Boston University
Center for
Archaeological Studies

Spring 2009
Vol. 20, No. 1

CONTEXT

Archaeology Professor Curtis Runnels and Lucy Wiseman share a moment of amusement at the Archaeology holiday party. See inside, page 6, regarding Lucy's retirement as the Managing Editor of Context.

INSIDE THIS ISSUE:

The Tell es-Sweyhat Archaeological Project 2008

by Michael D. Danti

In 2008, Boston University and the University of Pennsylvania Museum initiated a new research project specifically to investigate the rise and decline of societal complexity in the Early Bronze Age and the long-term effects of increasing aridity in the Middle and Late Holocene. Excavations and archaeological survey were conducted in May and June under the direction of Michael D. Danti of Boston University and William B. Hafford of the University of Pennsylvania.

> Why, when complex social systems are designed to handle catastrophes and routinely do, would any society succumb? If any society has ever succumbed to a single-event catastrophe, it must have been a disaster of truly colossal magnitude (Tainter 1988: 206).

The role of catastrophes, particularly climatic phenomena, in the collapse of complex societies is currently one of the more compelling theoretical debates in the archaeology of Mesopotamia. Scholars have cited abrupt, acute episodes of aridity lasting centuries as key shaping forces in the rise and demise of cultural complexity and as the prime movers behind plant and animal domestica-

continued on page 2

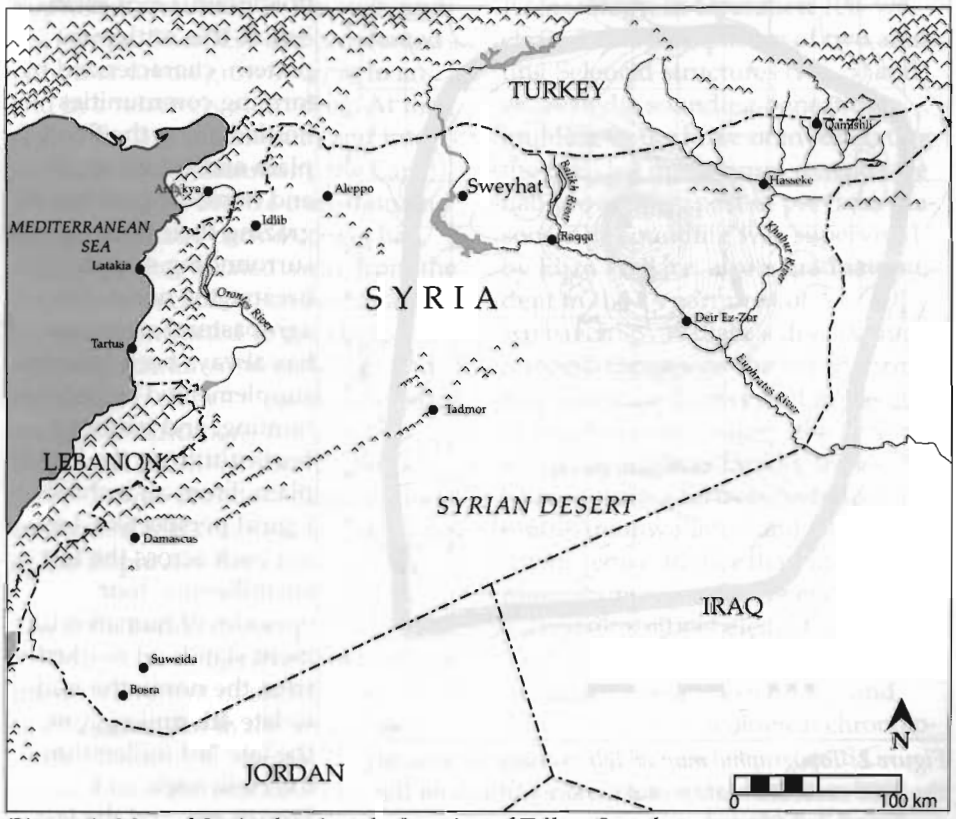

Figure 1. Map of Syria showing the location of Tell es-Sweyhat.

