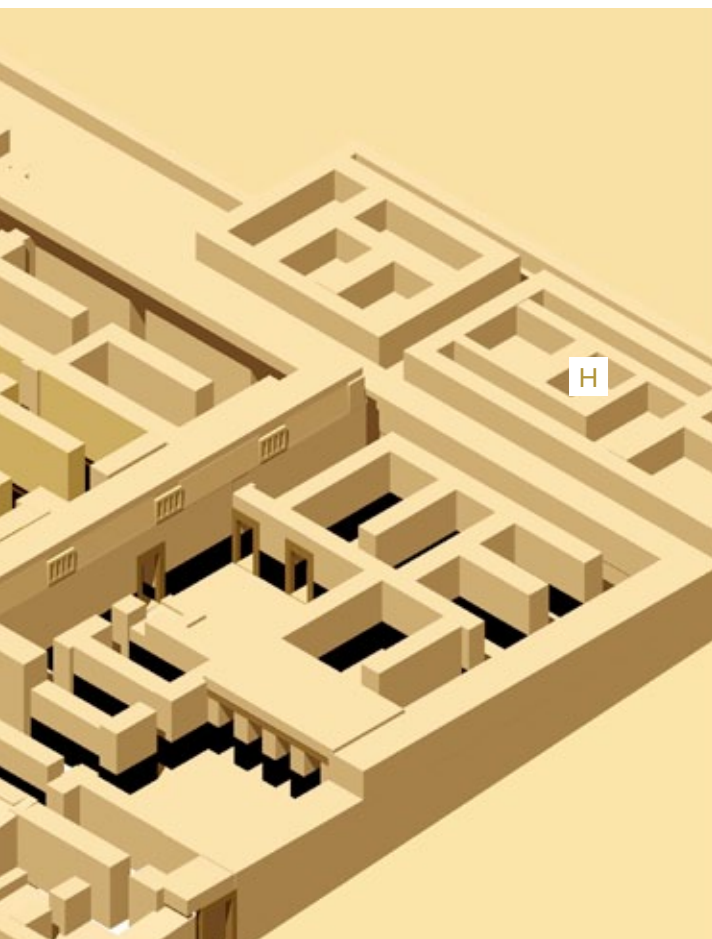


MUSEUM
EXCAVATIONS
AT ABYDOS



Extensive changes over two centuries reconfigured many areas of the mayor's house but the central residence—the main habitation structure of the mayors of *Wah-sut*—was left unchanged.



- A. Open Plaza
- B. Garden courtyard with ficus trees
- C. Kitchen/cooking area
- D. Residence (in former granary block)
- E. Granary courtyard (in former central court)
- F. Secondary residential unit (in former central court)
- G. Central residence
- H. *Areryt* (administrative area)

*i*t was the summer of 1994. Our first season of excavation was underway on the temple of Senwosret III. Walking across the landscape of South Abydos, I had many questions. What else besides a pharaoh's tomb and mortuary temple once existed at South Abydos? Not far to the south of the temple, my attention was drawn to a promising looking area where the eroded tops of brick walls were visible. An abundance of Middle Kingdom pottery indicated buildings that were contemporary with the pharaoh's temple were located just a short walk away. It was here in May of 1994 that we started work on what would turn out to be an exciting discovery, and one that would add incomparable information to our understanding of South Abydos during the Middle Kingdom: a palatial residence that belonged to a dynasty of mayors who ran the town of *Wah-sut* for two centuries, *ca.* 1850–1650 BCE.

*Modeling the Mayor's House
at South Abydos* BY JOSEF WEGNER

The PALATIAL
RESIDENCE
of WAH-SUT

The initial excavations demonstrated the presence of what was evidently a high status domestic building. This was promising enough in itself. Urban sites in the Nile Valley offer unique information on aspects of daily life and society not always reflected in the written and artistic record. Research on settlements has been hampered by the fact that most ancient habitation sites lay in or adjacent to the Nile floodplain and over millennia have gradually been covered by alluvium. Often modern towns and cities sit directly atop ancient settlements creating problems of access for archaeological survey and excavation. Here at South Abydos we had extensive and accessible remains of a habitation site.

