

Dr Győző Vörös  
Hungarian Academy of Arts  
H-1014 Budapest  
Országház u. 19.  
Hungary  
[taposiris@hotmail.com](mailto:taposiris@hotmail.com)

**Győző Vörös**

## **Machaerus: Excavations and Surveys (2009-2012)**

Machaerus, the Herodian fortified royal palace overlooking the Dead Sea in Transjordan, is the historical place where, according to Flavius Josephus (*Antiquitates Judaicae* XVIII 5, 2) one of the holiest men of his era (known variously as Yokhanan the Baptizer; Saint John the Baptist, the Forerunner and Precursor of Jesus Christ; Prophet Yahya ibn Zakariyya) was imprisoned and executed by the Tetrarch Herod Antipas nearly 2,000 years ago. The Hungarian Academy of Arts in collaboration with the Department of Antiquities of Jordan has been conducting archaeological excavations and architectural surveys at the ancient royal palace and city of Machaerus hilltop since July 2009 (FIG. 1).

Josephus described the citadel of Machaerus and its lower city in detail (*BJ* VII, 6). The rediscovery of the former was the achievement of the German explorer Ulrich Jasper Seetzen (1807) and the latter of the French Dominican Father Felix-Marie Abel (1909). We should not forget that although Christian pilgrimages to the Holy Land started in the time of the Roman Emperor Constantine the Great, by that time Machaerus had already been deserted for two and a half centuries. It only became a destination for pilgrims after its archaeological rediscovery in the 19<sup>th</sup> century. An exploratory

trial excavation, conducted by the American-ordained Baptist Minister E. Jerry Vardaman (1927 - 2000) in June 1968, lasted for three weeks. All of the 4,973 archaeological objects excavated at Machaerus at that time were exported to the United States with the permission of the Jordanian government, but the work was never published. We will return to this topic at the end of this paper.

The second and the third Machaerus excavations were led (in 1978 - 1981 and 1992 - 1993) by two well-known professors of the Studium Biblicum Franciscanum in Jerusalem: Virgilio Canio Corbo (1918 - 1991) and Michele Piccirillo (1944 - 2008). Although the results of their excavations were not presented in definitive final reports, they published several remarkable preliminary articles (Corbo 1979, 1980, 1981; Corbo and Loffreda 1981; Piccirillo 1979; Loffreda 1981). Nevertheless, a summary monograph and an article were published on the ceramic and numismatic material by members of the Corbo team, respectively Stanislaw Loffreda and Michele Piccirillo (Loffreda 1996; Piccirillo 1980). From an architectural perspective, Father Corbo concentrated primarily on the excavation of the citadel and his final result was a sketched layout, being the first ground plan of the interior of the fortified



1. East bank of the Dead Sea from the west: oases of Kallirrhoe and Zara in the foreground; hilltop of Machaerus, marked with an arrow, on the horizon.

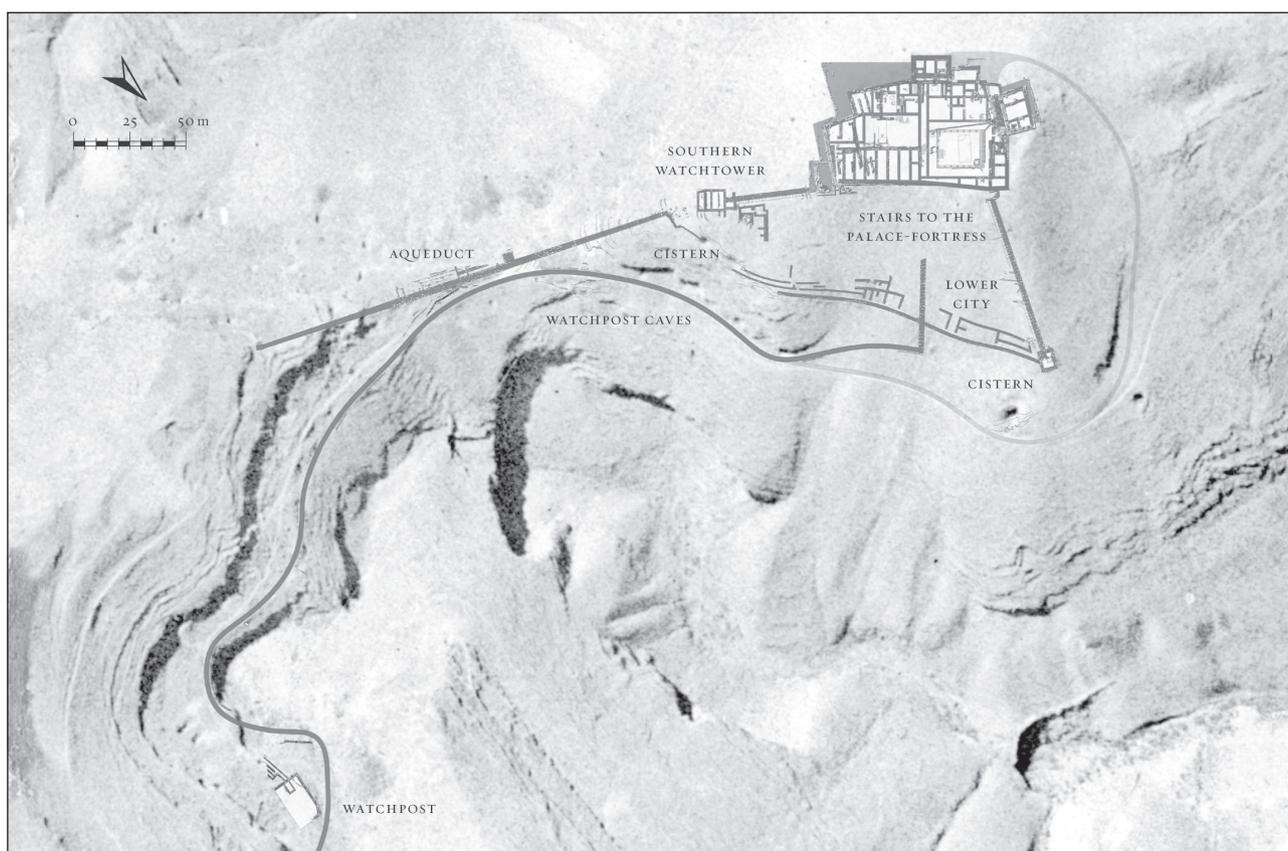
hilltop palace (Corbo-Loffreda 1981: fig. 1).