continued from page 1

tion, canal irrigation, and many other developments. Although the details are hotly debated, there is a growing acceptance that the Holocene climate of the Near East varied a great deal and was characterized by abrupt periods of aridity and an overall trend toward increased aridity in the Late Holocene. Much attention has been given to the role of a particularly severe period of aridity, the 4.2 Ka event, which lasted from ca. 2200–1900 B.C., in the downfall of the world's first documented empire, the Akkadian Empire (2350–2150 B.C.), and the collapse of civilizations worldwide. The use of catastrophe theories for explaining societal "collapse" begs the question of why societies did not adapt to changing conditions. For the last 15 years, the archaeological site of Tell es-Sweyhat, Syria has been central to the debate about the 4.2 Ka climate event and has played a major role in the development of other theories on "collapse."

Tell es-Sweyhat

Tell es-Sweyhat, possibly the city of Burman in the Early Bronze Age (3100–2000 B.C.; hereafter EBA), is located in northern Syria 65 km south of the modern Turkish border just inside Mesopotamia—the mounds lie 3 km west of the left bank of the Euphrates River at the center of a crescent-shaped valley cut out of the surrounding limestone plateau by the river in the Middle Pleistocene (Fig. 1). Today Sweyhat occupies the southern edge of the dry-farming zone, receiving only 250 mm of rainfall per annum with 25–35% interannual variability, and thus crop failure is a constant threat to farmers. Such was also the case in antiquity, and the ancient inhabitants practiced a balanced form of agropastoralism combining sheep-goat pastoralism with the dry farming of barley, primarily as fodder for animals. Canal irrigation is not possible in the valley since the valley floor slopes up markedly away from the river. Evidence for human occupation in the region dates back to the Epipaleolithic: a Natufian site was discovered in 2008 during survey, but sedentary occupation of the region is not conclusively attested until the pottery Neolithic along the fringes of the Euphrates floodplain. Once established, this settlement pattern, characterized by farming communities nestled along the floodplain and transhumant and nomadic pastoralists' grazing their flocks in the surrounding steppe, became the norm. The agropastoral economy has always been heavily supplemented by fishing, hunting, and irrigated horticulture on the floodplain. From an archaeological perspective, looking back across the last six millennia, four episodes of human settlement stand out markedly from the norm: the mid-to-late 4th millennium, the late 3rd millennium, the Hellenistic and Roman era, and the last

Figure 2. Topographic map of Tell es-Sweyhat showing the 2008 excavation areas and surface features on the southern High Mound.

Figure 3. The southern wall of the fortress (right) and walls abutting it. The view is to the west.

75 years. The first of these periods includes the colonization of the region by southern Mesopotamian Uruk colonies and their sudden demise at the end of the 4th millennium. Urbanization occurs in the latter three episodes with settlements expanding beyond the floodplain of the river into the adjacent valleys and the undulating steppe of the uplands between the Balikh and Euphrates Rivers. The Tell es-Sweyhat archaeological project seeks to elucidate the factors that supported these intermittent periods of urbanization in this agriculturally marginal environment as well as the intervening episodes, which are characterized by the dominance of transhumant and nomadic tribal pastoralists. Cultural responses to short- and long-term climate change are naturally one of our key interests.

Sweyhat consists of a High Mound rising 14.5 m above the surrounding plain and covering approximately 5–6 ha (Fig. 2). A rectangular Low Mound surrounds the High Mound and covers approximately 40 ha. In the early-to-mid 3rd millennium B.C., the settlement consisted of a large mudbrick fortress (measuring minimally 75 m east–west by 62 m north–south and at least 3 m high) surrounded by a settlement that was likely unfortified (Fig. 3). Cemeteries of subterranean

Figure 4. Mapping a tomb shaft in the southern Low Mound.

shaft-and-chamber tombs lay on the outskirts of this settlement.

