Lord Fund & Class of 1934 Fund); Dean of Cultural Affairs and Libraries; and Vice President of Academic Affairs and Provost, all of the University of Maine.

Norman Hammond will speak in May on "La Milpa, a Classic Maya City in Belize" at the Metropolitan Museum of Art as the Armand Brunswick Distinguished Lecturer of the Raymond and Beverly Sackler Foundation.

Professor Hammond delivered the Fourth Gordon Willey Lecture at Harvard University on October 26, 2000; the lectureship was endowed to honor Gordon R. Willey, Bowditch Professor Emeritus of Mexican and Central American Archaeology and Ethnology at Harvard, after his retirement in 1985. Since leaving the Bowditch Chair, he has also been a Distinguished Research Fellow in the Department of Archaeology at Boston University. Hammond addressed Willey's speciality of settlement archaeology with a presentation on "Settlement and Community: the Classic Maya City of La Milpa.

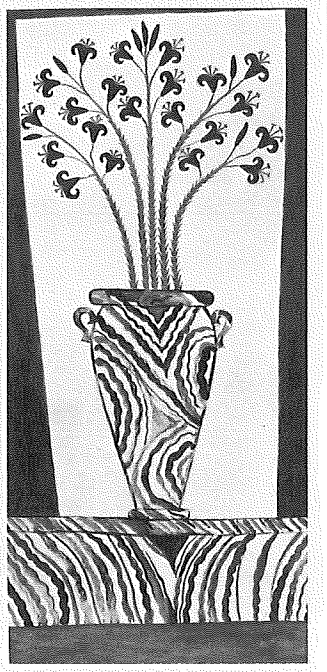
During the summer, 2000, Hammond delivered invited lecturers at the University of Paris-Sorbonne and at Canning House, the British center for Latin American Scholarship in London. His book, *The Maya*, was published by the Folio Society in London in October, and a revised version of his *The Ancient Maya Civilization* became the first book on the Maya to be published in mainland China. It appeared earlier this year as *The Search for Maya Civilization* in the "Translation Series of Famous Foreign Archaeologists."

During the spring of 2000, **Murray McClellan** undertook a rescue excavation project at a Roman villa on the US-Spanish Naval base at Rota in southern Spain. He completed the report of that excavation in the fall, 2000, and it has been sent to press for publication. The report will be published both in English and Spanish.

James Wiseman gave two named lectures for the Archaeological Institute of America in the fall, 2000. His talk, "Landscape Archaeology and Space Age Technologies in Epirus, Greece," was the first annual Ira Haupt II Lecture for the New York Society of the AIA, and was presented as the Charles and Ellen La Follette Lecture for the San Francisco Society meeting in Berkeley, California. Wiseman also spoke on the same topic to AIA Societies in Phoenix, Arizona, and Honolulu, Hawaii.

Distinguished Greek Archaeologist to Lecture at Boston University

One of Greece's most distinguished archaeologists, Christos G. Doumas, will give an illustrated public lecture entitled "Simple Beauty: Art in the Aegean Bronze Age," at Boston University on Wednesday, March 21, during his week-long visit to the Center for Archaeological Studies and the Department of Archaeology as the Onassis Foundation Senior Visiting Fellow. Director of the world-famous excavations at the site of Akrotiri on Thera since 1975, Doumas is the former Director of Antiquities of Greece (1977-1980) and Professor of Archaeology at the University of Athens (1980-2000). Doumas is a prolific author who has lectured widely in the United States, Europe, Australia, and Japan. In addition to the public lecture, he will be a guest speaker in graduate and undergraduate classes, lecturing on the wall frescoes of Thera, as well as on conservation and managing the archaeological heritage of Greece, with a focus on Thera. The lecture on March 21, 2001, will be at 7:00 p.m. in auditorium B50 of the Stone Science Building, 675 Commonwealth Avenue, and will be followed by a reception in Room 202.



The 2000 Summer Season

Archaeological Field School at Villamartín, Spain

by Murray C. McClellan and Alan Kaiser

During the months of June and July, 2000, we returned to Spain and joined José María Gutiérrez López and María Cristina Reinoso del Río in our second excavation season at Torrevieja, which is located on the edge of the *pueblo blanco*, Villamartín, in the Andalucían province of Cádiz (Fig. 1). Our team consisted of Christine Lovasz (M.A. 1998) Emily Parker (B.A. 2000), Kevin Mullen, graduate student, and fifteen Boston University Field School students. We were once again supported by Boston University's International Programs, and we received special treatment from the friendly people of Villamartín (Fig. 2), including being on local television twice and interviewed on Cádiz radio once.

Figure 1. View of Torrevieja. Field School excavations are in the sloping open area to the right of the town.

One of the central goals of our Field School is to provide for our students hands-on practical training in archaeological methods. In this regard, the site of Torrevieja is an ideal place to train students. In a very small area, one can encounter archaeological deposits ranging in date from the Bronze Final/Tartessian age (ca. 800 to 600 B.C.), through the Iberian (ca. 500 to 200 B.C.) and Islamic periods (ca. 900 to 1100 A.C.), up to the earliest foundation of the modern village (1503 A.C.).

A second goal of our Field School is to introduce students both to the ancient history of western Andalucía and to the modern culture of the region. To this end, we visited archaeological sites and museums in Jerez, Cádiz, Italica, Seville, Cordoba, Bolonia, Ronda, and Gibraltar. Along the way, we went to a bull-fight in Seville, and *ferias* ("festivals") in El Bosque and Prado del Rey, where we were based. The students, who came from universities in Pittsburgh and Princeton as well as Boston University, were constantly amazed by the warmth of the people of Andalucía and their zest for life.

In our investigation of the site of Torrevieja we continued to explore the area we had begun to excavate in 1998. At the western end of this area, where we had uncovered burials of the sixteenth century A.C., we discovered a field of grain-storage pits cut into the natural limestone and clay bedrock, some of which appear to have gone out of use in the eighth to sixth centuries B.C. A great surprise, however, was to be found in the extreme western edge of our excavation area, where we uncovered a large trench that had been formed by the partial cutting away of three of these grain-storage pits (Fig. 3). At this point in time, we do not know the function of this large trench, which had been eventually filled in with material of the fourth century B.C.

Immediately to the east of the grain-storage area, we uncovered a portion of a round floor composed of lime plaster. This floor probably belonged to a round house of the Bronze Final/Tartessian period that was associated with the grain-storage pits.

Another aspect of our research at Torrevieja was the use of a proton magnetometer to create a map of subsurface features at the site. In using the proton magnetometer at Torrevieja, students took turns holding the magnetometer at 1 m intervals while Dr. Kaiser took readings. Since no one can have any metal on them while they are performing this task, some students with pierced belly buttons and the like were excused from this tedious (but rewarding) task!

The strength of the earth's magnetic field, which is what is measured by the magnetometer, can be affected by a variety of human activities. When someone builds a fire, they heat the soil to such an extent that iron particles align in the same direction. Once the fire cools, iron particles in the soil

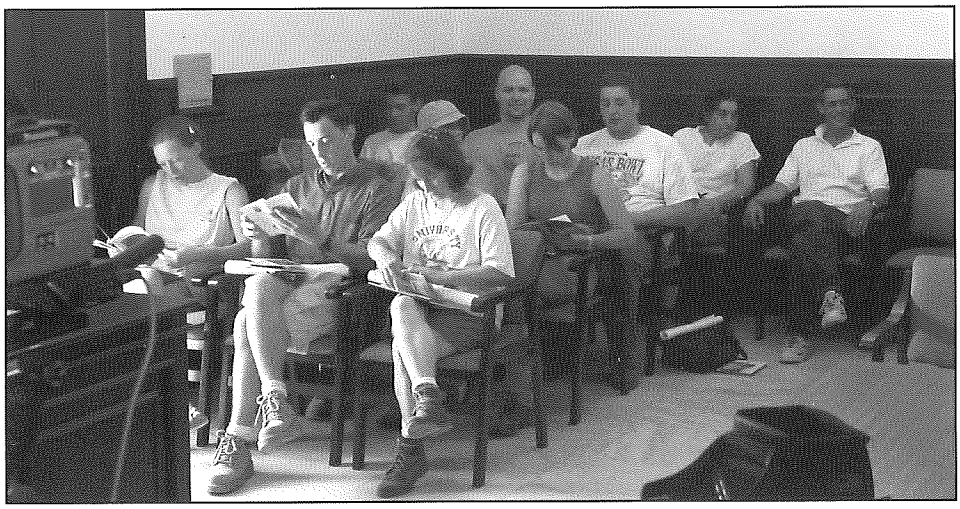


Figure 2. Waiting for the Mayor's reception in the Town Hall, Villamartín. Front row (l to r): Dana Mock-Muñoz de Luna, Alan Kaiser, Christine Lovasz; Middle rows: Nathan Santamaria, Vivianne Sterental, James Krajewski, Kate Buckley, Tony Wolters. Back row: Christina Reinoso del Río, Murray McClellan.

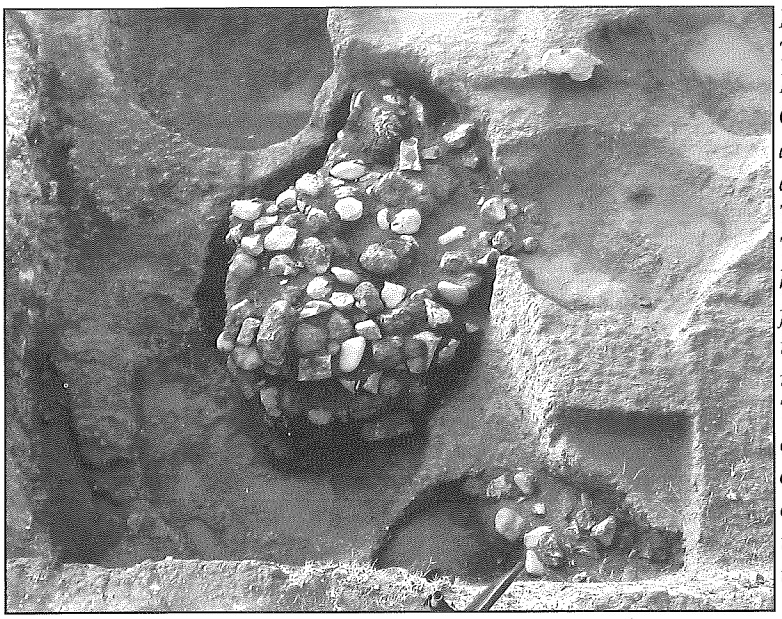


Figure 3. Torrevieja. Detail of trench C8, east side, after removal of deposit 811. The original Tartessian silos have been joined together to form a unique shape. The rocks in the center are part of a post-use fill concentrated in the earlier central silo.

that was burned continue to be aligned, while those in the surrounding soil point in random directions. The magnetometer can thus detect features such as hearths and kilns because the aligned particles in the soil increase the strength of the earth's magnetic field, creating an area of high readings (represented by the lighter colors on Fig. 4; the darker colors indicate areas with low magnetic readings). Some human activities have such a strong effect on the earth's magnetic field that they create their own north and south poles, similar to the poles on a magnet or battery.

Our magnetometer survey at Torrevieja has revealed just this type of strong effect, which can be seen in the line of alternating dark and light that cross Fig. 4 from southwest to northeast. Each light spot represents the north pole of the feature while the adjoining dark spot represents the south pole. While we must ultimately excavate in the area to the south of our present excavations (trenches C-3 to C-8 on Fig. 4) to understand this surprisingly regular set of alternating high and low readings, it should be noted that the lime plaster floor that extends over the eastern part of trench C-8 and the eastern part of trench C-7 creates a matched high-low reading very similar to the alternating set to the south.

Every season has its share of archaeological puzzles. Perhaps the most interesting one from the 2000 season at Torrevieja was the chance discovery of a Mesoamerican pipe, lying on the surface below the hill (Fig. 5). Given its location, the most likely time for this piece to have been brought to Andalucía is in the sixteenth or seventeenth centuries, when this part of Villamartín was most active. This surprising artifact might well be a souvenir from a returning colonist of the New World. In any case, it is indicative of the huge agricultural boom that the entire region experienced in the centuries following the Conquest.

The on-going study of material excavated since 1998 at Torrevieja will add much to our understanding of human occupation in the middle Guadalete river system—the region to the northeast of Cádiz that, in comparison to the larger Guadalquivir system, remains relatively unexplored. Of particular importance in this regard is a sealed deposit excavated during rescue work undertaken in 1999 just to the west of Torrevieja. This deposit consists of material of the later third century B.C. that filled in a defensive ditch. It is extremely likely that the burnt material from this deposit originated in a siege related to the Second Punic War (218–205 B.C.).

Several of the deposits excavated in 2000 add other details to our understanding of the site. The massive deposit that filled in the large

continued on page 14

Figure 5. Mesoamerican pipe bowl found on the surface near Torrevieja.

