

ARCHAEOLOGICAL EXPEDITION AT AKSUM (ETHIOPIA)  
OF THE  
UNIVERSITÀ DEGLI STUDI DI NAPOLI, “L’ORIENTALE”  
(2010 FIELD SEASON: SEGLAMEN)

*Rodolfo Fattovich* (Università degli Studi di Napoli, “l’Orientale”)

*Hiluf Berhe* (Aksum University College - AUC)

*Laurel Phillipson*

*Luisa Sernicola* (Università degli Studi di Napoli, “l’Orientale”)

*with contributions by*

*Bar Kribus* (Hebrew University, Jerusalem, Israel)

*Michela Gaudiello and Marco Barbarino* (Università degli Studi di Napoli, “l’Orientale”)

*Introduction*

In November 2010 the Italian Archaeological Expedition at Aksum of the Università degli Studi di Napoli, “l’Orientale” (UNO), Napoli (Italy), conducted the 16<sup>th</sup> field season in the Aksum region under the direction of Rodolfo Fattovich. In 1992-2003 the expedition investigated Bieta Giyorgis hill to the north of Aksum as a joint research project with Boston University, Boston, USA under the direction of Rodolfo Fattovich (UNO) and Kathryn A. Bard (BU) (Fattovich *et alii* 2000; Bard *et alii* 2003; Fattovich 2008). In 2005-2009 the foot hill of Bieta Giyorgis and the plains to the north of the hill were investigated (Fattovich 2008; Fattovich *et alii* 2009). In 2005-2006 the expedition surveyed the whole archaeological area of Aksum (100 sq km) in collaboration with the World Bank Ethiopian Cultural Heritage Project, Aksum Branch, and produced the detailed archaeological map of this area (Fattovich and Hagos 2005; 2006; Sernicola 2008). In 2009 UNO expedition surveyed the archaeological site of Yeha (Adwa) and mapped with a laser scanner the Great Temple as a contribution to the archaeological heritage management of the area (Fattovich *et alii* 2010).

Beginning in 2010 the UNO project included the valley of the Mai Nigus/Haselo from Addi Hankara (Wareda: Medegoy) to Adet (Wareda: Hawesta), with the surroundings of the modern villages of Medegoy, Seglamen, Mirina and Adet as main areas of investigation. The project is designed to survey this region along a transect about 5 km × 20 km and to carry out excavations at selected sites. This segment of the Mai Nigus/Haselo valley was chosen for investigation because the valley traditionally was an important route from Aksum to the Tekeze river and from here to the internal regions of the Ethiopian highlands (Fig. 1).

The research activity has been designed to provide:

- 1) a reconstruction of the cultural and environmental history of the region to the south-west of Aksum;
- 2) a detailed archaeological map of this region for the cultural heritage management of Central Tigray.

The project is implemented in collaboration with the Department of Archaeology, Aksum University College (AUC), Aksum (Tigray), represented by Mr. Hiluf Berhe, as a part of the agreement between UNO and AUC in progress since 2009 to conduct joint research and to provide undergraduate students of the Department of Archaeology, AUC, with a theoretical and practical training in survey and excavation procedures (L. Phillipson 2010).

In 2010 the area around the village of Seglamen, where a Pre-Aksumite royal inscription (RIE 1) was discovered in the early 1970s (Schneider 1976; Bernard *et alii* 1991, I, 68, II, pl. 1), was investigated and a reconnaissance was conducted around the villages of Merena and New Adet.

Preliminary excavations at Seglamen were carried out in 1974 by the Università di Roma “La Sapienza,” Rome (Italy), under the direction of Lanfranco Ricci (Ricci and Fattovich 1987). These excavations brought to the light a large Post-Aksumite rural house, which was apparently built on Pre-Aksumite foundations. The definitive location of the Pre-Aksumite settlement was identified during the World Bank survey in 2006 (Fattovich and Hagos 2006) and was confirmed in 2009 during a visit to the site by members of the Italian expedition and representatives of the Aksum University College (AUC), Aksum (Tigray).

Members of the 2010 expedition were Prof. Rodolfo Fattovich, archaeologist, Dr. Luisa Sernicola, archaeologist, Mr. Marco Barbarino, surface surveyor, and Ms. Michela Gaudiello, ceramic analyst (UNO); Dr. Laurel Phillipson, UK, lithic analyst; Mr. Hilluf Berhe, Mr. Habtamu Makonnen and Ms. Berhan Tekie, archaeologists (AUC); Mr. Bar Kribus, assistant archaeologist, Hebrew University, Jerusalem (Israel). The ARCCH was represented by Ato Alemu Hailu.

The members of the expedition are very grateful to Ato Jara Haile Maryam, Head, ARCCH, Addis Ababa, Dr Jonas Beyene, Director, Dept. of Anthropology and Archaeology, ARCCH, Addis Ababa, Ato Fisseha Zibelo, Aksum Site Manager, Ethiopian Sustainable Tourism Development Project, Ato Tedros Abraham, Head, Bureau of Culture and Tourism, Central Zone, Aksum; Dr. Mebratu and Dr. Aklilu, President and Vice President, Axum University College, Aksum, H.E. Raffaele di Lutio, Ambassador, Italian Embassy, Addis Ababa, Ethiopia, Dr. Bruno Bellotto, Director, Italian Cultural Institute, Addis Ababa, Ethiopia, Dr. Francesco Saverio Poliseno, Poliass Srl Marine & General, Naples (Italy), Dr. Pasquale Romano, Studio Tecnico Navale Romano, Naples (Italy), and Dr. Enrico Semino, Cambiaso Risso (Insurance Brokers), Genova, Italy, for their kind support to the expedition.

The expedition has been granted by the Ministry of Foreign Affairs, Rome, Poliass Srl Marine & General, Naples, Studio Tecnico Navale Romano, Naples, Cambiaso Risso (Insurance Brokers), Genoa, and Università degli Studi di Napoli, “l’Orientale” Naples (Italy).

### *Fieldwork Procedures*

#### Archaeological Survey (by L. Sernicola)

The survey has been conducted by foot. The 1 km sq grid of the EMA 1997 1:50,000 Map, Series ETH 4, sheets 1438 D3 (Aksum) and ETH4 1338 B1 (Adet) was used as a base for the survey. The sites were located with UTM coordinates using a Trimble Juno SB Handheld GPS.

Each site was described by using the ARCCH site inventory forms with indication of:

- 1) *Location*: 1.1. Region. 1.2. Zone. 1.3. *Wareda*. 1.4. *Kebele*. 1.5. House No. 1.6. Locality. 1.7. Site. 1.8. Site code. 1.9. GPS (UTM coordinates). 1.10. Elevation;
- 2) *Site characteristics*: 2.1. Site dimension. 2.2. Local landmarks;
- 3) *Locality name*: 3.1. Amharic, Local, English. 3.2. Ownership, Owner's name;
- 4) *Topography*: 4.1. Terrain setting. 4.2. Profile position. 4.3. Vegetation. 4.4. Land use. 4.5. Soil type and colour;
- 5) *Cultural Affiliation*: 5.1. Date range - 5.1.1. Absolute. 5.1.2. Relative;
- 6) *Date of discovery*;
- 7) *Function*: 7.1. Previous. 7.2. Current;
- 8) *Description of finds (observed materials), quantities and associated features*;
- 9) *Overall length of monuments building; Photograph Number*;
- 10) *Present condition* (e.g., in situ, disturbed);
- 11) *Threats*;
- 12) *Sketch plan or drawing*;
- 13) *Additional notes (remarks) and comments*;
- 14) *References*: 15.1. Books; 15.2. Photographs; 15.3. Maps; 15.4. Plan; 15.5. Oral traditions; 15.6. Ethnographic evidence; 15.7. Others (Fattovich and Hagos 2005, 2006).

The sites were recorded with a code consisting of the region name (Tigray = Tg), Wareda name, month/year of survey, and progressive inventory number (01-n). Each main site was also given the abbreviated name of the site in capital letters (Seglamen = SG) and a specific Arabic number (e.g., SG 1).

Distinct surface concentrations of artefacts within the single sites were named *loci* (White and King 2007: Appendix C6). Each *locus* was recorded with a code indicating the main site (Seglamen = S) and an Arabic number (e.g., S1, S2, etc.).

Systematic or random surface collections were carried out in selected *loci* with significant concentrations of exposed artefacts. *Loci* with less significant assemblages were recorded describing the materials visible on surface.

The GIS database of the recorded sites and *loci* was generated to produce the archaeological map of the investigated region using Earthsat TM satellite images, as well the 1:50,000 maps of Aksum and Adet (ETH4 1438 D3, ETH4 1338 B1).

### Excavation (by R. Fattovich)

Excavations were conducted in “Excavation Units” (EU), 10 m × 10 m, in order to combine extensive horizontal excavation with stratigraphic excavation. Each excavation unit was divided into a grid of 25 squares, 2 m × 2 m, in order to maintain horizontal control of the finds. The 2 m × 2 m squares were recorded by means of an alpha-numerical matrix with A to E along the west-east axis, and 1 to 5 along the north-south axis (i.e., from A1 on the NW to E5 on the SW). Each EU was given the abbreviated name of the site (e.g., Seglemen = Seg) and Roman numerals (e.g., Seg I, Seg II, etc.).

Stratigraphic excavations were conducted in conformity with Harris’s “Stratigraphic Unit” (SU) procedure (Harris 1989). “Soil strata” (i.e., discrete sedimentary deposits resulting from the combined action of natural and cultural factors) and “features” (i.e., all man-made, spatially organized structures), as well as their vertical and horizontal relationships, were the basic components of the stratigraphic sequence. Soil strata over 20 cm in thickness were excavated distinguishing artificial levels, ca 5-10 cm deep.

Each stratigraphic unit was described recording:

- 1) site name;
- 2) EU number;
- 3) grid number (2 m × 2 m squares);
- 4) SU number;
- 5) SU description;
- 6) elevations at the top and bottom of the SU;
- 7) type and density of artefacts and ecofacts, and
- 8) vertical and horizontal position in the stratigraphic sequence.