The Corbo archaeological mission was the first to prove that the castle of Machaerus was unquestionably one of the mosaic-decorated fortified royal palaces of King Herod the Great. It was also the first to confirm the accounts of Josephus regarding the Hasmonean presence at the citadel and its association with the First Jewish Revolt by means of architectural, ceramic and numismatic evidence. Following the unexpected death of Father Piccirillo in 2008, the Hungarian team resumed work exactly where the Studium Biblicum Franciscanum, led by two generations of Italian Franciscan academics, had left off. Our excavation and survey methods incorporated 21<sup>st</sup> century equipment and techniques from the outset. In 2012, the research team of the Hungarian Academy of Arts, following detailed archaeological survey and excavation, prepared architectural descriptions and reconstructions

of both the lower city (πόλις) and the Herodian royal fortified palace (βασίλειον) (FIGS. 2 - 12).

One of the most significant results of our excavations was the discovery of a previously unexpected vertical dimension to the citadel. For example, we exposed the interior of the western bastion to find that its walls, previously believed to be less than 1.5 m-high, were actually intact to a height of 8.75 m. In another case, we discovered and excavated the 15.5 m-deep Hasmonean cistern of the citadel; it can be demonstrated that this was in use during the Herodian period. Very rich archaeological material came to light at this location as well. In total, we opened more than 50 trenches to gain a better understanding of the monuments of Machaerus's citadel and its lower city.

In relation to the architectural surveys of the Hungarian Academy of Arts, the most important results were (1) identification of three his-



