

CONTEXT



The past saluting the present: a figurine (4.5 cm head to toe, 3 cm elbow to elbow) from Cuello, 900-600 B.C., is a whistle with a mouthpiece in the top of the head and sound vents in both feet (see Hammond, page 9 of this issue).

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Harbors, Towns, and Prehistory: Survey and Field School in Greece

by James Wiseman

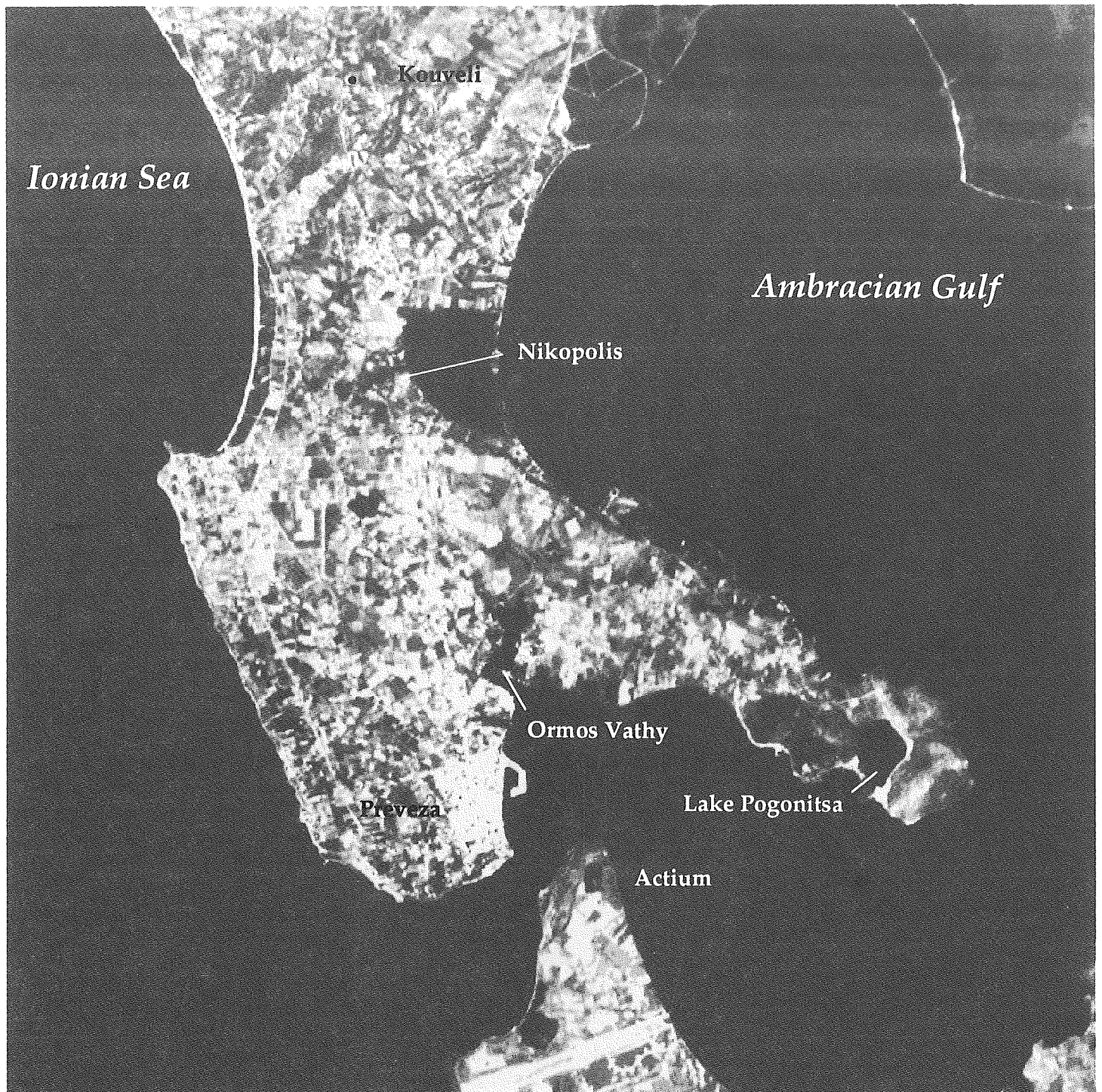
The Nikopolis Project is a joint project of the Center for Archaeological Studies and the Center for Remote Sensing of Boston University with the 12th Ephoreia of Prehistoric and Classical Antiquities, directed by Angelika Dousougli, and the 8th Ephoreia of Byzantine Antiquities, directed by Frankiska Kephallonitou; it is sponsored by the American School of Classical Studies at Athens. Kostas Zachos of the 12th Ephoreia is also one of the Greek co-directors of the Project. The interdisciplinary project is a regional survey within some 800 square kilometers of northwestern Greece which has as its aim the study of human and land relationships from Palaeolithic to Mediaeval times. There have been annual field seasons since 1991, and participation by a Boston University Field School since 1992. Reports have appeared in Context 9:3-4 (1991-92) 1-7, and 10:3-4 (1992-93) 11-15, where there is a map of the survey area.

Highlights of the 1993 field season of the Nikopolis Project include the discovery of one of the harbor towns of Nikopolis, an inland town of Classical and Hellenistic times, and other new prehistoric and historical sites (from small scatters to farmsteads to fortified places) of almost all time periods, including the first Mesolithic sites reported for Epirus. The results of the summer also provide further confirmation of the utility of the Project's multidisciplinary approach in showing the relationship between ancient sites and the changing landscape, and in determining the nature of some subsurface features below surface scatters without resorting to excavation.

One of the ancient harbors of Nikopolis had long been suspected somewhere not far from the city on the Ambracian Gulf, and sporadic finds over the years had been reported along both sides of the inlet known as Ormos Vathy, just beyond the north edge of the modern town of Preveza. Intensive survey by Project

teams has now determined that the harbor town occupied a strip of land some 250 m wide and over 900 m long on the western shore. Thousands of artifacts dating from the first century B.C. to the sixth century after Christ were observed and collected from the surface, including pottery sherds, lamp fragments, glass, and architectural debris. Concentrations of artifacts of different kinds have led to preliminary identifications of a variety of activity areas and likely types of structures: e.g., concentrations of fragments of amphoras suggest storage areas, perhaps warehouses, while quantities of murex shells among other ancient debris may mark a dye workers establishment, and quantities of fine ware and cooking vessels elsewhere point to residences. A personal tie to the community of Roman times was provided by the discovery by Lee Riccardi, Ph.D. candidate in art history and one of the survey team leaders, of a Greek inscription in marble that preserves part of a personal name

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Enlargement from satellite imagery showing the Nikopolis area and the Ayios Thomas peninsula.

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from the second/third century A.C.

The Ormos Vathy lies at the western edge of the Ayios Thomas peninsula which extends well out into the Ambracian Gulf. Survey in the eastern portion of the peninsula resulted in the discovery of three other sites of the Roman period, all in the area of Lake Pogonitsa, which probably also was a harbor at that time. Two sites of the Late Bronze Age were also discovered, as well as a few Palaeolithic

scatters. Preliminary analysis on the more than 1,000 lithics collected from the peninsula was carried out by Professor Curtis Runnels, who notes that there are many distinctive Middle Palaeolithic materials from around the Ormos Vathy region, and Mesolithic tools from a small hollow by the fort at Turkovouni. The latter, and a site north of Kastrosykia, are the first Mesolithic sites noted in southern Epirus. Lia Karimali, Ph.D. candidate in archaeology at Boston

University, has identified Neolithic materials from the same area.

A few kilometers north of the Preveza peninsula, in the now fertile region of the modern town of Michalitsi, Project survey teams located a town site much earlier than the Roman city of Nikopolis. The site, which was evidently not fortified, lies just south of the highest elevation of the region known as Kouveli. The land descends in stages to the southeast to a cemetery with a family plot

Nikopolis Funding

Funding for the Nikopolis Project was provided by a grant from the Institute of Aegean Prehistory and contributions by a number of private individuals, the Friends of the Nikopolis Project. The Apple Computer Corporation contributed four computers to the Project. Equipment for geophysical and topographic survey, and aerial photography was provided through grants by the W. M. Keck Foundation to the Center for Remote Sensing. Logistical aid and other assistance were contributed by the 12th Ephoreia of Prehistoric and Classical Antiquities in Ioannina, Greece, and by the Demarcheion (Mayor's Office) of Preveza. The help and contributions of all are acknowledged with gratitude by the entire staff of the Project.

marked by the lion monument discovered in 1974 by Sotirios Dakaris, and other burials are known along the ridge near the town. The settlement and the cemeteries both date primarily to Classical and Hellenistic times (fifth to second centuries B.C.), as attested by numerous potsherds, roof tiles, conical terracotta loomweights, lamp fragments, and other objects, but a few sherds recovered in the survey date to the earlier Archaic period.

Geophysical survey proved informative in several areas of the survey



Professor John Weymouth looks on as Stavros Zabetas, senior staff member, and Field School student, Stephanie Kleiman, use the magnetometer in geophysical survey at Michalitsi.

region in 1993, and was especially revealing at the Kouveli site, where a metal-working facility was located. Professor John Weymouth of the University of Nebraska headed the geophysical survey team, which used proton magnetometers, electrical resistivity, and electromagnetic conductivity meters.

The third region on which the Project focussed its research efforts in 1993 was the Acheron River valley near the northern end of the survey area. The study of ancient literature, accounts of other scholars who have worked in the area, and our own archaeological and geologic investigations in 1992, informed the decision to concentrate most of our survey efforts in this area during 1993 on the hills and ridges that surround Phanari Bay, known as Glykys Limen ("Sweet Harbor"), in antiquity. The survey was combined with additional geological survey and coring, which showed that the bay in antiquity extended some three-four kilometers deeper into the countryside than it does today. There was extensive evidence, however, of human activity on the elevations north and south of the harbor.

In all a total of 122 areas (or tracts, in Project terminology) and thirty-four new sites or scatters were surveyed intensively. Carol Stein and Tom Tartaron, Ph.D. candidates in archaeology at Boston University, led teams in the diachronic archaeological surface survey throughout the entire season. Other survey teams were headed by graduate students Brenda Cullen, Mark Greco, Melissa Moore, and Lee Riccardi, all of Boston University; Kael Alford, a recent graduate of Boston University; Stavros Zabetas, Greek Archaeological Service; and Cinder Griffin, a Ph.D. candidate at Bryn Mawr.

Brenda Cullen also headed the GIS team that was responsible for placing areas surveyed on digitized topographic maps. She and other staff and students also helped input the mass of data from the surveys and inventory into our relational database, using Macintosh PowerBook computers.

Geological investigations advanced



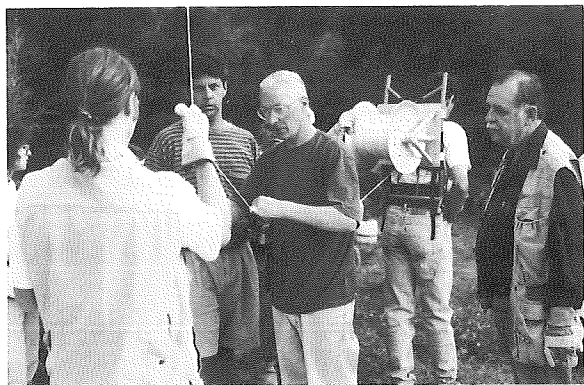
Zhichun Jing (in background) records while Field School students, Nina Delu and Martin McBrearty do geological coring at Ayios Thomas/Ormos Vathy.

in several significant ways, in addition to the revelations about the plain near the mouth of the Acheron River mentioned above. Zhichun Jing (University of Minnesota, Duluth) and Rick Dunn (University of Delaware), with a variety of assistants, drilled twenty-two geological cores and studied intensively the geomorphology of three important sites that had been surveyed. Preliminary analysis of cores from 1992 and 1993 also suggests that the Ambracian Gulf at some periods of antiquity extended north almost to the line of mountains at the entrance to the Thesprotiko valley.

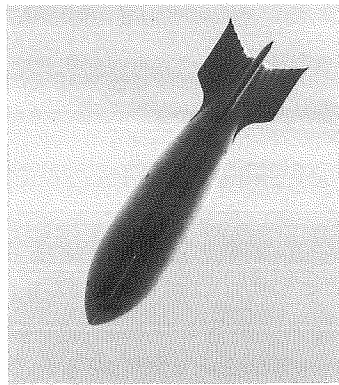
Professor Tjeerd van Andel of the University of Cambridge, Curtis Runnels, and Priscilla Murray made important contributions to our understanding of the Pleistocene landscape. With the help of Panayiotis Paschos of the Greek Geological Service, van Andel has identified soil profiles of different ages at several Palaeolithic sites. Palaeolithic artifacts collected from these sites are thus provided with rough dates that will be refined by further analysis.

Logistical delays involving permits and communications contributed to the decision in July to make only one flight with the tethered blimp for aerial photography. The site chosen was a Hellenistic fortified town near the abandoned modern village of Palaiorophoros. The flight also provided the opportunity to test extensively all the new equipment (gimbal,

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The photo on left shows Michael Hamilton (center) launching the balloon with Professors Wiseman (far right) and Elia (second from left) assisting. Successful flight in progress is shown in photo on right.



to be guided by the special insights of all. It is our hope that the interdisciplinary concepts and methods of the Project will ultimately lead to our aim of understanding the changing relations between human occupation and the changing land itself in southern Epirus. Achieving that integrated and dynamic view, moving through time, is likely to be far more significant for the study of the past than any single discovery of site or material, however individually important.

James Wiseman, Chairman of the Department of Archaeology, is the American co-director of the Nikopolis Project.