For purposes of archaeological excavation and interpretation, the deposits in residential sites were viewed as consisting of two basic types of stratigraphic unit:

- 1) architectural units, which are constructed features or “upstanding strata,” such as walls that define spatial areas or features that serve some other structural function within the building complex (e.g., doorways/thresholds, benches and platforms, pedestals, stone pavements, stairways, water drainage systems, etc.);

- 2) sediment units, which consist of soil or other sediments (e.g., topsoil, fill composed of wall collapse and artefacts in a clay matrix, occupation surfaces, refuse deposits, etc.) that are deposited on a primarily horizontal plane around or within the architectural units as the result of natural and cultural site formation processes.

All artefacts and ecofacts were collected for laboratory analysis.

### Mapping (by *M. Barbarino*)

In 2010 the topographical survey was limited to mapping the main site at Seglamen (SG 1). Coordinates of the site were acquired by Total Station (TS) Trimble M3 5'' and hand Trimble Juno SB Handheld GPS with an error of 5 to 10 m in order to create a map of archaeological occurrences at the site by combining GIS and CAD programs.

Control points were fixed with a TS and prism, and were marked in the ground with cemented picks. The coordinates of the "datum" reference point (463.713E-1.554.836N, elevation 2027 m) were acquired with GPS. WGS84 UTM 37N was used as a coordinate reference system (Fig. 2).

The elevation points of the ground in the central area of the site were also acquired in order to generate a detailed Digital Elevation Model (DEM), which will be extended in the 2011 field season.

The map of the EUs was created by TLS and prism recording the outline and height of each SU to get horizontal maps and profiles for analyzing the stratigraphic sequence and spatial distribution of the artefacts.

A GIS program (ArcGIS 9.3) was used to integrate survey data, database information, topographic maps and satellite imagery.

### Photogrammetry (by *M. Barbarino*)

A near-ground photogrammetry was tested for recording the Excavation Units. The Structure From Motion process, similar to the stereo vision one, was used insofar as this programme allows the acquisition of a whole three-dimensional feature from photos. At least 40 photos of each SU and feature were shot and four target points were acquired with TLS in order generate the 3-D models.

The test demonstrated that although the time of acquisition of the images for the models on the ground is acceptably short (10-15 minutes for a feature), the software processing requires 4 to 10 hours depending on the number and size of photos. The time to generate a 3-D model of a feature in the field is thus too long to be suitable for fieldwork, but this procedure can provide archaeologists with very detailed 3-D models of the features, which can be used to record and to analyse them in a stratigraphic sequence (Figs. 3, 4).

### *Analysis and classification of ceramics and lithics*

#### Ceramics (by R. Fattovich)

The ceramics have been described and classified in conformity with the procedure Fattovich (1980) suggested in the mid-1970s for the classification of the so-called Pre-Aksumite pottery.

Different groups of ware have been distinguished on the basis of the macroscopic observation of fabric, surface treatment and colour (Fattovich 1980, 9-19). Each group has been named on the colour of the surface, and the distinctive forms and decorations of each group have been described on the basis of diagnostic potsherds or complete vases (Fattovich 1980, 20-34)<sup>1</sup>.

At present, the following groups of ware have been identified<sup>2</sup>:

- 1) red-orange coarse ware (*ROCW*), with coarse mineral inclusions in the clay, orange to grey in cross-section; smooth red orange

---

<sup>1</sup> The colour of the surface was used to designate the single groups, as this attribute could be immediately perceived, even if the colour depended on manufacture technology and use of the vases (Fattovich 1980, 3-6, 9-19). The analysis of the ceramics had to rely on a macroscopic inspection of the samples as no petrographic analysis of the clay could be conducted and a binocular microscope was not available in the field. Archaeometric analysis of the ceramics from the investigated area are planned for the future seasons, and will surely modify the present classification.

<sup>2</sup> The study of the ceramics from the 2010 field season is still in progress. So far, only about the 60% of the ceramics from the excavation unit Seg I and 70% from Seg II at Seglamen have been examined.

- outside surface and orange or grey inside surface (Fattovich 1980, 21-22; Group 1.A.1);
- 2) red coarse ware (*RCW*), with coarse mineral inclusions in the clay, dark red or grey in cross-section; smooth or sometime burnished dark red to brown outside surface (Fattovich 1980, 22-23; Group 1.A.2);
  - 3) brown coarse ware (*BrCW*), with many coarse mineral inclusions and sometime mica; grey or black in cross-section; dark to light brown outside surface, black inside surface; rough surfaces;
  - 4) grey coarse ware (*GCW*), with many coarse mineral inclusions; red-orange inside surface; rough surfaces;
  - 5) black polished coarse ware (*BPCW*), with many coarse mineral inclusions in the clay; dark grey in cross-section; black polished outside and sometime inside surface (Fattovich 1980, 23; *Group 1.B.1*);
  - 6) orange polished coarse ware (*OPCW*), with many coarse mineral inclusions; red-orange or grey in cross section; red-orange slip on both surface;
  - 7) red polished coarse ware (*RPCW*), with many coarse mineral inclusions; red or grey in cross-section; red slip on both surfaces;
  - 8) black topped, red polished coarse ware (*BTRPCW*)<sup>3</sup>, with many coarse mineral inclusions; red-brown or black in cross-section; black inside surface and outside rim-top;
  - 9) black topped, brown coarse ware (*BTBrCW*) with many coarse mineral inclusions; brown or black in cross-section; burnished brown outside surface, burnished black inside surface and outside rim;
  - 10) red-orange fine ware (*ROFW*), with a few very small mineral inclusions in the clay, orange or grey in cross-section; smooth orange outside and inside surface (Fattovich 1980, 24; Group 2.A.1);
  - 11) orange-grey fine ware (*OGFW*), with a few mineral inclusions in very compact clay, dark grey in cross-section; smooth orange outside surface, grey inside surface and outside rim (Fattovich 1980, 24-25; Group 2.A.2);
  - 12) red-brown fine ware (*RBFW*), with small mineral inclusions in the clay, reddish brown in cross-section; smooth outside and inside surface (Fattovich 1980, 25-26; Group 2.A.3);

---

<sup>3</sup> Most polished wares were apparently covered with a slip.



- 13) brown fine ware (*BrFW*), with many small and medium-size mica inclusions in the clay, brown or black in cross-section; rough or smooth surface with a golden shine;
- 14) black topped brown fine ware (*BTBrPFW*) with many fine mineral inclusions; brown or black in cross-section; brown outside surface, black inside surface and outside rim;
- 15) grey fine ware (*GFW*), with very small mineral inclusions (sometime with mica) in very compact clay, grey in cross section; smooth outside surface (Fattovich 1980, 26; Group 2.A.4);
- 16) black fine ware (*BFW*), with many small mineral inclusions; sometime orange in cross section; black smooth outside surface, black rough inside surface;
- 17) light red polished fine ware (*LRPFW*), with very small mineral inclusions in the clay, red or sometime grey in cross-section; light red polished outside surface (Fattovich 1980, 26-27; Group 2.B.1);
- 18) dark red polished fine ware (*DRPFW*), with very small mineral inclusions in the clay, dark red in cross-section; var. 1, dark red polished outside surface (Fattovich 1980, 27-28; Group 2.B.2); var. 2, red slip on both surfaces;
- 19) black topped, red polished ware (*BTRPW*)<sup>4</sup>, with very small mineral inclusions in the clay, red and dark grey in cross-section; red polished outside surface with a black polished outside rim and sometime inside surface (Fattovich 1980, 28-29; Group 2.B.3); often only the top of the lip is black polished in colour;
- 20) red-brown polished ware (*RBrPW*), with very few mineral inclusions in the clay, grey in cross-section; reddish brown polished outside and sometime inside surface (Fattovich 1980, 29-30; Group 2.B.4);
- 21) black polished fine ware (*BPFW*), with very small mineral inclusions in the clay, grey in cross-section; black polished outside and sometime inside surface (Fattovich 1980, 30-31; Group 2.B.5);
- 22) orange ware (*OW*), with mica and possibly vegetal inclusions in the clay, orange in cross-section; smooth outside surface (Fattovich 1980, 31; Group 3.A.1);
- 23) orange-pink ware (*OPW*), with mica and vegetal inclusions in the clay, orange or grey in cross-section; smooth outside surface (Fattovich 1980, 31-32; Group 3.A.2);

---

<sup>4</sup> This ware is also described as Black Topped Red Ware (D.W. Phillipson 2000, 303-12).

- 24) pink ware (*PW*), with very few mica inclusions, pink or grey in cross-section (Fattovich 1980, 32; Group 3.A.3);
- 25) light brown ware (*LBW*), with very few vegetal inclusions in the clay, light brown in cross-section; smooth outside surface (Fattovich 1980, 32; Group 3.A.4);
- 26) brown ware (*BrW*), with very few mineral inclusions in the clay, brown or sometime black in cross-section; burnished surfaces sometime with a brown slip (Fattovich 1980, 32-33; Group 3.A.5);
- 27) dark Red (Brick-Red) Fine Ware (*DRFW*), with very few mineral inclusions in hard clay, dark red or rarely grey in cross-section; burnished or sometime red slipped outside surface (Fattovich 1980, 33; Group 3.A.6);
- 28) red-grey polished ware (*RGPW*), with very few mineral inclusions in the clay, grey in cross-section; reddish grey polished outside surface (Fattovich 1980, 34; Group 3.B.1);
- 29) orange polished ware (*OrPW*), with very few mineral inclusions in the clay, orange in cross-section; orange polished slip outside, smooth inside surface.

### Lithics (by *L. Phillipson*)

The lithic materials from Seglamen included knapped lithic artefacts and grindstones with related objects.

*Knapped lithic artefacts.* All knapped lithic artefacts recovered in excavated assemblages and in surface collections were individually examined and recorded according to their material, dimensions, plan and profile shapes and, where relevant, scar patterns; particular attention was paid to edge configurations and to possible signs of use wear. All retouched and utilised pieces plus a generous selection of cores and some flakes were also recorded in drawings and photographs. In this report, the term “fragments” includes all un-retouched and un-utilised broken artefactual material and knapping debris - that is broken flakes, chunks, chips, and angular waste - with the exception of significant portions of broken cores and of chalcedony/quartz geodes. The constraints of time and resources imposed by field conditions permitted only rudimentary recording of the materials and maximum dimensions of these residues of the knapping process. A few carved or otherwise shaped stone artefacts are also included in this preliminary report.