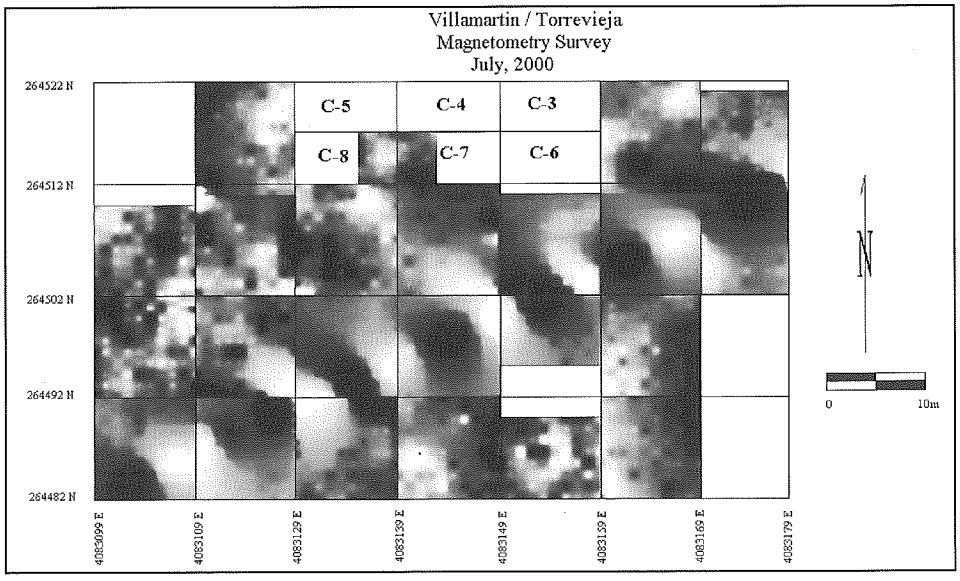


Figure 4. Preliminary results of the magnetometer survey at Torrevieja.

2001 Menorca Field School

The Department of Archaeology will hold its fourth summer field school in Spain on the Balearic island of Menorca, where Professor Murray McClellan and Amalia Perez of Boston University's Madrid program will co-direct excavations this summer from **May 21 to July 3**. (See pages 12–13 of this issue for a report on last summer's field school.) The excavations, at a site of the first millennium B.C., are being undertaken as a joint venture with the Museu de Menorca. Professor James Wiseman will join McClellan and Perez in offering seminars.

Please note: anyone interested in applying to this field school should contact the International Programs of Boston University, at 232 Bay State Road, Boston, MA 02215. Tel. (617) 353-9888; http://www.bu.edu/abroad.

continued from page 13

trench described above can be generally associated with the political reformation of the region following the collapse of the Tartessian aristocracy and provides evidence of the renewal of the site in the fourth century B.C. A few deposits found in the bottom of the silos to the east of the fourth century B.C. trench can be associated with the initial (that is, Bronze Final/Tartessian) use of the site, and thus provide an important insight into the period when the indigenous peoples of the region were interacting with the Phoenicians settled at Cádiz. Finally, a sealed pit at the eastern edge of the excavated area helps to clarify this area, which had been seriously disrupted by an Islamic pit.

Murray C. McClellan is Assistant Professor of Archaeology and Director of the Field School. Alan Kaiser, who received his Ph.D. in Archaeology at Boston University in 1999, is Lecturer in Archaeology.

Student/Alum News

William Barnett (Ph.D. 1989) accepted a position in Spring, 2000, at the Field Museum in Chicago as Vice President and Chief Information Officer which puts him into a top executive and management post in one of the country's major museums.

Ellen Berkland (M.A. 1999), City Archaeologist for Boston, held a City Archaeology Laboratory Open House on October 14 during Massachusetts Archaeology Week (October 7–15, 2000). The activity stations at the lab included a simulated dig, artifact mending and washing stations, and a Native American pottery workshop.

Steve Brighton, graduate student, lectured in February to the Boston Chapter of the Massachusetts Archaeological Society on "Brickbat Mansions and Darkened Doorways: An Archaeological Exploration of a New York Immigrant Enclave." In March, 2000, he spoke at a brown-bag lunch on "Fact or Fiction: Reality, Myth, and Stereotypes in a 19th Century New York Neighborhoods."

Margo Muhl Davis, graduate student, spoke to the Massachusetts Archaeological Society, Boston Chapter, in March, 2000, on "The Enigma of Maushop's Site: An Unusual Red Ochre Feature from Quincy, Massachusetts" (see also her article on "Boston Girls Dig It!" in this issue of *Context*, pages 5-7).

Effective September 1, 2000, **Francisco Estrada Belli** (Ph.D., 1999) became an Assistant Professor in a tenure track position at Vanderbilt University in Nashville, Tennessee, teaching archaeology courses in the Department of Anthropology.

Britt Hartenberger, Ph.D. candidate; Steven Rosen, Assistant Professor from Ben Gurion University of the Negev, Israel, and Timothy Matney, Assistant Professor, University of Akron, Ohio, have published an article, entitled "The Early Bronze Age Blade Workshop at Titris Höyük: Lithic Specialization in an Urban Context," in the *Journal of Near Eastern Archaeology*, 63 (1): 51-58.

Shannon Plank, graduate student, presented a brown-bag lecture at Boston University on April 19 on "Maya Hieroglyphs and Archaeology Are Not Strange Bedfellows: Shacking Up to Tell the Story of Ancient Maya Houses."

Tom Tartaron (Ph.D. 1998) was hired, effective September, 2000, by the Anthropology Department at Yale University as an Assistant Professor of Archaeology.

Michelle Terrell Wins Dissertation Prize

The Dissertation Prize Committee of the Society for Historical Archaeology selected Michelle Terrell's dissertation, "The Historical Archaeology of the 17th- and 18th-Century Jewish Community of Nevis, British West Indies," as the winner of the 2001 prize. The SHA Dissertation Prize is awarded to a recent graduate whose dissertation is considered to be an outstanding contribution to historical archaeology. A pre-publication contract to have the dissertation co-published by the SHA and the University Press of Florida and a $1,000 cash prize is awarded to the individual with the winning dissertation. The formal award ceremony took place at the 2001 Society for Historical Archaeology meetings on Historical and Underwater Archaeology, which was held in January, 2001, aboard the historic luxury liner, *The Queen Mary*, in Long Beach, California.

President Susan Henry Renaud presents Michelle Terrell (Ph.D. 2000) with the Society for Historical Archaeology 2001 Dissertation Prize.

Department of Archaeology Commencement 2000

Bachelor of Arts

Tiffany Beth Blackman, *cum laude*
Sandra Buerger, *cum laude*
David Michael Cardamone, *summa cum laude*; double major with Physics; Work for Distinction; Department Prize for Excellence
Marie S. DeGomez, *cum laude*
Geralyn Marie Dion, *cum laude*; double major with Anthropology
Elizabeth Ehrenberg, *magna cum laude*; Independent Concentration in Ancient Near East Culture
Jill Helen Foster, *cum laude*
Amanda Lynne Hutchinson
Scott Kearney
Amalia Caitlin Kenward, *cum laude*
Julia Anna Kropp, *magna cum laude*
Seleena Maureen Lanza, *summa cum laude*; Work for Distinction; College Prize for Excellence
Stacey Ann Matarazzo, *cum laude*; double major with Anthropology
Jason S. R. Paling
Emily J. Parker, *magna cum laude*
Jennifer K. Ross, double major with Classical Studies
Toby Ranney Rzepka
Kelly Ann Stone

Master of Arts

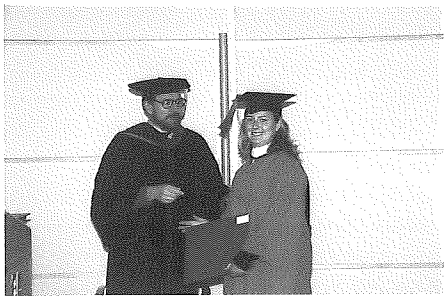
Jacqueline Abodeely
Margo Muhl Davis
Elizabeth P. Gilgan
Christina Hodge
Robert J. Lichtenstein
Leslie Mead
Cassandra Michaud
Jeffrey I. Rose

Doctor of Philosophy

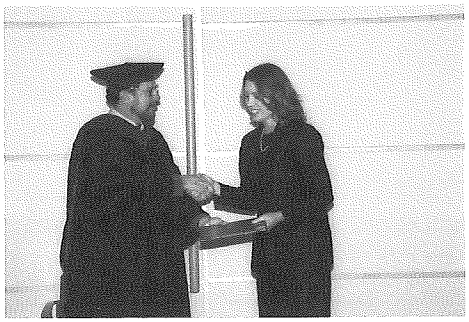
Melissa G. Moore
Akinwumi O. Ogundiran
Michelle Terrell

We made it! A group of undergraduates wait to receive their degrees at the Department's graduation ceremonies.

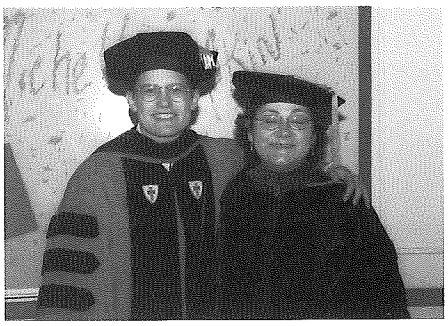
Professor Curtis Runnels, undergraduate adviser, congratulates Seleena Lanza, summa cum laude, *on receiving her B.A. degree.*



Professor Runnels presents Elizabeth Gilgan her M.A. degree.



Margo Davis receives her M.A. degree from Professor Curtis Runnels.



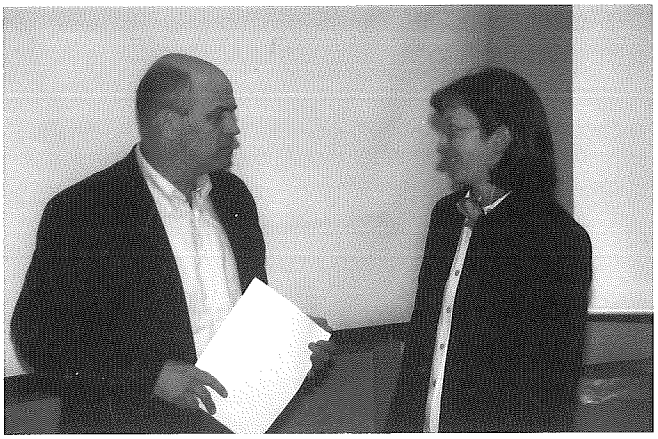
Michelle Terrell (left) with her academic adviser, Professor Mary Beaudry.

After graduation, summa cum laude *graduate David Cardamone poses for a picture with his mother.*

The three Ph.D. recipients look happy that their day has finally arrived! They are (left to right) Akinwumi Ogundiran, Melissa Moore, and Michelle Terrell.

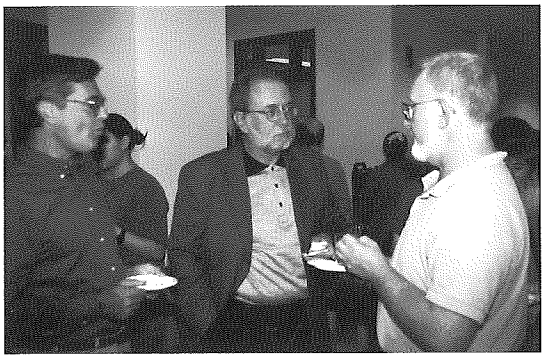
Center/Department Activities, Spring and Fall, 2000

Faculty, students, and distinguished scholars from the United States and around the world lectured under the sponsorship of the Center for Archaeological Studies, the Department of Archaeology, and our new Center for East Asian Archaeology and Cultural History. Photographs on pages 16-17 highlight some of those events and special receptions. (All photographs on these pages by Michael Hamilton.)



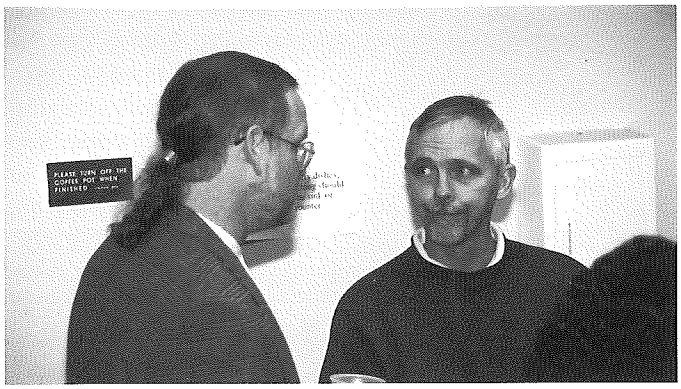
After his lecture in the spring, 2000, "The Masada of Josephus Flavius versus Archaeology," Haim Goldfus of Ben-Gurion University of the Negev, Israel, speaks with Trina Arpin, graduate student in the Department of Archaeology.

Kim Berry, graduate student in the Department, who spoke at a brown bag lunch on "Mucking Around: Wetland and Vacant Terrain Excavations at K'axob, Belize," talks with Al Wesolowsky, Managing Editor of the Journal of Field Archaeology *about her project.*



Michael DiBlasi, Rodolfo Fattovich, and Norman Hammond in conversation at the September reception to welcome students.

Dr. Maurizio Forte, Institute of Technologies Applied to Cultural Heritage, Rome, discusses his lecture on "GIS, Remote Sensing, and Virtual Reality Application for the Reconstruction of the Archaeological Landscape" with graduate student Irina Harris.