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cameras, remote control, etc.) that had been acquired by the Center for Remote Sensing for the new blimp, which had its maiden voyage in Greece in 1992. The flight in 1993, using helium instead of hydrogen for safety, was successful in every way, and excellent photographs were taken by the staff photographer, Michael Hamilton, who headed the blimp crew with the aid of Ricardo Elia, Assistant Director of the Project.

The Project base was again at the Hotel Kleopatra near the north end of Nikopolis beach on the Ionian Sea. Here the pottery and other artifacts recovered by the survey teams were cleaned, studied, and inventoried by Lucy Wiseman, Melissa Moore, and other staff members and assistants. The hotel also provided a congenial setting for classes for the twenty-four students in the Boston University Archaeological Field School. Students in the field school participated in all the activities of the research project, from archaeological survey to geological coring to cleaning artifacts. They proved to be a hardy group, quick learners, and were indispensable to the success of the season.

The students also participated in the frequent review and discussion sessions where the survey team leaders and other experts presented results to date and invited comments and discussion from others. This constant interaction among the staff has made it possible for the planning and carrying out of the archaeological, geological, and geophysical surveys

Colloquium on the Nikopolis Project

A colloquium will be devoted to the results of the first three seasons (1991-1993) of the Nikopolis Project during the annual meetings of the Archaeological Institute of America which will be held in Washington, D.C., on December 27-30, 1993.

Professor James R. Wiseman, chairman of the Department of Archaeology and co-director of the Nikopolis Project, will chair the colloquium and will present a joint paper with Angelika Dousougli-Zachos, Ephor of the 12th Ephoreia of Prehistoric and Classical Antiquities, Ioannina, Greece, on "The Nikopolis Project 1991-1993: Overview of the Multidisciplinary Study of Southern Epirus."

Several other members of the Nikopolis Project staff, many of Boston University, will also present papers at the colloquium as follows: Professor Curtis Runnels, Boston University, "Pleistocene and Early Holocene Archaeological Sites in Southern Epirus, Greece;" Thomas F. Tartaron, graduate student in archaeology at Boston University, "Prehistoric Settlement in Southern Epirus: Preliminary Results from Survey;" Brenda Cullen and Carol Stein, graduate students in archaeology at Boston University, "Satellite Imagery and Archaeology: A Case Study from Nikopolis;" Professor George (Rip) Rapp, research professor in the Department of Archaeology and professor of geology and director of the Archaeometry Laboratory at the University of Minnesota, Duluth, and Zhichun Jing, graduate student in geology at the University of Minnesota, Duluth, "Reconstruction of the Changing Holocene Coastal Landscape in the Nikopolis Region, Northwestern Greece;" Melissa Moore, graduate student in archaeology at Boston University, "Clay Sources and Pottery Production in the Region of Nikopolis;" Konstantinos L. Zachos, Greek Archaeological Service and co-director of the Project, "Investigations at the Gymnasium of Nikopolis;" Evangelos Chrysos, University of Ioannina, "Searching for the End of Nikopolis;" Ricardo J. Elia, director of the Office of Public Archaeology, Boston University, "Archaeological Heritage Management in the Region of Nikopolis." Dr. Katerina Romaiopoulou of the National Archaeological Museum, Athens, Greece, and former director of the Greek Archaeological Service, is scheduled to be the discussant.

The colloquium, entitled "Human Societies and the Changing Landscape in Southern Epirus, Greece," will be held on Wednesday, December 29, from 1:30 to 4:30 p.m.

Puzzling Over the Pieces: Archaeology at Spencer-Pierce-Little Farm, 1992

by Mary C. Beaudry

The Spencer-Pierce-Little house and about 230 acres of land was acquired by the Society for the Preservation of New England Antiquities (SPNEA) in June, 1986. Since then, the archaeological work has been conducted at the site through Boston University field schools and with grants from SPNEA, the Getty Conservation Trust, and the National Endowment for the Humanities. The archaeological research is aimed at recovering details of the changing use of the land over time and understanding how this relates to changes in property ownership and household membership, shifting agricultural practice, and changes in technology.

Archaeology at the Spencer-Pierce-Little Farm has moved forward steadily, season by season, but it still takes longer than architectural restoration of the structure, which was nearly complete in 1992. In October 1991, the construction staging that had been around the stone house since 1987 at last came down, making it possible for us to work directly against the foundation in areas that had previously been inaccessible. Our 1992 field season included a six-week field school in historical archaeology in which ten students enrolled; work continued beyond the end of the field school with volunteers, as well as with funding from a research grant from the National Endowment for the Humanities.

Excavations in the Scullery/West Yard area, at the rear or back of the stone house, were supervised by teaching assistant Sara F. Mascia. This area is, in essence, the kitchen door yard; it is labeled "Back Yard" in the 1812 plan of the property, which also depicts the footprint of the long-vanished scullery. In 1990 limited work in the kitchen area uncovered a portion of the scullery foundation, parts of a cobble paving around the scullery, and a mid-nineteenth-century cistern within and partially displacing the scullery foundation.

Our 1991 field season focussed on the Scullery/West Yard (see *Context* 9:3-4, 18-19); we exposed more of the cobbled surface along with the remainder of the scullery foundation, and extended our excavations to the west. We returned in 1992 to complete investigations of the kitchen-door yard by exposing the cobble paving and by completely excavating other features, including a shallow stone-lined dry well or cistern. The cobble surface slopes toward this circular receptacle, suggesting that it served to collect run-off. The feature was too shallow—too far above the water table—to have served as a proper well. It was clearly contemporary with and integral to the cobble surface, which, it turns out, directly abuts the scullery foundation as well as the house foundation, at least in areas where it has not been disrupted by subsequent utility installations. Our best guess on the basis of current evidence is that the scullery and its paved apron were installed around 1720 and covered over after 1840.

The coal chute, which appears on late nineteenth- and early twentieth-century photographs of this area, is another feature that was fully excavated. The coal chute appears to have been in use from about 1880 to 1940.

Excavations in the area designated as the East Front were aimed at

recovering information about landscaping over time, including historical grade levels, and, most important, evidence of construction of builder's trenches either for the main range of the house or for the original bulkhead entry in order to date the construction of the house. The East Front proved to be a very rich and complex area, but the basic stratigraphic sequence is one that occurs all around the house.

Most striking in this sequence is a thick layer of yellowish sand overlying a dark brown, organically rich stratum that in turn overlies the brownish-orange natural subsoil or B horizon. The surface of the B horizon shows evidence of burning, indicating that, before this area was farmed, its early owners/occupants burned off the existing vegetation. The dark brown layer may be an old zone of tilled soil; it is very rich in organic material and homogeneous in appearance, and there appear to be plow scars—parallel linear grooves—cutting into the B horizon. Even if this is not an old plow zone, it is an earlier topsoil; in any event, the top of the dark brown layer represents the grade level when the house was first built.

The sand layer was deposited over this earlier zone when construction of the house began; it is the ejecta from the cellar excavation. This sand layer is far thicker against the house, grading ever thinner as one moves outward. It seems logical that the prodigious quantities of earth were used to bank up the cellar hole so that it would not have to be dug any deeper

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Field School student and Boston University archaeology major, Paula Yarbrough, measuring for a profile drawing of her excavation unit.



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than absolutely necessary. The result of the deliberate banking of soil against the foundation of the house produced a visual effect: the house appears to be on a slight man-made rise in an otherwise flat landscape.

Over time, however, the grade built up against the house as successive generations of owners applied fill to the yard, often to tidy up and re-landscape after major renovations of the house. The original, intended grade gave the house a striking appearance of verticality that was lost with the rise in grade. The yellow, sandy soil from the cellar hole, after being smoothed out upon completion of the house, was used as a bedding surface for a paving of boulders and cobbles, and it is the surviving remnants of this paving, which, it seems, once surrounded the entire bulkhead entry, but now exist only on its east side, that clearly indicate the intended grade once the house was completed—in other words, this was part of the post-construction landscape treatment.

We removed a portion of the paving to make certain that it did not cover over later (e.g., eighteenth-century) deposits. Below the paving there was only the yellow sand and a thin layer of construction debris (i.e., brick crumbs and fragments, stone shims, occasional bits of mortar, nails, etc.), so we are confident that the paving is a feature that was created almost immediately upon completion of the house.

In areas where the paving did not extend, we found a sequence of strata that reflected in capsule form the history of the house, at least in terms of its major renovations. The lowest level above the sandy cellar excavate was, as noted above, composed of construction debris. Above this was a sequence of organically enriched landscaping fills, beginning with a layer containing late seventeenth- and early eighteenth-century artifacts (e.g., ceramics such as sgraffito, combed and dotted buff-bodied earthenware, sprigged and manganese decorated Westerwald-type stoneware, etc.), overlaid by a stratum with early to mid-eighteenth-century materials

(e.g., ceramics such as white salt-glazed stoneware, Chinese blue and white porcelain, etc.), followed by a thick lens of brick crumbs, stone rubble, and so forth that was covered by another thick layer very rich in late eighteenth-century/early nineteenth-century materials. We interpret the construction debris as a by-product of a mid- to late eighteenth-century reworking of the window openings and the layer above as a landscaping fill meant to cover up the resulting mess. This rubble layer contained some turned window leads and lots of very old window glass of the sort that would have been used in seventeenth-century casement windows, but we found window glass that looked very old (i.e., it was highly patinated and friable and almost black) in almost all levels, along with small scraps of the turned leads. We expect that a thorough analysis of the other artifacts from this layer will enable us to form some firm conclusions about who among the site's eighteenth-century occupants was responsible for installing new window treatments.

The layer just below the present ground surface appears to have been laid down sometime in the nineteenth century in a final landscaping effort that brought the grade to pretty much where it is today—about halfway up the cellar window opening!

Our analysis of materials from the East Front has only begun, and the sequence I have suggested is based on field observations of items as they were recovered. Detailed analysis will refine this sequence considerably. What can be said about this succession of fills is that they were very rich in artifacts, sometimes surprisingly so. This circumstance leads us to surmise that the soils used for landscaping purposes were mined from refuse heaps elsewhere on the site, or derived from privy cleanouts. Analysis of pollens in these soils has already begun; funds permitting, we will also have samples analyzed to see if the soils contain evidence of human parasites so that we can prove or disprove the privy cleanout theory. Our suspicion is that at least some of the late eighteenth-/early nineteenth-century ceramics will crossmend with sherds



Volunteers Bill and Betty Glen Rowe at work exposing a feature in the front yard at Spencer-Pierce-Little.

recovered from the trash deposits around, if not within, the Boardman/Pettingell privy in the East Yard.

The East Front also produced an impressive array of features. These included the original bulkhead entry, planting holes (holes dug for trees, shrubs, or other plantings), postholes (some of which were holes dug for the scaffolding used during construction of the house), a wall-like line of stones that served as either a retaining wall/revetment or as merely a landscaping feature, and a narrow roll-away ramp leading into the bulkhead entry.

The bulkhead opening itself was abandoned and backfilled in the early twentieth century; its fill contained vast amounts of furnace scale, coal ash, and clinkers, along with vessel fragments from a late nineteenth-century dinner service, and numerous iron shoe lasts of varying sizes. These may be leftovers from the extensive shoe-making operations carried out by Bartlett Currier (a tenant farmer on the property from 1830 to 1838) and his family, an income-producing activity he detailed in his account book.

The ramp feature leading into the bulkhead opening had served during construction of the house and was backfilled upon its completion; it was not disturbed subsequently, not even by the early twentieth-century backfilling of the actual bulkhead opening. Artifacts found in the fill of the ramp hence provide evidence of the con-

struction date of the house. The artifacts all date to the late seventeenth century, or, more accurately, to about 1680. The diagnostic or datable finds include a very distinctive decorated belt buckle, sherds of undecorated white and painted polychrome delftware dishes, and two copper alloy upholstery tacks. Also in the fill of this feature were two items that appear to be quill tips, the top of a case bottle, and several unused examples of the decorative molded bricks intended for use in the door and window finishes of the house. The fill itself was very similar to the cellar excavate, but had a good deal of organic matter mixed in.

Much to our surprise, at the end of the field season we discovered at least one, possibly two features cut into the B horizon which had not shown up even in the old A horizon. We exposed and drew, but did not excavate, a clearly defined posthole and mold at the southeast edge of our excavation, almost underneath the present driveway. This feature had fragments of brick and at least two fragments of coral in it; it is clearly historical in date and, unless we are seriously mistaken, pre-dates the construction of the house. Another feature showed up on the western edge of the East Front excavation, near the front step. This may prove to be another posthole, but only part of the feature was exposed, and no positive identification can be made without additional excavation. The discovery of features that date earlier than about 1680 right in front of the house is clearly of enormous interest.

In trenches we opened to the west of the front porch we found a sequence of post-construction strata that paralleled that to the east. One difference in the finds was the higher frequency of smoking materials and sewing implements (pins, thimbles, etc.), suggesting that, if such items were dropped here rather than introduced in landscaping fill, this may have been a favored spot for people to sit and enjoy a summer's evening.