From Fortress Town to Urban Center

In the mid-to-late 3rd millennium, Sweyhat's urban environment was radically modified. The fortress was buried within a high earthen terrace upon which a bent-axis long room temple was constructed. This terrace and temple, called the High Inner City, towered over the surrounding settlement of the late-3rd millennium. The terrace was abutted by the buildings of the Low Inner City, consisting of residential structures and industrial facilities such as a large kitchen, a warehouse, and facilities for grinding grain. The Inner City was surrounded by the Inner City Wall—a 2.75-meter-thick mudbrick fortification wall on a stone foundation with projecting buttresses and towers. Beyond this wall lay the Outer City (the area of the Low Mound), which was surrounded by the Outer City Fortifications, composed of a mudbrick wall on stone foundations protected by an outer earthen rampart and ditch. In the late 3rd millennium, there is evidence of at least one violent disruption in some buildings of the Low Inner City and in the temple of the High Inner City. Buildings were burned with their contents in place, and the walls of other buildings were toppled, crushing their contents. Following this disruption, most of these structures show evidence of having been rebuilt using the same architectural plans, which indicates this violent episode was not followed by a major abandonment. Concurrent with Sweyhat's urban apogee we see a peak in settlement in the valley, in neighboring regions along the Middle Euphrates, and even in the surrounding steppe. Then this unprecedented period of urban growth came to an end in a relatively short time. At the end of the 3rd millennium and into the early 2nd millennium, the Early Bronze-Middle Bronze transition and Middle Bronze I periods, Sweyhat and other sites located away from the Euphrates declined. Settlement at Sweyhat contracted to the High Mound, monumental buildings and industrial facilities were abandoned, and the fortifications fell into ruin. Before the Middle Bronze II period, Sweyhat was abandoned and regional settlement was confined to the fringes of the Euphrates floodplain.

The 2008 Excavations

Our current objectives are to study the development of societal complexity and urbanism in the area of the High Mound with special emphasis on the examination of the agropastoral economy. We are continuing the excavation of units opened by previous expeditions (Holland 2006, Zettler et al. 1997, Danti and Hafford 2008) as well as new areas. Since the early 1990s, the Low Mound has been under irrigated cultivation and we are not permitted to excavate there. Between 2005 and 2008, a number of subterranean shaft-and-chamber tombs of the mid-3rd millennium were opened by irrigation water in the northern, eastern, and southern Low Mound; we were granted permission to map them (Fig. 4), but not to excavate. A Syrian salvage project excavated an unspecified number of tombs following our 2008 season, and we await their published results.

In 2008, we began the excavation of a large horizontal clearance of Seleucid and Late Roman remains on the southern High Mound to better document these poorly known periods, particularly in terms of the largely unknown regional ceramic traditions and the architecture typical of rural settlements. These excavations are part of a larger regional project to investigate the Seleucid and Late Roman periods in the Middle Euphrates region initiated by Noam Rifkind, a Ph.D. candidate in Boston University's Department of Archaeology. In Operation 100, we cleared a large exposure of two abutting Seleucid structures (Fig. 5) and excavated a sounding beneath the building in the hope of investigating the mid-3rd millennium remains we had grown to expect in previous seasons. The sounding was supervised by Eliza Wallace, also a graduate student in the Department of Archaeology. Wallace's dissertation research focuses on the urban form and evolution of Sweyhat in the mid-to-late 3rd millennium—the period when the site was rapidly transformed from a fortress town to a multi-circumvallated and tiered urban center. Rather than mid-3rd millennium remains, we encountered a deep deposit of Seleucid, and possibly Achaemenid, remains that holds much promise for extending and refining our archaeological chronology for the 4th–2nd centuries B.C.

