Survey Shows Relations of Town to Countryside around Aphrodisias, Turkey

Aphrodisias is one of the most important archaeological sites of the Greek and Roman periods in Turkey, famous in antiquity for its sanctuary of Aphrodite and its virtuoso sculptors. Excavations at Aphrodisias, carried out by New York University since 1961, have revealed an unusually well-preserved and picturesque ancient town, which makes an indelible impression on visitors and brings the civic culture of the Graeco-Roman world vividly to life (fig. 1).

From 1993 to 2005, I directed new fieldwork at Aphrodisias, with the aim of investigating the urban development of the city from the time it was founded in the early second century BCE until the time it was abandoned in the early seventh century CE. In 2005, I started a new project with funding from the Leon Levy Foundation, a regional survey focused both on the relationship between the city and its natural environment in the Hellenistic and Roman periods and on the history of settlement in the region before the founding of the city and after its abandonment.

When I moved from NYU to Michigan in 2006, the Kelsey Museum as well as the Department of Classical Studies, the College of Literature, Science, and the Arts, the Office of the Vice President for Research, and the Rackham Graduate School joined NYU and the Leon Levy Foundation as sponsors of the project, resuming a tradition of Kelsey involvement toward publication of the results.

The survey has been an interdisciplinary project bringing together classical archaeologists, architects, historians, natural scientists, and geographers in order to investigate the relationship between human habitation and the natural environment in a 600-square-kilometer area around Aphrodisias from prehistory to the present day. Approximately 670 archaeological points of interest have been recorded and entered into a Geographical Information System (GIS), including tombs, farmsteads and settlements, caves, wine and olive oil presses, quarries, aqueducts and cisterns, rural sanctuaries and churches, and a network of fortified citadels and hilltop watchtowers (fig. 2).

Fieldwork by a team of twelve persons on average has combined “extensive” and “intensive” approaches to archaeological survey. The extensive survey involved visits to all the towns and villages in the survey area; interviews with local shepherds, farmers, and officials such as village mayors, schoolteachers, and imams; and detailed recording of sites shown to us by these informants (including controlled collection of surface finds, graphic and photographic recording, and incorporation into a GIS).

Intensive survey involved field-by-field examination of an area extending 500 m in every direction outside the city walls of Aphrodisias, and survey of a series of 5 km “transects”—strips 50 m wide—radiating out of the center of the city. The extensive survey has provided us with a reasonably complete inventory of known archaeological sites in the survey region—the vast majority of which, while familiar to the local population, were completely unknown to the archaeological community. At the same time, the intensive survey, following established sampling procedures and data-collection methods, has given us a more systematically assembled dataset for the central part of the region. Taking these two sources of information to-

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Notes from the Director

The Kelsey looks quiet from the outside with its “closed for renovation” sign, but inside we are in a whirl of activity preparing installations for the opening of the new Upjohn wing on October 11, 2009. Curators have chosen their items and are writing captions, conservators are preparing them for display, and the design teams are making final installation decisions. As you will read further in this newsletter (page 7) our wonderful moving team, led by Collection Managers Sebastian Encina and Michelle Fontenot, successfully and safely transported our 100,000+ artifacts into the new collections storage area last summer. The second phase of the building project—the expansion of the conservation laboratory and renovation of some of the less salubrious corners of the Newberry Hall—was originally scheduled for completion in the summer of 2008, but the workmen are just now putting the final touches on the building. We are grateful for their excellent work but will be even more thankful to see them depart for good after nearly two years of construction. The happiest sign of progress from the outside is the return of our newly conserved Tiffany window, which can now be seen brightening the gloomy November nights by those walking south on State Street.

With the Museum closed to the public we decided to concentrate in this issue of the newsletter on our field projects of this past summer. These are an impressive lot, ranging from Sardinia in the west to Aphrodisias in central Turkey with important projects at Gabii in Italy and Kedesh in Israel as well. Professor Kelsey’s dream of a museum that would both uncover new finds across the full span of the classical world and make them accessible to Michigan students and citizens continues to thrive. With the opening of the Upjohn Wing we will take Kelsey’s vision to new heights, thanks to the support of many generous donors, first among whom are you Associates.