The grant from the National Endowment for the Humanities has made it possible for us to intensify
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Uluburun, Other Shipwrecks, and Homer

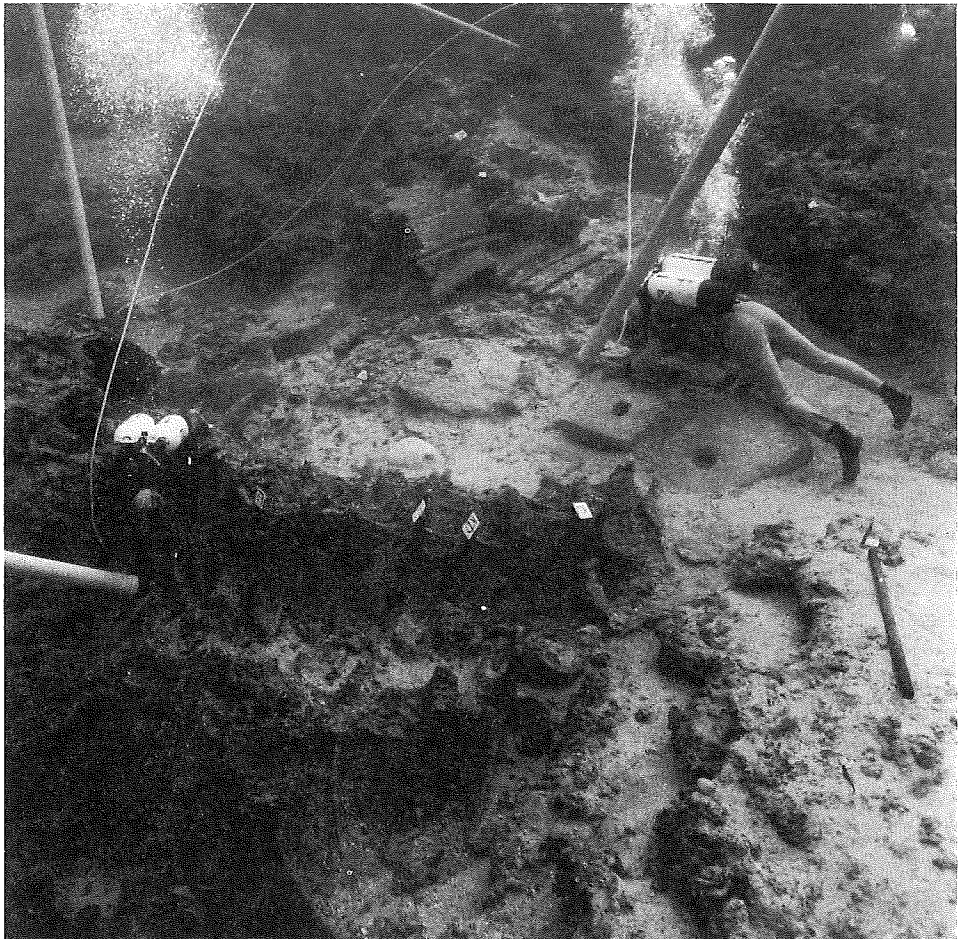
The Bronze Age shipwreck of the fourteenth century B.C. off the coast of Uluburun, Turkey, is proving to be one of the most informative, as well as sensational, underwater archaeological discoveries of the century. The continuing excavations, under the direction of George F. Bass, George T. and Gladys H. Abell Professor of Nautical Archeology at Texas A&M University, are adding significantly to our knowledge about Bronze Age trade, metallurgy, maritime technology, and society.

Members of the Center and guests heard a report on the Uluburun shipwreck by Professor Bass in his opening lecture of the Context and Human Society series last spring. The accompanying picture on this page conveys something of the excitement of discovery that the audience shared while watching the color slides with which Bass illustrated his lecture. In this underwater picture assistant excava-

tion director Çemal Pulak, at left, uses an air lift to remove sediments from a long row of copper ingots. Another staff member, Tufan Turanlı, at right, vacuums sediments near a row of stone anchors. Some 350 four-handled copper ingots were retrieved from the wreck's cargo!

During his week long visit to Boston University Bass also spoke on his excavation of a shipwreck of the eleventh century A.C. at Serçe Limani, Turkey, and gave an overview of the excavation and conservation of underwater sites, drawing examples especially from the Mediterranean. An additional highlight for students and faculty was his participation in an open seminar, "The Phoenicians of Homer in the Light of Nautical Archaeology." He was joined in the panel discussion by Lawrence Stager, Dorot Professor of the Archaeology of Israel at Harvard University and

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Photograph by Donald A. Frey, and courtesy of the Texas A&M Nautical Archaeology Program.

New Appointments in Archaeology and Remote Sensing

Kvamme Named W. M. Keck Foundation Professor

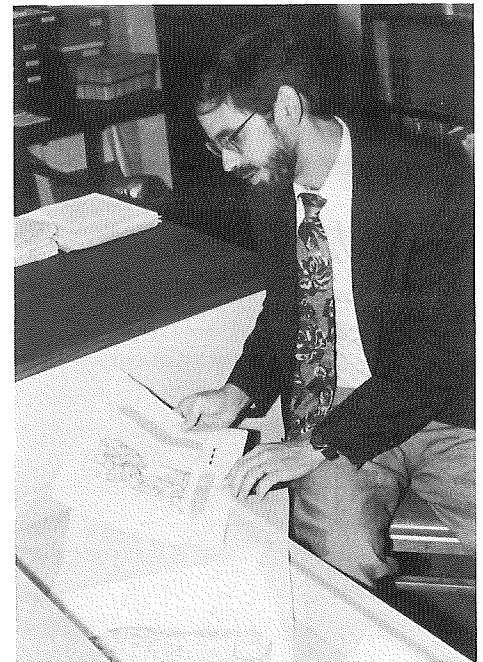
Kenneth L. Kvamme joined the Department of Archaeology in September 1993, as the W. M. Keck Associate Professor of Archaeology and Remote Sensing. Professor Kvamme received his Ph.D. in Anthropology at the University of California, Santa Barbara, in 1983. From 1985–1993 he was an associate curator of archaeology at the Arizona State Museum and a research associate professor of anthropology at the University of Arizona. He was a research associate of the Archaeological Research Institute of Denver University prior to going to Arizona. He has also taught at the University of Southampton in England; Leiden University, The Netherlands; and the University of Ljubljana, Slovenia. His field experience includes work in the Great Plains, the Great Basin, the American Southwest, the West Coast, the Arctic, the Boreal Forest, the Mexican Highlands regions, and Europe.

Professor Kvamme is a pioneer of a new methodology that combines his primary research interests in prehistoric locational behavior, computer applications, and quantitative methods to form models of prehistoric archaeological site location that can be computer-mapped over broad regions. He was among the first to promote the use of Geographic Information Systems (GIS) computer technology in archaeology. He has published numerous articles on GIS, and other areas of archaeological research. Professor Kvamme has served as consulting editor for several journals, and is currently on the advisory board of *Quantitative Anthropology* and is editor for North America of the *Archaeological Computing Newsletter*.

The new faculty position was made possible through an award in 1991 by the W. M. Keck Foundation as a challenge grant, as the first step in
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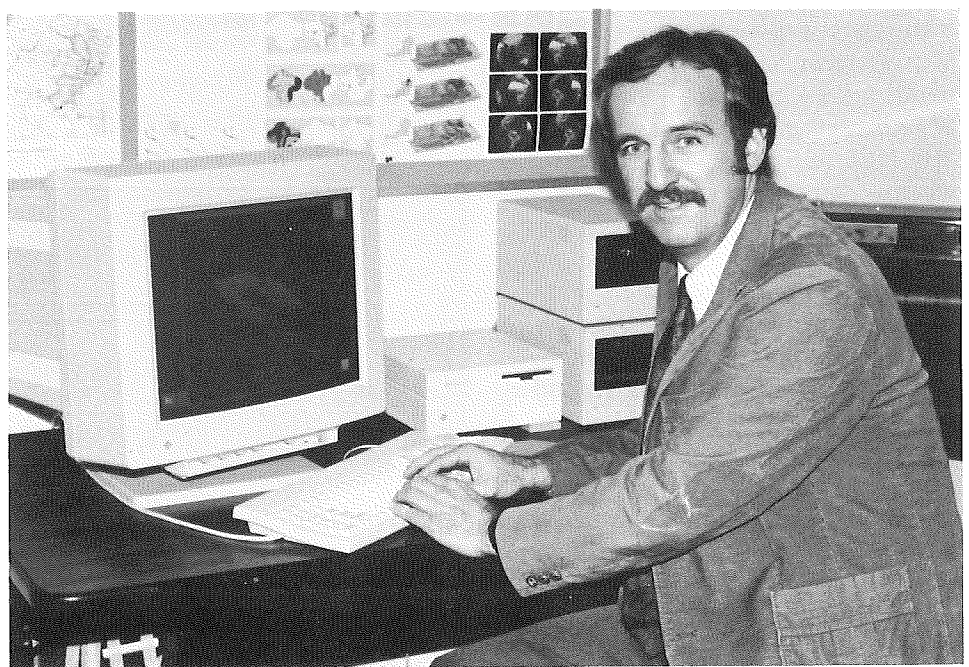
McClellan Appointed as Classical Archaeologist

Murray C. McClellan has been appointed as an assistant professor in the Department of Archaeology, effective September 1, 1993. Professor McClellan received his B.A. degree in Greek and classical civilizations from Oberlin College in 1974 and his Ph.D. in classical archaeology from the University of Pennsylvania in 1984. A resident of Greece from 1979 to 1983, he was Secretary of the American School of Classical Studies at Athens for two years. Having participated in excavations in Israel, Jordan, Libya, Greece, and Cyprus, McClellan began his own excavations at the late Roman site of Kalavastos-Kopetra in Cyprus in 1987 (see *Context* 9:1-2). He has taught at Stevens Institute of Technology, Emory University, and Agnes Scott College, and, as a visiting assistant professor from 1990 to 1992, was a member of the Department of Archaeology at Boston University. Professor McClellan also served as a program officer in the Interpretive Research Division of the National Endowment for the Humanities, where he oversaw the evaluations of



Murray McClellan examines a line drawing of objects from his excavations at Kalavastos-Kopetra, Cyprus.

grants in archaeology. This past summer, under a travel grant from Boston University, he returned to Cyprus to lead a study season in preparation for the final publication of Kalavastos-Kopetra. His publications include studies of ancient glass and reports on his excavations in Cyprus. Murray is married to Pamela Russell, who is a curator of classical art at the Tampa Museum of Art. They have one son, Russell McClellan, age six.



Kenneth Kvamme working on a digital topographical map of Greece in the Boston University Department of Archaeology GIS Laboratory.

Back in Belize: Investigations at Cuello and La Milpa, 1993

by Norman Hammond

Tanned, fit, and well dug-into the Belizean landscape, the 1993 Field Study in Archaeology class returned from their spring break to tackle a new set of problems, both practical and intellectual. After two months at K'axob, learning techniques of archaeological excavation and survey with Professor Patricia McAnany, they were to apply them first at another early site, Cuello, and then at La Milpa, a Classic Maya city contrasting in almost every way with what they had experienced hitherto.

Cuello is the earliest known Maya settlement, and 1993 was the ninth and last season of excavation there, during which the lowest levels of the site were to be removed. In previous years, a large trench 30 m x 10 m in area, on the top of the broad, flat Platform 34, had been stripped in three ten-meter sectors. The northernmost of these remained to be finished, together with a southern trench linking the main excavation to the south side of the platform, where substantial retaining walls had been exposed. We already knew that the present form of Platform 34 dated to the Late Preclassic period (400 B.C.–250 A.C.), and that when it was constructed an earlier courtyard, enclosed by plaster-floored substructures supporting timber thatched buildings, had been partly demolished and then buried under the platform's rubble fill. The northern sector of the main trench had exposed the north side of the courtyard, but these structures were removed in the 1992 season, leaving what appeared to be a featureless stretch of dirt, ten meters square, to be excavated in two weeks. Easy, but boring...

It was not. As site director Amanda Clarke, a veteran of Cuello since 1987, supervised the scraping-away of thin layers of trash that had built up over the old land surface, a shallow depression started to appear, the layers sinking down into it. We all scratched our heads: it did not look

like a grave cut—too wide, not vertical. John Walkey and Matt Bobo, 1992 graduates who had returned to Belize for a second season, gradually trowelled themselves downwards, found bedrock, and found also that the hole went on down: we had found a *chultun*, a bedrock storage chamber cut by the Maya for keeping food or water. Such *chultunob* are fairly common in the Maya area—we had found two in Platform 34 in earlier seasons—but this was by far the earliest we had encountered. Its shaft and roof had fallen in, hence the broad mud-filled depression we had initially encountered, and the top half of the chamber (and all of a smaller one next door) was filled with a similar homogeneous deposit, with pottery indicating that the collapse had occurred near the end of the Bladen phase around 650 B.C. Among the finds was an ocarina, a three-note musical instrument in human shape: the mouthpiece was in the top of the head, the sound vents in the feet. One hand was raised as though in salute, a feature found also in Olmec figures from the central highlands of Mexico.

The lower portion of the chamber was a surprise, infilled with a succession of thin trash layers, many packed with burnt plant material including complete nuts and a fibrous mass that may have been the raw material for bark-paper. Samples of these were

Part of the accumulated trash deposit filling the chultun, halfway through the excavation. Different colored layers can be clearly seen.



carefully excavated with dental tools and immediately packed in aluminum foil, to be sent to Jon Hather, our palaeobotanist at London University. In 1992 Jon successfully identified the first Preclassic Maya root crops from deposits at Cuello, and we hope that with this rich haul of well-preserved garbage he will be able to expand our understanding of the early Maya diet.

As Matt and John finally cleared the *chultun*, they found the pick marks made by the original diggers on the walls, still as clear as when they were made more than 2,800 years ago. Elsewhere on site, the postholes of timber-framed houses erected on the old land surface and penetrating into bedrock were being uncovered, together with thin layers of rubble cobbles that had once formed a yard surface, and fragments of pottery, including more ocarinas.