We discovered the mayor's residence at South Abydos during the first season of work at the site, naming it simply "Building A." We knew immediately that it was an elite house of substantial scale. However, it was not until subsequent seasons when we excavated numerous clay impressions naming the *Administrative gatehouse of the residence of the mayor of Wah-sut-Khakaure-maa-kheru-em-Abdju* that its identity became clear. Building A was the residence of a series of local mayors who administered

the town and mortuary foundation of Senwosret III. In one fell swoop we had identified the ancient name of Senwosret III's mortuary foundation, the name of the town (*Wah-sut*), as well as the identity of Building A as the mayor's house. Retrieval of further clay sealings in stratified deposits that named a series of mayors, as well as other inscribed material from these same individuals, permits the reconstruction of a local mayoral history covering the period from *ca.* 1850 to 1650 BCE.

By 2001 we had expanded excavations in the mayor's house and determined the overall size and location of the building. The main building covers an impressive 53 by 82 meters. In addition, behind the building is a walled compound containing a group of structures that together comprise the administrative gatehouse. Given the large size of the building, it has taken a numbers of seasons to excavate and study the finds. Work on the mayor's house has benefited from funding through the National Science Foundation and the American Philosophical Society among other sources. During 2011–2012, with funding from the Michaela Schiff-Giorgini Foundation for Egyptological Research, we completed the excavation of the building's interior. At the present time we have a complete record of the building's architecture and the changes that occurred to it over its approximately 250-year history.

THE RESIDENCE OF THE MAYORS

There are two things that are immediately notable about the mayor's house. The first is the impressive palace-like scale of the original building. This was a building specifically designed as a visible statement of authority, wealth, and power. Its large scale, lavish fittings, and numerous columned halls in many ways emulate the design of royal palaces from ancient Egypt. The second fact is that many elements of the original architect's vision proved to be dispensable over the building's long history. The building was not static as its

The mayor's residence (Building A) and adjacent buildings in the Middle Kingdom town of *Wah-sut* have been excavated by the team from the Penn Museum. The blue lines indicate the limits of excavation.





occupants adapted it in many ways over time, significantly altering parts of the interior in ways that dramatically changed its appearance and function.

The mayor's house at South Abydos is far from a perfectly preserved time capsule from Egypt's Middle Kingdom. Although many parts of the building still preserve floors, doorways, and column bases, other areas are quite badly pitted and eroded. Some areas of the building that underwent secondary changes witnessed such substantial remodeling that the original form of the interior architecture is simply unclear. Nevertheless, the majority of the building preserves evidence not only of its original late 12th Dynasty design but also the series of alterations that changed the building's form over time. Here we have an opportunity to examine a large, institutional building as it evolved and adapted to changing needs over several centuries.

A very useful exercise when studying an archaeological building like the mayor's house is to try to translate the excavated evidence into a three-dimensional reconstruction of the building as it might once have appeared through the different phases of its history. Modeling the mayor's house helps not just to visualize it, but also to understand the principles behind the overall architectural design and the ways in which parts of the building functioned and related to one another. The direct evidence at our disposal includes the building's preserved footprint

Clay seal impressions represent the first three mayors of the town of *Wah-sut*: Nakht (left), Nakht's son Khentykhet (center), and Nakht's son Neferher (right). These three men administered the town during the late 12th Dynasty (ca. 1850–1800 BCE).

as well as architectural fragments (stone fittings, plasterwork, roofing fragments, and other elements of the building) retrieved in the process of excavation.

Building A is a structure that once stood to a height of 20 feet, or more in some places. Today it is preserved only waist-high (2-3 feet) in the best areas, and ankle-high in some areas. Consequently, there is a certain amount of educated guesswork involved in the process of reconstruction. However, the building's physical

remains, combined with evidence provided by ancient Egyptian scenes, models, and texts, provide the basis for modeling the building using computer-assisted design software. Here we turn to look at how Building A may be visualized.

THE ORIGINAL BUILDING

Let us look first at the mayor's house in its original form, when it was constructed by royal architects ca. 1850 BCE as part of the state establishment of the mortuary foundation of pharaoh Senwosret III. We see a building constructed with painstaking exactness following architect's blueprints. Its walls, doors, and room dimensions are all multiples of the Egyptian cubit (one cubit is equal to 1.7 feet or .525 meter). It was beautifully built with large, mass-produced mud bricks. Its doors had stone thresholds and jambs, and its floors were bricked and plastered throughout. This was a building expressly designed for a

powerful administrator: the *haty-ʿ* or mayor, whose job it was to administer the newly founded royal funerary cult.