Sharon Herbert
Director

Fig. 2. Map of Aphrodisias regional survey area showing selected sites.
marble quarries have been recorded, as well as local sources of emery (used as an abrasive in ancient marble working). One of the newly documented aqueducts was a major piece of Roman engineering, over 20 km long, incorporating at least ten bridges and running in tunnels up to 70 m underground (fig. 4). The main function of this aqueduct was probably to deliver water to public baths built at Aphrodisias during the reign of the emperor Hadrian.

The development of the cemeteries in the immediate environs of Aphrodisias sheds new light on the social and political history of the city, culminating in the large-scale destruction of monumental tombs in the mid-fourth century CE to provide building material for new city walls. In later centuries, churches were built outside the major city gates—four well-preserved suburban churches have been identified, as well as a number of rural churches in the surrounding countryside. Examination of the larger survey area has also shown, contrary to our initial expectations, that rural villages and farmsteads were abandoned at the same time as the residential areas of Aphrodisias in the early seventh century CE—suggesting widespread rural as well as urban depopulation. Evidence for later periods includes the identification of the Middle Byzantine citadel of “Tantalus,” as well as the documentation of the regional Ottoman road system.

During the present academic year, I will be working with a team of students on the analysis and presentation of the results of the survey. Final publication will take two forms: an Internet map server, which will provide online access to our Geographical Information System and database of archaeological sites, and a book including both a general account of the survey and a series of special studies already assigned to various members of our team, among them geologist Carola Stearns and two current IPCAA students, Leah Long (who will be working on the marble quarries) and Angela Commito (who will be working on the aqueducts). I am currently collaborating with IPCAA student Ryan Hughes and the staff of the Spatial Analysis and Visualization lab here at Michigan on the development of the Internet map server. We hope to have a trial version ready by the end of this semester. In addition, there will be a colloquium on the survey at the annual meeting of the Archaeological Institute of America in January 2009, which will provide an opportunity for the contributors to the final publication to present the results of our research in preliminary form. The colloquium will include papers on the geology and the rural marble quarries, the aqueducts, the evidence for rural land division, the evidence for rural settlement and agricultural production, the Roman tombs, the Roman sarcophagi, and the churches. The final publication will also include sections on the pre-Roman tombs, the pottery, the territorial fortifications, and the inscriptions.

The excavations at Aphrodisias have made significant contributions to the history of the ancient Mediterranean city. Regional survey has extended our knowledge of the site in both time and space—providing new information about Aphrodisias and environs before and after the heyday of the city and illuminating the interaction between town and countryside in numerous ways. It has been a privilege to work on this project with the endorsement and support of the Kelsey Museum, and in collaboration with a great group of students. Last but not least, like all archaeologists working in foreign lands, our team owes a great debt of thanks both to the local authorities, in this case the Turkish Ministry of Culture and Tourism, and to the local population for their invaluable hospitality and assistance (fig. 5).

Christopher Ratté
Associate Professor of Classical Studies
On a bright, hot morning in August, my plane touched down on the tarmac of the Fertilia Airport in northern Sardinia. I disembarked, carrying too much luggage and not enough water, and began a day-long journey toward the south-center of the island. After hauling all my gear onto and off of three buses, a train, and a taxi, I finally arrived in Villanovaforru, a hill town of 600 overlooking valleys full of sheep, vineyards, and archaeological remains.

Many cultures have occupied Sardinia and left traces of their presence; the Phoenicians, the Carthaginians, and the Romans are only a few of the better-known examples. The hilly region around Villanovaforru, however, is home to the remains of a less well-known culture: the native peoples of the Sardinian Bronze Age. During the Bronze Age (about 1800–1000 BCE), these societies built thousands of multi-story stone towers, which they called nuraghi. The Bronze Age Sardinians did not have a writing system, but their name for the towers they built was preserved by the Romans. The nuraghi contain several rooms, niches, upper floors, spiral staircases built between the walls, and sometimes multiple towers, courtyards, storage buildings, and fortifications. The nuraghi were built entirely without the use of mortar, and they range in size from the merely impressive to the downright huge.

I had watched more than a dozen of these iconic towers speed by from the windows of my train as I traveled to Villanovaforru, and now that I had arrived, I was less than four miles from a group of sixteen of them located around the perimeter of a nearby plateau. The fieldwork I had come to do was an archaeological survey of these sixteen nuraghi and the associated tombs and natural resources in the valley below. Understanding the spatial relationships among these important features of the Bronze Age landscape was a first step toward answering the research question that I am addressing in my dissertation: Does the need to control scarce resources and protect villages against enemies encourage societies to develop increasingly complex leadership structures?