In the South Trench, linking the main excavated area on Platform 34 to the southern edge of the platform, Sara Donaghey, a veteran of Cuello in the 1970s, came back to supervise the excavation of the Middle Preclassic houses on the south side of the buried courtyard. The 1992 excavation under graduate student Francisco Estrada-Belli had exposed a mass of fill penetrated by and covering burials; Sara showed that this fill resulted from the almost total demolition of the late Lopez Mamom houses around 450–400 B.C., a demolition so thorough that it also took away the floors of numerous earlier buildings and any burials that lay beneath them. Immediately below the base of the fill,

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however, two burials survived intact, lying parallel to each other and close enough to be coeval interments. One was of a man, wearing a necklace of shell beads with a canine tooth as a central pendant, and with a bowl inverted over his skull. The other was of a woman, wearing a six-strand necklace of long thin *Dentalium* shells; as our osteobiographers Julie and Frank Saul removed the vertebrae, the necklace could be seen still in place behind the neck.

One of the best surprises came as we prepared to finish: one five-meter square of old land surface remained unexcavated, while the rest of the North Square had been stripped to expose postholes and other features cut into bedrock. We decided to remove a one-meter square in five-centimeter levels, to test the thesis that the soil could have built up over several centuries of occupation from an initial thin base, rather than being (as we had hitherto assumed) a thick old soil with cultural debris trodden into its upper portion. In fact, Robert St. Laurent, another 1992 graduate returning to Cuello, came straight down on the burial of a child, and when we expanded the excavation laterally several other individuals appeared, packed closely together in an area less than three meters square. The oldest was a middle-aged man, accompanied by two young women of 9–14 and 12–15 years old; the latter hugged an infant of 12–18 months to her chest with her right arm. All of the skeletons were tightly flexed, as though bound before burial, and all

were oriented to the northern quarter. Whether they were related, or were buried at the same time—a Maya "first family" struck by disaster—we cannot tell; but the circumstances are suggestive. They are, in any case, the earliest group of burials so far found in the Maya lowlands.

Thus the Cuello project ended in high excitement, sustained as we moved everybody south to La Milpa, a site contrasting in almost every way: centuries later than Cuello, of large and still undiscovered extent, set on a high limestone plateau in tropical forest a thousand years old. A team headed by co-director Dr. Gair Tourtellot III, a research fellow in the Center for Archaeological Studies and formerly director of the important mapping projects at Seibal in Guatemala and Sayil in Yucatán, had been working at La Milpa since February, and our arrival more than doubled the size of the crew. A new camp had been established, with tents and facilities all set under forest shade and our roofed work space in the open air with plenty of ventilation. Solar panels provided electricity for the computers housed in our permanent building, erected in 1992 and now fitted out with workbenches, storage racks, and lighting that enabled drafting and artifact processing to continue through the evenings.

Our daily schedule changed: at Cuello we had risen before dawn in order to get to work before the sun got too hot; at La Milpa we had to wait for light to penetrate the forest canopy, so we began an hour later, setting off on the three-mile drive

from camp to site in an assortment of vehicles that included an ex-British Army Land Rover and the battered pickup in which our workmen arrived each day from the village of San Felipe. Gair had survey teams organized, each cutting its way along a grid of narrow *brechas*, trails that caused minimal damage to the vegetation in this forest reserve set up by the Programme for Belize, and allowed us to set up fixed survey points. The EDM theodolite, borrowed from the Center for Remote Sensing, proved its worth for a second season in establishing an accurate basic grid and topographic contours, while Lietz optical transits, Brunton compasses, metric tapes and careful pacing were used to map the mounds and other evidence of ancient settlement that we encountered. In addition, John Rose, a graduate student from the University of Pittsburgh who is writing his Ph.D. dissertation on the La Milpa settlement pattern, defined a series of 250 square-meter survey blocks within which both recording and sampling of surface materials, and test excavations, were intensively carried out.

Seven blocks were surveyed in 1993, and we encountered types of environment and settlement not found on the central ridge, including seasonally inundated swamp (*bajo*) and other areas of naturally low vegetation. Preliminary analysis of pottery from surface collections and excavations indicates a fair amount of Late Preclassic and Early Classic material, but substantially denser occupation in the Late/Terminal Classic period from about 750 A.C. on. Extensive fields of chert nodules occur on several elevated areas adjacent to bajos either eroded from *in situ* deposits or cleared from fields. Most of the nodules are neither fresh nor whole, but have been fragmented. This stage of initial resource acquisition and processing has rarely been documented hitherto. Very few tool preforms were found in these quarry areas; subsequent processing activities took place elsewhere, probably within the settlement.

In one intensively investigated survey block we found that in spite of the

Dozens of *Dentalium* shells formed a necklace for this young woman; at least six parallel strands can be seen, together with parts of the skull and clavicles.



highly varied terrain, pottery and lithic debris occurred almost everywhere; the degree of slope or distance from recognized habitation seems to have little effect on the presence, and perhaps even the quantity, of artifacts recovered. There may have been more occupation at La Milpa than is indicated merely by those houses raised on stone platforms: at the site of Nohmul in northern Belize we found an entire neighborhood where the houses were built at ground level, and we had seen similar although much earlier examples at Cuello. We cannot as yet estimate the population of La Milpa, even though the central square kilometer is now completely mapped, together with substantial tracts outside it, but the extent of settlement and the monumental scale of the city center suggest that it was in the thousands.

Our excavations in the center concentrated on three things: Matt Bobo investigated the settings of the stelae that once stood along the east side of the Great Plaza, while Sara Donaghey supervised the cleaning and recording of the walls of looters' trenches into several of the major buildings around the plaza. One of these, Structure 5, was then the subject of an excavation which revealed part of the temple on its top.

A dozen stelae, stone pillars often carved with images of Maya rulers and hieroglyphic inscriptions detailing events in their reigns, were recorded by Sir Eric Thompson when he first explored La Milpa in 1938. Four more were found in 1990, and we added another, Stela 17, this year. Two stelae were still standing where they were erected over 1,200 years ago, but the others had fallen and many were fragmented. By finding their original settings, pits cut into the plaza floor, and any offerings placed below their butts, we hoped to date the monuments where (as in most cases) they were either too eroded or were uncarved.

Matt Bobo's first excavation was a textbook triumph: Stela 10 was found still in its original pit, although slumped forward; the pit was cut through one plaster floor and sealed by another, now eroded, and in it was

a pottery bowl dating the plain shaft to around the fourth century A.C. A second pit just in front held another pair of bowls of the same date. An oversized and broken altar sat in front of the stela, but it lay on a thick deposit of soil that had accumulated over the floor, and seems to have been placed in position centuries later. It also seems to have been made from a portion of another stela, cut down to size—something which we found had been done also with Stela 17.

When we started to look for the pits for Stelae 1 and 2 we got a rude shock: both stelae were fragments, one probably early fifth century in date from its style, the other at least two centuries later, and both had the butt and the lowest part of the carving present, showing the principal figure from the waist down. We had assumed in 1992 that the stelae had been uprooted and their upper portions taken elsewhere: we were wrong. Matt's excavations, expanded week by week to cover an ever-larger area at the north end of the plaza in front of Temple 1, showed that no pits were present. The monuments had originally stood somewhere else, had been broken, and their lower fragments brought here for re-erection; but it had never taken place.

As we moved south to the next monuments, Stelae 3 and 6 (4 is buried under modern looters' rubble and 5 lies flat on the surface), which still stood in front of Temple 1, the mystery deepened: both proved to be mid-sections of larger stelae, the latter with traces of a standing figure wearing an elaborate feathered headdress, the former once carved, but now almost totally eroded. Both were set in the topsoil, which had accumulated only since the Great Plaza ceased to be maintained as a public space at the heart of the Classic Maya city.

Although they had been placed carefully on line with Stela 7, one of two monuments still standing in its original location, this had been done centuries later. The fate of Stelae 1 and 2 now became clear: they were part of the same ritual program, but had not been set up when it was abandoned part-way through. The line of fragmentary monuments was intend-

ed to be symmetrically placed in front of the long-abandoned Temple 1, with Stela 17 laid flat on the axis and Stelae 1-6 flanking it, carrying northwards a line projected from Stela 7.

The big question was, when had this happened? One clue came, just before the end of the season, when we found the butt of Stela 12 at the south end of the Great Plaza. The shaft of the stela, with a striking figure of the ruler of La Milpa around 800-830 A.C. and an eroded inscription, was found by Thompson; the rock-cut pit with the butt broken off at ground level lay underneath it. Thrust down beside the butt was part of an incense-burner with a human face modeled in relief on the front; it was clearly of Postclassic date, so I asked Dr. David Pendergast of the Royal Ontario Museum, whose excavations at Lamanai and Marco Gonzalez in northern Belize have yielded much new information about this period and the following age of Spanish contact, if he could be more precise about it.

"Everything observable places your specimen near the end of the
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A fragmentary Postclassic incense burner proves that the Maya were still venerating the ancient stelae at La Milpa long after the site's abandonment. This piece was found thrust down the socket in which Stela 12, dedicated around 800-830 A.C., stood, but was made centuries later.



Part of Structure 5, a small temple at La Milpa. Excavation of this building, which was probably dedicated on November 30, 780 A.C. in conjunction with a carved stela nearby, began in 1993 and will continue in future years.

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fifteenth century or later, with the latest possible date perhaps early to mid-seventeenth century," he replied; in other words, 1500–1650 A.C. Since the butt of Stela 12 would have been buried by leaf-mold soon after the monument fell, we must accept that the stela was still standing in 1500 A.C., some seven centuries after it was raised. This episode of veneration, together with numerous incense-burner fragments found around the base of Stela 7, suggests that the resetting of the broken stelae in front of Temple 1 may also have occurred at this late date, either just before the Spanish arrived or even in response to their incursion into Belize—an appeal to the ancient gods in the face of mortal and inexplicable dangers.

The carved figures on Stelae 7 and 12, and those remaining on the other fragments, may have been thought of as gods by this time; we know them to have been rulers of the La Milpa polity, and the partial decipherment of the inscriptions by Dr. Nikolai Grube of the University of Bonn, the project's epigrapher, now allows us to name them. Only three glyphs survive on Stela 2, but they spell out the name of Mahkina K'uk Mo'—"Lord Quetzal Macaw." On Stela 7, Nikolai was able to read not only the date, which showed that the monument was dedicated on November 30, 780 A.C., but also to identify the "Emblem Glyph" or place name of La Milpa, and the three glyphs that spelt phonetically the name of its ruler at that time: grouped neatly together were a

bracket-shaped sign reading "U," a fishlike head reading "CA," and a pair of scrolls and dots for "YA." Since the Maya dropped the final vowel under such circumstances, the ruler's name was UCAY.

Knowing what he was called somehow makes us feel much closer to him and his time, and it was with renewed enthusiasm that we began to excavate Structure 5, the small pyramid immediately behind Stela 7. Two large looters' trenches drove into its heart, but by cleaning their walls we were able to show that UCAY's temple had been built over an Early Classic precursor of about 500–600 A.C., dated by a cached offering below its floor. An upper floor sealed the stela into its pit, and ran back to join the pyramid. Working from the top down, we exposed the southeastern quadrant of a small, square building with walls a meter thick, and undergraduates Sean Downey and John Millhauser (the latter from Brown University) carefully recorded its dressed masonry and the similar podium on which it stood. From that evidence we can conjecture what the building looked like when it was dedicated 1,213 years ago, and also assess what resources will be needed to complete the excavation and restore Structure 5 for visitors before the year 2000.

Norman Hammond is Professor of Archaeology, director of the Cuello Project and co-director with Dr. Gair Tourtellot III of the La Milpa Archaeological Project, which is funded by Boston University, the National Geographic Society, and the British Museum.

Faculty News

Mary C. Beaudry has been appointed to the National Park Service Archaeological Advisory Committee on National Historic Landmarks as one of two representatives of the Society for Historical Archaeology.

Papers which Professor Beaudry has presented during the spring, summer, and fall of 1993 are: "Above Vulgar Economy: Material Culture and Social Positioning Among Eighteenth-Century Urban Elites at a Rural Site in Massachusetts" to the Anthropology Division of the American Museum of Natural History, Smithsonian Institution on March 9, 1993, and to the University of Delaware Anthropology Colloquium on March 16, 1993; "Documents and Archaeology: On Intertextuality and Converging Lines of Evidence" to the twentieth annual meeting of the New England Archivists, held in Boston on April 30 and May 1, 1993. She also participated in a workshop on "Ethical Issues in Archaeology," sponsored by the Society for American Archaeology with funding from the National Science Foundation, hosted by the University of Nevada, Reno, November 4–7, 1993; and served as co-leader with Russell Handsman of a workshop on "Changing Scales of Analysis in New England Archaeology" at the twelfth annual meeting of the Conference on New England Archaeology, held in Sturbridge on May 8, 1993.

The publication of a popular treatment of the results of the Lowell Archaeological Survey Project, *Historical Archaeology at the Boott Mills Boardinghouses in Lowell, Massachusetts* by Grace Ziesing (M.A., 1987), Stephen A. Mrozowski, and Mary C. Beaudry will come out in the spring 1994, and will be printed by the U.S. Government Printing Office for the Lowell Historic Preservation Commission, for distribution at the Lowell National Historical Park and in Lowell area schools. Preparation costs for the book were funded by a grant from the Lowell Historic Preservation Commission.

Clemency Chase Coggins conducted archaeological research for three weeks in the spring of 1993, in Guatemala and Yucatán, Mexico. She visited ancient and modern limestone quarries in the two countries in an effort to understand the ancient Maya characterization, choice, and use of limestone. Professor Coggins presented a paper at the Asociación Tikal in Guatemala on the metaphoric titles of ancient Maya women, and her essay on the relationship between Teotihuacán and the Maya appeared in the catalog of the major exhibition "Teotihuacán: City of the Gods," which was created by and for the De Young Museum, San Francisco.