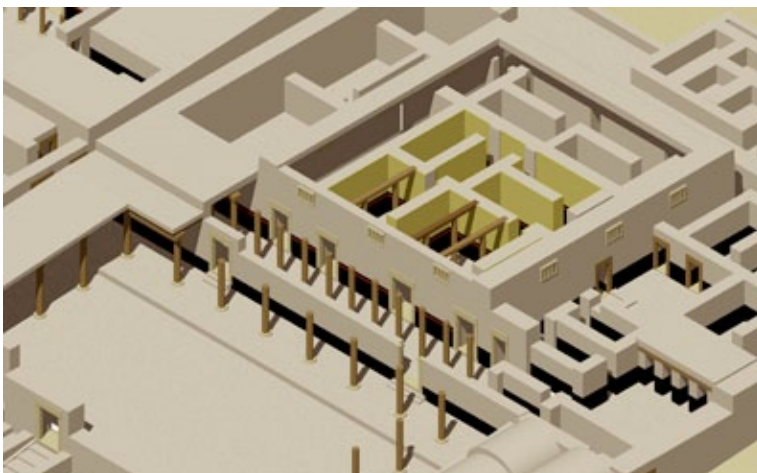
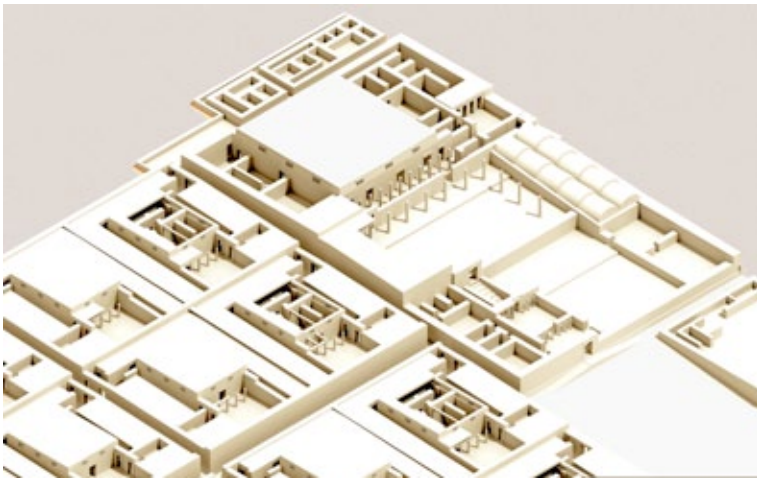
The first occupant of this office at South Abydos was a man named Nakht, followed in office by two of his sons in succession. After Nakht, the mayoralty passed to Nakht's son Khentykhet and then to Nakht's (presumably younger) son Neferher. These three mayors, all belonging to one family, administered the mortuary foundation of Senwosret III over the better part of half a century, through the late 12th Dynasty and into the succeeding 13th Dynasty.

The original mayor's house occupied by Nakht, Khentykhet, and Neferher is the product of the original design of *Wab-sut*. The building is conceived in three main sections. At the back was the main residential sector

including a "central residence" flanked on either side by supporting room blocks. The central residence follows a tripartite template that occurs also in other houses of this time period in Egypt, and also replicated in smaller format in the other elite houses at *Wab-sut*. These were the personal apartments of the mayor and possibly members of his immediate family. The larger chambers in the central residence all have column emplacements indicating that this part of the building was entirely roofed. Whether it had a single story or a second level is difficult to say, but fragments of stone-fenestrated windows suggest lighting and ventilation was provided by clerestory windows mounted in the upper parts of the walls.

On one side of the central residence stood a block of chambers for storage and preparation of foodstuffs. This "kitchen block" could be entered by a separate external doorway with, on the outside, a semi-subterranean chamber used for water delivery. Two open courtyards, one with a pillared portico facing north and the other with direct access to the central residence, both have ample evidence for regular storage and preparation of foodstuffs. A considerable amount of kitchen debris—cooking pottery and other utilitarian ceramics—accumulated outside this area.

To emphasize the status of the central residence, a grand hall composed of 15 columns originally ran along the front of the central residence. The columns themselves vanished long ago; we only found the limestone bases with impressions of columns. We can envision here a series of painted wood columns, mostly likely of the papyrus bundle-type that frequently appears in scenes and



TOP: This isometric cut-away view shows the mayor's house at the southwest corner of the town. Blocks of smaller households (shown both in complete reconstruction and cut-away) extend to the east. It is not clear whether the main residence was single- or multi-storied (here shown as a simple flat-roofed single story).