The problem of how essentially egalitarian autonomous villages that have little in the way of formal leadership structure become associations of villages with formalized, inheritable leadership structures has long interested archaeologists and anthropologists. The archaeological record of Sardinia’s Bronze Age, which includes small autonomous villages in the Early Bronze Age through large chieftain-like societies in the Final Bronze Age, provides an ideal case study for this process. During my three-week field season in Villanovaforru, I gathered information about the nuraghi, tombs, and local resources that would help me analyze my particular case study, the sixteen nuraghi of Siddi Plateau. I took photographs of the monuments, drew floor plans, took GPS coordinates, and looked for evidence of Bronze Age villages. I have now returned to Villanovaforru to analyze the results of my research with the support of a Fulbright Award. Using my conclusions, I plan to undertake another fieldwork season next spring.

At the end of my season, as the owner of the hotel where I stayed drove me to the train station, he indicated the hills around us scattered with the remains of nuraghi and said, “if these hills could speak, they would tell such stories!” It took me several tries to recognize the subjunctive verb forms (meanwhile, his fifteen-year-old daughter in the back seat chided, “Dad! Don’t use hard words—she can’t understand you!”), but when I finally did understand, I agreed enthusiastically. These hills did tell stories, and I was excited to have the opportunity for them to tell their stories to me.

Emily Holt
IPCAA Student
The Gabii Project

The archaeology of first-millennium BCE Italy has in recent years become a booming field, with far-reaching historical and cultural implications. The major protagonists were those central Italian cities that were part of the first wave of urbanization in the Archaic period. Strangely enough, virtually none of them has ever been extensively excavated, with the obvious exception of Greek colonies. Paradoxically, the best-known Archaic Italian city at this point is Rome itself, where the record is very fragmentary and difficult to reach. The Gabii project represents the first opportunity, certainly since the introduction of systematic excavation techniques, to investigate a significant portion of one of these “metropoleis” under perfect conditions, being an abandoned site owned by the Italian state.

Gabii, located on a strategic position along the Via Prenestina about 12 miles east of Rome (fig. 1), was first occupied during the late Bronze Age and had emerged during the Iron Age as one of the primary urban centers in Latium. A rich body of textual evidence and epigraphic sources attests to it cultural and political importance, especially during the Archaic and Early Republican ages (sixth–fifth centuries BCE). Extensive field surveys carried out in the late 1970s yielded an impressive quantity of material dating to the early phases but revealed that a major contraction occurred during the Late Republican and Imperial periods. It seems that Gabii has been only marginally impacted by the great public monumental projects that characterize the vast majority of Italian cities at that time. If this is true, then it is extremely likely that the original urban layout and structures of the Archaic and early/mid-Republican periods have been substantially preserved.

In the summer of 2007 the Kelsey Museum launched intensive geoarchaeological investigations at the site, as a first step in a multi-approach and multi-staged project under the direction of this writer. A pilot campaign was first conducted in a 6-hectare area to test the response of the buried archaeology to magnetic susceptibility; a rapid assessment of the results proved magnetometry to be an optimal technique (fig. 2). In the summer of 2008 the same method of investigation was adopted on a larger scale to survey an area of approximately 25 hectares corresponding to more than 40 percent of the estimated size of the settlement (ca. 60 hectares). In addition, 47 manual and 5 mechanical cores were drilled in 52 sample units of the survey area, with the goal of assessing the depth of the soil overburden and the underlying geology, obtaining a profile of the site stratigraphy along significant cross-section lines and refining the interpretation of the anomalies detected by the magnetometer (fig. 3).

The main acquisition of the geophysical survey is a regular pattern of linear anomalies that can be in all likelihood interpreted as streets. The urban layout appears based upon a previously unknown trunk road that follows a contour line around the lake of Castiglione, bending far to the north, presumably in the direction of Tibur. Secondary orthogonal streets branching off from this main artery delineate orthogonal blocks, wrapped around the truncated cone formed by the volcanic crater. This evidence strongly suggests a more southern course for the Via Prenestina, which in previous reconstructions was assumed to be the main thoroughfare of Gabii. A later reorganization of the site topography is indeed revealed by the presence of a very strong rectilinear anomaly that traverses the entire extent of the surveyed area along its southern limit, intersecting the overall road network at an odd angle.