A comprehensive study of the lithic industries from Aksum and its near vicinity (Phillipson 2009) includes descriptions of individual collections and sites with Pre-Aksumite and Aksumite lithics, a discussion of methodology, chronological overview of the lithic sequence, discussion of lithic materials, glossary of artefact terms used and bibliographic references. That work together with L. Phillipson 2000, which reports on the lithic materials recovered from the site of Kidane Mehret, near Aksum, provides basic references and terminology for the present report. Information contained in those publications is not repeated here. Comparison should also be made with the material contained in an as yet unpublished report on the lithic materials from sites on Beta Giorgis, near Aksum.

For the excavated sites, stratigraphic units not listed in the report produced no knapped or other lithic material or, in the case of Seg I, produced material which will be recorded at the start of the 2011 field season.

*Grindstones and related objects.* In this report, the terms used are as defined in L. Phillipson 2001. That article, which reports on Pre-Aksumite and Aksumite material excavated from the site of Kidane Mehret on the northern periphery of the Aksumite conurbation, also describes the recent and present-day use of such implements and their local nomenclature. It serves as a comparison for the excavated and surface-collected grindstones and related pieces from Seglamen. As this is a preliminary report, only sample measurements and weights are given. Detailed descriptions and measurements of all individual pieces were recorded, but are not all included here. Where measurements are given, they are in the form: maximum length × maximum width × maximum thickness. Measurements in square brackets [ ] are of the extant portion of a broken side or edge. The weights of grindstones are given as approximations to the nearest kg, as the available weighing equipment did not permit any more precise assessment.

Grindstones are the stationary lower member of a pair. The Seglamen examples are generally sub-rectangular or ovate in plan with a long axis parallel to the direction of their utilisation. They are flat or slightly convex on their unutilised lower faces. Some have been shaped on their peripheral edges, but many are simply utilised fieldstones or small boulders. Most are approximately plano-convex in cross section or are slightly

concave on their upper, utilized, faces; this contrasts with many present-day examples and with grindstones recovered from Kidane Mehret, which are generally somewhat more deeply concave. Some bi-planar examples were assumed to have been used first on one face, then on the other as stationary grindstones rather than as mobile topstones on account of their large size or heavy weight. Most grindstones were found to weigh more than 3 kg.

Topstones require both hands to manipulate in a back and forth motion. They are usually used in conjunction with a grindstone to mill grain or, less frequently, to reduce other substances to a paste or powder. However, at a macroscopic level of examination, there is no definitive indicator of whether all such artefacts were invariably used in conjunction with a stationary grindstone. Some may have been used directly against another material as abraders or polishers, others may have served as small grindstones. Topstones are usually ovate or sub-rectangular in plan with a long axis at right angles to the direction of movement; their cross sections may be plano-convex, triangular, wedge shaped or, less frequently, biconvex or bi-planar with two utilised faces. They generally weigh between about 1 and 3 kg and are made of basalt with a few of vascular basalt and a few of well-silicified sandstone. Some excavated and surface-collected topstones were found to have been broken and the broken parts not re-used before they were discarded; others were entire. Their approximate weights are from 3/4 to 6 kg, with a mean of 3 kg. Sample dimensions for complete specimens are  $78 \times 75 \times 33$  mm,  $99 \times 85 \times 37$  mm,  $149 \times 62 \times 41$  mm, and  $275 \times 108 \times 7$  mm.

Handstones fit comfortably in one hand, but are too small for two-handed use. They generally weigh less than 1 kg, are ovate or circular in plan shape and plano-convex or biconvex in cross section. Some have been carefully shaped on their circumferences as well as on both faces; most are more casual with little or no evidence of primary shaping. Wear on the flatter side of some examples indicates that they had been used with a circular motion. Handstones may have been used in conjunction with a stationary grindstone for preparing small quantities of foodstuffs, spices, medicines, pigments, etc. They are also used on their own for rubbing depilating and/or tanning materials into cattle hides or more delicate pelts,

as an adjunct to wood or stone working, to smooth plastered walls, and to assist in shaping ceramic vessels<sup>5</sup>. There is evidence of the re-use of handstones or for their having served multiple functions. Two examples had been used as hand-held anvils for light hammering or cutting tasks; a few have battered edges from additional use as hammerstones. All recorded handstones are of basalt. Most examples were found unbroken. They weigh between about 1/4 and 3/4 kg, with a mean of somewhat less than 1/2 kg. They have sample dimensions of 72 × 49 × 29 mm, 82 × 78 × 59 mm, and 117 × 69 × [23] mm.

Burnishers and whetstones are tabulated above together with handstones, of which they form subgroups, but between which they cannot reliably be distinguished except by an arbitrary size classification. Some burnishers are made of quartzite or other hard stones in addition to basalt. Sample dimensions of such tools are [31] × 34 × 32 mm, and [38] × 37 × 32 mm.

Hammerstones are frequently ovate or sub-spherical and are heavily battered, having been used *inter alia* for dressing or re-roughening grindstones, for knapping lithic artefacts, or as a pestle for crushing or powdering various substances. They are usually of relatively hard stone such as basalt, quartz or quartzite cobbles which have not been dressed; they are shaped only by use wear. Their weights range from less than 1/4 kg to almost 2 kg, with a mean of 1/2 kg and sample dimensions of 73 × 60 × 58 mm, 85 × 60 × 55 mm, and 94 × 76 × 70 mm.

### *Investigations at Seglamen*

*By H. Berhe, R. Fattovich, L. Phillipson and L. Sernicola*

The modern village of Seglamen is located on a remarkably flat terrace at the confluence of Haselo and Mai Nigus rivers, about 15 km to the south-east of Aksum, and less than 1 km to the east of the Aksum-Adet road (Fig. 5).

Four archaeological sites have been recorded in the area of the modern village of Seglamen:

---

<sup>5</sup> This process is illustrated in Arthur 2006, fig. 2.14.

- 1) Seglamen (SG 1; site code: 2010/01);
- 2) Mai Lelgi (SG 2; site code: 2010/02; SG 4; site code: 2010/04);
- 3) Mebahol (SG 3; site code: 2010/03).

Two rectangular slabs of sandstone regularly carved but not smoothed, measuring about 1.9 m × 0.3 m × 0.15 m have been also recorded at the entrance of the church of Beta Medhane Alem to the southwest of site Seglamen. According to the priest, the slabs were carried there from the area of Amda Tsion at SG 1. No ceramics or other ancient materials have been recorded within the church compound or in its vicinity. Starting from the church, the systematic survey was conducted over an area of about 2.5 sq km along the terrace to the west of Mai Nigus to record possible sites, but no evidence has been found in the area.

Seglamen SG 1 (2010/01), is located at the 11<sup>th</sup> kilometer of the Aksum-Adet road, about 700 m to the east the road from Aksum. The site occupies an area of about 7 hectares at the edge of the western cliff of the Nigus river gorge, and encompasses the areas of Amda Tsion and Mogareb, in the eastern sector of the village, where concentrations of artefacts (mainly lithics and ceramics) and architectural elements are visible on the surface.

Fieldwork at SG 1 included the systematic surface survey of the site and test excavations at four selected localities.

#### Survey (by *L. Phillipson and L. Sernicola*)

The 2010 survey covered the whole area of the site in order to delimit its extension and to possibly locate different activity areas.

Seventeen *loci* were recorded (S1-S17) (Fig. 6). Systematic surface collections, 10 m × 10 m in area, were carried out at S3 and S4, in the south-western sector of the site. S5, S7, S8, S9, S10 were randomly sampled. S11, S12, S13, S14, S15, S16, S17 were only recorded. S5, S7, S8, S9, S10 were randomly sampled.

The occurrence of architectural structures was recorded in the north-eastern and south-eastern sectors of the site (S1, S2). Possible activity areas have been recorded in the north-western and south-western sectors of the site (S4, S11, S12, S13, S14, S15, S16, S17).

Two carved sandstone slabs were also recorded in the compound of a local farmer. According to the owner of the house, these slabs were found in the area of Mogareb.

The recorded *loci* are:

S1- Locality: Amda Tsion. Location (X/Y): 463719,950 / 1554804,599. Dense scatter of ceramics and lithics with rubble and a carved quadrangular stone block suggesting the occurrence of constructed structures in the area.

*Knapped stones.* A surface scrape and total collection of all possible artefactual material was made from the area laid out as excavation Seg I (labelled S1 on artefact bags and record sheets). This yielded 6 retouched chert tools, 3 possibly retouched pieces, 3 utilised or possibly utilised pieces, 31 cores, 26 whole flakes, and 174 lithic fragments. Among the tools are three rectangular end-scrapers with 65° edge angles, two convex scrapers and a triangular trimmed flake 34 × 29 × 9 mm with a worn tip. This was probably used as a hafted knife, not as the armature of a weapon. A chert flake with a denticulate edge and a tabular chert fragment had edge scars which could not be distinguished between deliberate retouch, utilisation or accidental field damage. A flake of hard slate or indurated shale, 88 × 44 × 14 mm, had a scarred concave edge which may have resulted from its use as a knife. Similar tools have been recovered from Late and Post-Aksumite contexts in eastern Tigray. In addition, 3 fragments of a tabular, somewhat fibrous schist had what appeared to be marks on their surfaces and/or possibly trimmed edges. It is not, however certain that such modification was artificial. There were 4 plano-convex ovate chert cores, maximum dimensions 30 - 77 mm, with areas of careful edge preparation at angles of 75° - 90°, and 1 circumferential core, 65 mm, with similar preparation all around; 1 biconvex ovate core lacked such edge preparation. The 3 single-platform cores, maximum dimensions 39 - 62 mm, may have been late stages in the reduction of what had originally been radial ovates. Most abundant were 21 chert and 1 chalcedony casual and irregular cores, 37 - 53 mm, of which about half tended towards multi-platform orientations and a quarter towards radial. Whole flakes included an obsidian core edge (rejuvenating) flake, 35 × 25 × 10 mm, and a circular quartzite flake, 321 × 35 × 6 mm. The remainder comprise 23 chert and 1 chalcedony irregular flakes with maximum dimensions of 21 to 62 mm. Not all of the 93 chert angular fragments were necessarily artefacts. Probably the 16 geode and

chalcedony, 13 tabular schist, 6 obsidian and 3 quartzite angular fragments were, as were the 32 chert, 7 chalcedony, 6 obsidian, 3 quartzite, and 2 quartz fragments collected.