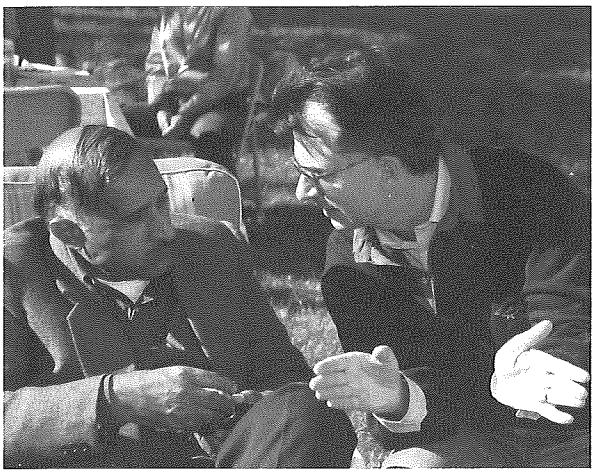
Stephen Ball from Indiana University, Bloomington (left), who lectured on "Integrating Geophysical Surveys and Archaeological Practice: Some Examples from the Mid-Continent," speaks with Don Keller, Executive Director of the American Center of Oriental Research.

Julie Hansen, Chair (right), chats with graduate students, Elizabeth Gilgan (left) and Christa Beranck (center) at the Department's Christmas reception for faculty, staff, and students.

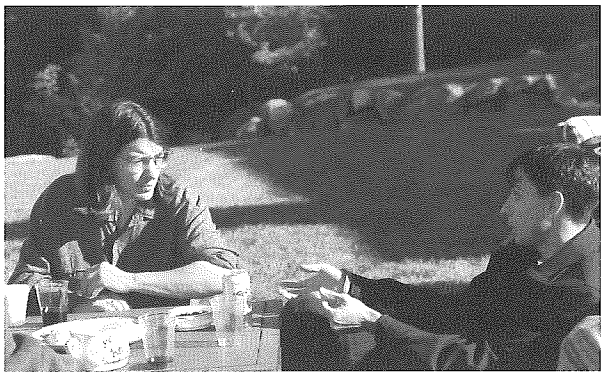
....and More Activities

Emilio Marin, Visitor from Dalmatia

Dr. Emilio Marin, Director of the Archaeological Museum in Split, Croatia, was a special invited visitor and lecturer in the Center for Archaeological Studies and the Department of Archaeology during the week of October 2–9. Marin, who is also Professor of the Archaeology of the Roman Empire at the University of Split, is internationally known for his investigations in Diocletian's Palace at Split; the nearby ancient city of Salona, birthplace of the Roman Emperor Diocletian; and at Narona, near the mouth of the Neretva river in southeastern Dalmatia. Marin gave a public lecture on Narona, focusing on his recent excavation of a temple of the Roman Imperial Cult in which he found several statues of members of the imperial families of the 1st century A.C. He also lectured on Salona in Professor Wiseman's seminar on Late Antiquity, and met with other students and faculty. Dr. Marin and his wife, Hajdi, were house guests of Professor and Mrs. Wiseman at their home in Center Ossipee, New Hampshire, where they were honored on October 7 at an outdoor reception for the Department of Archaeology and other guests. Photos on this page are from the reception.



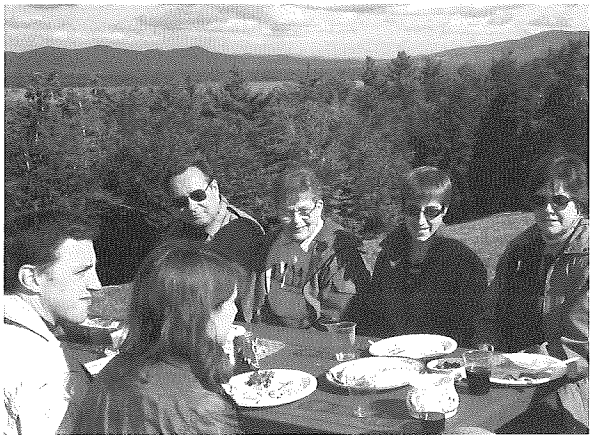
Emilio Marin, right, and Rafique Mughal, who was appointed Professor of Archaeology at Boston University effective September, 2000, are shown deep in conversation.



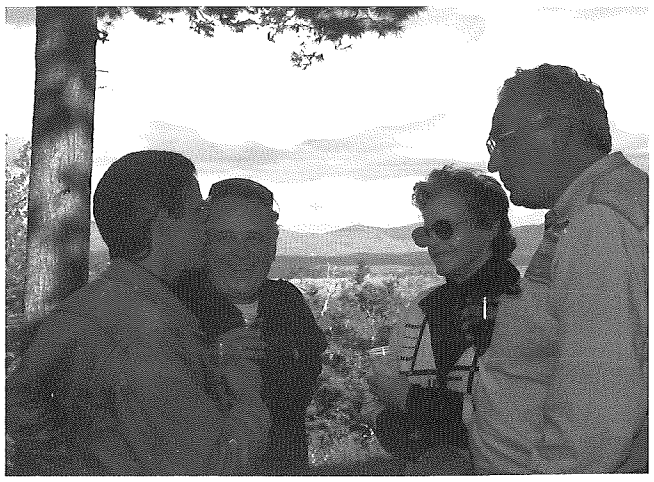
Cathy Alexander, archaeological illustrator, who received her M.A. in Archaeology at Boston University in 1987, listens intently to Michael MacKinnon, Research Fellow in Archaeology.

A stroll in the New Hampshire woods: left to right, Priscilla Murray (AIA Lecture Program Adminstrator), James Wiseman, Hajdi and Emilio Marin, and students Karen Mansfield, Jamie Fitzpatrick, and Trent Bingham.

Lake Ossipee provided the backdrop for the outdoor luncheon. Lecturer Alan Kaiser and Christine Lovasz (M.A. 1998) in the foreground; seated opposite, left to right, are Rudi Dornemann, Executive Director of the American Schools of Oriental Research, and Mrs. Dornemann; graduate student Abbi Holt, and Julie Hansen, Chair of the Department of Archaeology at Boston University.



Murray McClellan, left, telling an amusing story to James Wiseman, and Martha and Professor Carl Lamberg-Karlovsky, Harvard University.

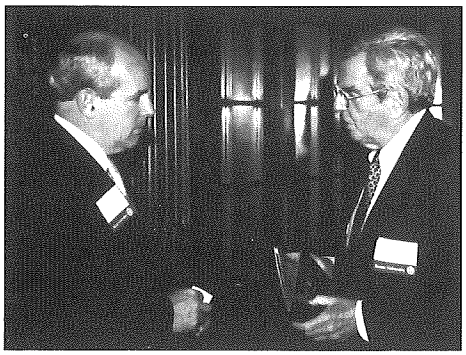


Inauguration of East Asian Archaeology Center Celebrated at The Castle

by Robert E. Murowchick

On September 20, 2000, a reception was held at The Castle at Boston University to celebrate the formal opening of the International Center for East Asian Archaeology and Cultural History (ICEAACH). Hosted by Dr. Dennis D. Berkey, Dean of the College of Arts and Sciences and Provost of Boston University, the event was attended by more than 150 guests, including faculty and students in archaeology, art history, anthropology, and East Asian studies from many institutions, as well as supporters of the Center from greater New England. Amidst good food and enthusiastic discussion, Dr. Berkey welcomed the assembled guests and described how this new Center, funded initially by a three-year start-up grant from the Henry Luce Foundation, represented a welcome expansion of Boston University's strong program in archaeology built up by Professor James Wiseman and his colleagues during the past twenty years. Professor Julie Hansen, Chair of the Department of Archaeology, then discussed how the East Asian focus of the new Center complements existing faculty expertise and curricular offerings, and also fills an important gap in Boston University's program in world archaeology.

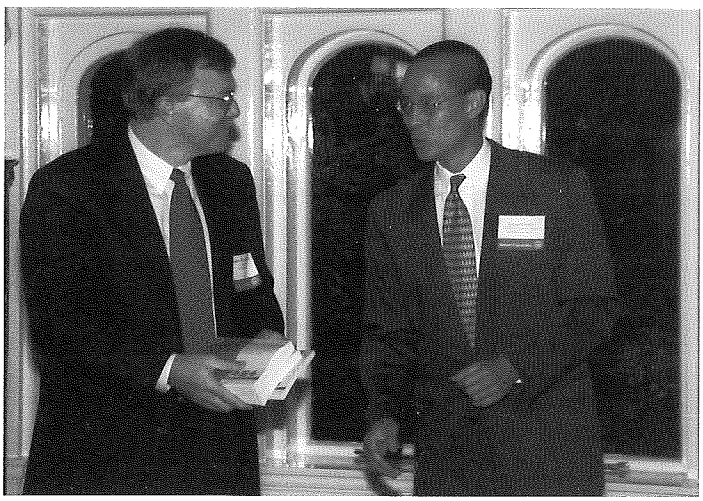
As Director of ICEAACH, I laid out the Center's short-term and long-term plans for its three major programmatic areas: research, publications, and public outreach. On the research front, the Center will help to coordinate international collaborative research programs, drawing upon the collective strength of participating scholars at many institutions. These programs will include ongoing as well as new field surveys and excavations in China and elsewhere in Asia. Connections with Asian institutions will be further strengthened by collaborative programs being set up between the Center and the Archaeology Department at Peking University, the Institute of Archaeology in the Chinese Academy of Social Sciences in Beijing, the Institute of Archaeology in Hanoi, the Centre for Malay Archaeology in Penang, and several other institutions. The Center's publication program focuses on the newly established *Journal of East Asian Archaeology*, published by Brill Academic Publishers in Leiden, The Netherlands, for which the Center serves as the editorial home base. The Center will also begin publishing a series of English translations of major archaeological reports from China and Vietnam to make that information more accessible to Western scholars. The center is also spearheading the development of a major international database of Asian archaeological publications and site/culture information that will be available through the Internet.



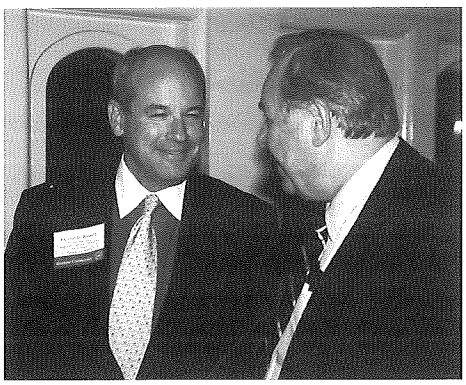
Provost Berkey with Julian Sobin, former Trustee of Boston University and long-time expert on U.S.- China trade relations.

Outreach activities also represent a major mission of the Center, which is engaged in a series of public seminars on Asian archaeology, and also is working closely with the Boston Children's Museum and other agencies to provide teaching materials to K-12 teachers who are increasingly incorporating early East Asian cultures into their curriculum. A teaching kit on Chinese archaeology, including artifact reproductions, guidebooks, illustrative material, and classroom exercise, is already nearing completion and will be available for rental through the Children's Museum.

Finally, the assembled guests at the reception took great pleasure in welcoming the family of Professor Kwang-chih (K.C.) Chang, the eminent emeritus professor of Chinese archaeology at Harvard. In a powerful and moving show of support for Boston University's new Center, Professor Chang and his family have donated his entire research library of some 5,000 books and journals and 15,000 photographs on Asian archaeology to form the core of the Center's new library. At the time of the reception, Professor Chang was hospitalized with Parkinson's Disease, and his son, Julian P.K. Chang, described how happy his father was to see the new Center get launched, for K.C. has been the critical force during the past forty years to help bring East Asian archaeology to a Western audience, and to help bring Western archaeological method and theory to a new



Robert Murowchick, Director of the new Center, receives a symbolic gift of a new Chinese archaeology book from Julian Chang, son of K.C. Chang. The Chang family donated K.C. Chang's research library to the Center. Photo by Michael Hamilton.



Provost Dennis Berkey and James Wiseman, Director of the Center for Archaeological Studies, share a pleasant moment after the speeches. Photo by Michael Hamilton.

generation of archaeologists in Asia. Presenting a recently published Chinese archaeology book to Dean Berkey for the Center's library, Dr. Chang described the gesture as symbolic of his father's support for the establishment of the ICEAACH, and offered his family's best wishes for a successful launch of this important new research Center.

Robert E. Murowchick is Director of ICEAACH and Research Associate Professor of Archaeology and Anthropology at Boston University.

---

continued from page 10

context, providing an opportunity for spatial analysis, through which one can determine site use and spatial organization by Neanderthals. The data show that there are clear patterns of lithic procurement, transport, and reduction, within a resource-rich landscape.

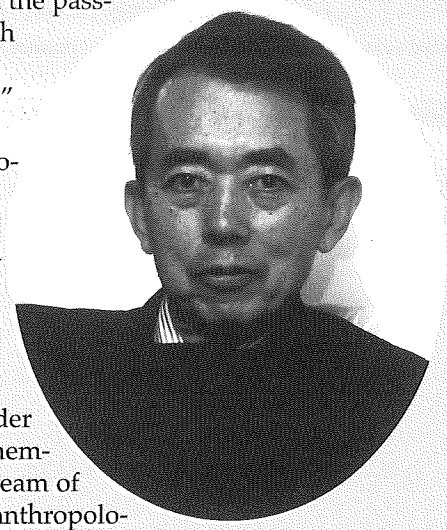
The final paper was "Into the Jaws of the Earth Monster: Cave Rituals of the Xibun Maya," by Polly Peterson of Boston University. For the Maya, caves held a special meaning as portals to the underworld and were often portrayed as the gaping jaws of the Earth Monster. Peterson showed how the Maya of Belize used caves for ritual activity, with deposition of pots, "ritually killed," along with stone tools, shells and other items.

The conference ended with a reception for all attendees and a "thank you" dinner for the keynote speaker and the faculty sponsor, Dr. Mary Beaudry, at the restaurant Sol Azteca. The conference committee would like to thank once again the following sponsors of the event: the Humanities Foundation, the Department of Archaeology, Boston University, and the *Journal of Field Archaeology*. We also thank the students who presented and all those who attended for making the conference a success.