BOTTOM: In the original design of the mayor's house, the central residence was fronted by a 15-columned broad hall and peristyle courtyard. Many rooms had a black dado (lower wall) with the upper wall plastered white or yellow. Remains of painted wall scenes occur in some areas.

models of domestic architecture during Egypt's Middle Kingdom. The evidence suggests an impressive architectural space with the soaring colonnade fronting a series of stone-lined doorways, which lead to different parts of the central residence.

As impressive as it must have been, the 15-column hall was originally fronted by an even grander columned courtyard, so large it composed the entire central third of the mayor's house. Whereas the 15-column hall was roofed, the space in front was a peristyle courtyard with massive columns (the bases were *ca.* 90 cm, 2.5 feet in diameter) extending along the front and sides. The exact functions of this central courtyard are unclear because it was substantially remodeled during the later history of the building. However, the grandeur of this architectural space suggests a location designed for official use. We may perhaps envision this as a semi-open meeting space where many of the official functions of the mayoralty occurred.

For a long time it was unclear whether the mayor's house had a formal entryway: a "front door." However, in 2003 we did discover evidence for a main door on the front (Nile-facing) side of the building. The door was not centered exactly on the building itself, but was positioned with respect to a large open plaza that fronts the mayor's house. The plaza does not span the full width of the mayor's house due to the presence of another building situated just off its northwest corner. The plaza forms a kind of open area dominated in its center by the entrance into the mayor's house. This main doorway was raised up above the level of the plaza and accessible by brick ramps placed against the building's façade. Unfortunately the doorway itself is very eroded but we may envision a grand stone-lined entryway, probably with hieroglyphic texts marking this as the formal door to the mayoral residence of *Wab-sut*. In all likelihood the plaza itself connects with other features now buried beneath the floodplain, such as a central road and access to a landing quay or canal providing riverine communication to the mayoral residence.

During our 2011–2012 season we completed excavation of the inner part of the building just behind this main entrance. Here we revealed another grand element of the building's original architecture. Upon entering the building one would have passed through a sequence of two courtyards with pillared porticoes that led to a brick

staircase that proceeds up into the central peristyle courtyard. There is no doubt that a major function of the original design of the mayor's house was the visual statement of power provided by these grand architectural spaces. Here at South Abydos we see some of the principles of royal palace architecture adapted into the house of a powerful town mayor who himself may have had close connections with the royalty of the period.

THE EVOLUTION OF A BUILDING

The excavations of the mayor's house have provided a rich illustration of the ways in which a building conceived with a specific set of functions can be adapted and altered in major ways to suit the evolving needs of its occupants. This does not imply the abandonment of its essential function as the seat of the mayors of *Wab-sut*. Indeed, we have strong evidence for the continuity of a hereditary succession of mayors who passed the office from father to son over more than two centuries. Rather, the building was remodeled and changed in ways that discarded some of the original palatial elements and reflected more the necessities of a large, evolving elite household.

The nature of the mudbrick architecture helps to define parts of the building that were original and elements that were added later. While the whole town was originally built with uniform mass-produced bricks, changes were made using smaller, locally-made bricks. Unlike the original blueprint, secondary walls and spaces do not follow the cubit system. Architecturally we see continuity reflected in the fact that the central residence and inner room blocks were maintained largely intact, with only minor modifications over the entire history of the building. In contrast, the grand columned hall and courtyard and entire front section of the building were altered to such a degree that they lost all resemblance to their original architectural form. This is perhaps not surprising in that the central peristyle courtyard, while aesthetically impressive, may have been essentially adaptable space that could be allocated for other uses. By the middle of the 13th Dynasty, the colonnade of the peristyle courtyard was gone; only the impressions of its great column bases remained in the brick floor. In its place a secondary house was added complete with its own columned halls, and even a sunken "bathtub" lined

with tilework of mortared potsherds. Adjacent to the house was a storage courtyard outfitted with a group of brick beehive-shaped granaries. Despite the changes, the main door to the house was still intact, and a passage from the lower part of the building to the inner residence was still maintained.