In June, Coggins spoke to the scientists and staff of the Getty Conservation Institute about problems with unprovenienced antiquities. At the end of July, she gave a paper on ideological explanations for the presence of Teotihuacán warriors in the Maya Lowlands in the fourth century A.C., at the 13th International Congress of Anthropology and Ethnology, Mexico City. Professor Coggins will be visiting scholar for two months in the spring of 1994, at the Instituto Nacional de Antropología, Universidad Nacional Autónoma de México.

In the spring of 1993 **Julie Hansen** received a grant from the National Science Foundation in the amount of \$34,765 for laboratory improvements for undergraduates in archaeology. Boston University matched the grant.

Norman Hammond was an invited speaker in the spring of 1993 at the University College of Belize's National Environmental Education Workshop at Rio Bravo, and attended the World Heritage/Biosphere Reserve Workshop sponsored by UNESCO in Belize City.

The British Museum and Cambridge University's Museum of Archaeology and Anthropology joined the National Geographic Society in sponsoring Boston University's Department of Archaeology Field School in Belize. The Trustees of the British Museum made a grant in March to Professor Hammond to support the 1993 investigations at La Milpa, which is one of

the largest Maya sites in Belize.

In addition to his usual duties in writing archaeology articles for the *London Times*, Hammond's summer included a trip to Paris to address a UNESCO conference on conservation. His plenary presentation on how technical subjects can be made accessible to the public through media such as TV and newspapers is being published by UNESCO. His other recent activities for the UN organization have included chairing a session at the conference on the Central Asian caravan city of Merv in Turkomenia, and contributing a chapter to the *History of the Scientific and Cultural Development of Mankind*. In July he took part in a Council of Europe seminar on the future of Stonehenge, with 40 other prominent British and European archaeologists, and was one of those invited to the British Museum's summer symposium on Early Egypt.

In May/June 1994, Professor Hammond has been invited to lecture at the University of Bonn, Germany, and in December 1994, and he will present a paper on stratigraphic matrices at a conference in Delhi, India. His review article "Explaining the Aztecs" of the book *Codex Mendoza* by Frances F. Berdan and Patricia Rieff Anawalt appeared in March, 1993 in *Antiquity* 67, No. 254. Boston University matched the grant.

Kenneth L. Kvamme presented the opening address at the first major European conference on the role and uses of Geographic Information Systems in archaeology. The conference which was entitled "The Impact of Geographic Information Systems in Archaeology: A European Perspective" was sponsored by the European University Center for the Cultural Heritage in Ravello, and was held on October 1-2 in Ravello, Italy. Professor Kvamme's address offered a North American perspective on the technology. It is a relatively new computer technology (about a decade old) that combines computer mapping with sophisticated database operations, data manipulation, analysis, modelling, and imaging techniques. The resulting single comprehensive program is well-suited for

handling any spatially distributed information. The papers presented at the conference will result in a volume to be published by Taylor and Francis of London.

Professor Kvamme has recently been named associate editor for North America of the *Archaeological Computing Newsletter*. ACN is published quarterly by the Institute of Archaeology, University of Oxford, and is primarily produced to provide a vehicle for the publication of short papers that describe computer applications, and announce meetings, events, and software that may be of interest to archaeologists.

Patricia McAnany co-organized and chaired a symposium on "Ancestors, Agriculture, and the Archaeology of Place at K'axob, Belize" at the annual meeting of the Society of American Archaeology in St. Louis, Missouri, on April 14-18, 1993. Dr. McAnany also presented a paper at the annual meeting entitled "The Role of the Ancestors in Architectural Transformations at K'axob." Her book on *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society* was recently accepted for publication by the University of Texas Press, and she received a subvention from the National Endowment for the Humanities to help with publication costs.

Professor McAnany also received a Research Experience for Undergraduates Supplement to her National Science Foundation award (see *Context* 10:3-4). The supplement is for \$5,000 to underwrite the costs of developing a computer system for analysis of archaeological materials from her archaeological field work at K'axob in Belize. McAnany recently joined the editorial review board of the international journal *Antiquity*.

On December 28, 1993, **Murray McClellan** will preside over a session on "Studies in Cypriot Archaeology" at the annual archaeology conference sponsored by the Archaeological of America which will be held in Washington, D.C., on December 27-30.

The Geological Society of America
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recently honored **George "Rip" Rapp**, research professor at Boston University and professor of geology and director of the Archaeometry Laboratory at the University of Minnesota, Duluth, by naming its annual award for outstanding contributions in archaeological geology, *The Rip Rapp Archaeological Geology Award*.

James R. Wiseman, Charles Eliot Norton Lecturer for the Archaeological Institute of America during the past academic year, will give lectures at AIA societies in Austin and San Antonio, Texas, and New Orleans, Louisiana, in January/February 1994. He again directed the Nikopolis Project and the Boston University Archaeological Field School during the summer 1993. The Field School was run as a part of the Nikopolis Project which conducted an archaeological field survey in Greece, in June and July of 1993.

Professor Wiseman will preside over the colloquium entitled "Human Societies and the Changing Landscape in Southern Epirus, Greece," which will be held on December 29 at the annual archaeology conference sponsored by the Archaeological Institute of America to be held in Washington, D.C., on December 27-30, 1993. He will also present a joint paper at the colloquium with Angelika Dousougli-Zachos, 12th Ephoreia of Prehistoric and Classical Antiquities, Ioannina on "The Nikopolis Project 1991-1993: Overview of the Multidisciplinary Study of Southern Epirus."

Paul Zimansky was a national lecturer for the Archaeological Institute of America in the Spring of 1993. He spoke on the "The City of the Grim Reaper: The Archaeology of Mar Shipri" at societies in Houston and Dallas, Texas, and New Orleans, Louisiana, and was an invited speaker on the same topic at the University of Texas at Arlington.

Professor Zimansky attended an international conference on Neo-Assyrian Geography, Rome, Italy, on November 10-12, 1993, and he presented a paper on "The 'Urartian Frontier' as an Archaeological Problem."

Notes from a Year of Research in Greece

by **Thomas F. Tartaron**

It was in the summer of 1991 that I first approached Dr. James Wiseman, American co-director of the Nikopolis Project, about the feasibility of a dissertation concerning the late prehistoric period of the Project's research area in southern Epirus. With the blessings of Dr. Wiseman, my advisor Dr. Curtis Runnels, and two of the Greek co-directors of the Project, Drs. Angelika Dousougli and Kostas Zachos, I began the task of writing a workable proposal for the work to be accomplished. After the usual succession of high hopes, false starts, unrealistic goals, the "impostor syndrome" (a horrifying fear that one's admission to graduate school was the result of a clerical error), and finally, with the help of cooler heads, a more realistic perspective, I submitted an acceptable version in April 1992.

It quickly became clear that my research, concerning the settlement patterns and subsistence strategies of local populations of southern Epirus in the Bronze Age, would require a substantial amount of study in Greece, and particularly in Epirus itself. Virtually all of the relevant finds, including those discovered by the Nikopolis Project's surface survey teams, are housed at the Archaeological Museum in Ioannina, the provincial capital. A study visit to Ioannina was therefore a necessity.

The early groundwork of my dissertation dovetailed nicely with the opportunity to spend an academic year at the American School of Classical Studies at Athens. For over a hundred years, students and scholars have taken advantage of the American School's unique facilities in Greece. Aside from housing a vast collections of books, periodicals, and other documents, the School is the official liaison between the individual archaeologist and the Greek Archaeological Service and Ministry of Culture. A special program, lasting a full academic year, is offered to qualified graduate students and others who wish to obtain an intensive experience in ancient Greek topogra-

phy, history, philology, and archaeology. As did many others before me, I wanted to enrich my understanding of ancient (and modern) Greece, while also having the freedom to pursue my own research.

The quest for funding to attend the American School's 1992-1993 session occupied much of my time in the fall and winter of 1991. After several nervous months of waiting, the good news arrived that I had been awarded the Anna C. and Oliver C. Colburn Fellowship from the Archaeological Institute of America. Two additional smaller grants, from the Fulbright Foundation and the Humanities Foundation of Boston University, ensured that I would have sufficient funds to spend the year at the School. I enrolled as an Associate Member, which meant that I was not *required* to attend any of the seminars or trips that are mandatory for Regular Members. This option is chosen by those who need the time and freedom to pursue their own research. Associates are not, however, as god-like as Regulars. Associates, it should be noted, are not required to endure the grueling entrance examinations; those who would accuse me of cowering in the face of hours of sight translation in ancient Greek are heartless, but dead on the mark.

My modern-day odyssey began in mid-September, when I arrived in Athens after a complicated flight that featured unconscionably long layovers in New York and Frankfurt. The standard airport chaos in Athens has become almost comforting to me, for it signals a renewal of my relationship with the land and its people. I can feel passion, wonderment, admiration, exasperation, anger, or amusement for Greece, but I cannot feel indifference. An uneventful taxi ride then conveyed me to the American School, nestled on the lower slopes of Lycabettus in the neighborhood known as Kolonaki. The School complex consists of three main buildings: the Blegen Library building; Loring Hall (the residence and dining hall);

and the Gennadius Library (housing a remarkable collection of Byzantine, Ottoman, and contemporary Greek works).

A Travel-filled Autumn

I did not have long to settle in. From mid-September to mid-November, students of the regular program are occupied with four extended study trips throughout continental Greece. These famous, and sometimes infamous, trips allow students access to ancient sites of all description, particularly those that are well off the beaten tourist track. The American School group is routinely granted access to such off-limits wonders as the Parthenon, the temple of Apollo and Athenian treasury at Delphi, and the temple of Apollo Epikourios at Bassae. When someone tells you that you will never see Greece like this in any other way, believe it.

Trip 1, led by John McK. Camp, covered Boeotia, Phocis, Locris, and Thessaly; Trip 2, also led by Camp, took in much of northern Greece (Macedonia, Epirus, and Aetoloacarnania); on Trip 3, William Coulson introduced us to the deep Peloponnese (Laconia, Messenia, Arcadia, and Elis); and Trip 4, supervised by Christopher Pfaff and Charles Williams, traversed the Argolid. Each participant was expected to prepare one report per trip on a site or other special topic; the trip leaders provided background information and many additional site lectures. The schedule was rigorous, with only a week in Athens between trips to prepare site reports.

One might think of these study trips as the ultimate road-trip fantasy for the classics/archaeology geek, and there were indeed a few moments of confusion when I had the feeling of being trapped in some hellish Old World version of a Star Trek convention. Yet these visits were among my most exhilarating and meaningful adventures in Greece. A few personal highlights will suffice to illustrate this unique experience: in Arcadia, a long and difficult hike to the summit of Mount Lykaion (near Megalopolis) was rewarded with a spectacular view of nearly the entire Peloponnese

The ancient Epirote city of Kassope on a beautiful autumn afternoon. In the foreground, a stoa facing out onto the agora, and just below the hill, the "small theater" can be seen. The Ambracian Gulf is clearly visible in the distance.



and the sea beyond. The dramatic effect was heightened by a sparkling sun, vast columns of variegated clouds, and a brisk wind. In southern Epirus, a visit to the Hellenistic town of Kassope on a crystal-clear October afternoon was particularly memorable. Nestled high in a mountain saddle, this is a stunning site under any circumstances; and although I know Kassope well, I have never seen it as beautiful as on that day.

Our long and demanding days of beating the bush in search of ancient Greece were not without moments of considerable hilarity. One memorable incident took place at the Philippeion at Olympia. A very enthusiastic student was in the midst of delivering a dramatic account of the family of Alexander the Great at Olympia, when he suddenly vanished. I had glanced momentarily at my notebook, and when I looked up again, he was gone. But far from being snatched away in the prime of life by an alien mother ship, he had merely tripped over a column drum and ended up behind a fine course of ashlar masonry. Presently, our loquacious friend emerged, unscathed and undaunted, to much laughter and merriment.

Apart from the obvious rewards of our autumn excursions, we students reaped other important benefits. In day-to-day social interaction, we formed friendships and alliances that in many cases will last a lifetime. Other contacts and friendships were forged along the way with the Greek archaeologists and students who will be our links to the archaeological bureaucracy of Greece in the future. And so great is the volume of information to which we were exposed, that only now, in reviewing my pho-

tographs and notes, have I come to appreciate my time in Greece.

Back in Athens

In mid-November, it was time to get down to some serious dissertation work. Most of my days in November and December were spent at the Blegen Library, tracking down published material relevant to my topic. I was sharing an apartment in the Pankrati section of Athens with a fellow graduate student, Carol Stein, who was also an Associate Member for 1992–1993. Our basement apartment, not a palace to be sure, was one of a number of simple, inexpensive dwellings that are passed around among members of the British and American Schools. Since the apartment had only one bedroom, I slept in the living room on a sort of couch consisting of three old mattresses folded in half, stacked, and covered with a slipcover. This arrangement was rather unstable, and I often awoke in the night to find that the top mattress had slipped off the other two, leaving me dangling half on and half off the couch. This was no great cause for complaint, however, since we had a refrigerator, a small kitchen, and a nice shower.

The opportunities for intellectual enrichment in Athens were numerous. On a given day, one could always find an interesting talk or conference offered by a local society or at one of the foreign schools. Several students opted for the courses in modern Greek language offered at the Athens Centre. And, of course, the fabulous museums and ancient monuments provided a classroom of a different kind.

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The social scene could be varied and interesting if one was willing to go out and make contacts with locals and other foreigners. Members of the British and American schools are quite naturally drawn to one another, owing to a common language, neighboring complexes, and a shared tennis court. The British School hosted weekly Darts Nights where all could enjoy a game of darts, a cold Amstel beer, and friendly ribbing between Brits and Yanks.