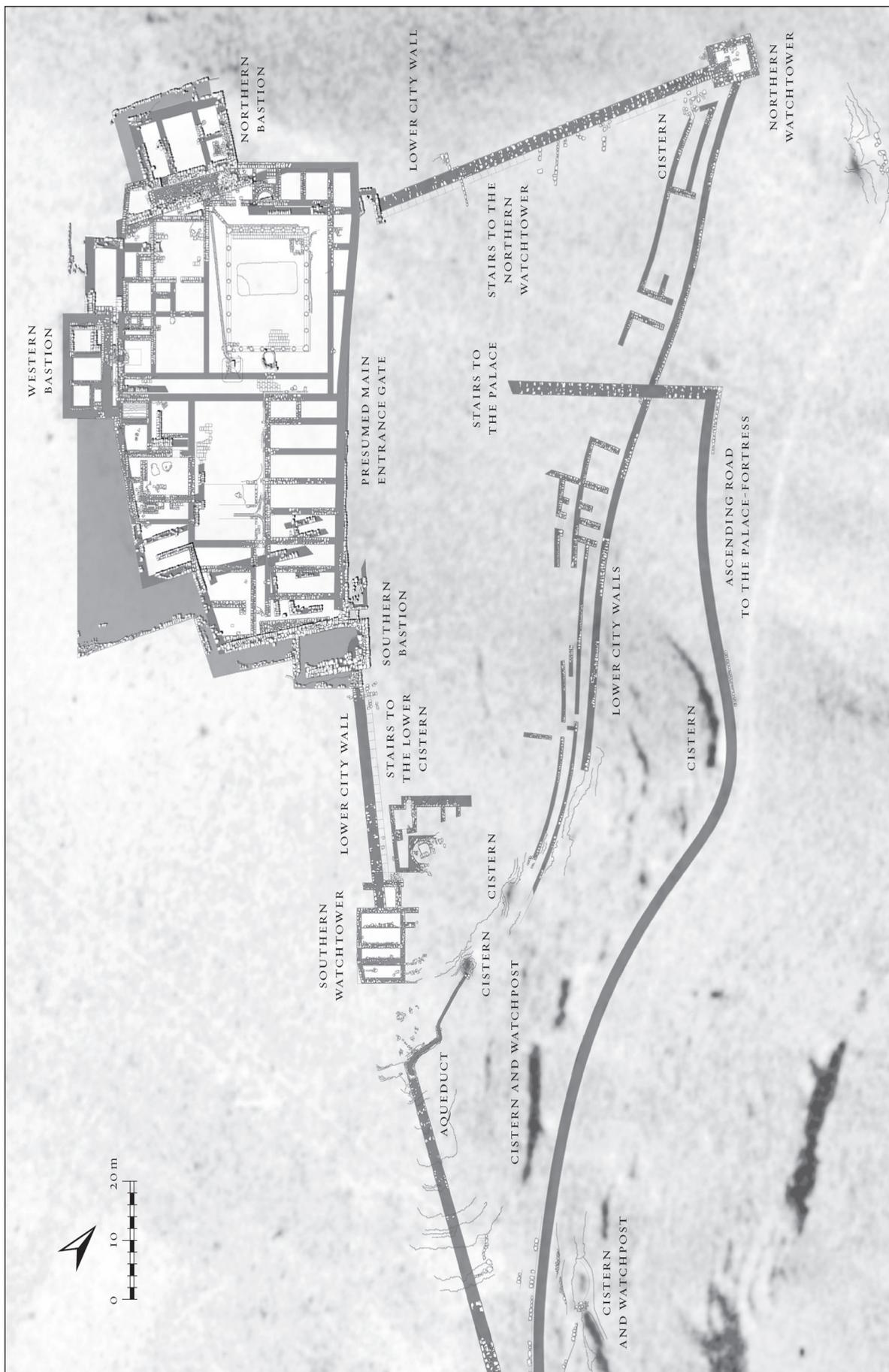
2. Architectural layout of the archaeological site of Machaerus: 182 m-long aqueduct, ascent road, lower city and fortified palace-citadel superimposed on a 1953 aerial photograph of APAAME\_19531031\_HAS-52-039.

torical periods at Machaerus city, (2) detailed analysis of the architectural development of the buildings, both individually and as building complexes and (3) preparation of their theoretical reconstructions. The complete architectural description of the standing monuments (with drawn and photographic documentation) was extended also those building elements that were no longer *in situ*. Following architectural survey, we prepared three-dimensional digital models to provide a basis for later theoretical reconstructions. The illustrations of the anastilosis of the Doric and Ionic columns and the theoretical reconstruction of the fortified Herodian royal palace give a glimpse of this work.

As well as carrying out detailed standing building surveys and archaeological / stratigraphic assessments, our research methods followed the so-called comparative archaeological and architectural approach.

According to Pliny the Elder, “*Machaerus on the south, at one time, next to Jerusalem the most strongly fortified place in Judea*” (*Historia Naturalis* V 15. 16). The Machaerus stronghold had been part of a network of military fortresses aimed at defending Jerusalem from attack from the east during the 1<sup>st</sup> centuries BC and AD. After Jerusalem itself, these fortresses (*viz.* Masada, Herodion, Hyrcania, Cypros, Doq and Alexandreion) represent the closest Late Hellenistic (Hasmonean), Herodian and Early Roman architectural and archaeological analogies. Therefore, our research team spent extensive periods on the West Bank conducting comprehensive archaeological and architectural examinations of these fortifications. This enabled us to gain a better understanding of Machaerus itself and facilitated the creation of credible architectural reconstructions.

The archaeological mission of the Hungarian Academy of Arts is currently working on the



