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### ETHIOPIA

The B.U./I.U.O. Archaeological Excavations at Bieta Giyorghis (Aksum, Ethiopia): a preliminary report on the 1996 field season

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Archaeological investigations were conducted at the site of Ona Nagast, on Bieta Givorgis hill near Aksum, Ethiopia, by Boston University (B.U.) and the Istituto Universitario Orientale of Naples (I.U.O.) under the direction of Kathryn A. Bard and Rodolfo Fattovich in May-June 1996. Members of the expedition were Dr. Livio Crescenzi. Soprintendenza Archeologica per il Lazio, Rome, topographer and classical archaeologist; Dr. Michael C. Di Blasi, B.U., Boston, archaeologist: Prof. Julie Hansen. B.U., Boston. paleoethnobotanist; Dr. Andrea Manzo, I.U.O., Naples, archaeologist; and Dr. Cinzia Perlingieri, I.U.O., Naples, ceramic analyst and illustrator. The Regional Bureau of Culture, Tourism and Information of Tigray was represented by Ato Afiworki Tiumay and Ato G/Kidan W/Hawiriat, whose contributions in the field were greatly appreciated. In addition, we were assisted by six students from Aksum and thirteen workers from Bieta Givorgis. Funding for the project was provided by the National Geographic Society, Washington D.C.; the CNR, Rome; and the Ministry for University, Scientific and Technological Research, Rome (funds 60%).

As a result of test excavations in 1995, the 1996 field season focused on the site of Ona Nagast

in the SW sector of the top of Bieta Giyorgis hill (Aksum). The site was first identified as a large settlement complex in an archaeological survey conducted in 1974 by Prof. J. Michels, Pennsylvania

State University, as well as by the Italian Archaeological Expedition at Aksum in 1974, directed by Prof. L. Ricci. The site of Ona Nagast is over 12 ha in area. In the eastern sector of the site are three well defined terraces sloping down to the Mai Lahlah (a seasonal stream bed). According to L. Crescenzi, the architectural remains of the site are situated in conformity with the orientation of the terraces. A detailed topographical map of Ona Nagast with contour lines of 50 cm was made by L. Crescenzi.

Three excavation units, ON IV, ON VI, and ON V, were opened in the SE sector of Ona Nagast on the middle and lower terraces. ON IV and ON VI are located on the middle terrace, approximately 10 m SW of ON III, excavated in 1995. These two units are contiguous, with a total of 15 2 m² squares, which were opened to identify structures and understand the stratigraphy in this part of the site. ON V, 10 m x 10 m in area, is located on the lower terrace, approximately 36 m SE of ON IV/VI.

#### ON IV/VI

Excavations at ON IV/VI uncovered the remains of a substantial stone structure. Within this structure were four walls which defined one room, designated Feature 1 (F1). The well preserved external wall of this structure is stepped in design, ca. 4 m in length (excavated), preserved to a height of ca. 1.4 m, and aligned in a N-S orientation. Surface evidence suggests that the stepped wall continues approximately 10 m to the N. The three excavated internal walls which enclose F1, a room 5 m x 2.06 m, are less substantial than the external wall. The western wall of F1 includes a threshold associated with a step leading to F2, which was only partially excavated.

The stepped wall of ON IV/VI is similar in design to the external walls of the Middle Aksumite elite residence complex of Dungur (ca. A.D. 500-600), excavated in the western part of Aksum at the base of Bieta Giyorgis by Francis Anfray. The stepped wall at ON IV/VI is made of roughly hammer-worked pieces of syenite laid in mud mortar. At the base of this stepped wall was a foundation

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construction consisting of an arrangement of stones projecting approximately 50 cm from the wall base.

Within F1 and adjacent to the northern interior wall was a stone platform also made of roughly hammer-worked syenite laid in mud mortar, which may be the remains of a platform. Platforms similar in dimension and design are found in modern farmers' houses at Aksum and are used for storage of equipment and sometimes for sleeping.

Excavation of F1 revealed a series of strata of fill with potsherds, animal bones, bronze and iron artifacts, beads, glass sherds, lithics, brick fragments and charcoal, which was collected for radiocarbon dating. Five distinct stratigraphic units could be distinguished in F1 (S.U. 1 and 2, S.U.20, S.U. 21, S.U. 24, S.U. 25). The uppermost strata within F1 (S.U. 1 and 2) contained a mixture of Middle and Late Aksumite pottery, suggesting a mixed context which resulted from plowing and erosional activity. In earlier phases of room fill (S.U. 20, 21, 25) was a type of pottery which seems to be transitional between that of the Early and Middle Aksumite periods. Forms include cauldrons, storage vessels and large pots. In one of the lower strata of fill (S.U. 21) a shallow, rectangular basin of syenite was found. S.U. 24 consisted of the remains of a prepared clay surface, which may have been a floor. None of the stratigraphic units excavated in F1, however, represents a well preserved floor. Excavations in 1997 will continue in this feature.

Feature 2, which was partly excavated, is a room adjacent and to the W of F1. It is connected to F1 by a carefully prepared threshold and one step made of flatly laid stones set in mud mortar. Artifacts from F2 are similar to those in F1; however, a greater quantity of burned brick fragments were found in F2. A fragment of an elephant ivory tusk was also excavated in F2. Fill in both F1 and F2 consisted of artifactual and cultural debris that accumulated within the rooms after abandonment, when the structure collapsed and deteriorated through time.