I even ventured into the club scene a bit, thanks to my British colleagues. They first took me to a dingy place called the "Ploughman," which is reputed to be something like a British pub. At my favorite club, called "Stand," the young Greek men play at being bike-riding toughs. Their Harleys are parked in front of the bar and they sport long hair and Harley shirts; yet they are well-groomed and well-behaved. The Doors and Jefferson Airplane are blaring on the stereo, but many of them were not even alive when Jim Morrison and Grace Slick ruled the pop music world. The loud music and charged atmosphere of the "Stand" made it an enjoyable break from the rigors of research. Now if I could only get this horrible cigarette smell out of my clothes.

On to Ioannina

The final stage of my research plan involved traveling to Epirus to study the prehistoric pottery stored in the archaeological museum in Ioannina. A considerable amount of planning was required to arrange a month-long visit. I had first to apply for permission to study the artifacts; once this was granted, I would need a place to stay and a study space in the museum. All of this was eventually arranged, with much assistance from Drs. Zachos and Dousougli. Professor Thanasis Papadopoulos of the University of Ioannina kindly granted me permission to see a selection of material from the important Late Bronze Age site of Ephyra, and Professor Dimitris Glaros, also from the University of Ioannina, arranged for my lodgings.

Armed with books, articles, and the tools of the pottery trade (Munsell book, diameter chart, calipers, etc.), I arrived in Ioannina in mid-January. An inland, provincial town of about 50,000 people, Ioannina lies less than 100 kilometers south of the Albanian border. It retains some of the flavor of the late Turkish period, from the old houses and almost suq-like appearance of certain markets, to the fortress and tomb of the notorious Ali Pasha.

I was greeted by Professor Glaros, who had reserved a room for me at the city's *yerokomeio* (Old Folks' Home). My third-floor room had a lovely panoramic view of the old city, Lake Pamvotis, and the snow-capped mountains beyond. The furnishings included a large desk, ample closet space, and three extra beds in case I wanted to throw a slumber party. It was a perfect environment for intensive study.

Over the following four weeks, I worked at the archaeological museum from Monday to Saturday, inspecting thousands of pottery sherds. My objective was to get a firm grasp on the prehistoric ceramic types of Epirus, including their shape, function, forming and firing characteristics, and variation within and among assemblages. I also hoped to make a little progress toward the resolution of the perplexing problem of dating the prehistoric Epirote handmade coarse pottery (Professor Dakaris' Categories II and II). These wares, of coarse fabric and often decorated with plastic impressed bands and "warts," are ubiquitous in late prehistoric sites, but cannot be closely dated in the absence of imported wares or other associated artifacts of known date. In fact, many scholars believe that household potters fashioned these vessels with little or no change in technology from the Neolithic period to sometime in the Iron Age, a nearly incredible span of more than 2,000 years. In my opinion, the general paucity of dated prehistoric settlement contexts in Epirus has been the greatest obstacle to resolving basic issues. As securely dated assemblages become increasingly available, it will be possible to propose solutions

to these chronological problems and to begin piecing together a history of later prehistoric cultural process and change.

An example drawn from the Nikopolis Project's surface survey work illustrates one approach to the problem. In 1992 and 1993, our survey teams discovered several new prehistoric sites that we believe must date to sometime in the Bronze Age. For one of these, we were able to obtain a radiocarbon date in the Late Bronze Age, and in other cases, the presence of sherds from imported and imitation Mycenaean pottery suggests a similar date. By closely comparing these assemblages with those from the area's few sites with well-dated Bronze Age occupation (such as Ephyra and Dodona), we may begin to detect changes and variation across time and space. Furthermore, as more Bronze Age sites, large and small, begin to dot the map of southern Epirus, significant questions of site function, site hierarchy, settlement pattern, and economic subsistence will be addressed.

Drawing on earlier work done by Dakaris, Papadopoulos, and English archaeologist Ken Wardle, I was able to make an excellent beginning. It was especially instructive to contrast the excavated pottery assemblages with those of our surface sites. Through it all, the museum staff was friendly and provided every possible assistance. I would only suggest that it is foolish to attempt to do anything in an unheated basement in Ioannina in January. From now on, the museum is strictly a summer venue for me.

My evenings were joyous occasions, thanks to a group of special friends who are students at the University of Ioannina. The weeks passed in a whirlwind of food, drink, and camaraderie as we excitedly swapped stories of our lives and times. Anyone who knows the Greeks well has experienced this splendid *philoxenia* (hospitality), which appears to begin at the moment of introduction. I also thoroughly enjoyed two Sunday outings with Dr. Zachos, in which we visited archaeological sites all over Epirus, and discussed at great length the present

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creating a permanent endowment for the professorship. It was the fourth grant awarded by the W. M. Keck Foundation since 1985 in support of the remote sensing and archaeology programs. The grants, which total \$1.52 million, have played a critical role in the development of the Center for Remote Sensing into an internationally respected research and instructional center, and the grant for the professorship in archaeology recognizes the close relationship between the Center for Remote Sensing and the Department of Archaeology.

Professor Kavamme's wife, JoAnn Christein Kvamme, has also worked extensively in American archaeology. They have three children, Charles, Kristina, and Emily.

state and future direction of research in the region.

At last it came time to leave Ioannina, but I did not return immediately to Athens. Instead, I headed east to Macedonia, in the heart of the land of Alexander, to the village of my friend and colleague Stavros Zabetas. For one week, I shared in the leisurely existence of a village in winter, rising late in the morning, shopping for the day's meals, wasting the odd hour in a *kafenion*, and visiting the nearby town of Veria in the evening if the spirit moved us. I never tire of Stavros' stories about the history of the area and of his village, long a refuge for Albanians, Vlachs, Turks, and even Russians. We always set aside time for an archaeological excursion or two, and this time around it was a delightful afternoon at Nea Nikomideia, an important Neolithic site just seven kilometers down the road. All things considered, it was the perfect way to recover from the mind-numbing experience of analyzing thousands of small fragments of possibly the worst-made pottery in human history.

Several weeks back at the Blegen Library in Athens allowed me to begin to assimilate my recent work, and to recheck important information. There was time for a few more tennis matches, and nice dinners with friends. And as the time for my

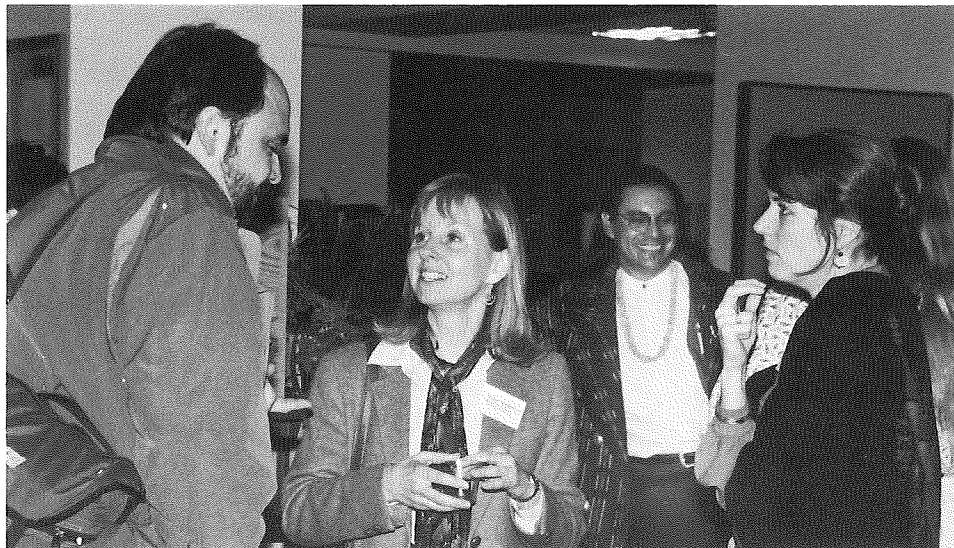
Ethnobiology Conference

Nearly one hundred participants from several countries attended the 16th Annual Society of Ethnobiology Conference sponsored last spring by the Department of Archaeology and organized by Professor Julie Hansen. The conference was held at Boston University on March 11–13, 1993.

Papers were presented on topics concerned with the effect of foreign contact on Native American populations, the ethnographic evidence for medicinal and other uses of plants, palaeoethnobotanical studies from the Old and New World, and zooarchaeological analyses of bones from historical sites in the eastern United States and Canada. Highlights of the conference included the paper by Dr. Robert Bye of the Botanical Garden in Mexico City in which he discussed cures for

fatigue suffered by Aztec officials. The De La Cruz–Badianus Manuscript, written in 1552, the earliest known New World herbal, mentions more than twenty plants, as well as animals and stones, that were consumed as teas, applied to the feet, or bathed in to relieve fatigue. Dr. David Landon (Ph.D., 1991) presented the results of his study of animal remains from several rural and urban sites in eastern Massachusetts. Butchery patterns, age, and seasonal-slaughtering patterns suggest that specialized husbandry for urban markets was a late development, and that the supply of meat to colonial Boston markets was dependent on traditional rural husbandry practices.

Beverages for the conference were gratefully accepted from Very Fine Products, Inc., Chicama Winery, Good Ale Orchards, West County Winery, Westport Rivers Winery, and the Boston Beer Company.



Outgoing president Dr. Paul Minnis (l), University of Oklahoma; Dr. Wilma Wetterstrom (center), Harvard Botanical Museum; and Dr. Joy McCorrison (r), Smithsonian Institution, discuss palaeoethnobotany at the reception held at Boston University. In the background is Enrique Salmon, University of Arizona, a Tarahumara Indian who is studying the traditional herbal medicines of his tribe.

return to the U.S. drew close, there was an opportunity to reflect on my months as a member of the American School. The immediate and tangible benefits included new friends and acquaintances, improved knowledge of modern Greek language and culture, a quantum leap in my familiarity with the ancient Greek landscape, and a solid foundation of research for my dissertation. But I have decided that

the full meaning of my participation will only be revealed in time, and often in small ways, as my intellectual development hearkens back to the people, places, and experiences associated with my time in Greece.

Thomas Tartaron is a Ph.D. candidate in the Department of Archaeology and a senior staff member of Boston University's Nikopolis Project in Epirus, Greece.

AlumNews Student News

Mary Lee Angelini, graduate student in pre-Columbian archaeology, was co-organizer for a symposium on "Ancestors, Agriculture, and the Archaeology of Place at K'axob, Belize" at the annual meeting of the Society for American Archaeology held on April 14-18, 1993, in St. Louis. She also presented a paper at the symposium entitled "Clay Sourcing at K'axob, Belize." **Valerie McCormack** (B.A., 1989), **Francisco Estrada-Belli**, a graduate student in pre-Columbian archaeology, and **Hope Henderson**, a student at the University of Pittsburgh, presented a paper in the same symposium entitled "Documenting the Elusive Proclassic and Early Classic Settlement: Stratigraphic Evidence from K'axob."

William Barnett (Ph.D., 1989) has been promoted to director of the Interdepartmental Laboratories at the American Museum of Natural History in New York City.

Edward L. Bell (M.A., 1987) has written an article entitled "Historical Archaeology at the Hudson Poor Farm Cemetery, Hudson, Massachusetts," which will appear in *Occasional Publication in Archaeology and History*, No. 5, published by the Massachusetts Historical Commission, Boston.

Ellen P. Berkland, graduate student in New World archaeology, presented a paper at the Council for Northeast Archaeology Conference held in Portsmouth, New Hampshire on October 22-24. The paper was entitled "Results of the Archaeological Reconnaissance of the African Baptist Society Meeting House, Nantucket, Massachusetts."

Congratulations to **Lauren Cook** (M.A., 1990) and his wife, Nancy, on the birth of their son, Samuel Morris Cook, who was born on February 2, 1993.

Brenda Cullen, graduate student in classical archaeology, was reappointed as the W. M. Keck Foundation Research Fellow in Remote Sensing for 1993-94. She will

continue her research in GIS and remote sensing connected with the Nikopolis Project.

Scott deBrestian, a senior in archaeology, received a Robert Yellin Scholarship (\$1,250) from the College of Liberal Arts' Robert Yellin Scholarship fund to continue his studies during 1993-94.

David B. Landon (Ph.D., 1991) presented the paper "Zooarchaeological Evidence for Food Supply and the Distribution Systems in Colonial Massachusetts," on March 13, 1993, at the 16th Annual Conference of the Society of Ethnobiology, which was held at Boston University. David and his wife, Joan, are the proud parents of Jennifer Martha Landon, born on September 12, 1993.

Ann-Eliza Lewis, a graduate student in archaeology, was awarded an Alice M. Brennan Scholarship (\$3,200) by the College of Liberal Arts for 1993-94.

Wendy O'Brien, a senior in archaeology and classics, received funding from the College of Liberal Arts from the Professor John Oddy Scholarship fund to continue her studies during 1993-94.

Paula Kay Lazrus (Ph.D., 1992), recently appointed research associate of the Center for Archaeological Studies, is now an assistant professor at the New School for Social Research at NYU. She also teaches in NYU's adult education program and continuing education. Paula presented a paper in December 1992 at the Archaeological Institute of America's annual archaeology conference on "Settlement in the Sinis and the Gerrei (Sardinia) and the Impact of Phoenician, Punic and Roman Colonization." She also has had an article accepted for publication by the *Quaderni della Soprintendenza Archeologica per le Province di Cagliari e Oristano*.

Michèle Miller, a graduate student in the Department of Archaeology, is spending the academic year 1993-94 at the American School of Classical Studies, Athens, Greece, where she is beginning her dissertation research. Miller received the Jacob Hirsch Fellowship from the American School as well an Alice M. Brennan

Scholarship (\$3,200) from the College of Liberal Arts for 1993-94.