The subsurface sampling has demonstrated the existence of well-stratified archaeological deposits associated with the magnetic anomalies in most of the sample units of the survey areas; evidence of terracing suggests that substantial parts of the earliest levels may have been sealed up.

On this basis, major excavation work at the site is scheduled to begin in the summer of 2009. Two excavation areas wide enough to include sections of three adjacent blocks will be opened to further our understanding of the structure of the settlement: one area will be centered on a massive rectangular anomaly (a podium?) to the north of the main artery; the other one will be opened to the south of the modern Via Prenestina. Over the next two to four years it is expected that the results of the excavation will offer a significant contribution in future discussions of planned urbanism in ancient Italy.

Nicola Terrenato
Associate Professor of Classical Archaeology

Fig. 1. Aerial view of Gabii.

Fig. 2. Magnetometry in progress.

Fig. 3. Dr. Jeff Becker (Boston University) and Jason Farr (IPCAA) record a core sample.
Tel Kedesh 2008: Conservation Update

This summer we stepped out of the Museum for a month each to work on the Kelsey Museum’s project at Tel Kedesh in Israel. Together we were on site for a total of seven great weeks, providing conservation support for the entirety of the excavation season. If you read our blog, http://sitemaker.umich.edu/kelseyuseum.digdiary/home, you already know a lot about our work this summer, but here’s a little bit of background.

We set out for Israel with several goals in mind. Our first priority was, as always, conservation treatment of the artifacts being excavated. As artifacts are dug up each day on site, the trench supervisors consult with the site directors and other specialists to decide which objects are worthy of cataloguing. There are many reasons to catalogue an object—it might be the earliest from a given area, or the latest, or a particularly fine example of its type, or it might be indicative of trade—but once it’s catalogued, the team decides whether the artifact requires conservation treatment. This might involve cleaning, as in the case of coins, or mending, as with pottery, or chemical stabilization, as in the case of corroding iron farming tools. The point is, we’re not responsible for treating every single object that is excavated, only those that are considered important and that also require treatment. During this season, we treated 201 things (including some architectural features).

Did we have favorites among these 201? We did! Interestingly, our favor-ites come from the same find. Claudia really enjoyed her work on the terracotta winged figurine discovered in the fourth week. This figurine was found with Suzanne’s favorite objects, a set of glass gaming pieces and knucklebones. Another favorite project was our work to stabilize the cracked and crumbling plaster walls on site.

Which brings us to our second major goal for the 2008 season: stabilizing the rare Hellenistic decorated plaster at Kedesh. The plaster walls at Kedesh are variously decorated with incised lines, raised panels, and pigment. Our work involved capping the crumbling top edges of the plaster, providing structural support for loose and fragile areas of plaster, and strengthening cracked sections of walls. We also cleaned the hard layer of dirt off a few postage-stamp-sized areas of wall surface to reveal brilliantly painted decoration. We enjoyed working on the tel with the archaeologists and imagining how beautiful the painted plaster must have been in antiquity. And we especially loved the morning coffee break: the cardamom-flavored coffee generously shared with us by the Druse workmen compensated for the 5 a.m. start to the day.

A slightly less exciting but very important goal was the creation of a database to record all the conservation work at Tel Kedesh. Detailed recordkeeping is an extremely important part of all archaeological and conservation work. In fact, we’re already finding that our conservation photographs are being referenced by other members of the 2008 team.

This season we were also able to implement something dear to us as conservators of archaeological material: an educational website about our work. Education about the role of conservation in archaeology is something to which we’re committed. The website we created will feature not only our conservation efforts at Tel Kedesh but also other Kelsey field projects, such as the Abydos Middle Cemetery Project in Egypt. With the website, we’re hoping to reach not only the Kelsey Museum community but also other conservators, archaeologists, and allied professionals. Plus, we hope to give our readers an insider’s look at daily life on a dig. This season, we very much enjoyed working with members of the team to put website entries together, especially the “Find of the Week” feature (if you don’t know what we’re talking about, go to our site and check it out). We were happy to receive many comments about the website, but we continue to welcome feedback. If you’d like to send us your thoughts, please do. You can write us through links on the website.

If you did read our website’s blog, you might have noticed that not everything about working on a dig is fun and satisfying. For us, the biggest challenges were the sheer numbers of artifacts, especially pottery, that needed conservation and the difficulty of performing the fine, time-consuming work needed to clean corroded coins when there are so many other things to do! But the challenges are more than made up for by the collegial team work, excellent food, and beautiful setting of the project.