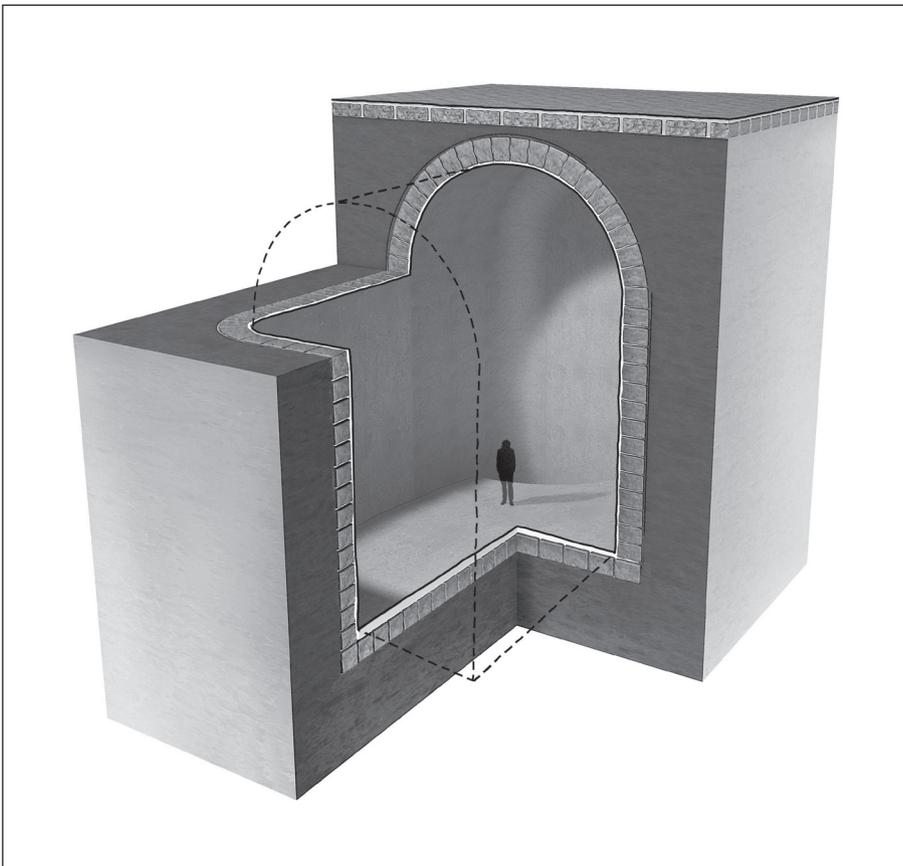
3. “(King Herod) therefore surrounded a large space of ground with walls and towers, and built a city there, out of which city there was a way that led up to the very citadel itself on the top of the mountain; nay, more than this, he built a wall round that top of the hill, and erected towers at the corners” (Josephus on Machaerus in Bellum Judaicum VII, 6, 2)



4. "(...) in the middle of which place he built a palace, after a magnificent manner, wherein were large and beautiful edifices. He also made a great many reservoirs for the reception of water, that there might be plenty of it ready for all uses, and those in the properest places that were afforded him there" (Josephus on the Machaerus royal palace in Bellum Judaicum VII, 6, 2)



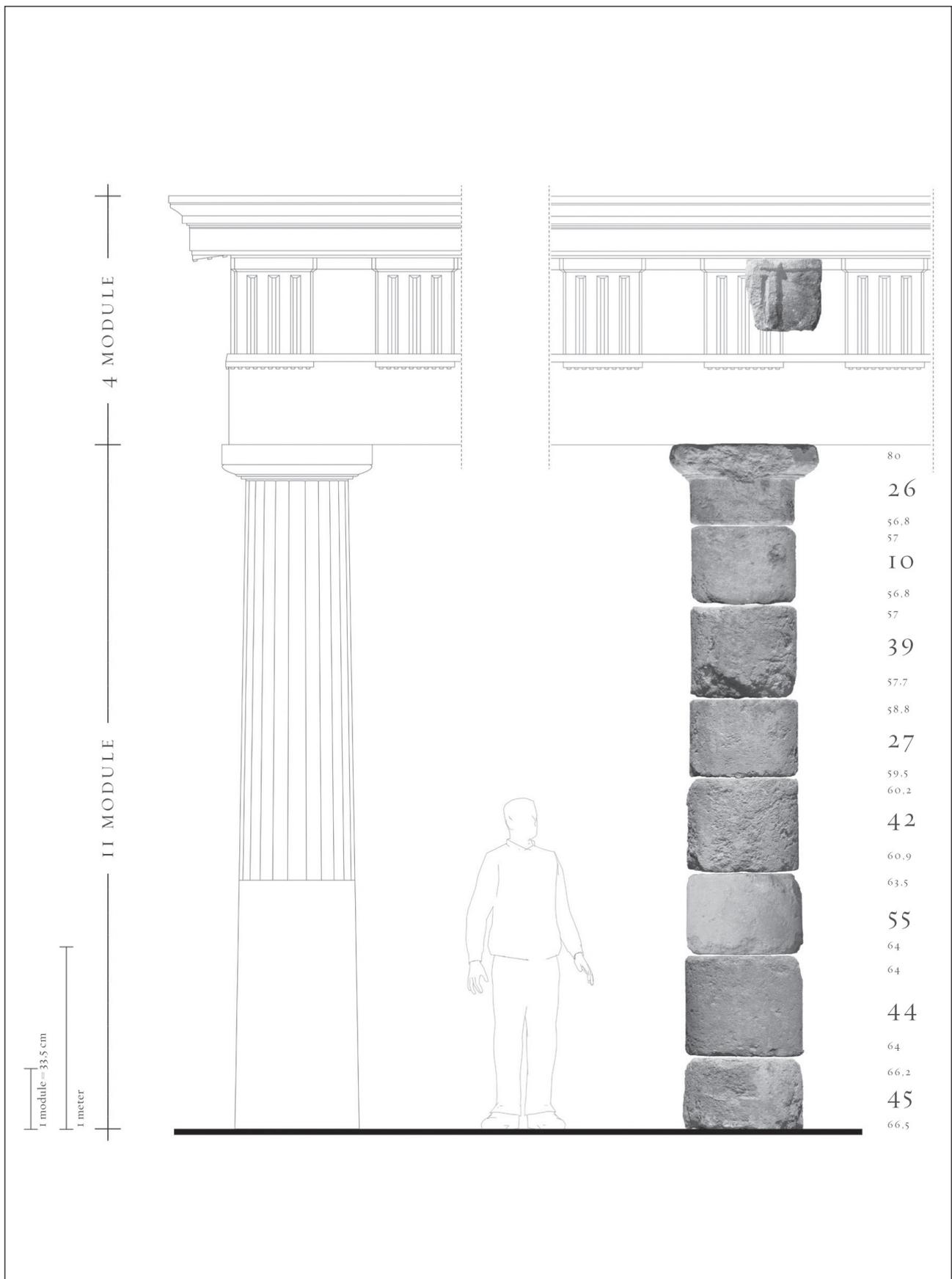
5. Overview of the architectural layout of the lower city and citadel of Machaerus, superimposed on a 2006 aerial photograph by David Kennedy.