Congratulations to **Nicole Missio** and **Chris McGeown** who had a baby boy, **Andrew Alexander Missio McGeown**, on August 22, 1993.

Melissa Moore, a graduate student concentrating in classical archaeology, received the Teaching Fellow Award in Archaeology for the 1992-93 academic year. The award carried with it a gift certificate to the Boston University Bookstore of \$100.

CRC Press has accepted for publication a volume entitled *Landscape Archaeology: Studies in Reading and Interpreting the Historic Landscape*, which is being co-edited by Dr. **Rebecca Yamin** and **Karen Bescherer Metheny**, a graduate student in New World historical archaeology. Contributors to the book from Boston University include: **Professor Mary Beaudry**, "Why Gardens?" **Sara Mascia** (Ph.D. candidate in the department), "One of the Best Farms in Essex County: The Changing Domestic Landscape of a Tenant Who Became a Farmer;" **Dr. Anne Yentsch** (research fellow of the Center for Archaeological Studies), "Close Attention to Place: Landscape Studies by Historical Archaeologists;" and **Karen Bescherer Metheny, Judson Kratzer, Anne Yentsch, and Conrad M. Goodwin** (Ph.D., 1987), "Methodology in Landscape Archaeology: Research Strategies in a Historic New Jersey Garden."

Karen Bescherer Metheny will contribute the entry on landscape archaeology to the forthcoming volume entitled *The Oxford Companion to Archaeology*, to be published by Oxford University Press and edited by **Brian Fagan** of the University of Arizona. She also presented a paper (read by Dr. Mary Beaudry) at the annual meeting of the Society for Historical Archaeology held in January 1993, in Kansas City, Missouri. The title of the paper was "Pottery Production and the Rise of Complex Society."

Carol Stein and **Tom Tartaron** (Ph.D. candidates in the Department of Archaeology) were teaching assistants in the Boston University Archaeological Field School at

Maya Burials and Rituals in the Preclassic Period

by Mary Lee Angelini and Francisco Estrada-Belli

For the ancient Maya, death and sacrifice provided links to their ancestors, and through these spiritual links, power and prestige were generated.

Excavations by the Boston University Field Schools at the Maya sites of Cuello and K'axob in northern Belize have recently uncovered a large burial sample dating to the Late Preclassic period (400 B.C. to 250 A.C.). Similarities in burial practices are shared by the two sites, but there are also striking differences. These differences are related to the inauguration of architectural complexes and to the emergence of political power during the Late Preclassic period.

"They buried them inside or in the rear of their houses. . . .

Usually they abandoned the house and left it deserted after the burials, except when there were a great many persons in it, so that their society lost some of the fear which remained in them on account of the death." (From *Landa's Relacion de las Cosas de Yucatán*, in Tozzer 1941:130)

The Maya sites of Cuello and K'axob are located between the Rio Hondo and the Rio Nuevo near the modern town of Orange Walk. Cuello, a site which has been excavated by Professor Norman Hammond since 1975, is a minor ceremonial center of

Nikopolis, Greece, during the summer of 1993. They are staff members of the Nikopolis Project. Stein was awarded a Rallis Scholarship (\$3,200) by the College of Liberal Arts, and Tartaron was appointed a Teaching Fellow by CMRAE at MIT, both for the academic year 1993–94.

Michelle Terrell, graduate student in archaeology, received funding from the Nevis Historical Conservation Society to cover her summer 1993 expenses for the preliminary stage of a proposed archaeological exploration of a late-seventeenth-century synagogue on the island of Nevis in the Caribbean.

approximately 252 structures.

Occupation of the site was continuous from Early Middle Preclassic to Late Classic times (1200 B.C.–900 A.C.).

Population estimates suggest that from 2,200 to 2,600 persons may have lived at the site at any one time.

The site of K'axob lies on the western bank of the Rio Nuevo adjacent to Pulltrouser Swamp and is approximately eight kilometers north of Cuello. Approximate dates of occupation based on ceramics analysis are from the Middle Preclassic period (800 B.C.) to the Terminal Classic period (1000 A.C.). K'axob, currently being excavated by Professor Patricia McAnany, appears to be a smaller site than that of Cuello and occupies an area of 0.84 square kilometers with



Among the earliest known Maya—one of a group of burials found in the lowest levels at Cuello and dating to 1400–1200 B.C. The adolescent girl has the remains of a baby clutched to her right shoulder; part of its skull can be seen by her right cheekbone.

ninety structures of observable surface elevation. The focus of the ongoing research is on changes in settlement patterns, burial practices, and land use as they relate to the genesis of ancestor veneration among the Maya.

Burials at Cuello

The Late Preclassic burial sample of 103 individuals is from Platform 34, which occupies a broad, raised area of 80 m x 70 m and was apparently the center for the Preclassic community at Cuello. By the end of the Middle Preclassic (400 B.C.), this area had developed from a residential patio group to a ceremonial precinct and elite compound. At that time the previous residential structures were burned and a mass burial of thirty-two individuals was placed in a depression in the center of the rubble fill. This mass burial contained two individuals, an adult and a young adult male, in a semi-reclined position with three smashed vessels over their heads. Body bundles of nine adult males were placed in their laps and at their feet. Grave goods consisted of seven bone tubes in association with one of these main individuals. An additional twenty-one individuals were buried around this central group. Only one of these burials contained interment of a possible female adult.

A second mass burial, interred at a later construction phase, was placed directly above the first. This second mass burial consisted of two seated young adult males each with a body bundle of four additional individuals, probably all young to middle-aged adult males. Broken ceramic vessels were covering the heads of the two seated individuals. At the end of this construction phase, remains of three other individuals were placed in an occupation/surface fill area. Two were decapitated and the third burial contained only a tooth. Four other graves were excavated at the northern end of Platform 34: an infant, possibly as a construction dedication; two double burials which were secondary interments; and a male burial along the northern extension of the

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pyramid. Three additional burials seem to be related to ceremonial rituals connected with the construction of Platform 34. One was placed parallel to the steps of a ceremonial platform and the other two were axially placed within two other ceremonial platforms on the west side of the plaza.

Additional burials were found in the fill and floors of residences excavated on the north side of the platform. These included both male and female adults and juveniles and are representative of family burials. The majority were simple graves either placed directly into the rubble fill or through cuts in patio floors.

Disarticulated skeletons, mostly interred as body bundles, account for thirty-two percent of burials. The next most common position of body placement was seated. Twenty-five percent of the burials had vessels placed upright in their laps, a position which suggests that these may be food storage containers. Vessels in seven cases were placed beside the head or over the shoulders. Additional burial goods included shell beads which were present with five individuals, and shell pendants or ornaments with seven individuals. Three individuals had shell ornaments placed over their pelvic region and one adult had two jade beads in this same position. Two individuals had pots inverted over their pelvis. Two adult males, one a central individual in the second mass burial, were found with prepared red ocher. Six jade beads were associated with the mass burials and the remaining three were found with decapitated adults.

Elaborate grave goods connoting wealth were present in the Middle Preclassic period. Two of the child burials had shell beads, including red *Spondylus*, and an adult male was interred with three vessels protecting his body. Bone tubes which appeared to have a primitive design of the pop woven mat, a design connoting leadership in later time periods, were also present with this burial.

Burials at K'axob

Late Preclassic burials at K'axob were

Late Preclassic
Burial 25 from K'axob
including two extended
individuals and one
small vessel decorated
with a cross on the base.



excavated in Mound 18 of the B plaza group, the site of a Late Classic pyramid. A total of thirty-seven skeletons, dating to the Late Preclassic period, were excavated from a 6 m x 8 m area. The Late Preclassic burials were cut into house floors and interred in fill deposits in a manner similar to that of the residential burials at Cuello. Interments of later periods at K'axob have been found in house-mounds from the area surrounding this plaza group.

There were twenty-four single burials and thirteen multiple burials in Structure 18. Twelve of the multiple burials contained the remains of two individuals. The triple burial (Burial 15) was a bell-shaped cist. Each of the three bodies was associated with a vessel and shell beads. In double burials, males were more frequent, but females also occurred. There seem to be no examples at K'axob of burials of the skull only, although in some instances only cranial fragments remained.

The majority of depositions were primary, with little evidence of post-mortem disturbance of bones. Body position in the burials at K'axob was most frequently extended and supine (14). Most of the extended occurred in single interments (13). The two seated burials contained the remains of two individuals while the seven flexed burials were equally distributed. All ages were represented at K'axob as well as both sexes.

In the Late Preclassic there was no preferred directionality in the orientation of the bodies or in head facing. In the Early Classic burials excavated outside Structure 18, however, the north orientation was preferred. In

Classic Maya iconography the north indicated the sky, the place where the ancestors reside. The absence of this pattern in the Late Preclassic as evidenced by the data from both Cuello and K'axob may be significant.

An equal distribution of wealth was evidenced by grave goods. The average was one vessel per individual. Jade was quite rare at K'axob, occurring in five burials. Jade was associated with adults as well as juveniles. Shell beads were more common occurring in forty percent of the interments. *Pomacea* shells, sometimes in large quantities (i.e., ninety-six snails) also were associated with seventeen individuals. In some instances, these were placed around the bodies or in caches. *Pomacea flagellata* is a wetland snail which was a food source for the ancient Maya. Its presence in graves may have been an example of a food being left to help the dead through the underworld.

One rich burial deserves special attention (Burial 2). A mature adult was interred in a straight-walled cist capped with a low platform. Three other individuals were interred vertically above (Burial 1), but it is not clear from the stratigraphy whether they were all deposited at different times. Grave goods consisted of five vessels, of which two had the quadripartite design found only at K'axob, two jade beads, thirty-seven shell beads, a skeleton of an unidentified animal, and red hematite. This wealth is relatively outstanding for K'axob. No other burial excavated held so many offerings. This wealth suggests that this individual was a leader. In addition, McAnany notes that the presence of a shrine-like low

platform built on this grave suggests that this individual was probably the object of public ancestor veneration. Four other burials which may be connected with this same lineage included vessels with the quadripartite design. These burials also contained grave goods connoting wealth.

The sex of only seven individuals has been determined to date. The skeletal analysis currently being conducted by Dr. Rebecca Storey of the University of Houston should be completed this spring. Although it is a small sample, the data indicate that wealth was not confined to males. Two females were associated with two vessels. Similarly, wealth seems to have been ascribed. One child and one adolescent have been found with two vessels each, but the richer burials found thus far are of adult and mature adult individuals.

Discussion

Some differences are discernible in the Late Preclassic burial patterns of K'axob and Cuello. At Cuello, there is evidence of mass burials, probably sacrificial which include mostly males and are associated with new phases of construction of Platform 34. At K'axob, rather than mass burials, there are double interments. In most cases these include an adult and a child or adolescent. In the triple burial, the three bodies are poorly preserved and the stratigraphy suggest that the bodies may have been interred at different times. None of this data suggests that sacrificial burials were occurring at K'axob.

Other differences between Cuello and K'axob can be noted in the prevalent position of the bodies in the graves. At Cuello forty-three percent of the bodies are seated while at K'axob only sixteen percent were placed in this position. Conversely at Cuello, twelve percent are extended while at K'axob thirty-eight percent are extended. The burial data from Cuello suggest that a change in the burial population occurs when the shift from a residential plaza group to a ceremonial center is made. By the beginning of the Late Preclassic, the precinct at Cuello had become linked with ritual, as evidenced by the mass

burials. Once the area became designated as having more ritual significance, the number of women and children buried there decreased and males predominated. The placement of the two mass burials seems to be an action connected to the inauguration of the ceremonial plaza. The significance of this evidence indicated mobilization of the labor force and is an expression of political power by one individual or group. Although at K'axob public rituals are documented by the presence of dedicatory offerings in the floors of structures, there seems to be no firm evidence for the kind and scale of public rituals practiced at Cuello in the same period. At K'axob, the richer burials and burials with ceramics marked with the quadripartite cross, which may designate lineage descent, suggest that certain burials were serving to sanctify the area through a link with the ancestors.

The presence of disarticulated skulls appears to have been related to ritual interment at Cuello. This is a custom that is apparent in Classic times and is mentioned in the ethno-historic account by the Spanish priest Diego da Landa. It may be indicative of sacrifice or represent the veneration of ancestors, as the observation of Landa suggests. At K'axob, skulls occurred in burials which contained an adult and a child or adolescent because the remains of the younger individual were invariably poorly preserved, often comprised of only cranial fragments and teeth.

Many similarities do exist in the burials of these two sites. These similarities are most apparent when comparison is made between the burials in the northern residential structures of Platform 34 at Cuello to the burials at K'axob of Structure 18. In these areas, both sexes and all ages were represented. Head position and azimuth appear to be random, a custom which changes in the Classic period. In both instances, the areas were reused for successive interments. One burial occasionally was cut into another and bones were intermingled or were rearranged when the new body was interred. The majority of the burials at these sites were primary, single interments, but multiple interments of two

or more individuals were also present. These multiple burials contained the skeletons of women and children, suggesting the burial of a family unit in which both sexes and all ages were represented, as expected from a residential population. In some of the double burials, the second individual was a secondary interment and may have been buried to accompany the first individual either through sacrifice or through re-burial.