For more information, including paper abstracts, see the conference website at http://www.bu.edu/archaeology/calendar/gradconf.

Eric Vrba, Ben Thomas, and Kevin Mullen are graduate students in the Department of Archaeology at Boston University.

Kwang-chih Chang (1931-2001)



It is with great sadness that we report the passing on January 3, 2001, of Kwang-chih Chang, the eminent archaeologist of China and of East Asia. Known as "K.C." to his colleagues and students alike, he provided a window into Asian archaeology for Western scholars for more than four decades through his prodigious publications, his insightful research programs, and through his inspirational teaching.

Born in Beijing in 1931, K.C. Chang received his B.A. degree from National Taiwan University in 1954, studying under the guidance of Prof. Li Chi and other members of the original Anyang excavation team of 1928-1937. K.C. completed his Ph.D. in anthropology at Harvard in 1960, and then taught anthropology at Yale until 1977, when he moved to Harvard's Anthropology Department where he taught until his retirement several years ago.

The breadth of K.C.'s research interests is reflected in the variety of topics covered in his more than 300 publications, ranging from Paleolithic settlement of East Asia, shamanism in Neolithic and Bronze Age China, and urbanization to religious interpretations of jade and bronze iconography, and the relationship between kinship and kingship in ancient China. In the West he is best known for *The Archaeology of Ancient China*, which appeared in 1963 and was updated in three subsequent editions (1968, 1977, and 1986), reflecting the enormous surge of archaeological data coming out of China that required frequent reassessments of the Neolithic and Bronze Age cultural developments there. Other major works in English include *Early Chinese Civilization: Anthropological Perspectives* (1976); *Shang Civilization* (1980), *Art, Myth, and Ritual: The Path to Political Authority in Ancient China* (1983).

K.C. Chang played a pivotal role in helping to modernize the field of archaeology and museum studies in Taiwan. On the Chinese mainland, when the Chinese antiquities laws were finally changed in the early 1990s to allow Sino-foreign collaborative projects for the first time since before WWII, Chang's interdisciplinary project, "Investigations into Early Shang Civilization," was among the first to be approved. Working with colleagues from the Institute of Archaeology of the Chinese Academy of Social Sciences in Beijing, this ongoing survey and excavation program has yielded valuable new data on the Holocene landscape, on Neolithic cultures in this area, and on the sequence of early historic cities near the present-day city of Shangqiu.

While he will be sorely missed by his colleagues and friends, K.C.'s work very much lives on through the students that he taught, many of whom now hold positions crucial to the future development of archaeology in China, Taiwan, Korea, Japan, the Philippines, Hong Kong, Vietnam, Malaysia, and Indonesia, as well as at universities across the United States and Europe.

— R.E.M.

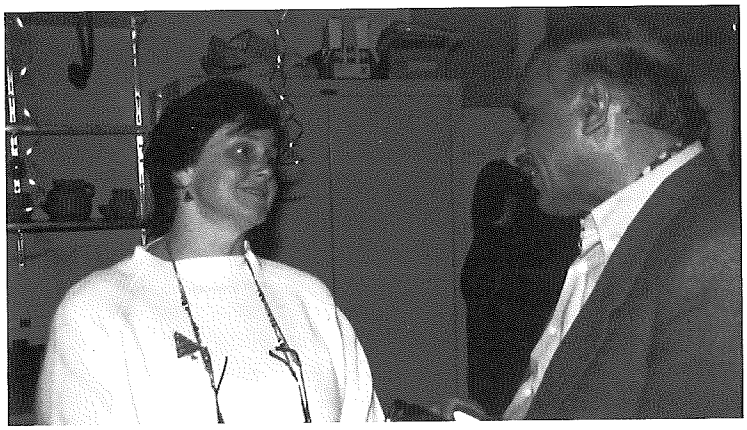
Faculty Appointments

Three new faculty, Drs. Mohammad Rafique Mughal, Patrick Ryan Williams, and Aaron Brody, joined the Department of Archaeology at Boston University in September, 2000.

Mohammad Rafique Mughal served as the Director General of Archaeology and Museums in Pakistan, the culmination of a distinguished career in his native country prior to joining the Department of Archaeology as a tenured Professor. He is an internationally known scholar and the world's leading expert on South Asian archaeology, in particular the development of the Indus civilization.

Dr. Mughal has taught at the University of California, Berkeley, the University of Pennsylvania, and Harvard University, and was a visiting fellow at Churchill College at Cambridge University from October, 1998 to March, 1999. He is a prolific writer, having published six books and over 60 articles; a recent book is *Protected Archaeological Sites and Monuments in Pakistan* (Peshawar and Lahore: Pakistan Heritage Society).

As the former Director of Archaeology and Museums in Pakistan, Dr. Mughal has extensive experience in dealing with issues pertaining to cultural resources and the preservation of archaeological sites. He serves as a consultant to the International Council on Monuments and Sites (ICOMOS) and his international expertise in the preservation of archaeological sites greatly augments the Department's Archaeological Heritage Management program.

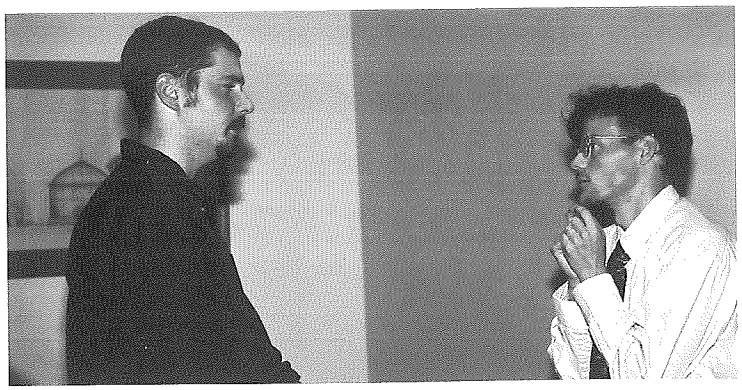


Professor Mughal (right) celebrates the holiday season with Julie Hansen, Chair, at the Departmental party. This photo and others on page by Michael Hamilton.

Patrick Ryan Williams, (Ph.D. University of Florida, 1997) is an Andean scholar and an expert in the applications of Geographic Information Systems (GIS) and Remote Sensing to Archaeology. He joins the Department of Archaeology as a tenure-track assistant professor.

Dr. Williams has taught at the University of Florida and Valdosta State College in Georgia. He has extensive field experience using remote sensing applications.

Williams has received numerous honors, grants, and fellowships, including a grant in 2000 from the National Science Foundation and the G.A. Bruno Foundation Grant for Andean Archaeological Research in 1997. He has written several articles, including the forthcoming "2001 Cerro Baúl: A Wari Administrative Center in Moquequa, Perú" (*Latin American Antiquity*: 12.1).



At the Department's September reception to welcome students, Professor Williams (right) speaks with graduate student, Dan Welch.

Aaron Brody (Ph.D. Harvard University, 1996) is a specialist in maritime archaeology, focusing on the Bronze and Iron Age of the Eastern Mediterranean world, with particular emphasis on sea trade, coastal society, and religions of the Levant. He joined the Department as a Visiting Assistant Professor of Maritime Archaeology, a special appointment funded from the Boston University Underwater fund established by Dr. Anna Marguerite McCann.

Dr. Brody has published several articles and a book *"Each Man Cried Out to His God"* (Scholars Press: Atlanta, 1998), about the religion of Phoenician sailors. In addition to having received most recently the Shelby White-Leon Levy publication fellowship and a National Endowment for the Humanities fellowship from the Albright Institute for Archaeological Research, Jerusalem, he has been honored with several other fellowships and awards.

Aaron and fiancée, Christina Kahrl, Administrative Assistant of the Center for Archaeological Studies, are enjoying their New England reprieve from sunny and hot Lubbock, Texas.

Aaron Brody chats with Kathryn Bard at the Department's September reception for new students.

East Side Story: A Middle Preclassic Maya Sweathouse at Cuello, Belize

by Norman Hammond and Jeremy R. Bauer

In the spring of 2000 we returned to the noted Maya site of Cuello, Belize (Fig. 1), a quarter century after the initial excavations had shown it to be the oldest settlement yet discovered in the lowland zone (Hammond 1991). Eight seasons of further investigation, between 1976 and 1993, had confirmed this early date, demonstrating that Platform 34, a broad elevation with a raised plaza built around 400 B.C. at the beginning of the Late Preclassic, enshrouded a Middle Preclassic residential group with a history spanning eight centuries from 1200 B.C. onwards. The first timber-framed houses, some with thin plaster floors laid directly on the ground surface, others with floors just of trodden earth, were built a few yards apart, but with no discernible organization. By 900 B.C., however, the dwellings were not only raised on low rubble-filled platforms for better ventilation, drainage, and protection from crawling pests, but also set around an enclosed patio some ten meters across. A typical building like Structure 326 on the south side of the patio, almost completely excavated in 1980 and 1993, proved to be about 8 × 4 m in plan, with apsidal ends to its basal platform that were followed by the timber framework of the house itself: it looked very much like a modern Maya house in Yucatan (Fig. 2). Similar structures lay on the west and north sides of the patio, but are less well known because the former lie partly under the small Late Preclassic pyramid, Structure 35, while the latter were systematically demolished when the patio was expanded northwards in the seventh century B.C.

The patio itself was refloored repeatedly over some five centuries, usually in concert with reconstruction and enlargement of the structures around it: those of the seventh century B.C. were nearly 12 m long, large enough to have been chiefly residences or public buildings. The courtyard seems to have formed the center of the Cuello community, since extensive testing elsewhere at the site has not yielded anything of comparable scale. Around 400 B.C., however, the structures were ceremoniously razed, and the patio filled in with rubble; a mass human burial accompanied by the bundled bones of possibly venerated ancestors in the top of the rubble, and several other interments around the edge, marked the ritual dedication of Platform 34.

By the time we returned in 2000, we therefore knew what had happened on three sides of the Middle Preclassic courtyard, but not on the eastern side. This was an important gap in our knowledge of this earliest Maya community core: the east was the most important orientation in later Classic Maya culture, because it was where the sun rose. Major temples such as Temple I at Tikal (Guatemala), stood on the eastern sides of plazas, while in many house groups a small shrine on the east marked the burial place of the ancestors. So we decided to look for the buried east side.

We started with three competing hypotheses: (1) the east side of the group was open, facing the rising sun; (2) it was occupied by buildings similar in plan and function to those on the other three sides, initially domestic, later perhaps with a more public function; (3) the buildings

continued on page 22

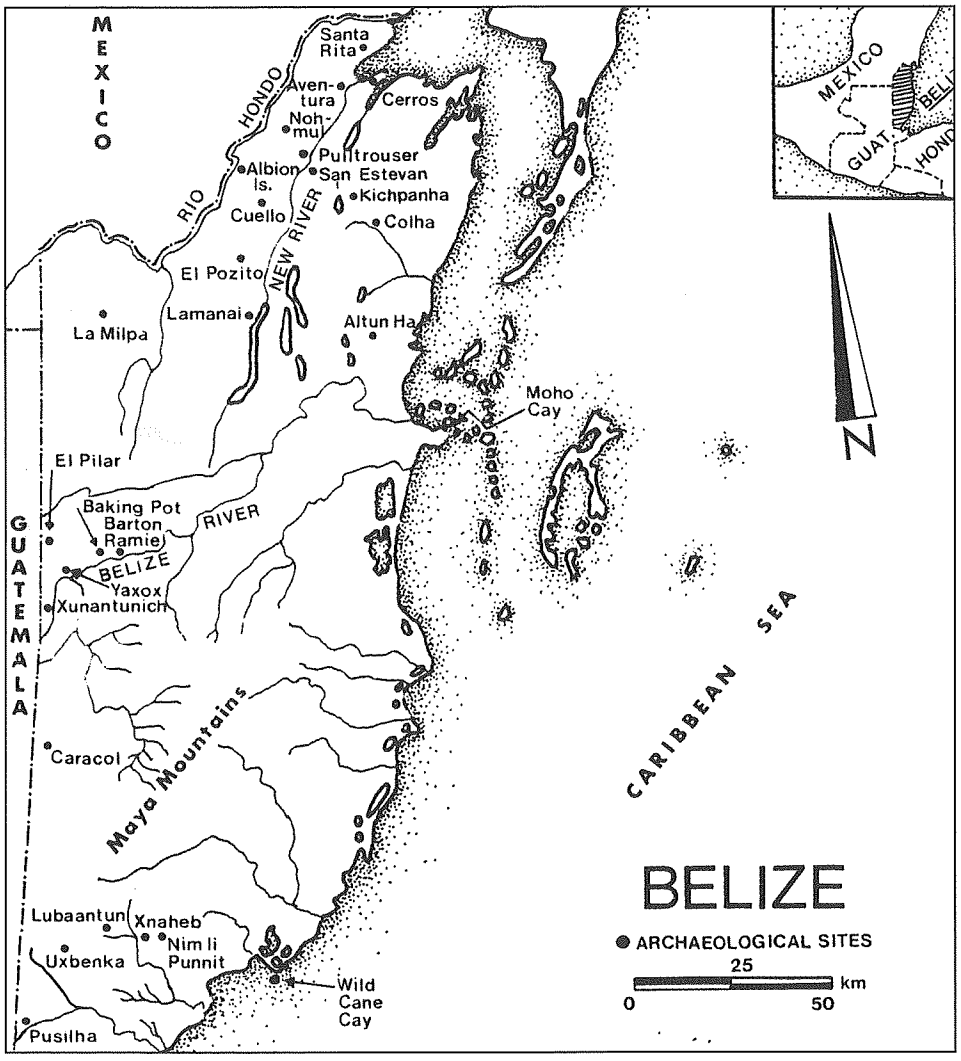


Figure 1. Map of Belize and important archaeological sites including Cuello and La Milpa, where Boston University carried out research in 2000. The site at Louisville (see page 26) is located midway between Nohmul and Aventura in the far north of Belize.