S2 - Locality: Amda Tsion. Location (X/Y): 463721,086 / 1554837,564. Dense scatter of ceramics and lithics over a slightly mounded area. Traces of rubble on surface suggest the occurrence of constructed structures in the area.

*Knapped stones.* A total collection was made over the surface before excavation of Seg II commenced. While the area had more evidence of underlying building structures and than did the former area, there was less density of knapped lithics. The collected materials included:

Three chert scrapers: a very finely worked, almost circular convex scraper,  $35 \times 34 \times 18$  mm, with a  $65^\circ$  edge angle, a small denticulate end scraper,  $14 \times 13 \times 8$  mm,  $70^\circ$ , and a high-backed convex end-scraper,  $51 \times 32 \times 19$  mm,  $75^\circ$ . This last is one of the enigmatic pieces that may have been either a scraper which had been repeatedly resharpened - as illustrated in Yonatan and Agazi 2010, figure 3b - or as core from which small flakes had been removed for use elsewhere.

Thirteen chert cores and pre-cores included 1 roughly shaped, rectangular pre-core,  $80 \times 55 \times 46$  mm, a second possible pre-core of similar size with a biconvex cross section, and 6 casual or irregular cores, 51 to 64 mm, which tended towards radial, conical or plano-convex forms. There were also 1 multi-platform, 1 bi-polar, 2 plano-convex ovate, and 1 tabular rectangular core,  $62 \times 63 \times 23$  mm. These last three examples had been used for the production of Levallois style flakes - that is flakes, whose plan shape repeats that of the parent core, struck from and comprising almost the entirety of one face of the core<sup>6</sup>. A roughly shaped cuboidal block of

---

<sup>6</sup> It is likely that future research will show that the presence of such flakes is a significant feature of some Pre-Aksumite lithic assemblages. At the site of Kidane Mehret (L. Phillipson 2000), similar flakes had been used as parts of composite harvesting knives; there may perhaps be a similar use association in the Seglamen area. In general, however,



indurated sandstone,  $140 \times 132 \times 94$  mm, may have been a pre-core or intended as a building stone.

Five irregular chert and 1 irregular chalcedony flakes. There is also 1 Levallois-style chert flake,  $58 \times 54 \times 21$  mm which retains part of its original core's edge,  $80^\circ$ ; this gives the piece an initial and incorrect appearance of being a flake scraper, which it is not.

Nine pieces of limestone angular and flake fragments, 24 - 85 mm, 68 of chert, 17 - 156 mm, 5 of chalcedony geodes, 2 of hard slate, 1 of quartzite, and 1 of obsidian.

Thirty-one fragments of a grey-green, slightly fibrous tabular schist, 13 of which approximate regular oval plan shapes,  $84 \times 62 \times 12$  mm to  $111 \times 68 \times 16$  mm. It is not clear whether they had been deliberately trimmed to this shape or whether they are the result of natural processes; these larger pieces and some of the smaller fragments have what may be knife cut marks on their faces and perhaps artificial trimming scars on their edges.

*Grindstones.* From a surface collection over the area of the Seg II excavation, came a wedge-shaped piece of basalt fieldstone which had been used as a rough hammerstone or chopper, a broken basalt topstone,  $[131] \times 134 \times 40$  mm, of rectangular plan shape and plano-convex profile, and part of a sandstone bi-planar topstone,  $[70] \times 114 \times 36$  mm, a battered chert hammerstone, a broken sandstone grindstone and two fragments of what may have been either grindstones or topstones, one of sandstone and one of basalt.

Also in this collection are two broken, plano-convex sandstone topstones, each of which has been utilised or deliberately shaped on both faces,  $[92] \times 151 \times 44$  mm and  $[190] \times 145 \times 56$  mm, and a bi-planar sandstone handstone or perhaps whetstone,  $71 \times 52 \times 25$  mm, worn on both faces.

A portion of a slightly concavo-convex sandstone grindstone,  $[195] \times 140 \times 65$  mm, was collected from the surface about 30 metres south-east of the S2 excavation area.

---

except at Kidane Mehret, small Levallois-style cores and the flakes struck from them were not characteristic of collections and assemblages from Aksum and its immediate vicinity.

S3 - Locality: Amda Tsion. Location (X/Y): 463672,207 / 1554879,622.  
High quantity of ceramics and lithics.

### *Ceramics*

- 1) red-orange coarse ware (ROCW): 5 body-sherds, 0.6 cm to 0.9 cm thick; 1 decorated body-sherd with an outside band of wavy lines, 0.9 cm thick; 1 decorated body-sherd with a horizontal incised line, 0.9 cm thick; 1 fragment. of a coil handle, 1 cm in diameter;
- 2) orange-grey coarse ware (OGCW): 5 body-sherds, 0.5 cm to 0.8 cm thick;
- 3) red-grey coarse ware (RGCW): 1 body-sherd with traces of scraping/wiping inside, 0.9 cm thick; 1 decorated body-sherd with a horizontal incised line outside and scraping/wiping inside, 0.6 cm thick;
- 4) red-orange fine ware (ROFW): 97 body-sherds, 0.5cm to 1.3 cm thick; 1 fragment, straight rim with a flaring lip, traces of scraping-wiping inside, cup/bowl, 0.8 cm thick;
- 5) orange-gray fine ware (OGFW): 8 body-sherds, 0.5 cm to 0.8 cm thick; 1 fragment, everted shouldered rim with a flaring lip, open bowl or pot, 0.6 cm thick; 1 decorated body-sherd with horizontal incised line, 1.1 cm thick;
- 6) red-brown fine ware (RBFW): 1 fragment of coil handle, 2.4 cm in diameter;
- 7) brown coarse ware (BCW): 1 atypical body-sherd, 1 cm thick;
- 8) gray coarse ware (GCW): 7 atypical body-sherds, 1 cm thick; 1 decorated body-sherd with a horizontal incised line, 1.1 cm thick;
- 9) grey fine ware (GFW): 1 atypical body-shead, 0.7 cm thick;
- 10) black polished coarse ware (BPCW): 3 atypical body-sherds, 0.3 cm to 0.5 cm thick.

*Knapped stones.* This was an intensive surface collection over an area of 7 × 7 metres, centred on a localised concentration of lithic material. It included 1 chert convex scraper on a flake, 46 × 33 × 15 mm, and two others of remarkably similar size and shape, 45 × 34 × 14 mm and 46 × 32 × 11 mm<sup>7</sup>. There is also a single quartz crystal with possible utilisation on its tip.

---

<sup>7</sup> However, it was not apparent whether edge modification on the latter two pieces was the result of deliberate modification or accidental field damage.

Among the chert cores, are an ovate Levallois-style,  $52 \times 43 \times 23$  mm, a rectangular Levallois-style,  $46 \times 28 \times 16$ , 2 multi-platform, 2 single-platform, 2 biconvex ovate radial, and 4 casual/irregular examples. There are also a chalcedony geode fragment used as a single-platform blade core, maximum dimension 38 mm, 2 chalcedony casual/irregular cores, and a sub-rectangular radial quartzite core,  $91 \times 67 \times 18$  mm.

The 15 whole flakes recovered are all irregularly shaped chert with maximum dimensions of 24 to 48 mm. Angular and flake fragments include 98 of chert, 13 - 68 mm, 9 of chalcedony, 13 - 86 mm, 8 of obsidian, 1 - 27 mm, and 8 tabular schist fragments, 38 - 110 mm.

The material collected also included 2 water-worn cobbles which may have been used as casual hammerstones. A sub-cuboidal chert cobble had battered utilisation or accidental field damage at one corner; a quartzite cobble had had 3 flakes removed from one end.

S4 - Locality: Amda Tsion. Location (X/Y): 463682,438 / 1554812,556. High quantity of ceramics and lithics.

### *Ceramics*

- 1) red-orange coarse ware (ROCW): 1 fragment, coil handle, 2 cm in diameter; 2 body-sherds, 0.9 cm and 1.0 cm thick;
- 2) orange-grey coarse ware (OGCW): 6 atypical body-sherds, 0.5 cm to 0.6 cm thick;
- 3) red-grey coarse ware (RGCW): 3 atypical body-sherds, 0.6 cm to 0.9 cm thick;
- 4) red-orange fine ware (ROFW): 16 body-sherds, 0.5 cm to 1.5 cm thick; 1 fragment, straight rim with flattened lip, horizontal incised line around the rim, cup, 0.5 cm thick;
- 5) black fine ware (BFW) with many fine mineral inclusions: 1 decorated body-sherd with incised horizontal line, 0.4 cm thick.

*Knapped stones.* This was an intensive surface collection over a measured area of  $7 \times 7$  m, centred on a small concentration of knapped lithic artefacts. The concurrence of 3 hammerstones together with cores and knapping debris suggests that this may perhaps have been the remnants of a knapping workshop. The only finished tool included in the collection is a chert convex scraper on a thick flake,  $59 \times 50 \times 16$  mm.

Except for a single-platform bladelet core of chalcedony,  $34 \times 34 \times 21$  mm, a broken rectangular quartz core,  $[36] \times 32 \times 12$  mm, and a quartz casual core,  $40 \times 26 \times 24$  mm, all of the cores are of chert. These include 2 plano-convex radial cores,  $52 \times 41 \times 22$  mm and  $63 \times 56 \times 26$  mm, a casual core, and 3 multi-platform cores with maximum dimensions of 50 to 69 mm<sup>8</sup>.

In addition to a weathered basalt flake or spall,  $71 \times 39 \times 22$  mm, the collection includes 17 whole chert flakes, of which 8 are end-struck and/or sub-rectangular with maximum dimensions of 29 to 61 mm, 7 are irregular, and 2 are core edge flakes with maximum dimensions of 50 mm and 72 mm.

Probably not all of the 67 angular and tabular chert fragments, 18 - 68 mm, collected - some of which have areas of field damage resembling scraper or core edges - are in fact artefacts. However, 12 chert flake fragments, 7 geode fragments, and 1 chalcedony fragment are all artefactual. The status of 5 tabular schist fragments, 51 - 137 mm, is uncertain.