Kelsey conservators Suzanne Davis (left) and Claudia Chemello clean coins in the Kedesh field lab.

Winged terracotta figurine, glass gaming pieces (upper right), and glass knucklebones found this summer at Kedesh.
Collections Move to Upjohn Wing

The Kelsey Museum collections have been closed for several years to prepare for the move to the Upjohn Exhibit Wing, and I am happy to announce that the move is finally complete.

We began by closing the collections to outside scholars and museums in spring 2005, but we left them open to curators and their assistants so they could prepare the new permanent installation in the Upjohn Wing. Once we neared the date of the actual move, however, we even had to close the collections to internal use so that we could return every item to its storage location. We did this for several reasons. First, as you read in the Spring 2008 Newsletter, Conservators Suzanne Davis and Claudia Chemello, along with Lorene Sterner, needed to have everything back in place so they could complete their condition survey. Second, we had to inventory every item to ensure that everything that was supposed to move was actually still there. Third, it is easier to move the collections when they all start out in one place.

Before the inventory began, we all worked together to identify what new equipment we would need to accommodate the entire collections. We knew we needed a plan that used all the available space in the one Upjohn room allotted to storage if we were going to accommodate all our artifacts. We realized early on that to do this, we had to install compact storage. And we decided to order movable cabinets on tracks so that we could place cabinets in the space normally taken up by aisles. This way we were able to squeeze all the collections into the space available.

In the years leading up to the move, the Registry planned how the new and existing equipment would fit into collections storage. We also wrote up a schedule of what steps were needed to accomplish the move and what outside help would have to be brought in. Paul Smith at Fine Art Services and Transportation, our usual crate maker, assisted with the moving of larger, heavier objects, primarily those that had been stored in the basement of the old building. UM Moving & Trucking moved the large metal cabinets from the third-floor SAFE to Upjohn. And for the day-to-day move, we had help from Hannah Groh, Tracey Miller, and Reema Thitha, as well as continuing Registry members Michelle Fontenot and Kate Carras.

After waiting out some construction delays, we finally began the move. While we had to make some adjustments, overall the plans and layouts worked as planned. Cabinetry fit where it was supposed to go; collections moved as smoothly as anticipated. Michelle did a fabulous job of coordinating people’s work schedules, and, fortunately, the entire collections do fit in the one space. Now all collections work can take place in one secure, climate-controlled location.

Since the move ended, we have been busy with another inventory to make sure everything that was supposed to move did move. So far, nothing has turned up missing, and, better still, pieces that were previously listed as “missing” have now been found! Curators have begun working with collections again, but it will be some time before outside researchers may work with artifacts at the Kelsey again. During this time, we will continue setting up the new Registry spaces, which include a new mockup room, a new curator lab, and a new visiting researcher lab, as well as a new Registry office. There will also be new policies and rules for working with collections.

Thank you to everyone who assisted in planning and carrying out the move.

Sebastián Encina
Calendar of Events

New Wing Lecture Series
“Presenting the Past: Upcoming Exhibitions in the New Kelsey Museum”
Thursdays, 6:00 p.m. at the Kelsey Museum
• Reimagining the Kelsey Museum, 2004–2010
  by Sharon Herbert, Director
  January 22
• Exhibiting Daily Life, Death, and the Afterlife in Greek and Roman Egypt
  by Terry Wilfong, Curator of Graeco-Roman Egyptian Collections
  February 12
• The Romans on Display at the Kelsey Museum
  by Elaine Gazda, Curator of Hellenistic and Roman Collections
  March 12
• Seleucia-on-the-Tigris: An Ancient City between East and West
  by Margaret C. Root, Curator of Greek and Near Eastern Collections
  March 26
• The Kelsey Museum’s Dynastic Egyptian Collections
  by Janet Richards, Curator of Dynastic Egyptian Collections
  April 30

• Conservation Challenges in the New Kelsey
  by Claudia Chemello and Suzanne Davis, Conservators
  May 14
• Greece and Cyprus: New and Old Treasures
  by Lauren Talalay, Curator for Academic Outreach
  May 28

The Tiffany window was recently reinstalled in the Kelsey library after being removed for restoration and safekeeping during construction.