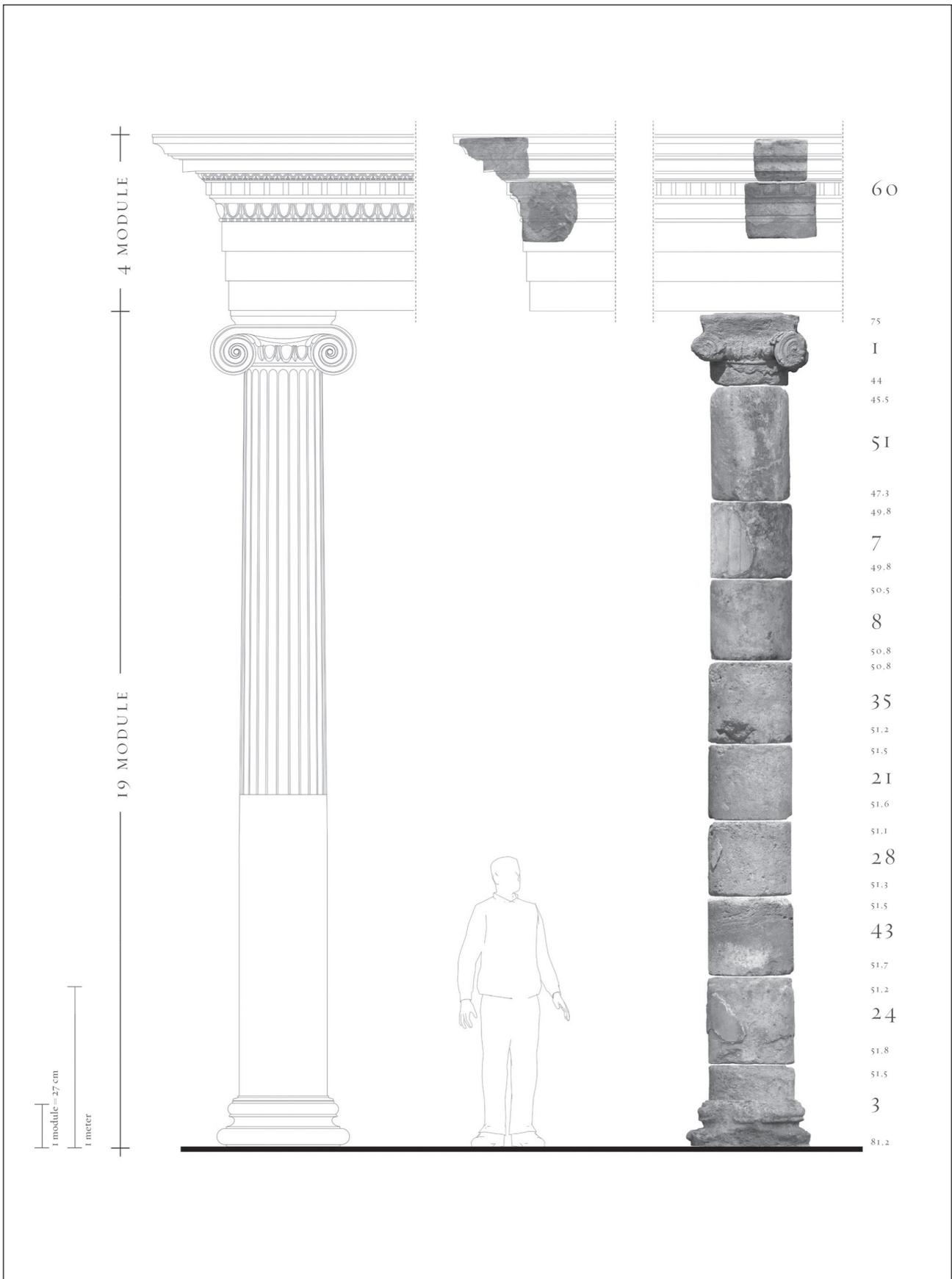
6. 3D architectural model of the Herodian cistern: length 11.75 m; width 5.4 m; shoulder height 6 m; vault height 8.7 m; water capacity (to shoulders) *ca.* 380,000 litres  $\approx$  100,000 US gallons.