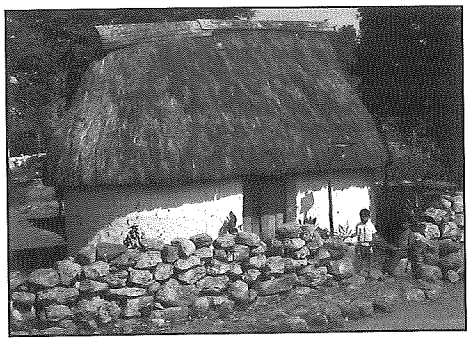


Figure 2. A modern Maya house, with wooden frame and wattle-and-daub plastered walls below a thatched roof. Preclassic Maya buildings at Cuello were similarly constructed.

continued from page 21

there were special-function structures, connected with ancestor veneration or some other ritual purpose. We also had to guess where to dig, projecting the probable location of the patio's eastern margin and the buildings that flanked it from the positions of those on the other sides: as it happened, the five-meter East Square that we laid out was spot on.

Our first discovery was an offertory cache, buried in floor fill. It consisted of two large red-slipped dishes with outcurved rims, of a ceramic type known as Sierra Red: Big Pond variety, which confirms a date in the latter part of the Late Preclassic for this level. The vessels were set lip-to-lip, and inside the lower dish were five small, round apple-green jade beads, apparently arranged in a rough quincunx ("X") pattern. Such caches are not uncommon at Late Preclassic Cuello, but this is the first time we have found one with multiple beads inside. The quincunx pattern reminds us of similarly-dated offerings found at the sites of Nohmul and Cerros, also in northern Belize, in 1974 and 1975: the offerings included jade god-heads, which at Cerros were laid out in a quincunx formation and which seem to portray the sun and maize gods and a deity of darkness. Perhaps the Cuello beads replicated in function, though not in form, those more explicit and elaborate offerings.

Below the succession of eroded Late Preclassic floors we came down on the thick rubble that infilled the Middle Preclassic patio (Fig. 3d). It cut diagonally across the excavated area, and east of it lay the plaster surface of a substantial platform, extending beyond the trench on the north, south, and east. As we cleaned this, we discovered that three large scoops had been taken out of its front, spaced 2.5 m apart; as we exposed the lower terrace that abutted the courtyard, we found that it, too, had been damaged, its front face stripped away down to floor level (Fig 4). This demolition had been carefully done, deconsecration rather than wanton destruction, in the same way that the buildings on the other sides of the patio had been slighted before the entire courtyard was buried around 400 B.C. They had all showed evidence of burning: on the south side the timber-framed superstructure had been set ablaze, and had fallen into the patio, leaving scorch marks on the plaster floor. This eastern platform, designated Structure 334, lacked post holes for a superstructure, however, unless the three equally-spaced scoops had removed them. Until more of Structure 334 is exposed, we cannot know whether it supported a perishable superstructure or was an open platform. If the latter, then some non-residential function seems likely.

We cut a cross-section through Structure 334 to establish how it was built, finding that a single substantial mass of earth and fist-sized limestone rubble fill had been dumped to form both the main platform and its front

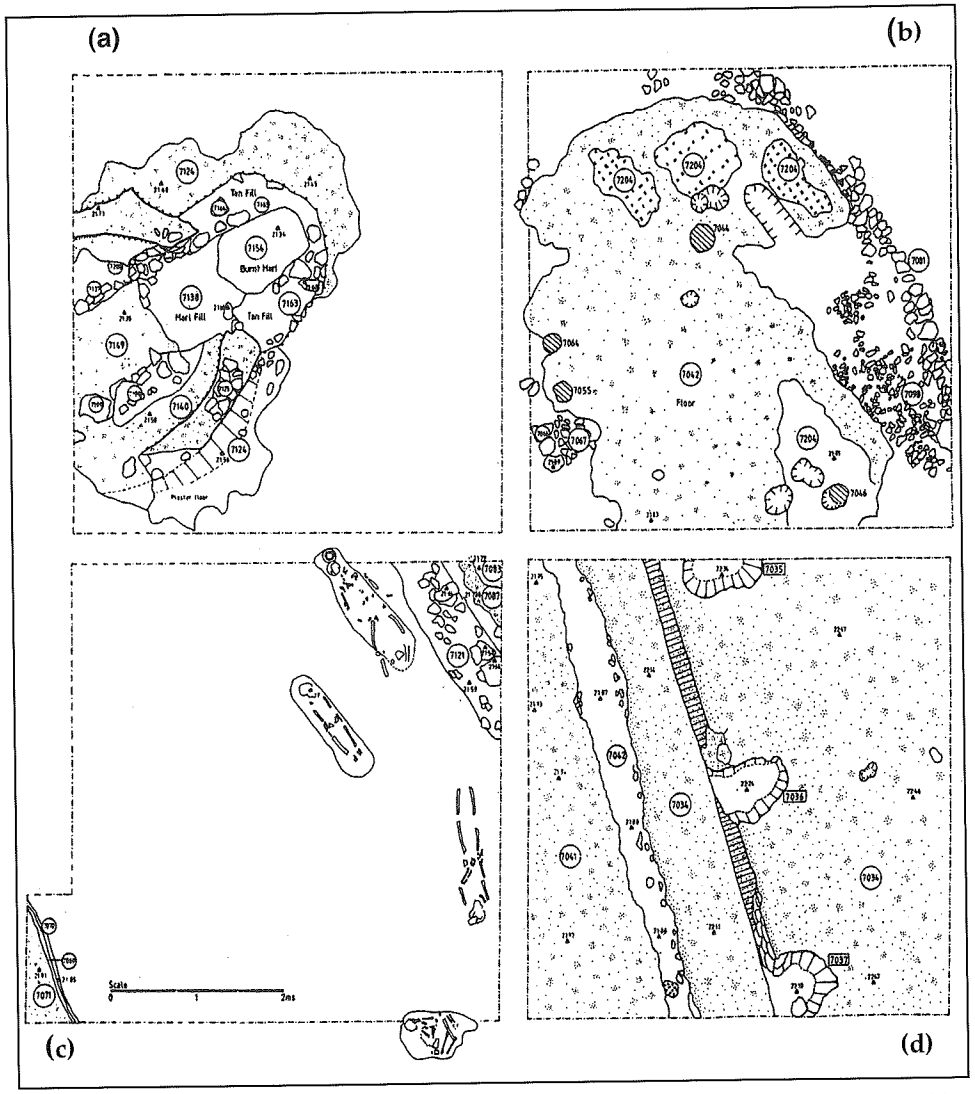


Figure 3. Middle Preclassic buildings at Cuello: (a) the sweatbath, Str. 342, about 900 BC.; (b) the overlying subcircular Str. 338, about 700-600 B.C.; (c) the scant remains (7060, 7070 to the southwest, 7083, 7087 to the northeast) of Str. 339, with four surviving burials, 600–500 B.C. (d) the partly demolished front and lower terrace of Str. 334, 500–400 B.C., facing onto the patio floor 7041. North is at the top.

Figure 4. Cuello Str. 334 from the north, showing the partial demolition carried out before the building was buried under rubble about 400 B.C. The scale lies on the patio floor in front, and the rubble can be seen in section behind it.

terrace, held in place with a retaining wall and thick, well-made plaster surfacing. Since the building had only this single period of construction and had been buried around 400 B.C., it can hardly have existed for much more than a century: our next find thus occasioned some surprise.

As we removed the lowest part of the fill of Structure 334, an eroded plaster floor appeared, which proved to be a well preserved subcircular platform almost entirely within our excavation: we designated this Structure 338 (Fig. 5). Cut into the floor we recognized the elongated outline of a grave, not sealed with the usual plaster patch: our initial reaction was that it had been dug immediately before Structure 334 was built over it, and contained a dedicatory burial. Whether the burial had sparked off construction, or was a timely sacrifice, we had no idea. Within the grave was a pottery bowl, which as we dug down proved to have been placed over the body of a boy, some seven to ten years old when he died; the lower legs were missing, truncated by a later cut. The bowl was subtly modeled, with a projecting turtle head on one side, cream-slipped with a broad band of red down each side (Fig. 6). The shape and finish of the vessel placed it in the Consejo Group of the Bladen Ceramic Complex, dating to 900-600 B.C. Unless the bowl was an heirloom that had been buried with a child of a later generation, we had an apparent gap of at least a century between the burial and Structure 334 immediately overlying it.

An idea occurred to us, but it seemed far-fetched: that the burial was indeed of circa 600 B.C., but that it had been covered by a building now completely vanished, demolished when Structure 334 was constructed. For several days we puzzled over the problem, until right in one corner of the trench, at the limit of excavation, we found a thin upturned line of plaster an inch high. We recognized it as the base of a wall face, and noted that it had two layers—the wall had stood for long enough for its facing to need renewal. It was the laying of a new floor up against this refacing that had protected the very bottom of the plaster from destruction when the wall had been demolished, quite literally to ground level. The surviving fragment of facing reached an elevation just sufficient to show that the wall it covered must have risen to a height above the floor of Structure 338, and therefore this newly-discovered building, which we called Structure 339, could be the missing piece of our puzzle.

Only that tantalizing inch of plaster stood in evidence, however, until several days later, in the far corner of the excavation, we hit pay dirt: in this case a line of small boulders lying just outside Structure 338 and abutted by a fragment of plaster floor which turned up their outer face to form a wall covering. Later than 338 and earlier than 334, it was the clincher: a building 6 m wide and of unknown length and height had succeeded Structure 338 and survived for an unknown but substantial period of time before being obliterated and succeeded by the mass of Structure 334. An explanation for the unsealed grave was now forthcoming: it had been cut through the floor of the buried Structure 338 when the latter was buried by 339. The Maya who were raising the later Structure 334

continued on page 24

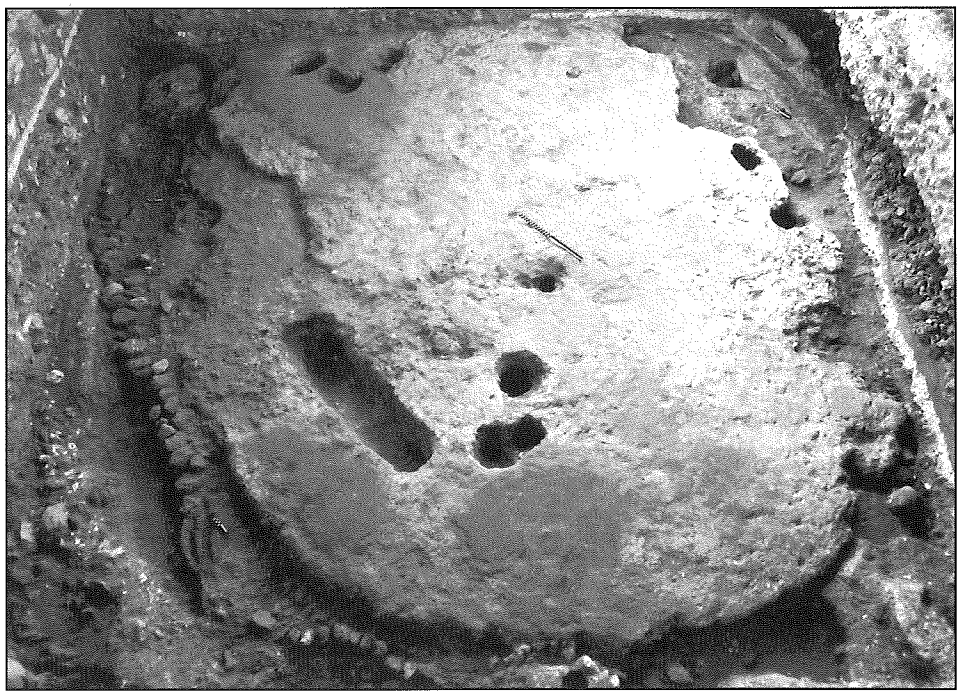


Figure 5. Cuello Str. 338 from the north, with traces of the later Str. 339 at lower left and upper right. The small scale at lower left marks Burial 183, that at upper left marks Burial 182, and the grave of Burial 181 is at center left.

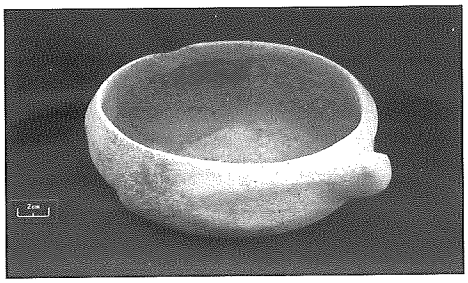


Figure 6. Pottery bowl with projecting turtle head on right from Cuello Burial 181.

continued from page 23

saw, and respected, the burial and also used the re-exposed surface of Structure 338 as their foundation. Three other burials (see plan) date to the same period.