To the E of the excavated structure and adjacent to the extension of the stepped wall was a thick deposit of stone rubble from post-abandonment wall collapse. This stratum of wall collapse (S.U. 12) reaches a maximum depth of 1.25 m. Artifacts found within this wall collapse include both Middle and Late Aksumite pottery, animal bones and lithics.

#### ON V

This excavation unit is located on the same terrace as ON III, which was excavated in 1995. Because of their proximity, there is a probable correlation of the architectural remains from these units, which is also suggested by the same orientation of the structures within these units. Excavation conducted in ON V revealed well constructed stone walls. These walls delimited three or more rooms and possibly a small courtyard. Three different phases of construction were evident. They point to continuous occupation, reuse and reconstruction of one structure from Early Aksumite to Middle Aksumite times.

Beneath the plow zone was a thick stratum of collapsed stones (syenite) that covered most of the excavation unit. This collapse represents the final abandonment of the structure. The collapsed stones filled parts of at least three rooms (F1, F2, F3), delimited by four walls (S.U. 3, 7, 8, 9), from the latest phase (3) of construction. In one of these rooms (F3) a great quantity of animal bones was collected, as well as two small ivory carvings (that may have decorated furniture or boxes), and sherds of imported amphorae and terra sigillata africana. Moreover, a new "creamy ware" was discovered here. This is a locally made ware reproducing the shapes, decoration and morphological characteristics of the imported terra sigillata africana. The four walls of phase 3 were newly constructed on earlier ones (phase 2, see below). The ceramic evidence from phase 3 suggests a date in the Middle Aksumite period. These ceramics had a different spatial distribution from that of earlier deposits, which most likely reflects a functional differentiation of the features. An assemblage of light orange/creamy ware was recovered in the soil (S.U. 10) to the W of the wall, S.U. 8. A different ware, orange in color and with a gritty texture, predominated in the soil (S.U. 16) to the E of the same wall (S.U. 8).

Phase 2 is represented by a room (F4) in the western sector of the unit delimited to the N by a massive, well constructed stone wall (S.U. 18), 1.3 m thick, and walls to the E (S.U. 8) and S (S.U. 3). A fourth wall oriented N-S was excavated in the eastern part of the area. A sequence of well made floors was associated with this phase (2) of construction in F4, and in the deposit between F4 and the eastern wall (S.U. 32). During this phase a stone

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platform was constructed in the southern part of the room. This is the same type of constructed platform as in ON IV/VI F1. At the end of this phase a room, characterized by a red very well preserved floor (S.U. 29), was added to the N of F4.

The potsherds coming from phase 2 (S.U. 19, 22, 24, 25, 26) were characterized by an orange-gritty ware. A number of sherds were decorated with a pattern of parallel shallow grooves, sometimes alternating with light impressions, typical of the Early Aksumite period.

Finally, the earliest excavated phase (1) of construction was represented by three walls (S.U. 23, S.U. 30, and, very likely S.U. 3), which delimited F4 and another wall (S.U. 32) parallel to S.U. 23, in the central sector of the unit. At the bottom of F4 a large flat stone was found which covered most of the area of the feature. The walls of phase 1 construction appear to continue farther down in the deposit and may represent even earlier and unexcavated phase(s) of construction, which will be investigated in 1997. No significant sherds, from the typological point of view, were found associated with phase 1. The very few wall sherds recovered are of the same orange-gritty ware as the previous phase (2).

The strata and construction phases from ON V represent one of the best stratigraphic sequences from an Aksumite site and associated charcoal samples will be used to establish an absolute chronology for the Early and Middle Aksumite periods. A statistical study of the ceramics, which is presently being conducted by C. Perlingieri, includes associations of the recognized shapes, reconstructed diameters and all other morphological elements. This study will provide a provisional but complex sequence for the development of Aksumite pottery.

## Imported artifacts

Evidence of imported pottery includes sherds of ribbed amphorae excavated in ON V, F1, which are typical Egyptian-made wares dating to the 4th-7th centuries A.D. Also in ON V F3 were sherds of

terra sigillata africana, suggesting a date of the 3rd-6th centuries A.D. A rim and shoulder fragment of a jar decorated with an impressed band is similar to a ware found in central Sudan and at Kassala (eastern Sudan), dating from post-Meroitic to early Christian times.

Body sherds of imported glass vessels (green, blue and white in color) were also excavated and can probably be dated to the 4th century A.D. and later. A fragment of *millefiori* glass imported from Egypt was excavated in an Early Aksumite context in ON V and can be dated to late Ptolemaic/early Roman times.

### Scientific analyses

Soil samples were collected from all strata in ON IV/VI and ON V for sedimentological, micromorphological and palynological analyses. Over 20 charcoal samples were collected from different stratigraphic units in ON IV/VI and ON V and will be processed for radiocarbon dating. Eleven flotation samples were taken for paleobotanical identification. Twenty-seven potsherds were chosen for petrographic analysis at Addis Ababa University.

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