7. 3D architectural model of the Hasmonean cistern: length 4.72 m; width 9.32 m; min. height 14.9 m; max. height 15.7 m; full capacity 110,000 litres  $\approx$  29,000 US gallons



8. Theoretical anastylosis reconstruction of one of the Doric columns that originally stood on the stylobate of the royal peristyle courtyard in the Herodian palace of Machaerus.



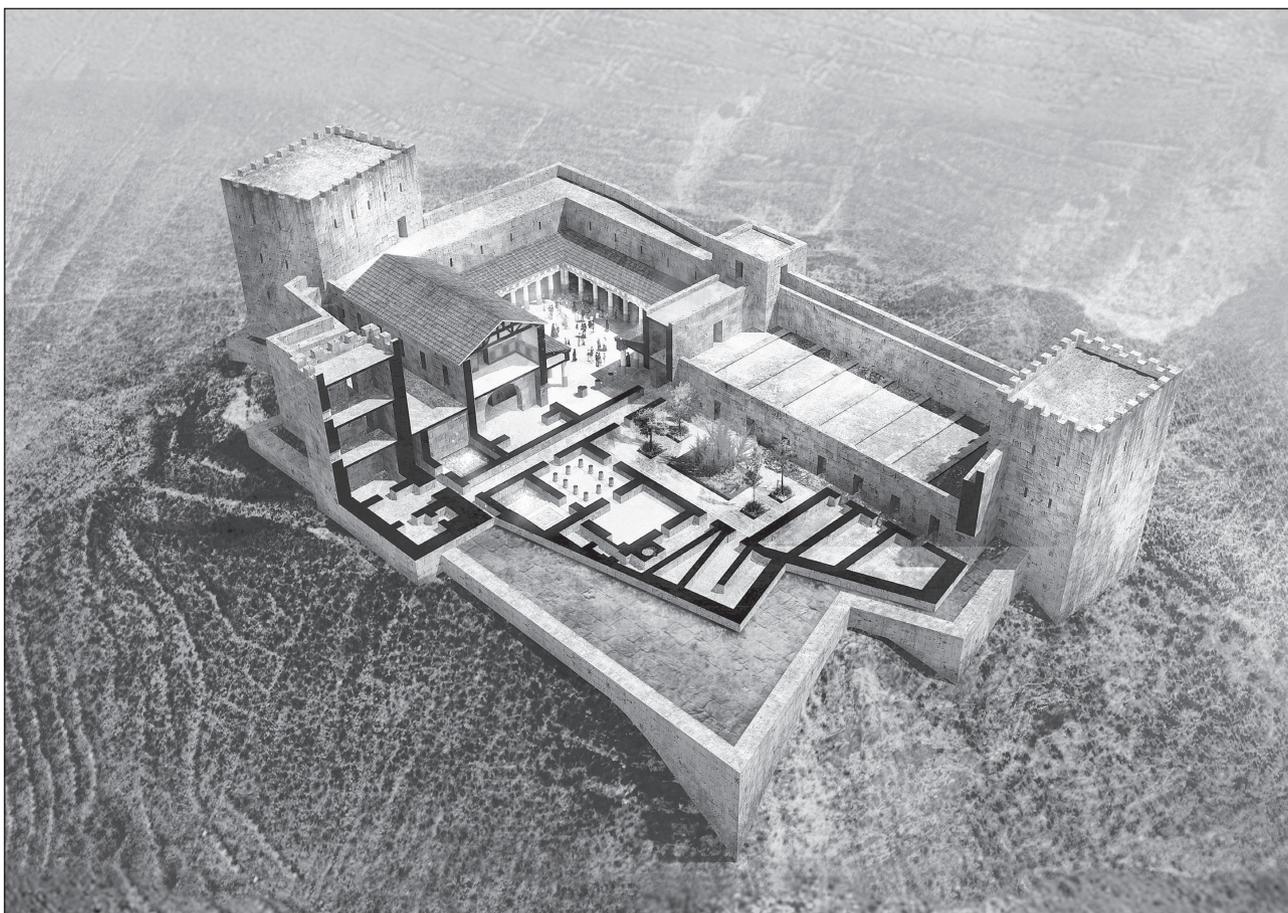
9. Theoretical anastylosis reconstruction of one of the Ionic columns that originally stood on the crepidoma of the apodyterium hall in the royal bathhouse of the Herodian palace of Machaerus.