S5 - Locality: Amda Tsion. Location (X/Y): 463785,880 / 1554781,864. Dense scatter of ceramics and lithics on a cultivated terrace.

### *Ceramics*

- 1) red-orange coarse ware (ROCW): 1 fragment, coil handle with traces of red slip, 2 cm in diameter;
- 2) red-orange fine ware (ROFW): 2 fragments of coil handle, diameter 1.5 and 1.7 cm; 1 fragment, straight rim with flat lip, bowl, 1 cm thick; 1 fragment, everted rim with rounded lip, bottle/small jar, 0.6 cm thick; 2 body-sherds with internal scraping/wiping, 0.8 cm thick;
- 3) black topped polished ware (BTPW): 1 fragment, bowl with a straight profile and rounded rim, 0.6 cm thick; 2 fragments, cup with a slightly concave profile and rounded rim, 0.3 cm to 0.6 cm thick; 1 atypical body-sherd;

---

<sup>8</sup> Two of the multi-platform cores have edges with crushed damage scars of a type characteristic of field damage, and it is possible that their modification is entirely accidental.

- 4) black topped, brown coarse ware (BTBrCW): 1 fragment, cup or beaker with a straight profile and rounded lip, many small mineral inclusions, 1 circular molded knob under the rim, 0.3 cm thick;
- 5) light brown fine ware (LBFW): 1 fragment, everted rim with a rounded lip, incised line around the rim, 0.3 cm thick; 1 fragment, bowl with a slightly concave profile and rounded rim, incised notches around the rim, 0.4 cm thick; 1 decorated body-sherd with a combined pattern of one horizontal incised line and a band of wavy lines, 0.6 cm thick.

*Knapped stones.* An impressive looking object in this collection may be entirely natural, it is a slightly tapered piece of columnar basalt with an almost right angled triangular cross section, 64 mm long. At the larger end, the sides measure 22 mm, 21 mm and 14 mm; at the smaller they measure 14 mm, 17 mm and 12 mm. Since the nearest source of columnar basalt is on a hill top across the river at a distance of about 5 kilometres, it was probably deliberately brought to the site, perhaps for use as a whetstone.

Cores include a chert rectangular Levallois-style,  $53 \times 30 \times 19$  mm, and a chert bipolar,  $39 \times 31 \times 19$  mm example; the latter has an area of incidental field damage that resembles scraper retouch. An obsidian broken bipolar core measures  $21 \times [18] \times 17$  mm. All of the whole flakes collected have areas of field damage which in some instances resembles, but is not, scraper retouch. These are 7 chert irregular flakes, 24-37 mm, 3 obsidian triangular flakes,  $16 \times 12 \times 5$  mm,  $22 \times 12 \times 14$  mm, and  $25 \times 17 \times 5$  mm, and 1 obsidian irregular flake,  $13 \times 20 \times 3$  mm.

Artefactual fragments include 24 of chert, 16-48 mm, 2 chalcedony, 20 mm and 38 mm, 7 obsidian, 14-26 mm, and 2 sandstone, 31 mm and 45 mm. In addition, 13 angular sub-cuboidal chert fragments, 31-75 mm, were collected. These fragments, which are entirely natural products of chert weathering, resemble the chert rubble found as a foundation packing material under stone slabs in the lowest excavation level of Seg I.

S6 - Locality: Mogareb. Location (X/Y): 463625,601 / 1555038,764. Medium quantity of ceramics and few lithics. The upper part of a sandstone carved slab outcropping about 10-12 cm from the ground has been also noted. According to local farmers, stone slabs similar to stelae presently stored in private compounds, metal bracelets and painted vessels have been collected in this area through time.

### *Ceramics*

- 1) black topped red polished ware (BTRPW): 1 fragment, cup/bowl with a rounded rim thickened inside and many coarse mineral inclusions, 0.6 cm thick;
- 2) orange-grey coarse ware (OGCW): 1 fragment, small jar with a ring-foot, 7.6 cm in diameter at the base.

*Knapped stones.* Among the few lithic artefacts collected from the surface are a triangular chert flake, 35 × 24 × 8 mm, 5 chert flake fragments, and 20 angular chert fragments. Most of the angular fragments are probably entirely natural, though the status of one piece, a very hydrated possible fragment of a casual or irregular core, is more problematic; if it is an artefact it must belong to an older series than is represented by most of the material recovered from Seglamen.

*Other finds.* Conical bronze object, possibly a seal or a weight, 1.6 cm high, 1.1 cm in diameter at the base. Small (6 mm) clay foot, probably part of a human figurine.

S7 - Locality: Amda Tsion. Location (X/Y): 463704,035 / 1554888,716. Dense scatter of ceramics and lithics.

*Ceramics.* Fragments of orange, red, and black ware, orange ware with gray core, black topped ware with many coarse or fine mineral inclusions. Diagnostic sherds include everted continuous rims with rounded or pointed lip, straight rims with flatted lip and decorated sherds with incised horizontal and/or wavy lines<sup>9</sup>. 1 fragment, black ware with a red brownish core and mat impressions inside was also recorded.

*Knapped stones.* This selective collection was made with the intention of obtaining a sample of lithic cores and whole flakes plus any retouched pieces that were observed; few angular or flake fragments were collected.

---

<sup>9</sup> The study of the ceramics from this *locus* is in progress.

Tools include a broken, bifacially backed obsidian crescent,  $[14] \times 8 \times 3$  mm, a roughly backed basalt blade,  $120 \times 36 \times 14$  mm - practical experiment has shown that such tools serve as efficient knives for some cutting tasks and for flensing or removing the hide from an animal carcass - and a chert convex endscraper,  $38 \times 31 \times 13$  mm, with a  $65^\circ$  edge.

Most abundant of the cores are 16 chert plano-convex examples,  $33-51 \times 32-46 \times 18-34$  mm, with plan shapes that grade from almost circular to sub rectangular. Six of these had been used for the Levallois-style removal of large flakes immediately before their discard and several of the others seemed prepared for such a use. There is also 1 somewhat irregular Levallois-style quartz core,  $50 \times 35 \times 28$  mm. The next most frequent group comprises 8 chert multi-platform cores,  $31-78 \times 22-69 \times 21-42$  mm, some of which have heavily stepped edges. There are also 3 single-platform hemi-circumferential chert cores,  $28-31 \times 22-30 \times 12-40$  mm, and 2 bifacial, biconvex, circular, radial chert cores with maximum diameters of 42 mm and 53 mm. In addition, 7 chert broken cores and core fragments were collected, 36-61 mm; two of these were edges that had been removed from partially worked cores in order to facilitate additional flake removals.

Chert flakes have maximum dimensions of 12 mm to 59 mm; these include 19 irregular and 2 triangular examples. A single rectangular basalt flake, 65 mm, 2 triangular quartzite flakes, 39 mm and 75 mm, 3 irregular chalcedony flakes, 17-29 mm, and an obsidian flake fragment were collected. A piece of tabular schist,  $87 \times 72 \times 21$  mm, had apparently been trimmed to a sub-circular shape, perhaps to serve as a jar lid. A carved sandstone fragment,  $100 \times 40 \times 18$  mm was also collected.

*Grindstones.* This collection includes a portion of a sandstone grind- or handstone with an almost bi-planar profile and a sub-rectangular plan shape.

S8 - Locality: Amda Tsion. Location (X/Y): 463748,368 / 1554855,751. Dense scatter of ceramics and lithics. According to local farmers, many of the sandstone slabs presently stored in some of the private compounds come from this area.

*Ceramics.* Fragments of orange, red, and black ware, orange ware with gray core, black topped polished ware. Mineral inclusions vary from abundant coarse to fine. Diagnostic sherds include everted continuous rims with

rounded or pointed lip, straight rims with flatted lip and decorated sherds with incised horizontal and/or wavy lines<sup>10</sup>.

*Knapped stones.* This selective collection was made to gather additional examples of tabular green schist which may have been deliberately trimmed or which may bear artificial cut marks; it includes 1 ovate, 153 × 82 × 23 mm, and 6 rectangular schist fragments 76-123 × 58-62 × 11-20 mm. Until the source of this material is located, experiments are carried out on it, and its natural weathering patterns are observed, the status of these objects remains uncertain. However, the artefactual status of a tabular, circular disc of hard sandstone, 75 × 71 × 7 mm is not in doubt; probably it was a pot lid. The few cores collected include 1 roughly trimmed polyhedral pre-core, 87 × 76 × 61 mm, 1 sub-circular plano-convex chert core, 1 single-platform chert core, 48 × 47 × 39 mm, 1 chalcedony bladelet core, 34 × 23 × 15 mm, and 1 chert core fragment. Two chert core edge rejuvenating flakes, 14 chert irregular flakes, 1 chalcedony rectangular flake, 28 × 18 × 7 mm, and 2 chalcedony flake fragments were also collected.

*Grindstones.* This collection includes a lightly worn, basalt handstone - probably a burnishing tool - which had been neatly trimmed to an oval shape, with a very slightly biconvex cross section, 99 × 67 × 24 mm.

*Other finds.* Moderately consolidated sandstone block with fine pink and white lamina roughly trimmed to an irregular shape with two flat ends on a regularly curved top (or bottom). The back appears to be entirely natural. Most of the carved lines appear to have been made by punching or drilling small holes or dimples; the holes were then joined by knife cuts. Irregular spacing of the dimples suggests that the tool used was a single point unlike the toothed chisels used for much Aksumite fine stone dressing. On either side of the principal figure the apparent background has a number of sub-parallel engraved lines plus two lines across what may be the figure's right leg (or left horn). These may represent an intermediate stage in cutting away the unwanted stone and suggest that the work was abandoned in an

---

<sup>10</sup> The study of the ceramics from this *locus* is in progress.



unfinished state. The depth and orientation of lines on the bottom (or top) face seem to indicate that, had the figure(s) been completed, it would have been a statuette in the round or at least in high relief.

S9 - Locality: Amda Tsion. Location (X/Y): 463684,711 / 1554834,153. Dense scatter of ceramics and lithics on cultivated terraces immediately south of S1. Possibly metal slags have been collected in this area.