Pleased at having solved this problem, especially when careful measurement of the orientation of the two fragments of Structure 339 showed that it was almost the same, roughly 15 degrees west of north, as its precursor and successor, we were not expecting something even more puzzling: but as we stripped away the floor and fill of the subcircular Structure 338 we came upon something that was to perplex us for the rest of the season, and indeed prompted us to extend our field work by an unintended additional month.

Below Structure 338 were the remains of two low buildings constructed very close together, with a small portion of a third just inside the southwest corner of the trench. This last, designated Structure 341, will only be known when the area west of our current excavation is investigated. The second, Structure 340, was slightly more visible: its northern apsidal end, with a low rubble wall supporting fill and a plaster floor, showed it to be similar to Structure 338, perhaps slightly smaller; most of it also remains for future excavators. The third building, Structure 342, was the headache: most of it, so far as we could see, lay within our trench. What is more, it was unlike anything we had seen before at Cuello.

It was about 4 m long and 3 m wide, oriented roughly northeast to southwest. Two curving rubble walls with plaster facings formed a U, broken in the middle. A smaller U projected northeast from the break, and a parallel-sided channel somewhat under a meter wide and dug to a lower level ran through the entire structure (Fig. 7). The channel proved to be cut down to bedrock through the old land surface, and was walled with limestone slabs; a small depression in the floor of the channel may have been to collect or drain liquid. The channel was filled in with a bewildering succession of deposits, including a blue ashy substance; there was burnt material mixed in, and as we cleared the end of the smaller U at the northeast we found its bedrock walls had been burnt red and gray by fierce fires. It was the oldest building in the sequence, standing on the ancient land surface: it was clearly not a house, apparently not a shrine, not an ancestral tomb. What was it?

The answer came in a casual remark: the roof over the excavation had been destroyed in a storm, and we had stretched a tarpaulin across the trench, staked to the ground, to keep the blinding sun out and stop the deposits from drying up. It was hot and humid—like a sauna, someone said—and we suddenly realized what we had was a *pib na*—a sweathouse. Known to the Aztecs as a *temescal*, such structures are found across Mesoamerica and North America in historical times: they are used for both practical and ritual cleansing. A score of prehispanic Maya examples are known from both the highland and lowland zones, the latter including Tikal, Uaxactun, Palenque, Chichén Itzá, and Piedras Negras (Houston 1996, Fig. 10). At Piedras Negras (Fig. 8) they were elaborately constructed, and most of the eight so far known were apparently used by the ruling elite. These high-class sweatbaths usually consisted of a small steam chamber, with a separate smaller firebox chamber and a channel in the floor leading to the outside, enclosed in a larger building. At Palenque, the small shrines inside the Cross Group temples which held the great carved tablets of the Cross, Foliated Cross and Sun are of similar design to the Piedras Negras sweatbaths, and were designated as "symbolic sweatbaths" (Houston 1996). While the steam chambers at Chichén Itzá were around 5 × 3 m and those at Piedras Negras consistently almost as large, their symbolic equivalents at

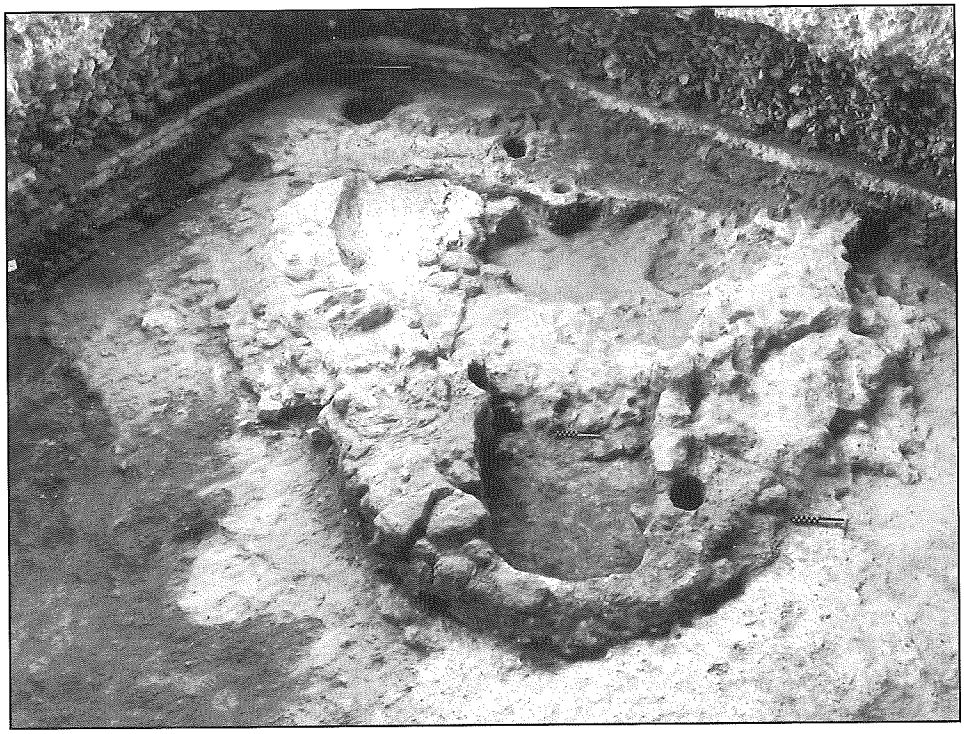


Figure 7. Cuello Str. 342, the sweatbath or pib na, *from the northeast. The firebox is in the foreground, with the heating channel behind partly filled with deposits. Portions of the curving rubble walls and interior plaster floor of the seat-room lie on either side of the channel. Part of a later overlying structure is at rear left, and the bedrock and old land surface underlying the sweatbath are exposed in the left and right foreground.*

Palenque were, at roughly 3 × 2 m, smaller. Some of the more mundane sweatbaths so far identified were smaller still: at Tikal the steam chamber is only 2 m to a side.

The two best comparanda for our Middle Preclassic sweatbath at Cuello are probably those from Cerén in El Salvador (Sheets 1992, 97–102) and Dzibilchaltun in Yucatan (Andrews IV and V 1980, 31, Figs. 14–17), at the southern and northern limits of the Maya Area respectively. Dating to the middle of the Classic period, Cerén Structure 9 was just under 3 m square internally, with the firebox in the center of the floor and a domed roof probably 1.5–2 m high (lower than the stone-vaulted roofs of the elite lowland *pib na*). Dzibilchaltun Structure 605, in the Mirador Group, had attached to its western side in Phase 2F a subcircular chamber some 2.6 × 2.5 m, with a narrow entry stair on the south and an internal firebox against the northern wall, with no channel to the outside. Only the lower portion of the walls survived, so we do not know its height, although somewhere under 2 m seems probable; it dates to around 500 B.C. in the Nabanche Phase of the Middle Preclassic.

The Cuello sweatbath, dating to ca. 900 B.C., has a steam chamber 2.5 m by at least 2.5 m (the western end lies outside our excavation), a firebox chamber 1.3 × 0.9 m, and a central channel broader in relation to the seating area than we see in the Classic Period sweatbaths. The curved walls enclose an area similar to the Dzibilchaltun example and only marginally smaller than Cerén. The roof was, by analogy, probably less than 2 m above the floor, covering a small room easy to heat and capable of holding up to half a dozen people.

Sweatbath design clearly evolved over the centuries: at Cuello we have an exterior firebox chamber and a channel funnelling heat into the steam chamber. The broad channel would allow hot stones to be raked in through an arched opening in the wall separating the two chambers, while bathers could sit on the side benches with their legs over the edge without coming into contact with the stones. At Dzibilchaltun, the firebox was brought inside, albeit as an open area on one side of the steam chamber; it remained there in the Cerén design a millennium later, but with a domed cover to avoid direct heat. In the Piedras Negras elite sweathouses, the firebox was a small separate chamber within the steam chamber, set against the back wall; hot stones could again be raked out into the central channel to maintain temperature. At Chichén Itzá, Structures 3E15 and 3C3 were of similar plan, with the firebox at the back of the building.

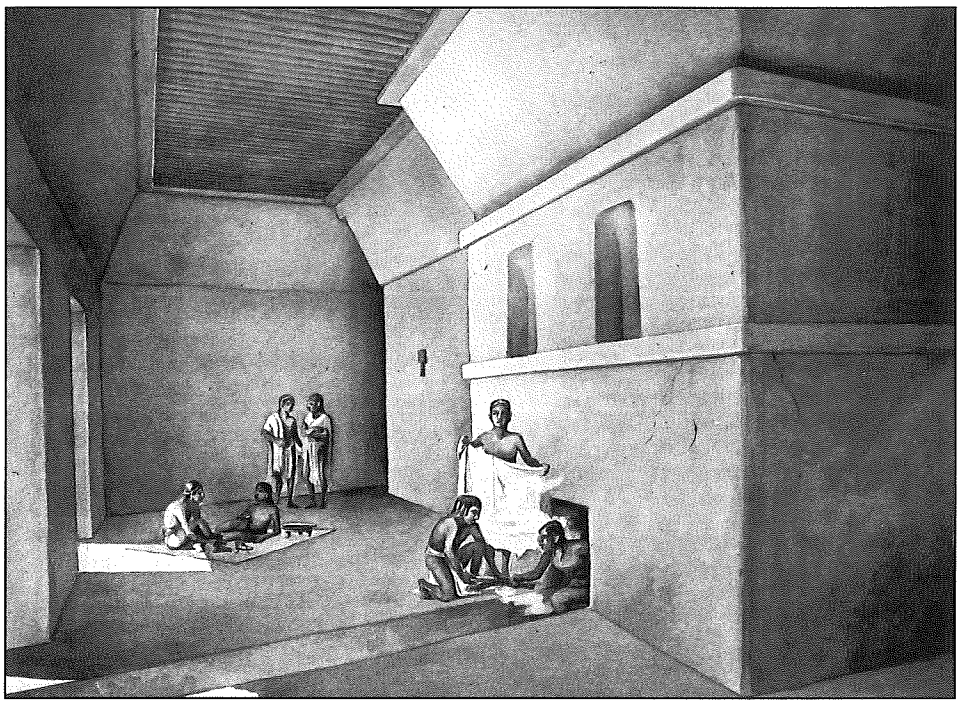


Figure 8. A classic Maya sweatbath of the eighth century A.C. at Piedras Negras, Guatemala, by Tatiana Proskouriakoff. The Cuello sweathbath, more than 1600 years earlier, also has a central channel and would have had a low entrance to keep the heat in.

The discovery of the Cuello sweatbath completed the answer to our initial question in a dramatic and unexpected way: yes, the eastern side of the buried Middle Preclassic patio was occupied by buildings throughout its history. But the form, and certainly the function, of those buildings had changed over the half millennium of the courtyard's use. The sweatbath—the earliest known from the Maya Area—was the initial structure on the site, its still unexcavated entrance facing the patio. It was joined by Structure 340 just to the southeast, and partly overlain by Structure 341 on its west, before being completely covered over by the low subcircular Structure 338 around the seventh century B.C. This was in turn buried in the sixth century beneath Structure 339, slightly larger but possibly of similar plan (we can say no more at present, because both ends lie beyond our excavations, and the structure was completely demolished to make way for Structure 334). This last Middle Preclassic building, occupied from around 500 to 400 B.C., was a long, straight-fronted two-level platform, facing two similarly squared-off structures on the west and north of the patio. While any or all of the sweatbath's successors may have been ritual in function rather than residences, we have little supporting evidence for this at present: it is quite possible that the eastern side of the courtyard was a special, perhaps sacred, place from the beginning of Cuello's history.

References

Andrews, E. Wyllys, IV and E. Wyllys Andrews V
1980 *Excavations at Dzibilchaltun, Yucatan, Mexico*. Middle American Research Institute, Tulane

continued on page 26

Millennial Moments: Disinterring the Archaeology of Louisville, Belize.

Astrid Runggaldier and Norman Hammond

You hardly notice Louisville today as you drive through northern Belize, on the way from the Mexican frontier to Belize City—just a long bend in the Northern Highway with a few houses on either side. The village itself has been bypassed by the new road, while a few hundred yards away in the curve of the bend the ancient Maya ruins of Louisville lie similarly unremarked (see map on page 21).

It was not always so: in 1936 the ruins were the site of a notable discovery, but one which chance has dropped into obscurity. The site itself had long been known—the two principal mounds stood over thirty feet high and were visible from a great distance in the flat limestone country of northern Belize—and surface pottery had been collected there by the great Mayanist J. Eric S. Thompson in the course of survey work, although no actual excavations had taken place. Dr. Thomas Gann, for many years chief medical officer in Belize and from 1894 onwards a keen amateur archaeologist there, lived in retirement some twelve miles north of Louisville, on the shores of Corozal Bay. Late in 1935 Gann "learnt of a treasure trove dug from an ancient Maya mound...several life-sized stucco heads painted red and blue" that a local farmer, digging into one of the Louisville structures, had found. He and his wife Mary decided to visit, and subsequently obtained permission to dig in search of further sculptures.

Gann noted that seven mounds lay around a plaza, just north of the western main pyramid (the eastern one lay several hundred yards distant): the mound that had yielded the painted heads was on the southwestern side and was the largest. Below the soil was a limestone rubble fill burying a walled building which Gann thought "almost certainly a temple...of roughly squared stones and crumbly mortar...thirty-four by twenty-one feet...the north and west [walls] standing to a height of five feet." This infilled ruin had been used as the podium for several later structures, of which only the plaster floors survived; Gann found similar earlier buildings inside other mounds.