In the area of the southwestern

continued on page 4

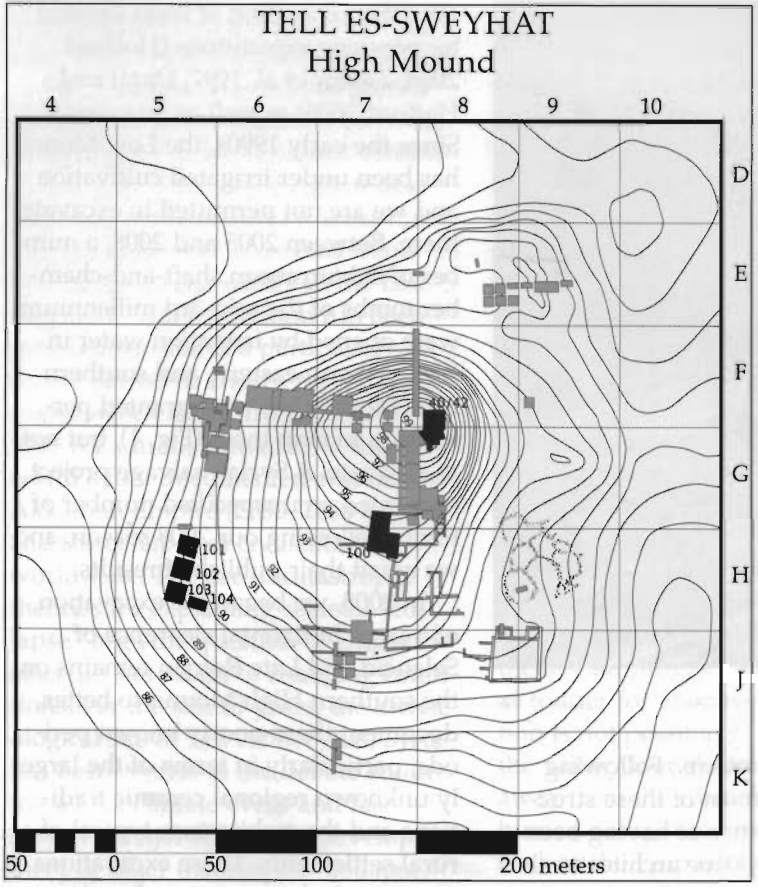

Figure 5. Topographic map of the High Mound of Tell es-Sweyhat showing the excavation units of 2008 (black) and those of the previous seasons (grey).

continued from page 3

High Mound, we located Operations 101–104 (Fig. 5), four new units (10 m × 10 m squares) placed to investigate this virtually unexplored portion of the Low Inner City and the Inner Fortifications. In the upper deposit, we encountered graves of the Seleucid or Late Roman periods, including one so-called bathtub burial (Fig. 6) and several stone-lined cist graves. In the northernmost unit, Operation 101, we uncovered late-3rd millennium-stone foundations, probably the remains of a postern gate in the Inner City Wall. These remains are tentatively dated to the late-3rd-millennium rebuilding of the Inner City following the disruption of 2200 B.C. In Operations 102–104 only scattered and severely eroded remains of this late-3rd-millennium deposit were recovered. In these operations, we uncovered a large exposure of the Inner City Wall and adjacent architecture. These buildings of as yet undetermined function contained cooking installations, storage facilities, and an area dedicated to grinding grain. One room of the structure excavated in Operation 102 contained a low mudbrick podium covered in plaster. This feature seems to indicate that the space was used for cultic purposes, and the artifactual assemblage supports this hypothesis—it includes beads, fragmentary alabaster and ostrich eggshell vessels, a fragmentary macehead, and a smashed lion vessel. These buildings were torn down and the walls toppled onto the contents of the buildings, leaving large numbers of *in situ* finds and well preserved features.

At the summit of the High Mound, we continued the excavation of the temple of the High Inner City, carefully studying the detailed evidence of its multiple use-phases and destruction by fire. In the west end of the temple, we started the excavation of a sounding beneath the temple. In this sounding we immediately encountered deposits of the mid-3rd millennium, presumably interior spaces of the fortress, including a large dome-shaped mudbrick oven, large plaster-lined storage pits, and drains. We found no conclusive evidence that the area served a cultic function prior to the late-3rd-millennium in this small exposure. In the areas surrounding the temple, we have been exploring adjacent late-3rd millennium architecture over the last four excavation seasons, most of which is poorly preserved. In 2008, we continued work in the area north and east of the temple and discovered intriguing architecture that may have served as tombs, consisting of two square mudbrick structures on stone foundations (Fig. 7); the structures have interior dimen-