Extensive changes were made in the building's later history to the entire middle and front portions of the structure. Originally running alongside the grand pillared courtyard was a generously sized granary with ten storage chambers. This granary was remodeled during the 13th Dynasty to form an independent residential unit. This was itself a grand redesign with a pillared portico facing (unusually) southwards towards the central residence. It was here that we discovered in 2001 a painted birth brick used in rituals of childbirth—the only example of its kind known to date from Egypt—and suggestive that this secondary household may have been a female residential area, perhaps for the wife of one of the mayors in the later history of the building.

An intriguing addition to the front part of the building was the removal of the original architecture and its replacement with a walled garden courtyard. The actual floor level of this garden is not preserved but we have a 3 x 4 grid of 12 brick tree planters. Remnants of bark and leaves suggest this was a garden of ficus trees (*Ficus sycamorus*), which were frequently favored by Egyptians in formal garden settings.

The mayoral residence provides a fascinating glimpse into the realities of a long-lived building over its lifespan. While it is not a perfectly preserved time capsule, the shell of this once vibrant building—the heart of the community of *Wah-sut* for over two centuries—has much to tell us about life in Egypt four millennia ago. ●

FOR FURTHER READING

Wegner, Josef. "Echoes of Power: the Mayor's House of Ancient *Wah-sut*." *Expedition* 48.2 (2006): 31-37.

Wegner, Josef. "External Connections of the Community of *Wah-sut* during the Late Middle Kingdom," in *Perspectives on Ancient Egypt: Studies in Honor of Edward Brovarski*, edited by Z. Hawass, P. Der Manuelian, and R. Hussein, pp. 437-458. Cairo: SCA Cahier no. 40, 2010.

A Treasure in Clay

The excavation of the mayor's residence has provided evidence on the building that served as the nerve center of ancient South Abydos. But what of the actual people who lived and worked in the mayor's house? These individuals would remain anonymous if it were not for one important custom during Egypt's Middle Kingdom—commemorating people's names and titles on seals that were used to impress lumps of clay as part of daily administrative routines. During this time period many people possessed name and title scarabs. Also there were official stamp seals that included the names of institutions. The mayor's house at South Abydos has turned into a goldmine for this valuable category of artifact, which helps us to reconstruct the composition of the ancient community and the administrative system that maintained it over time.

Directly behind the mayor's house are the ruins of an important area, the *areryt* or administrative gatehouse. We first identified the architectural remains of the *areryt* in 2002 and conducted excavations there in 2004. Here once lay a series of multi-roomed structures and smaller areas for storage and distribution of goods. This was a



ABOVE: Graduate students Shelby Justl and Paul Verhelst stand beside the summer 2013 excavations into the administrative gatehouse and the deposits behind it. RIGHT: Deposits behind the mayor's house were excavated in June 2013.

place occupied by scribes and officials who managed the flow of goods and communications that went in and out of the mayor's house. More recently, we have defined extensive deposits that are rich with discarded clay seal impressions that had been thrown out of the *areryt*. Most of the debris was cast onto the desert surface behind a boundary wall. It piled up over time and has been beautifully preserved over thousands of years in the dry desert sands.

In 2013, with funds from the University of Pennsylvania's Faculty Research Foundation, we completed the first phase of detailed excavations of these *areryt* deposits. During just four weeks of excavation in the summer of 2013 we retrieved over 2,000 clay sealing fragments. We have yet to examine the densest areas of the deposits. Previous work in and around the mayor's house had produced a sizeable corpus of seals. However, the new work on the *areryt* has already produced many new examples of seals. The potential at South Abydos exists for the largest assemblage of administrative sealings ever found in the Nile Valley.



LEFT: This seal impression was photographed using Reflectance Transformation Imaging. In this image the color of the clay has been removed and the surface reflectivity enhanced to highlight the hieroglyphs and surface details. BELOW: Fresh from the ground, clay seal impressions from 2013 excavations in the *areryt* or administrative gatehouse. The three upper rows have hieroglyphic texts while the bottom row has impressions of scarabs with decorative and amuletic symbols.



In order to streamline the recording and study the seals, we are using a photographic technique called Polynomial Transfer Mapping or Reflectance Transformation Imaging (RTI). This technique involves multiple exposures taken with the light source at different positions. RTI produces a high-resolution image that can be viewed with a variety of lighting angles and manipulated to enhance aspects of the object's surface such as reflectivity and grain. It also has solved an ongoing problem: how to record and reconstruct the hieroglyphic texts on these tiny objects. Excavation, recording, and publication of the *areryt* sealings is an ongoing project that will result in a greater understanding of how the mayor's house worked and who it was that worked there.