Along the north side of the building Gann found 41 stucco heads and 2 torsos, and felt that they had been carefully detached and buried face down in marl dust to preserve them when the structure was partly demolished and infilled. He noted the individualistic features of several of the faces, and decided that the building was "a portrait gallery...for the first time we see men and women of the various classes exactly as they were in life when they lived and loved." There were also numerous fragments of painted stucco from architectural moldings, along with a few hieroglyphs: one of the latter seemed to be the day sign Ahau with a bar above it, which Gann interpreted as the Maya number 5. He then suggested that the day 5 Ahau might mark the end of a katun or twenty-year period in the Maya calendar, and that the date in question might be 10.1.0.0.0. 5 Ahau 3 Kayab, the equivalent of November 28, A.D. 849 in our calendar. Oddly enough, although his argument is stretched, to say the least, the date he arrived at, described in his unpublished report as "from the end of the ninth, or the early tenth Baktun" is right in the range of dates we would suggest on archaeological grounds after more than half a century of subsequent research.

Gann took the sculptures out of Belize (then the Crown Colony of British Honduras), and deposited more than half of them in the British Museum, where other Maya finds from the Colony had gone; the rest he left for apparently temporary safekeeping with his friend Frans Blom at the Middle American Research Institute at Tulane University. He also left a typescript report, titled *A Maya Portrait-Gallery* and dated 1936, for Volume IV of the Institute's journal *Maya Research*. Thereafter he went to England, fell ill, and died in a nursing home in London on February 24th, 1938. A brief account of the Louisville

continued from page 25

University, Publication 48. New Orleans.

Hammond, Norman (ed.)
1991 *Cuello: an early Maya community in Belize.* Cambridge University Press. Cambridge and New York.

Houston, Stephen D.
1996 "Symbolic Sweatbaths of the Maya: Architectural Meaning in the Cross Group at Palenque, Mexico". *Latin American Antiquity* 7: 132-151.

Sheets, Payson D.
1992 *The Cerén Site: A Prehistoric Village Buried by Volcanic Ash in Central America.* Harcourt Brace Jovanovich. Fort Worth.

Norman Hammond, Professor of Archaeology at Boston University, has directed the Cuello Project since 1975. Jeremy R. Bauer earned a B.A. from Boston University in 1997, and, after three seasons of fieldwork in Belize, is now a graduate student at Vanderbilt University in Nashville, Tennessee.

Acknowledgements

The authors of the two articles on Belize are grateful to the Archaeological Commissioner of Belize, Dr. Allan Moore, and to the Cuello Brothers for permission to investigate these perennially fascinating sites. Funding was provided by the National Geographic Society and Boston University (including gifts from Raymond and Beverly Sackler and an anonymous donor). Our colleagues Sophie Hay, Sam Dennis, Sheena Howarth, and Amanda Clarke, and the other members of the 2000 Cuello/La Milpa Project team provided vital support, as they did for the work at Louisville also.

work appeared in the final chapter of Gann's last, posthumous book *Glories of the Maya* (1938).

The British Museum accessioned his finds that year, together with his material from the site of Nohmul a few miles south of Louisville (which he had also excavated in 1936). The Museum does not seem to have had, or known of, his report at Tulane, and the stuccoes went into store. The advent of World War II and the protective warehousing of the British Museum's collections left them there for another three decades. At the same time, *Maya Research* collapsed: Volume IV was never issued. Tulane, in the absence of other instructions, accessioned the Louisville materials in its possession in 1939. Robert Wauchope, Blom's successor as director, edited Gann's report down to a fraction of its original length, removing what he regarded as speculation (which turns out to have included Gann's perceptive ideas on dating), and published it as a four-page pamphlet in 1943. The minds of Mayanists were elsewhere, and it made no impact: Louisville is mentioned by neither Sylvanus G. Morley in *The Ancient Maya*, nor J. Eric S. Thompson in *The Rise and Fall of Maya Civilization*, the two popular accounts of the postwar years; nor does it feature in the encyclopedic coverage of the *Handbook of Middle American Indians*, even though Wauchope was editor-in-chief. Gann's discovery was lost in limbo.

The site of Louisville remained similarly unremarked until 1958, when Wolfgang Haberland published a brief note on a round structure, apparently of Middle Preclassic date, in the present village. When one of us (NH) included the site in the regional survey of Northern Belize in 1973, it lay undisturbed a short distance east of the community: a collection of surface pottery indicated a Late Preclassic date for at least one of the two main pyramids, but no excavations were undertaken. Over the next quarter century, this situation of benign neglect persisted, although efforts were made to interest various colleagues and graduate students in doing a project at Louisville. By the late 1990s, however, it became clear that plowing for sugarcane farming was eroding the smaller mounds of the settlement, and that even the large structures were threatened by quarrying for road fill (the western main pyramid was totally demolished in 1999, and about one-third of the eastern pyramid was also gone by early 2000). The Archaeological Commissioner of Belize, Dr. Allan Moore, agreed that this situation justified emergency recording and requested that we carry it out during Boston University's 2000 Field Study in Archaeology program. We were based a half-hour's drive south of Louisville during January through early March, excavating at the early site of Cuello and living in Orange Walk Town, so a program of mapping (by Marc Wolf and Scott Smith), surface collecting, and excavation was feasible. Within this general aim of salvage archaeology, we had the specific objective of relocating Gann's excavations and carrying out such further investigations as were needed to put his finds into a cultural context.

Although he never published a plan of either the Louisville site or his excavations, we had no difficulty in relocating his trenches in January 2000, sixty-four years later: when we removed the underbrush from an area too hummocky for the cane farmers to have bothered with, we found two substantial mounds covered with backdirt piles alongside eroded trenches. In the course of our work we also found in the backdirt two ribs from an English umbrella of the early twentieth century which were identified for us by the old-established ribmakers Hoyland Fox: the cross-section, type of steel, and paint all pointed to a model made before 1920, which had been burnt. While they could not be certain whether it was used in a man's or lady's umbrella, Messrs. Swaine Adeney Brigg of Piccadilly, London, who have made both since the nineteenth century, decided that it was the latter: we concluded that Mrs. Gann had discarded her old umbrella (probably used as a parasol as well in the Belizean heat) after it was damaged, thereby giving us a useful clue to date the earlier excavation and identify it as Gann's.

Gann described the mound as being 90 ft long, 75 ft wide, and 15 ft high: our survey of the remnants suggests that his measurements were reasonably accurate, as was his measurement of the buried building within the mound at 34 ft, with a doorway 4 ft wide. He found what he thought were the north and west walls, noted that those on the south and east had

continued on page 28

Structure 18 at Louisville, partly demolished for road fill in January 2000. Sections of limestone construction fill, laid side-by-side in "tasks" carried out by separate gangs of workers working simultaneously, have been exposed. Further destruction took place later in 2000; the site's other major pyramid was totally destroyed in 1999.

continued from page 27
been completely destroyed, and surmised that the "temple" had been roofed with wooden beams, "as the span was too wide for the cantilever arch and no roofing-stones were found."

We discovered, however, that Gann had only uncovered part of the building (designated Structure 12), and that it was not only much longer than he had thought, but also, in fact, had five doorways each almost 4 ft wide. A step down just south of the easternmost door, to an outer room or terrace, shows that the doorways pierced the south or central wall of Structure 12. The building faced south rather than north, and consisted of either one very long narrow room with five entries, or two rooms with an unknown number of doors to the exterior and five giving access from the outer to the inner room. Such a structure was clearly not a standard residence even of the elite, since "palace" or "range" buildings with multiple entries usually had many small rooms. Similar multi-doored long-room buildings are known from sites further north, such as Dzibilchaltun and Edzna, and in Belize at Altun Ha, some 50 miles south, from the beginning of the Late Classic period onwards. The closest and best parallel, however, is Structure 17 at Nohmul, only a few miles south of Louisville and likely to have been the regional capital: this building, of the Terminal Classic period after A.D. 800, had seven doorways into a single long room, and it matches the Terminal Classic date we established for Louisville Structure 12 on the basis of the pottery found in the room fill just above the floor. The function of these structures remains unknown—we fall back on the overused "ritual" or "ceremonial" because no residential or administrative activity demands such a feature—but Structure 12 suggests that Louisville was important enough to execute whatever esoteric actions these were.

The stucco sculptures can thus be placed in a context of unusual elite behavior: not surprising, given their quantity, quality, and variety. We have only just begun to work on these: they have been photographed in the storerooms of the British Museum and the Middle American Research Institute, and will be scanned into a database with comparative materials. Similar life-sized, polychrome human heads have been found at several other sites in northern Belize, mostly early in the twentieth century and poorly documented. There is, however, one superb comparative sample, found by Gordon R. Willey and Ledyard Smith at Seibal in Guatemala when they excavated Structure A-3 in 1965-66. This building, standing in the center of the main plaza at Seibal and surrounded by four large stelae, was built in the mid-ninth century A.C. The stelae, and a fifth inside the building, all date to A.D. 849, and Gordon Willey believes this to be the date of the elaborate stucco frieze that ornamented the upper part of the walls. The frieze included human figures, some twice life-size, together with complex panels with smaller human and animal figures and a hieroglyphic text. This text included

Astrid Runggaldier with part of a plaster glyph found in February 2000: evidence that Structure 12 was the decorated building found by Dr. Thomas Gann in 1936.

the date 7 Ahau 18 Zip, the Calendar Round date of the Long Count Baktun-ending 10.0.0.0.0. in A.D. 830. The date marked the end of one of the 400-year great cycles of the Maya calendar: the building may have been constructed to mark the recent passing of this highly significant date.

Thomas Gann, as noted above, ascribed Louisville Structure 12 and its stuccoes to "the end of Baktun nine or the beginning of Baktun 10,"

Part of the Terminal Classic building discovered by Dr. Thomas Gann in 1936 (now Structure 12). The scales mark two of the five or more doorways and rest on the plaster floor of the interior. The mass of fill at left buried the building later in the ninth century A.C., and formed the foundation for a later structure.

precisely this period, confirmed in essence by the pottery that we found. It is not beyond the bounds of credibility, in the light of the evidence from Seibal, to suggest that here at Louisville, too, we have a monument to that "Maya Millennium," the beginning of what turned out to be the last Baktun of Classic Maya history. How appropriate that the year 2000 should bring Gann's prescient discovery back to our attention.

Astrid Runggaldier is a Journal Fellow at the Journal of Field Archaeology *and a graduate student in the Department of Archaeology. She directed excavations at Louisville in 2000, and is completing an M.A. thesis on the site and its sculptures. Norman Hammond is Professor of Archaeology at Boston University.*

Of Crofters, Kelp, and Greed

Archaeological Perspectives on Eighteenth- and Nineteenth-Century Life in Scotland's Outer Hebrides

by Mary C. Beaudry

In the summers of 1998, 1999, and 2000, Boston University through its Office of International Programs sponsored archaeological field schools on South Uist in the Western Isles of Scotland; see Context *14:1 (Fall/Winter 1998/99) 23–24. Professor Mary Beaudry directed the field schools as part of her role as collaborator in the Flora MacDonald Project which was developed and led by Mr. James Symonds of the University of Sheffield. The following article presents some preliminary thoughts on the results of the summer, 2000, field season.*

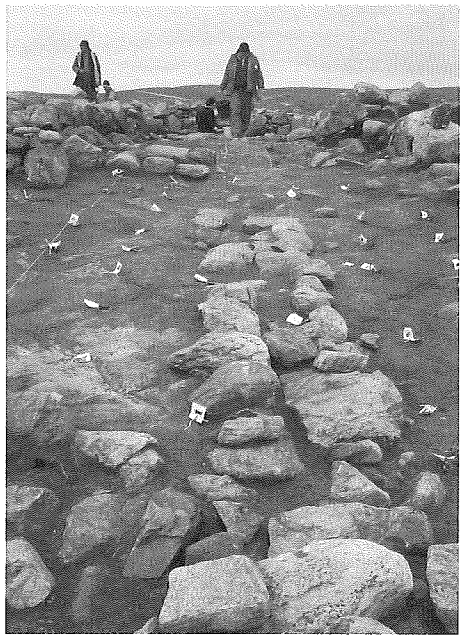
The Flora MacDonald Project is far-reaching in its scope and research aims: in the past five field seasons, it has involved a comprehensive landscape survey of the township of Milton, near the center of the Isle of South Uist, along with several targeted investigations of elements of the Milton landscape. The work has included testing at a late medieval site as well as at the nineteenth-century walled garden of Milton Farm. The project has also ranged beyond the confines of Milton township with a survey program at five large nineteenth-century estate farms on the island, test pits and geophysical survey at an eighteenth-century Clanranald "castle" north of Milton at Ormiclate, and, in summer 2000, excavation of two nineteenth-century bothies, or hut-dwellings, at the kelp collecting and drying grounds known in Gaelic as *Aird á Mhuile* but now commonly called Ardvule. The most intense focus of archaeological investigation has been within Milton township and has consisted of a series of wide-area excavations and geophysical surveys in a small settlement, or *hamlet cluster*, known as Airigh Mhuillin. Hamlet clusters are made up of several dwelling compounds, probably built by members of an extended family or close kin group; they do not have any civic or public buildings.

The remains of the tiny hamlet of Airigh Mhuillin consist of the foundation stumps of a number of traditional blackhouses: elongated, subrectangular dwellings characterized by double-wall construction, lack of windows or chimney, and an animal byre at one end. Each blackhouse is situated within a feature system of outbuildings, trackways, lazy-beds, and informally built fieldstone-walled enclosures and boundaries. Students of the Boston University Field School spent most of the 2000 field season exposing the fifth blackhouse to be investigated at Airigh Mhuillin, sampling and excavating the floor deposits from within both the main house and byre and fully excavating a small corn dryer abutting the north end of the structure.