### *Ceramics*

- 1) red-orange coarse ware (ROCW): 5 fragments of coil handles, 1.1cm to 2.8 cm in diameter; 2 fragments of a short flat horizontal handle, thickness 1.6 cm; 1 body-potsherd with a roulette decoration, 1.1 cm thick;
- 2) red coarse ware (RCW): 1 straight rim with flaring top, cup/beaker, 0.5 cm thick;
- 3) black topped polished ware (BTPW): 1 everted rim with a flaring lip, small jar/pot, 0.6 cm thick; 1 fragment, beaker/bowl with a rounded rim, 0.8 cm thick;
- 4) black topped polished coarse ware (BTPCW): 1 fragment, cup/bowl, 0.6 cm thick;
- 5) red-orange fine ware (ROFW): 1 fragment of a jar S-profile and rounded rim, incised line around the rim, 0.8 cm thick;
- 6) gray coarse ware (GCW): 1 decorated body-potsherd with horizontal band of impressed triangles, 1 cm thick;
- 7) black coarse ware (BCW): 1 decorated body-potsherd with roulette rectangular impressions, 0.7 cm thick; 1 decorated body-potsherd with mica inclusions, horizontal band of two impressed circles, 0.8 cm thick; 1 straight rim with rounded top, cup, 0.4 cm thick; 1 everted rim with rounded top, mica inclusions, jar, 0.7 cm thick;
- 8) black fine ware (BFW): 1 fragment of a straight cylindrical neck and flat rim, bottle, 0.4 cm thick.

*Knapped stones.* This small selective collection was made of all artefacts found on the surface before excavation of Seg IV. It includes a roughly backed basalt flake knife,  $92 \times 31 \times 17$  of a type which is moderately common in eastern Tigray, but not known from the Aksum area. It also includes a very fine, broken basalt handstone which is described in the preliminary report on grindstones and related objects from Seglamen.

Cores include 1 obsidian plano-convex circular,  $33 \times 32 \times 13$  mm, 1 obsidian rectangular bipolar,  $22 \times 19 \times 8$  mm, 1 chert biconvex radial  $31 \times$

26 × 12 mm, 1 chert irregular core, 55 × 51 × 16 mm, and 1 chert core edge fragment, 61 mm. In addition, 1 obsidian rectangular flake, 28 × 16 × 5 mm, and 2 obsidian and 1 chert fragments were collected.

*Grindstones.* This small collection included a very fine basalt burnishing tool or, perhaps, whetstone with a long ovate plan and a rounded triangular cross section, [31] × 34 × 32 mm.

*Other finds.* 1 small (5 mm) cylindrical bead of limestone.

S10 - Locality: Amda Tsion. Location (X/Y): 463672,207 / 1554854,614. Dense scatter of ceramics, lithics and rubble on cultivated terrace.

### *Ceramics*

- 1) red-orange fine ware (ROFW): 1 straight rim with a rounded lip, horizontal incised line around the rim, cup/bowl, 0.6 cm thick;
- 2) red-brown fine ware (RBFW): 1 fragment, strainer vessel, 0.8 cm thick;
- 3) black topped red polished ware (BTRPW): 1 fragment, straight rim with a rounded lip, cup, 0.5 cm thick;
- 4) BTBrW: 1 fragment, straight rim with a flattened lip, cup, 0.4 cm thick;
- 5) brown coarse ware (BCW): 1 fragment, straight rim with rounded lip, internal band of wavy lines incised below the lip, bowl, thickness 0.8 cm, with a grey core; 1 decorated body-potsherd with bands of horizontal and wavy lines on the outside and traces of scraping/wiping on the inside, with an orange core; 1 everted rim with rounded lip, horizontal incised line along the rim, jar, 0.5 cm thick;
- 6) brown fine ware (BFW): 1 decorated body-potsherd with bands of horizontal and wavy lines on the exterior and traces of scraping/wiping on the interior.

*Knapped stones.* This very small collection centred on a few obsidian artefacts. It includes 1 chert concave scraper, 54 × 32 × 26 mm, with a 75° edge, 1 chert ovate radial core, 48 × 38 × 17 mm, and 1 obsidian plano-convex radial core, which cannot have been long exposed on the surface as it is in very fresh condition. An obsidian rectangular flake, 22 × 21 × 8 mm and 3 obsidian flake fragments also collected suggest that this might have

been the locus of some minor knapping activity, too slight to be termed a workshop. Also collected were 1 rectangular chert flake,  $38 \times 19 \times 6$  mm, and 1 chalcedony rectangular flakes,  $31 \times 16 \times 7$  mm.

S11 - Locality: Amda Tsion. Location (X/Y): 463552,851 / 1554873,939. Low density of ceramics and medium density of lithics.

*Ceramics.* Fragments of red and orange ware with a grey core.

*Knapped stones.* Yellow chert cores and flakes, chalcedony flakes.

S12 - Locality: Amda Tsion. Location (X/Y): 463436,905 / 1554833,017. Medium density of lithics.

*Knapped stones.* Yellow chert cores and flakes

S13-S16 - Locality: Amda Tsion. Location (X/Y): 463428,948 / 1554870,529; 463416,444 / 1554893,263; 463436,905 / 1554894,400; 463490,331 / 1554889,853. Surface description: Very low density of lithics forming a continuous scatter on surface. GPS readings were taken where major concentration were recognized.

*Knapped stones.* Yellow and red chert cores and flakes.

S17 - Locality: Amda Tsion. Location (X/Y): 463530,117 / 1554884,169. Surface description: Medium concentration of lithics and very low quantity of ceramics on surface.

Finds include:

*Ceramics.* Fragments of red and orange ware with a grey core and many coarse mineral inclusions.

*Knapped stones .* Yellow and red chert cores and flakes.

*Seglamen Area Non-Systematic Surface Collection.* In addition to the total, intensive, and selective surface collections that were made in particular locations, a number of cores and other artefacts were collected from the

general area of the Seglamen sites, primarily for use as examples to show students and workmen. These comprise 1 chert flake with a convex modified edge that may have resulted from deliberate retouch or from accidental field damage, 1 chert proto-core,  $147 \times 59 \times 55$  mm, 2 chert casual/irregular cores, 4 chert multi-platform cores, 5 chert sub-circular plano-convex cores, some of which have had Levallois-style flake removals, 2 chert Levallois-style cores with rectangular plan shapes and 1 with a triangular plan.

There are also 1 quartz, rectangular Levallois-style core and 1 chalcedony irregular core, 1 chert core edge rejuvenating flake and 7 irregular chert flakes, a chalcedony and an obsidian fragment, and 1 tabular ovate schist object,  $92 \times 66 \times 13$  mm.

### Excavations (by *H. Berhe, R. Fattovich, B. Kribus and L. Sernicola*)

Four excavation units were opened during the 2010 field season: Seg I and Seg II, 26 m apart from each other, in S1 and S2 at Amda Tsion; Seg III in S6 and Seg IV at Mogareb (Fig. 7). The excavation of Seg I, in particular, was conducted by the AUC fourth year undergraduate archaeology students under the supervision of Hiluf Berhe and Rodolfo Fattovich.

#### Seg I (by *H. Berhe*)

##### Structure and stratigraphy

This excavation unit of  $10 \text{ m} \times 10 \text{ m}$  was opened in a farming area where the topsoil (SU1) was heavily disturbed by ploughing<sup>11</sup>.

The main stratigraphic units were:

SU1 - topsoil, divided into two subunits:

---

<sup>11</sup> A datum point at the NW corner of the EU and a reference point about 40 meters to the east of the site were established for mapping and taking relative elevations of each SU.

SU1a, very hard and dry plough-zone, about 10 cm deep, mixed with stones, probably from an ancient building;

SU1b, relatively fertile and black topsoil, about 15 cm deep with many potsherds embedding the architectural structures.

SU2 - heavily damaged wall, about 4 m long, 0.7 m thick, with a south-west to north-east orientation, in A2-B1 at the north-western corner of the unit; stone rubble from a collapse was visible in A1 to the north-west of the wall;

SU3 - heavily damaged wall, about 5.20 m long, 0.60 thick, with a south-east to north-west orientation in C1-E3 at the north-eastern corner of the unit;

SU4 - possible “pavement” of regularly arranged small stones, associated with many potsherds and bones beneath SU1 in squares A2-A5, B2-B5, C2-C5, D2-D3;

SU5 - concentration of grinding stones, potsherds and bones, apparently associated with three burnt stone carved blocks, and two large stone slabs with a east-west orientation in C1;

SU21 - a wall, about 2.50 m long, 0.60 m thick, perpendicular to the wall SU2 in A2-B3, beneath the “pavement” SU4;

SU26 - heap of chert fragments, about 1.5 m × 1.2m in size, in C2-C3;

SU32 - heavily damaged wall in B4, most likely originally abutting wall SU3;

SU33 - roughly circular hole, about 2 m × 1.5 m in area, filled with small irregular chert blocks, where the two large horizontal slabs (SU5) were located;

SU34 - bedrock at an average depth 0.5 m to the north and 0.3 m to the south.

The excavation brought to light the heavily disturbed remains of an architectural unit, most likely a rectangular building, in a black soil matrix (SU1b), about 5-20 cm thick, disturbed at the top by ploughing (plough-zone, SU1a), about 10 cm deep. The walls were directly built on the bedrock (SU34) (Fig. 8).

On the basis of the fragmentary evidence of the walls, the original building maybe had three rooms with a larger one to the south. In the south-eastern sector of the excavation unit, however, no intersecting point between

the walls was found, suggesting they might join with each other outside the excavated area (Fig. 9).

A room, about 4.30 m × 4.70 m in area, has been tentatively distinguished in the northern and western sector of the trench (Fig. 9).

An arrangement of three blocks of stones with evidence of ashes (a furnace or oven?) associated with a great quantity of potsherds, bones, grinding stones (SU5) were found inside this room in square C1 (Fig. 10a), suggesting this was a working area, maybe a kitchen.

Two large and flat, horizontal stone slabs, about 0.60 m × 0.90 m in size, with traces of burning on the upper surface were placed beneath this feature (Figure 10b).

The excavation also demonstrated that these slabs were placed in a hole, which was filled with broken and irregular small blocks of chert (Fig. 10c).

A heap of chert fragments (SU26) like those beneath the slabs in C1 was found to the south-west of the features in SU5. This feature might suggest that the stones in excess, which were no more useful to fill the hole beneath the large stone slabs in SU5, were left on the ground inside the room.