10. Theoretical architectural reconstructions of Machaerus city (πόλις) and the fortified royal palace-citadel (βασιλείον) under the first rays of the rising sun, with the Dead Sea, Bethlehem and Jerusalem in the background (superimposed on a 2004 aerial photograph by Jane Taylor from the east).

conservation, preservation and anastilosis reconstruction of Machaerus (FIGS. 13 - 14). The present author has recently published the first scientific final report on the history, archaeology and architecture of Machaerus (Vörös 2013).

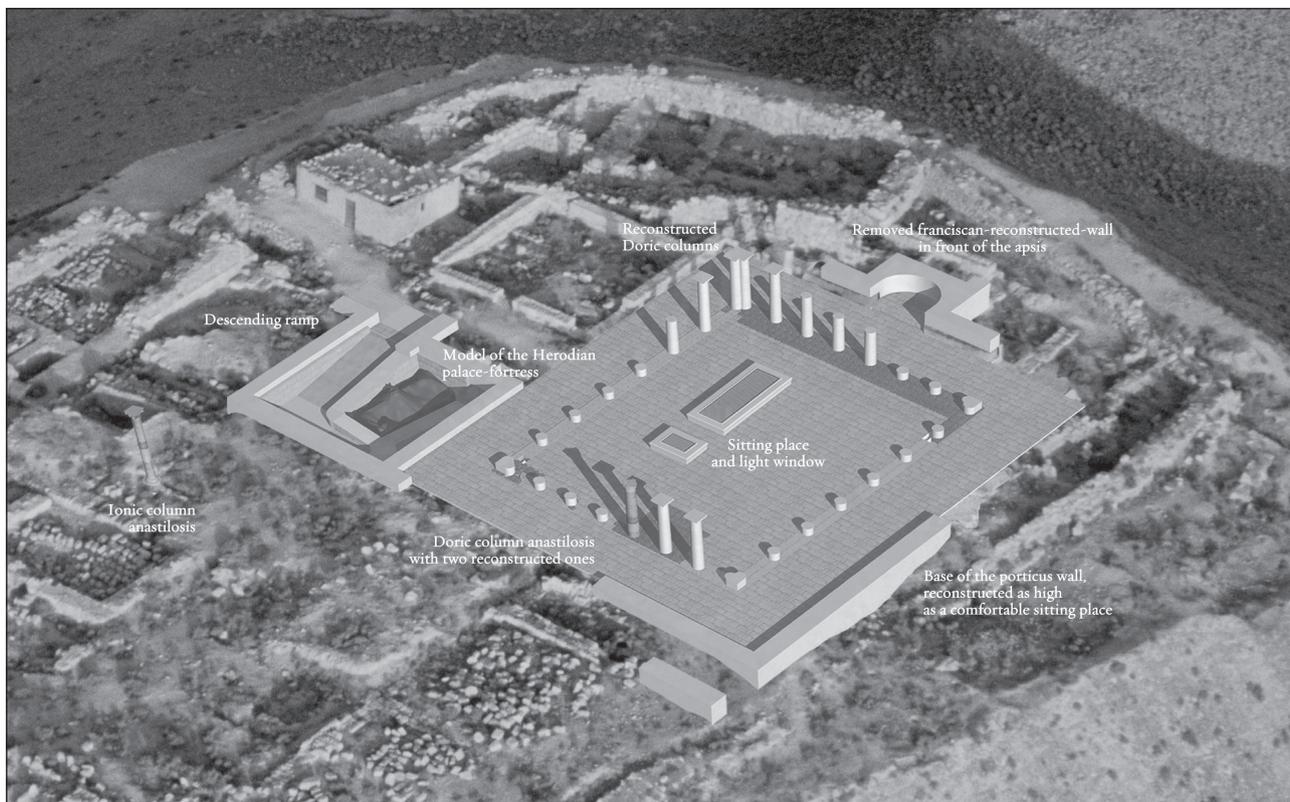
It was not until June 2012 when the present author, after a long search, made contact with the 85 year-old widow of Vardaman, Madame Alfalene, in the United States. She kindly sent us copies of the surviving and entirely unpublished excavation field notebooks and