Ceramic finds indicate that the five blackhouse sites the Flora MacDonald Project has investigated were occupied about 1790–1820, and the secondary historical writings suggest that the residents were *cottars*, or subtenants who were relocated here during the height of a boom in the kelp industry (kelp was burned to produce a compound used in the glass industry and, later, as a source of iodine), which took place during this time frame.

The students were able to learn about archaeological techniques while exploring aspects of life on the islands before and after the Highland Clearances. Investigation of the blackhouses involves "de-turfing"—removing the thick growth of turf from the rock walls and interiors of the structures, then gridding off the interior into 50 centimeter-square units so that it can be sampled systematically. Small samples were taken for magnetic susceptibility and phosphate testing. The "mag sus" tests reveal areas of burning or ash deposition, while the presence of phosphates or other chemicals in the site sediments helps to pinpoint activity areas within the structure. Once these samples were taken, all of the floor deposits were hand-excavated, finds

continued on page 30



Looking from north to south across the 2000-season blackhouse site fully exposed with the sample grid established. The alignment of stones along the center of the structure cap a drain running into the byre end of the blackhouse.

Earthwatch volunteer Joanna Gebhardt and teaching assistants Anna Badcock of Sheffield University and Steve Brighton of Boston University excitedly discuss finding a deposit of potsherds that will mend to form a single vessel.

continued from page 29

were plotted and bagged, and the soils taken off to a nearby lake for flotation. Through flotation we are able to recover plant remains as well as small finds; the acidic peaty soils of the site afford good organic preservation for the most part, but for some reason animal bones were not preserved well at these sites, so the faunal remains are very sparse (one reason for this may be that meat did not form a large part of these people's diet). Hence plant remains take on special significance in our analysis and interpretation of what went on at the site and what people were growing and eating.

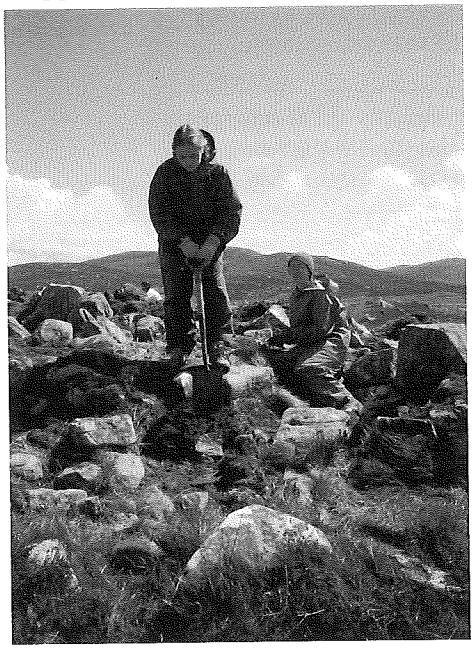
Artifacts from these humble home sites are few and far between; they consist chiefly of a mass-produced, inexpensive type of pottery generically known as industrial slipwares; these were cheaply produced but colorfully decorated with banding, rouletting, or cut-sponge motifs. Bowls are the most prevalent type of vessel we find, and we take their abundance to indicate a diet composed for the most part of gruels, porridges, and stews. What surprised us most about the pottery finds, which are being studied by David Barker, Curator of Archaeology at the City Museum and Art Gallery at Stoke-on-Trent, England, is the extensive evidence of repair and curation. One of our field school students this summer recovered numerous fragments of a single bowl that when pieced back together exhibited a total of 20 holes drilled in order to mend the vessel. Clearly, here is ample evidence of how the islanders "made do" with what little they had and recycled items so long as they could be put to use.

Other sorts of material culture are rare at the Airigh Mhuillin blackhouses; some fragments of window glass and a few nails show up, but these are rare finds (window glass may have been used in small skylights). This summer the students found a fairly large number of rosary beads—the islanders were and still are, for the most part, devout Catholics—but little else of a personal nature has come to light. Although Catholicism was discouraged (to put it mildly) after the "union" with England (1746), islanders retained their religion and attended church regularly on Sunday and on Holy Days of Obligation.

For this reason, I thought that it would be useful to undertake documentary research in the parish records, believing that these would surely be the key to finding Airigh Mhuillin's people. We knew that few of the people who lived at the sites we excavated had the time to write about their lives and thoughts, even if they could. But people who never write a word still tend to escape total anonymity; somehow their lives, or deaths, get captured in a bureaucrat's web or a traveler's diary or a reformer's screed, or perhaps in a priest's notation of a marriage or baptism. The case proved to be otherwise for South Uist, because the attempts to suppress the Catholic faith discouraged keeping of church records prior to the second quarter of the nineteenth century.

The land-tenure system that exists to this day on the Isle of South Uist means that the people of South Uist do not own the land of their crofts (small farms) or even the seats upon which their houses are placed. There are no deeds, no chains of title to investigate. Both under the clan system, when the Lordship of the Isles lay in the hands of Clanranald, and after the late 1830s, under the ownership of Robert Gordon of Cluny Castle in Aberdeenshire, South Uist was part of a large estate operated for the support, if not the profit, of its owner. Indeed, the private, largely London-based syndicate that runs the island today continues to expect to turn a profit from its holdings.

In a nutshell, the bulk of documentation for the history of the island exists in the form of business records pertaining to the running of the estate. The Clanranald Papers in the Scottish Records Office constitute a vast archive; of these the most useful tend to be the factor's reports to the owner. The South Uist Estates office, at Askernish Farm, retains a great many records, most particularly a complete run of letterbooks from 1872 onwards containing copies of the correspondence of the various men who served as factor (that is, steward or bailiff of the estate) since that time. Happily, the current Factor for South



Field school students Charlotte Henderson (left) and Jocelyn Gould (right) assisting in the "de-turfing" of the 2000-season blackhouse site.

On a field trip to the Neolithic site of Callanish, on the Isle of Lewis, teaching assistant Steve Brighton (r) points out to field school students the remains of a nineteenth-century blackhouse lying only a few meters from the 3,000-year-old standing stones.

Uist Estates is quite helpful and generous with these resources, and allowed me to take several of the letterbooks to the museum at Kildonan so that the students and I could work with them. The letterbooks constitute an unparalleled resource for examining the management of the estate and the ways in which the islanders' lives were affected both by the system and by the disposition and actions of the men who served as factors.

We first approached the South Uist Estates letterbooks with the notion that we would skim through them looking for references to Milton or Milton Farm, since I did not expect any mention of what by 1872 would have been the long-abandoned settlement of Airigh Mhuilinn. But soon I became fascinated by the books, and focused my own efforts on transcribing the earliest book in the series in its entirety. My thought was that this would provide a tangible product of my efforts to return to the people of the island, who are deeply interested in their own history. I also thought that any insight gleaned into the running of the estate in the early 1870s could help us derive broader insights into the conditions of work and life on the island throughout the nineteenth century.

The book that I selected for transcription contained correspondence from July 5, 1872 to August 30, 1873 and proved to be of particular interest. The transcribed book contains 398 letters written to 88 different correspondents, and one memorandum of agreement settling a dispute between two quarreling crofters. It begins with a letter written by a new factor, a Mr. James Drever, recounting his first experiences collecting rents and his initial impressions of the estate. Because these were business letters, there is little personal information in them. Mr. Drever's arrival coincided with a revived boom in the kelp industry, as it was then in demand by the chemical industry as a source of iodine.

My analysis of the contents of the book is not far advanced and continues as a work in progress. But of the 398 letters, 102 deal in some manner with kelp: its collecting, drying, burning, loading onto transport vessels, the price it is fetching, how much the workers receive per ton for producing it, and so on, showing how important a source of revenue it was deemed to be (by contrast, only 40 letters deal with rents). Every man, woman, and child was forced to work at collecting, drying, and burning the kelp when it came ashore.

The factor's letters reveal just how wide-ranging his responsibilities were as the representative of the proprietor of the island estate. Many of his letters are addressed to suppliers, shippers, and tradesmen of various sorts: grain merchants; ironmongers; suppliers of timber, slate, and lime. All buildings constructed on the island, from the humblest cottage to the schools, churches, banks, wharves, warehouses, and mills, were constructed and maintained with the permission, and often at the expense, of the proprietor, so the factor was responsible for ordering supplies and materials from the mainland.

Arrears at rents often led to warnings out and evictions, and Drever was ruthless about them. If his Ground Officers were unable to get a person to leave the cottage they occupied either when they could not pay the rent or because Drever had decided someone else should have it—these sorts of arbitrary evictions were not uncommon—the constable from North Uist was called in to forcibly evict the offending parties. Often such persons were elderly widows or men who could no longer work, people whose family-support network no longer existed and who could no longer fend for themselves. In one instance an intransigent crofter was to be subject to what Drever referred to as "the tar and feather" treatment to add to the public humiliation of his eviction.

The analysis of the content of the letterbooks has clear implications for our interpretation of the material lives of islanders both in the past and in the present, and has the potential to inform our archaeological interpretations in both direct and indirect ways. Through their participation in the excavations and documentary research efforts that make up the Flora MacDonald Project, Boston University students have contributed immeasurably to our attempts at reconstructing Highland life, while forcing us to acknowledge the nuances and complexities that accompany this effort. The letters offer vivid testimony to the attitude the proprietors and factors had towards the indigenous people of the islands: they were, to them, no different from livestock or other resources to be exploited and moved about at will. Yet the excavations at Airigh Mhuillin tell a different side of the story; they tell of people whose lives were perhaps economically marginal but who were nonetheless enriched by close ties among families and neighbors, deeply-felt religious faith, and an intimate knowledge of and relationship to the landscape.

Mary Beaudry is an Associate Professor of Archaeology and Director of the Flora MacDonald Field School.

In Memoriam

Richard S. MacNeish (1918–2001) at Coxcatlan Cave in the Tehuacan Valley, Mexico, in 1979.

Richard S. ("Scotty") MacNeish, one of the great archaeologists of the twentieth century, died on January 16 in Belize City as the result of injuries suffered in an automobile accident while he was driving between the Maya sites of Lamanai and Caracol in the Maya Mountains of Belize. His interdisciplinary project in the Tehuacan Valley of Mexico during the 1960s assured him a distinguished place in the history of archaeology, marked especially by his contributions to the origins of agriculture in the New World, especially maize. His numerous honors included election to the U. S. National Academy of Sciences. Scotty, as he was called by all who knew him, came to Boston University in 1981 as a Research Professor of Archaeology, and was a member of our Department of Archaeology from the time of its founding in 1982 until 1986. He subsequently headed his own Andover (Massachusetts) Foundation for Archaeological Research. We note in sadness the death of our former colleague. (Photograph provided by Norman Hammond.)

—J.W.

CONTEXT

Context is a publication of the Center for Archaeological Studies and appears twice a year. Membership in the Center is open to the public; annual dues are $20. Benefits include a subscription to *Context*, invitations to attend fall and spring lecture series and other events, and the use of the Center's library facilities. The Center also offers special seminars for the public during the academic year and summer field schools in the Boston area and abroad. Please make checks payable to the Center for Archaeological Studies and send to the Center office at Boston University, 675 Commonwealth Avenue, Boston, MA 02215. Gifts to the Center are tax-deductible.

Editor-in-Chief: James R. Wiseman
Managing Editor: Lucy Wiseman
Editorial Board: Ricardo J. Elia, Norman Hammond, Fred S. Kleiner

Faculty and Research Appointments in the Department of Archaeology (2000-2001): Professors Clemency C. Coggins, Norman Hammond, Fred S. Kleiner, Mohammad Rafique Mughal, Curtis N. Runnels, James R. Wiseman. Professor Emeritus Creighton Gabel. Associate Professors Kathryn A. Bard, Mary C. Beaudry, Ricardo J. Elia, Paul Goldberg, Julie M. Hansen, Patricia A. McAnany, Paul E. Zimansky. Assistant Professors Murray C. McClellan, Patrick Ryan Williams. Visiting Assistant Professor Aaron Brody. Lecturer Alan Kaiser. Adjunct Professor Anna Marguerite McCann. Adjunct Associate Professor Robert E. Murowchick, Director of ICEAACH, Adjunct Assistant Professor Michael C. DiBlasi. Distinguished Research Fellow Gordon R. Willey. Post-Doctoral Fellow Michael MacKinnon. Research Fellows Mary Lee Bartlett, William K. Barnett, John Bennett, Miriam Chernoff, Lauren Cook, Tracey Cullen, Rudolph H. Dornemann, Francisco Estrada Belli, Rudolfo Fattovich, Lorinda Goodwin, Alexander Joffe, Donald Keller, Thomas W. Killion, Laura Kosakowsky, Christine Lovasz, Michele Miller, Melissa Moore, Priscilla Murray, Akim Ogundiran, George (Rip) Rapp, Nancy Seasholes, Joanna S. Smith, Elizabeth C. Stone, Thomas Tartaron, Gair Tourtellot III, Tjeerd H. van Andel, Howard Wellman, Al B. Wesolowsky, Anne Yentsch. Associated Faculty, Farouk El-Baz, Research Professor of Remote Sensing and Director of the Center for Remote Sensing; Kenneth Lapatin, Assistant Professor of Art History.

BOSTON UNIVERSITY

Center for for Archaeological Studies
675 Commonwealth Avenue
Boston, MA 02215

Address Correction Requested

Nonprofit Org.
U.S. Postage
PAID