Most of the southern half of the excavation unit was covered with a “pavement” of regularly arranged small stones (SU4), associated with many potsherds and bones beneath SU1. This stratum of stones also overlapped walls SU21 and SU32, suggesting a later reuse of the area. Some big blocks apparently separate the northern room (a kitchen?) from this pavement and might suggest that part of the original building continued to be used.

An accurate interpretation of the recorded building and phases of construction is not yet possible due to the very bad state of preservation of the walls. It seems however that this was a residential structure. Further investigations will be conducted in the coming seasons to record the whole plan of the building in order to appropriately understand its function.

*Finds.* Finds from Seg I include ceramics, lithics, grindstones and a few other artefacts.

*Ceramics*<sup>12</sup> (by R. Fattovich). The study of the ceramics from Seg I still is at a preliminary stage of analysis insofar as only about 30% of the ceramics were examined in the laboratory of the Archaeological Museum at Aksum during the 2010 field season. All examined ceramics were collected in SU1. The following groups of ware have been identified:

- 1) red-orange coarse ware (ROCW), 33 fragments (1 small ledge rim with transversal incisions on the slightly everted rim, large jar, 14 mm thick, 24 cm in diameter; 1 everted rim, jar, 15 mm thick, 26 cm in diameter; 2 rounded handles);
- 2) red coarse ware (RCW), 3 fragments (1 everted rim, large jar, 13 mm thick; 2 cylindrical handles);
- 3) red-orange fine ware (ROFW), 55 fragments (1 slightly everted rim with an inside horizontal groove; 2 rims, open bowls, 6 mm thick; 1 fragment, shoulder with wavy comb-incised decoration, 8 mm thick; 1 everted rim, small necked jar, 6 mm thick; 1 rim, bowl; 1 rim, large coarse plate, over 30 cm in diameter, 17 mm thick; 2 slightly everted rims, small jars or bowls; 1 big horizontal, cylindrical handle, 24 mm in diameter; 1 cylindrical handle; 1 fragment with outside wiping; 1 neck with vertical, cylindrical handle, 10 mm thick; 1 ledge rim and shoulder, jar, with horizontal, comb-incised wavy bands, 4 mm thick, 14 cm in diameter; 1 fragment with inside scraping and a knob; 2 cylindrical handles);
- 4) black polished coarse ware (BPCW), 1 everted rim, jar, 14 mm thick, ca. 24 cm in diameter;
- 5) orange-gray fine ware (OGFW), 10 fragments;
- 6) red-brown fine ware (RBFW), 8 fragments (1 fragment with inside scraping; 1 fragment, foot of a biconical cup);
- 7) grey fine ware (GFW), 15 fragments (2 straight rims; 1 straight rim, open bowl, 6 mm thick; 1 straight rim, bowl; 1 straight rim, open bowl, 10 mm thick; 1 everted rim, jar, 9 mm thick; 1 rounded base; 1 shoulder and lower neck, jar, 8 mm thick; 1 body-potsherd with a vertical comb-impressed band, 8 mm thick; 2 body-potsherds with bands of impressed triangular punctuations; 1 body-potsherd with a comb-impressed band of triangular

---

<sup>12</sup> The ceramics from Seg I were examined in a preliminary way by R. Fattovich. The exhaustive study of the ceramics from Seg I is in progress by M. Gaudiello.

- punctuations, 10 mm thick; 1 body-potsherd with a band of impressed triangular punctuations);
- 8) light red polished fine ware (LRPFW), 7 fragments (2 straight rims, cups/bowls, 7 mm thick; 1 body-potsherd with burnished red vertical lines and rocker-stamp decoration; 2 body-potsherds with outside red burnished lines);
  - 9) dark red polished fine ware (DRPFW), 13 fragments (2 slightly everted rim, open bowl, 4 mm thick; 1 straight rim, cup/bowl; 6 body-potsherds with inside burnished lines; 1 fragment, neck;
  - 10) black topped polished ware (BTPW), 53 fragments (1 straight rim, 5-6 mm thick; 11 straight rims, cups/bowls, 5-7 mm thick; 5 straight rims, small bowl, 6 mm thick; 2 straight rims, open bowls, 5 mm thick; 1 straight rim, large open bowl, 4 mm thick; 5 straight rims, open bowls, 6-7 mm thick; 1 slightly everted rim, bowl, 7 mm thick; 1 straight rim, small cup, 6 mm thick, 10 cm in diameter; 4 straight rims, bowls, 8-11 cm in diameter; 7 straight rims; 1 thick everted rim, jar, 6 mm thick; 1 ring-base; 1 body-potsherd with inside scraping; 1 fragment with a light inside scraping; 1 fragment with a small molded elongated knob);
  - 11) unpolished black topped ware, 47 fragments (1 shoulder with a band of horizontal impressed dots, 8-12 mm thick; 2 straight rims, bowls, 8-11 mm in diameter; 1 body-potsherd with mica and outside red-burnished lines; 1 body-potsherd with an inside incised zigzag band; 41 straight rims, bowls; 1 straight rim, closed cup, with a horizontal, small oval knob, 5 mm thick, ca. 12 cm in diameter);
  - 12) red-brown polished ware (RBrPW), 16 fragments (1 body-sherd, bowl; 11 body-sherds with outside red-burnished lines; 2 fragments with inside scraping);
  - 13) black polished fine ware (BPFW), 6 fragments (1 straight rim, bowl, 7 mm thick; 4 straight rims, cups/bowls; 1 everted rim, small jar);
  - 14) orange-pink ware (OPW), 3 fragments (1 everted rim and neck, "amphora," 15 mm thick; 1 everted rim, jar, 12 mm thick; 1 base, large jar, 14 mm thick);
  - 15) pink ware (PW), 2 fragments (1 slightly everted rim, jar; 1 straight rim, cup/bowl);
  - 16) light brown ware (LBW), 25 fragments (1 rim with a triangular cross-section, 6 mm thick; 1 slightly everted rim, 5 mm thick; 1 straight rim, closed bowl, 6 mm thick; 1 everted rim, jar, 7 mm thick; 1 everted rim, jar, 5 mm thick; 1 slightly everted rim, small jar; 6 straight rims, cups/bowls; 7 slightly everted rims, small jars or bowls; 3 slightly everted rims, jars; 1 fragment, upper shoulder and lower neck, jar, 8 mm thick; 2 body-potsherds with comb-



incised wavy bands; 1 body-potsherd with an inside criss-cross incision);

- 17) brown ware with many mica inclusions (BrW), 120 fragments (2 straight rims with a slightly everted top, bowl; 17 straight rims, cups/bowls; 3 straight rims, 5 mm thick; 1 straight rim, bowl, with cross incisions at the top, 5 mm thick; 1 straight rim, bowl, with outside horizontal scraped rim-band, 7 mm thick, ca. 24 cm in diameter; 1 straight rim with a molded chain decorative pattern along the top, 5 mm thick; 5 everted rims, jars; 1 everted rim, 7 mm thick; 1 slightly everted rim, 6 mm thick; 1 slightly everted rim, horizontal rim-band with lightly engraved parallel lines; 10 everted rims, small to middle size jars; 1 everted rim, jar, with a scraped horizontal band along the inside rim; 1 ledge rim, jar, 6 mm thick, 16 cm in diameter; 1 rim, smooth inside surface, small open dish, 5 mm thick, ca. 12 cm in diameter; 1 straight rim, plate, 7 mm thick, 24 cm in diameter; 1 everted rim, middle size jar, 4 mm thick; 1 base with a ring-foot; 3 body-potsherds with incised decorations; 1 body-potsherd with a cylindrical handle, decorated with two horizontal, comb-incised wavy bands framing two parallel lines, 5 mm thick; 2 body-potsherds with horizontal, comb-incised straight or wavy lines; 10 cylindrical handles; 10 body-potsherds with engraved decoration; 2 body-potsherds with evidence of an ancient restoration; 1 fragment, large cover with a vertical, cylindrical handle, decorated with parallel bands of double, short incised lines, 8 mm thick; 2 straight rims, plates, 4 mm thick, 16 cm and 18 cm in diameter; 1 rim, triangular in cross-section, plate, ca 20 cm in diameter; 1 body-potsherd with a molded U, 6 mm thick; 1 body-potsherd with a vertical band of circular punctuations; 1 straight rim with notches across the lip; 7 straight rims with comb-incised wavy or linear bands; 1 straight rim with a groove along the lip, small bowl, 5 mm thick, 12 cm in diameter; 1 straight rim with a groove along the top; 2 rims, triangular in cross-section, small bowl, 8 mm thick, 14 cm in diameter and 6 mm thick, 12 cm in diameter; 7 cylindrical handles; 2 body-potsherds with inside scraping; 1 body-potsherd with an incised decoration; 1 straight rim, small plate, with inside vertical incisions, 6 mm thick, 16 cm in diameter; 1 straight rim, small plate, with outside horizontal scraping, 6 mm thick, 20 cm in diameter; 1 body-potsherd with an inside wiping; 2 body-potsherds with inside scraping; 1 body-potsherd with incised decoration; 1 straight rim, small plate, with punctuations at the top, 5 mm thick, 10 cm in diameter; 1 body-potsherd with comb-incised wavy lines. The fragments of this group of ware also included 43 fragments, 1 middle size, closed jar, smooth outside

surface, scraped inside surface with a regular rhomboidal scraping, flat base, decorated on the shoulder with an alignment of molded knobs, 4-8 mm thick);

- 18) dark Red (Brick-Red) Fine Ware (DRFW), 2 fragments (1 shoulder and everted neck, jar, with a band of vertical rows of short incisions between two horizontal comb-incised lines; 1 fragment with a similar decoration).

Miniature ceramics have been also recorded at Seg I. They include 24 fragments (ROFW, GFW, BTPW, DRPFW) from Seg I, C1, SU1b (closed or open cups and small bowls or dishes); 2 fragments from Seg I, E2, SU1a (small cup with a straight rim); 4 fragments from Seg I, C5, SU1a.