There is also an overall similarity in type and distribution of grave goods. Shell beads, both marine and fresh water, were apparent in many of the burials at both K'axob and Cuello. Ceramic vessels were also included in most burials at these two sites (Cuello 0-7 vessels, K'axob 0-5 vessels). The majority of these vessels were placed over the head of the individual. McAnany compares this practice to that of closing a coffin lid. It is common in the Classic period as well. Bowls were also placed over the pelvic region. Vessels were also placed in upright positions in burials, possibly as food containers. *Pomacea*, an eatable snail, is present both at Cuello and at K'axob, but it appears that only at K'axob is there a direct association between a burial and the presence of *Pomacea*. This may be a site-specific custom which became important because of the close association between this community and the swamps.

Conclusions

The burials at K'axob evolve from being simple interments to being reflections of the veneration of ancestors. This is also reflected in the evolution of the architecture of Structure 18 from that of a house platform in the Middle Preclassic, to a larger and possibly elite residential and ceremonial plaza in the Late Preclassic, and finally to a small ceremonial precinct with pyramids by the Late Classic.

At Cuello, the occurrence of mass burials and other possible sacrificial interments appears to be connected to the inauguration of the ceremonial precinct of Platform 34. The elaborate rituals of which the mass burials are the physical remains suggest the

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Tenure and Promotion for Julie Hansen

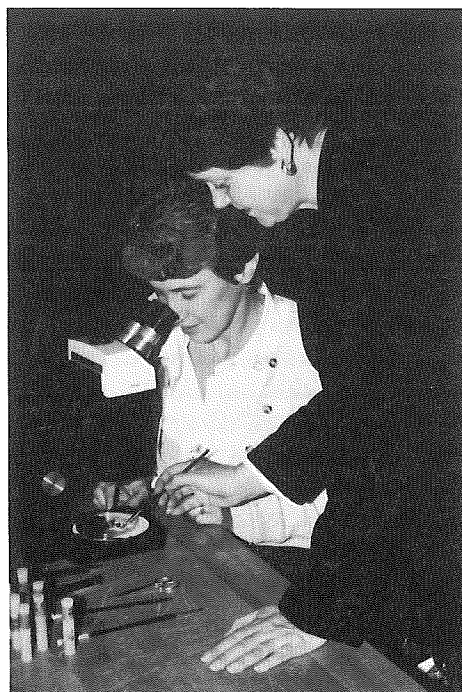
Julie M. Hansen has been awarded tenure and promoted to associate professor by the Trustees of Boston University, effective September 1, 1993.

Professor Hansen joined the University faculty in 1985 as a Visiting Assistant Professor in the Department of Archaeology and in 1986 was hired in a tenure-track position. She received an M.A. (1975) and a Ph.D. (1980) in classical area studies: archaeology from the University of Minnesota, and a B.A. (1972) in archaeology and anthropology from the University of Wisconsin.

Hansen has received several national grants, including a recent one from the National Science Foundation for instrumentation and laboratory improvement. In 1984 she received a postgraduate Fulbright Senior Research Lectureship to conduct research at the Cyprus American Archaeological Research Institute, Nicosia, Cyprus.

Hansen is a leading expert in palaeoethnobotany, on which she has written numerous articles and a book,

The Palaeoethnobotany of Franchthi Cave, published in 1991 by Indiana University Press. Her archaeological field experience includes work at the Franchthi Cave in Greece, as well as at other sites in Cyprus and Albania.



Professor Julie Hansen observes as Mary Angelini, graduate student in archaeology, examines some seeds with the microscope. Photograph by Michael Hamilton.

Center Appoints New Research Fellows

The Center for Archaeological Studies has appointed four Research Fellows in archaeology.

The new Research Fellows are: Priscilla Murray, programs administrator of the Archaeological Institute of America and senior staff member of the Nikopolis Project, and Paula K. Lazrus (Ph.D., 1992), assistant professor at the New School for Social Research at NYU; appointments effective September 1, 1992. Gair Tourtellot III (Ph.D., Harvard University, 1983), co-director of Boston University's La Milpa Project in Belize and a leading archaeological mapper and specialist in settlement pattern analysis in the Maya area; appointment effective December 1, 1992. Lorinda Goodwin (M.A. and Ph.D., University of Pennsylvania, 1993, B.A., Boston University, 1987), visiting scholar in archaeology at the Peabody and Essex Museum, Salem, Massachusetts; appointment effective October 1, 1993. The tenure of the appointments is three years.

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emergence of strong political authority during the Late Preclassic period.

This period is also marked by a change in the burial population from one which includes all ages and sexes to one which emphasizes the burial of males. The interment of males seems to coincide with the elaboration of the ceremonial precinct and is probably indicative of the increasing inequality within Maya society, culminating in the development of kingship in Classic times. Both of these sites emphasize the importance of burials for the sanctification of place.

For Further Reading

Hammond, Norman

1991: *Cuello: An Early Maya Community in Belize*. Cambridge University Press, New York.

McAnany, Patricia

1992-93: "Ancestor Veneration at K'axob, Belize: Excavations and Analysis, 1992." *Context* 10: 3-4.

In press: *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. University of Texas Press, Austin.

Robin, Cynthia

1989: *Preclassic Maya Burials at Cuello, Belize*. BAR International Series 480, Oxford, England.

Tozzer, Alfred L.

1941: *Landa's Relacion de las Cosas de Yucatán*. Papers of the Peabody Museum, 88, Cambridge, Massachusetts.

Mary Lee Angelini is a graduate student in archaeology; her area focus is Maya ceramics. Francisco Estrada-Belli is a graduate student in archaeology; his area focus is the Maya Preclassic period.

Volunteers Needed

The K'axob Project, under the direction of Dr. Patricia McAnany, is looking for volunteers to assist in the processing of artifacts in the archaeological laboratory at Boston University.

Help is needed during the daytime to sort, mark, weigh, catalogue, and reconstruct material from the Maya site of K'axob in northern Belize. This is an excellent opportunity for hands-on experience with Maya artifacts that are over two thousand years old. Please contact the lab director, Ms. Mary L. Angelini at (617) 353-2354 or Dr. McAnany at 353-3415 if you are interested and if you have a free hour or two to donate to archaeological research.

Continuing Research at Estate Whim, St. Croix, U.S. Virgin Islands

The Office of Public Archaeology at Boston University received a \$10,000 grant from the Carlsberg Foundation of Denmark for the Estate Whim Project after successfully raising \$10,000 in matching funds from a variety of private foundations and individuals. The matching funds were obtained through grants from The Bay Foundation of New York, Queen Margrethe's and Prince Henrik's Foundation of Denmark and numerous donations from private individuals. These funds will be used in part to support field research in conjunction with the Estate Whim Project Heritage Education/Archaeology Workshops. The workshops will be held at Estate Whim Plantation Museum in January and February 1994.

As part of the Estate Whim Project, a comprehensive survey of St. Croix's former sugar plantations is being planned to investigate the spatial arrangement of plantations and slave/workers' villages, and to aid in the development of a preservation management plan for St. Croix preservation and planning agencies.

Barbara Hagan-Smith, executive director of the St. Croix Landmarks Society, and George Tyson, also of the Landmarks Society, have initiated a rural survey of St. Croix to identify sites with significant remains. The OPA survey will combine Geographic

The Nature Conservancy received Estate Little Princess as a donation in 1990. This seaside property, which is listed on the National Register of Historic Places, contains two great houses (which are currently being renovated), a windmill tower, a well tower, ruins of the sugar mill, and remains of what are possibly two slave villages. The main theme of the proposed community center will be to show the environment's impact on Caribbean culture. In addition to providing an administrative office, conference facilities, and a research library (to be housed in the renovated

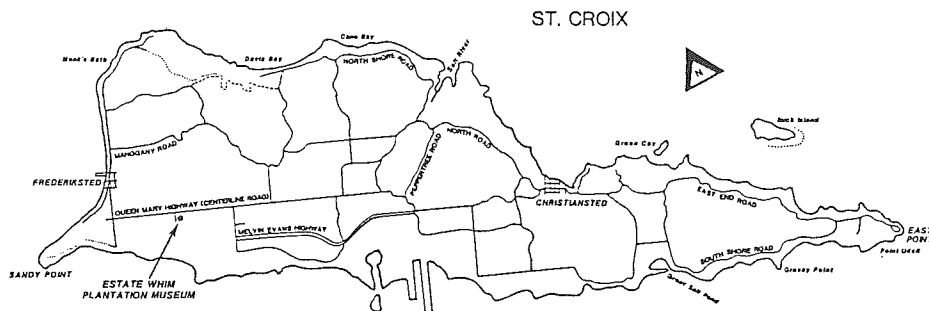
Estate Whim Field Report Available

The final report on the 1991 field season at Estate Whim is now available. This report presents the results of the commentary and archaeological research conducted thus far, and provides the framework for research and education in historic preservation for future excavations seasons. A copy of the report was recently solicited by the U.S. National Park Service southeast regional office in Atlanta, Georgia, for information to be included in the NPS nomination of Estate Whim as a National Historic Landmark. Copies of the report (253 pages, including 73 illustrations, 20 tables, and an inventory of artifacts recovered) may be obtained for \$25.00 from Donald G. Jones, Boston University, Office of Public Archaeology, 675 Commonwealth Avenue, Boston, MA 02215, (617) 353-3416. Information about the Estate Whim field season to be held in January and February 1994 may also be obtained from Mr. Jones.

Congratulations to the 1993 Graduates!

Bachelor of Arts

Zachary J. Davis
 Elizabeth L. Fuller
 Jason J. Gonzalez
 Catherine Hawley, *Cum Laude*
 Jane Jalutkewicz, *Summa Cum Laude*, Work for distinction, College Prize for excellence, double major with Anthropology
 John S. Morales, *Magna Cum Laude*, double major with Classics
 Kevan Schultz
 Scott Spurlock
 Anita Vyas



Information Systems (GIS) technology with a topographical survey of individual plantation ruins across the island to eventually provide the Landmarks Society with site maps of each estate. This component of the Estate Whim Project is being conducted by David Clayton, who is assistant director of the Estate Whim Project and an archaeologist with the OPA, as well as a graduate student in archaeology at Boston University.

The OPA has also been invited to join with the St. Croix Environmental Association and the Nature Conservancy in developing a community environmental education center at Estate Little Princess on St. Croix.

great houses), the community center will also offer demonstration projects on the sustainable use of natural resources and hands-on demonstrations and participatory environmental exhibits for the youth of St. Croix, including archaeology workshops at the estate ruins. The OPA will conduct a topographical survey of the estate ruins during the 1994 Estate Whim field season as a preliminary step toward developing longterm archaeological research and education at Little Princess in conjunction with the Estate Whim Project.

Donald G. Jones associate director of the OPA will direct the Estate Whim Project.

Those Crazy Romans

It is well known that the Romans were skillful in using metals to enrich their everyday lives. They also learned that wine from lead vessels had a pleasant bitter-sweet taste and stayed fresh longer.

Further, the Romans had a plethora of medical problems that have led many scholars to suggest that lead toxicity may have played a role in such miseries as madness, gout among the wealthy, and infertility. While widely accepted, this conjecture had minimal scientific basis until now. George (Rip) Rapp, Jr., research professor of archaeology at Boston University, and his Archaeometry Lab colleagues at the University of Minnesota, Duluth, working with Italian archaeologists, have recently published a major study ("Lead Exposure in Italy: 800 BC-700 AD," *International Journal of Anthropology*, Vol. 7, No. 2, 1992) which analyzed the lead content of bones of twenty Italian archaeological populations.

The data from these analyses demonstrate that between 800 B.C. and 700 A.C., the skeletal lead content of Italian peninsula residents paralleled industrial production and that Imperial Age Romans experienced a body lead burden ten times greater than did their predecessors and immediate successors. This paper will renew scholarly interest in the decline of the Roman aristocratic class.

Readers interested in this topic may request a free reprint from the Center for Archaeological Studies.

Beaudry, continued from page 7
our survey efforts in the plowed fields surrounding the homestead. Our goal is to construct a full land-use history of the property through a combination of archaeological, botanical, and archival research.

Our efforts within the homelot of the Spencer-Pierce-Little Farm, which took place as part of our 1993 field school, continued to yield pieces of the site's past for us to puzzle over. A detailed report on the 1993 field season will be published in the spring 1994 issue of *Context*.

Mary C. Beaudry is an Associate Professor of Archaeology and Anthropology, and a former president of the Society for Historical Archaeology.

Uluburun, continued from page 7
director of the Leon Levy Expedition to Ashkelon (Israel); Professor Stephen Scully of Boston University's Department of Classical Studies and author of *Homer and the Sacred City*, Cornell University Press, 1990; and by Professor Kathryn Bard of the Department of Archaeology and moderator of the session. The meeting was an expansion of a class of AR 706 The Archaeology of Complex Societies, taught last spring by Professor Bard.

The Context and Human Society lecture series is made possible by a grant from the Humanities Foundation of the College of Liberal Arts.

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

Faculty and Research Appointments in the Department of Archaeology (1993-94): Professors Creighton Gabel, Norman Hammond, Fred S. Kleiner, James R. Wiseman. Associate Professors Mary C. Beaudry, Julie M. Hansen, Kenneth L. Kvamme, Curtis N. Runnels, Paul E. Zimansky. Assistant Professors Kathryn A. Bard, Murray C. McClellan, Patricia A. McAnany. Research Professors Farouk El-Baz, George (Rip) Rapp. Adjunct Professor Clemency C. Coggins. Adjunct Associate Professor Ricardo J. Elia. Distinguished Research Fellow Gordon Willey. Research Associate Gerald Kelso. Research Fellows William K. Barnett, Julie Benyo, Tracey Cullen, John A. Gifford, Lorinda Goodwin, Thomas W. Killion, Paula K. Lazrus, Georgeana Little, Priscilla Murray, Steven Pendery, Gair Tourtellot III, Tjeerd H. van Andel, Elizabeth C. Stone, Al B. Wesolowsky, Ann Yentsch.

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