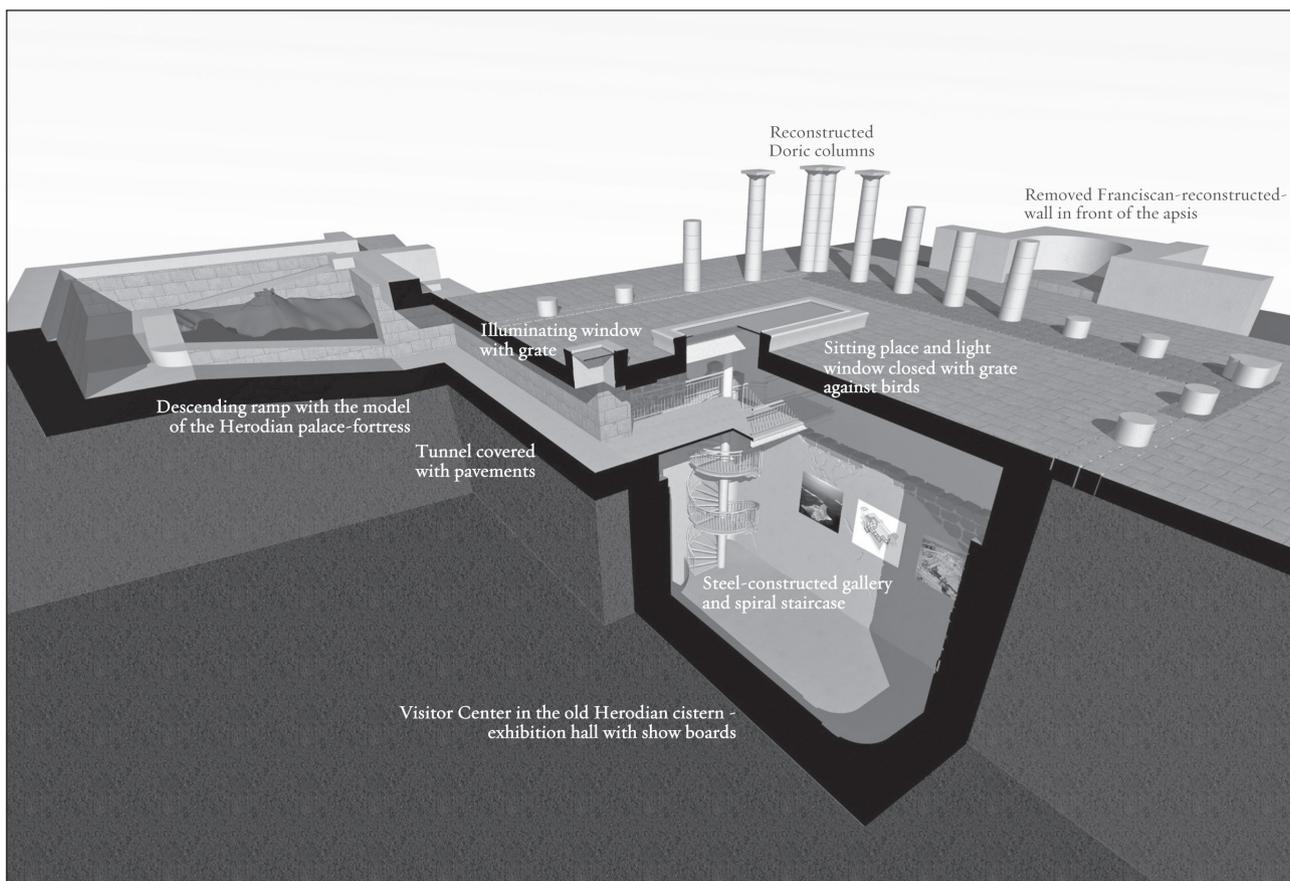
11. Cutaway bird's eye view of the Herodian fortified royal palace from the south. This theoretical reconstruction is superimposed on an aerial photograph by David Kennedy.



12. Reconstructed interior of the peristyle courtyard, based on surviving architectural and archaeological evidence.



13. Aerial view of Machaerus citadel, with 3D montage of the architectural model for the presentation of the Doric peristyle royal courtyard (detail of an aerial photograph by David Kennedy, APAAME\_20060910\_DLK-005).



14. The Herodian cistern under the peristyle courtyard will be a pilgrim (visitor) center on the Machaerus hilltop.

drawings of her late husband, together with the archaeological object catalogue and the then 44 year-old original Kodak slides from the excavations (FIG. 15). From the huge, *ca.* 300-page, archive it was obvious that there had to be a large archaeological collection somewhere in the United States that Vardaman transported there from Jordan in 1968. After contacting several American institutions, the Director of the Cobb Institute of Archaeology at Mississippi State University, Professor Joe D. Seger (former President of ASOR), responded with a surprising answer: they have 13 large boxes labelled “*Machaerus - 1968*” in the Institute basement; these remained unexamined and unpublished.

A retrospective report on the June 1968 American Machaerus excavations and surveys, together with an analysis of its material in the light of the later Italian - Franciscan and Hungarian excavations, will therefore be

published in the “*Machaerus II*” volume of the *Collectio Maior* academic series of the Jerusalem Studium Biblicum Franciscanum (through Edizioni Terra Santa in Milan).

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15. June 1968 - a group of American archaeologists from Southern Baptist Theological Seminary stand in pith helmets on the unexcavated Machaerus hilltop while supervising the excavation of their archaeological Fields B (left) and CV (center-right); view from the north.

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