Figure 6. A "bathtub burial" in Operation 102. It contained the skeleton of an adult and dates to the Seleucid/Late Roman period.

sions of 1.30 m × 1.30 m and are preserved to their roof levels (interior height 46 cm). The entrances to these small chambers, only 60 cm wide, were located in the south, where there was a stone-paved court (Fig. 7). The entrances were sealed with brick and the structures were heavily coated in lime plaster. The structures were roofed with partial arches, ending in flat mudbrick roofs. The interiors were heavily plastered, including the floor levels, and we were able to determine that the interiors were not initially infilled based on the layers of debris that had fallen from the roof and walls onto the two floor levels, which were separated by a layer of debris 13 cm thick. No human remains were recovered from these structures. The artifactual assemblage dates to the mid-3rd millennium B.C. and included nearly complete Euphrates metallic-ware vessels, fragments of copper/bronze, fragments of ostrich eggshell, and animal bones. It is not clear whether the assemblage from the latest floor is use-related or represents the infilling of these structures prior to the construction of the late-3rd-millennium High Inner City. In other areas, we know that the chambers of the early-to-mid-3rd-millennium fortress were intentionally filled with debris and sealed prior to the building of structures over the top of it. Further research is needed to determine whether these structures date to the period of the fortress, the temple, or both. If they served as tombs, it would appear that they were intentionally cleaned out or were looted prior to the end of the 3rd millennium B.C.

Future Directions

In order to understand the potential impact of the 4.2 Ka climate event in the Middle Euphrates region, we must greatly refine our chronology of the mid-to-late 3rd millennium B.C. Tell es-Sweyhat, with its continuous record of EBA occupation, promises to provide the ideal field laboratory for this objective as well as for studying the evolution of agropastoral economies over the *longue durée* in relation to climate. In contrast to other regions of Mesopotamia, which witnessed the widespread abandonment of settlements around 2200 B.C., the Middle Euphrates region prospered. No only did urban centers such as Sweyhat withstand the initial impact of the 4.2 Ka climate event, the settlement and many others like it thrived for another 150–200 years. It was not until the EB–MB transition that we possibly see a major cultural response to changing climate as settlement was confined to the area of the Euphrates floodplain and the surrounding steppe was used by transhumant pastoralists. This pattern prevailed until the conquest of the region by Alexander the Great, at which time settlement again expanded into the regions away from the river. Sweyhat was reoccupied after a 1400-year hiatus. Continued excavation of the EBA and Hellenistic settlements will greatly enhance our understanding of the timing and circumstances of these rare urban episodes. In 2009, we plan to continue and expand our excavations in Operation 100 and to explore adjacent Seleucid/Late Roman structures visible on the mound's surface. We will also continue work in Operations 101 and 102 on the southwest mound. These areas promise to provide well-stratified deposits dating to the mid-to-late 3rd millennium B.C. that will enable us to refine our dating of the construction of the Inner City Fortifications, the subsequent destruction of much of the Inner City, and its rebuilding.

Figure 7. The entrance to one of the mudbrick structures located east of the temple of the High Inner City. The view is to the north.

Michael D. Danti is an Assistant Professor in the Department of Archaeology at Boston University.

References

Danti, Michael D. and William B. Hafford. 2008. "A Mesopotamian Mystery: The City of Sweyhat," *Current World Archaeology* 30 3/6: 34–40.

Holland, Thomas A. 2006. *Excavations at Tell es-Sweyhat, Syria 2. Archaeology of the Bronze Age, Hellenistic, and Roman Remains at an Ancient Town on the Euphrates River.* Oriental Institute Publications 125. Chicago: The Oriental Institute of the University of Chicago.

Tainter, Joseph A. 1988. *The Collapse of Complex Societies.* Cambridge: Cambridge University Press.

Zettler, Richard L. et al. 1997. *Subsistence and Settlement in a Marginal Environment: Tell es-Sweyhat, 1989–1995 Preliminary Report. MASCA Research Papers in Science and Archaeology* 14. Philadelphia: Museum Applied Sciences Center for Archaeology.