*Knapped stones (by L. Phillipson).* The preliminary report on artefacts from the Seg I 2010 is incomplete, as it was not possible to record all of the lithic material that was excavated in the final few days of the field season. Several buckets of chert rubble from the lowest level, SU20 “beneath the stone slabs” were set aside for examination in 2011. A somewhat surprising discrepancy was noted between the relatively abundant lithic artefacts collected from a closely supervised preliminary surface scrape and total collection of the area to be excavated and the much lower density of excavated artefacts recovered; many of the excavated assemblages apparently yielded no knapped lithic material. While such a circumstances is not impossible, it was unexpected<sup>13</sup>.

SU1a - The only retouched pieces recovered from sula are 1 scraper on a chert flake, 70 × 52 × 22 mm with apparent field damage superimposed on a trimmed edge found in square B4, and an obsidian bifacially backed bladelet, [21] × 11 × 14 mm found in C2. A chert rectangular flake, 49 × 20 × 14 mm, from square B5 had scars on one long edge perhaps resulting from its use as a small knife.

---

<sup>13</sup> This paucity may have been due in part to relatively hasty work by students who were being initiated in archaeological excavation methods. It is most likely that the use of sieves to screen the excavated soil would have increased the recovery the kinds of small artefacts that have been shown to be a significant part of Pre-Aksumite and Aksumite lithic assemblages at Kidane Mehret and elsewhere.

Five chert cores from su1 include 2 rectangular Levallois-style cores with plan-convex profiles,  $50 \times 45 \times 38$  mm and  $52 \times 34 \times 26$  mm; the smaller has an area of intense core edge preparation at one end. There are also a plano-convex circular Levallois-style core,  $44 \times 38 \times 20$  mm, and a biconvex radial chert core,  $66 \times 62 \times 32$  mm, whose subsequent use as a bipolar single-platform core demonstrates the fluid and opportunistic nature of lithic knapping strategies. A much smaller chert bipolar core,  $24 \times 22 \times 9$  mm, may likewise have begun as a core of some other “type”. The same observation can be made of an obsidian blade segment which had been re-used as an opposed-platform core,  $23 \times 27 \times 9$  mm. Another obsidian bladelet core,  $25 \times 18 \times 6$  mm, resembles similar forms recovered from excavations at Kidane Mehret. There are 2 chalcedony casual cores,  $31 \times 28 \times 20$  mm and  $37 \times 27 \times 17$  mm.

A perhaps significant difference between surface collected whole flakes and those excavated from Seg I is the lower proportion of irregular examples in the excavated assemblage. Chert whole flakes from su1 include 4 circular or sub-circular examples, probably struck from plano-convex Levallois - style radial cores, with maximum dimensions of 28 mm to 37 mm and sample dimensions of  $28 \times 27 \times 5$  mm and  $36 \times 32 \times 8$  mm. There are also 5 rectangular and sub-rectangular Levallois-style flakes with maximum dimensions of 26 mm to 50 mm and sample dimensions of  $36 \times 33 \times 12$  mm and  $31 \times 40 \times 10$  mm; one of these flakes bears a portion of its core's platform edge, which gives the flake the erroneous appearance of a scraper. A sub-triangular chert flakes measures  $55 \times 46 \times 16$  mm; 10 irregular chert flakes have maximum dimensions of 21 mm to 61 mm. A chert core edge flake measures  $53 \times 25 \times 18$  mm. Obsidian whole flakes include 4 rectangular and sub-rectangular bipolar flakes which measure from  $12 \times 13 \times 4$  mm to  $31 \times 38 \times 7$  mm. These resemble the artefacts found at Kidane Mehret, where they were termed Likanos flakes and noted to have been used to provide the cutting edge on grain-harvesting knives. The Seg I SU1a examples are all in fresh to very fresh condition, without any signs of use wear, though one example was broken while being excavated. There are also 2 obsidian irregular flakes, 17-23 mm, and an irregular chalcedony flake,  $27 \times 34 \times 8$  mm. A chalcedony broken triangular flake,  $44 \times 26 \times 9$  mm, has a markedly stepped shoulder, which is a significant feature of a knapping trend noted at sites of comparable age on Beta Giyorgis (L. Phillipson and Sulas 2005).

The total of 66 fragments recovered: 38 chert, 16-62 mm; 20 obsidian, 5-30 mm; 4 chalcedony, 18-32 mm; 1 schist, 15 mm; 1 pink sandstone, 50 mm; 1 broken chalcedony and quartz geode, 59 mm; and 1 chert core edge fragment, is several times fewer than might have anticipated in relation to the number of cores (7) and of whole flakes (34) recovered. Since the presence of relatively fresh to very fresh whole flakes and fragments makes it apparent that at least some knapping took place *in situ*, it may be surmised that the paucity of small lithic fragments in this excavated assemblage is a result of the recovery techniques that were employed.

SU1b - Two cores, 1 flake and 4 fragments recovered from SU 2 include a single-platform chalcedony core,  $25 \times 31 \times 24$  mm; a very fresh obsidian multiplatform core,  $40 \times 28 \times 16$  mm, with a heavily stepped core edge came from an area labelled "inner wall". Just 1 obsidian irregular flake,  $45 \times 31 \times 6$  mm, and 2 obsidian fragments, 10 mm and 17 mm, a large chert fragment, 88 mm, and a chalcedony geode fragment, 59 mm, comprise the remainder of lithic artefacts from this level.

SU4 - This stratigraphic unit yielded a single obsidian rectangular bipolar, Likanos flake,  $22 \times 18 \times 6$  mm with no traces of utilisation.

SU5 - A single quartz irregular flake,  $23 \times 17 \times 6$  mm, was recovered from SU5.

SU20 - Chert artefacts from SU20, "beneath the stone slabs" differ markedly from those recovered elsewhere in the excavation, in that they are rolled, weathered and patinated, unlike the fresh to very fresh pieces recovered from other stratigraphic units. Probably much or most of the edge damage on flakes and similar artefacts from SU20 results from accidental modification, not from deliberate retouch or utilisation. They were found intermixed with a large quantity of chert rubble which had apparently been deliberately placed to provide a firm foundation for whatever structure it once supported and must therefore pre-date that structure. In view of the time it may take for chert to become well-weathered, it is possible that the Seg I SU20 lithic artefacts should not be attributed to the Pre-Aksumite, but to an earlier culture. Since not all of the lithic material from SU20 has yet been examined and recorded, the totals given here are partial and provisional.

Three cores that are relatively less rolled and patinated than other material from SU20 are a rectangular plano-convex core,  $50 \times 35 \times 22$  mm, and two sub-circular plano-convex cores,  $46 \times 39 \times 19$  mm and  $45 \times 40 \times$

20 mm. A long plano-convex core,  $74 \times 39 \times 23$  mm, and a biconvex core,  $54 \times 39 \times 23$  mm, are among the heavily rolled and weathered pieces. Equally weathered are 1 circular, 3 sub-rectangular and 4 irregular chert flakes with maximum dimensions of 31-61 mm, and 4 chert fragments, 48-62 mm. An additional 3 weathered fragments may be parts of broken cores or they may be entirely natural.

*Grindstones and related objects* (by L. Phillipson). The following grindstones and related objects have been collected in Seg I:

SU1 - A total of 3 handstones, 4 topstones and 1 grindstone were recovered from su1 of this excavation with no particular concentrations in any square, except that a broken grindstone and a biconvex ovate handstone both derived from square B1. An unusual hand- or topstone,  $98 \times [55] \times 32$  mm, had both faces worn flat from utilisation and its edges trimmed to give the piece a circular plan shape. This and another flat handstone were labelled as coming from su1 “inside the wall”, with no excavation square indicated. Another piece from su1 which had no indication of the square from which it was recovered is a plano-convex hand stone,  $110 \times 73 \times 42$  mm, with traces of a red colorant - perhaps red ochre - in the pores of its utilised surface. Among its many uses, red ochre is an effective and frequently used material for dressing cow hides and in leather preparation.

SU1b - A broken topstone from square B1 had signs of use wear indicating that it was subsequently used as a handstone. Another topstone derived from square C2 of this stratigraphic unit.

SU3 - Square D1 of this unit yielded a single topstone,  $275 \times 108 \times 77$  mm.

SU4 - A small grindstone,  $[95] \times 78 \times 31$  mm, from square C2 is more likely to have been used for preparing condiments, medicines, or similar purposes than to have been used for grain grinding.

SU5 - From square C1 of SU5 comes a large grindstone,  $[245] \times 305 \times 125$  mm.

SU11 - Part of an unusual, hemi-cylindrical basalt artefact,  $[73] \times [18] \times 22$  mm was recovered from square C2. It had been finely finished and polished, especially on its flat surface, possibly from use as a burnishing tool.

SU13 - Square D1 yielded a roughly shaped, somewhat worn basalt handstone,  $102 \times 90 \times 43$  mm, with a small concavity in its utilised face.

The dimple does not seem large enough for the artefact to have served as a lamp; it may have been a small mortar.

*Small finds (by L. Sernicola). Other finds included:*

- 1 cylinder white stone bead (18 mm, diam. 10 mm) (B2, SU22);
- 1 cylinder bead in limestone with radial notches around the hole on both sides (sections) and two parallel zigzag incisions running horizontally along the body (6 mm; diam. 11 mm);
- 1 basalt small mortar or lamp approximately circular (diam. 10.1 cm; 4cm thick) (D1, SU13);
- 1 sandstone small mortar or lamp approximately circular (diam. 9 cm; 2.4 cm thick) (B2, SU1). 1 finely carved cylinder of limestone with an incised decoration on one of the sections. The decoration consists of a central circle. Ten coupled radial lines departing from the circle delimit five areas filled with 2 or 3 horizontal incisions (16 mm thick; diam. 18 mm) (C1, SU1);
- 1 copper alloy rod with a rounded-section (1 mm) and rounded slightly pointed ends (length 119 mm) (E1, SU 1);
- 1 loop-ended hook, 8 cm long with a rounded section (1 mm) (E3, SU1).

Seg II (by R. Fattovich and B. Kribus)

Structure and stratigraphy

This excavation unit, 10 m × 10 m in area, was opened at locus S2, where according to the local farmers big fragments of pottery, including the base of a jar, were collected (Fig. 11)<sup>14</sup>.

Seventy-three stratigraphic units were distinguished during the excavation:

SU1 - topsoil, Brown soil with small and medium-sized field stones over the whole EU, overlapping SU2, SU3, SU4, SU5, SU6, SU7, SU8, SU9, SU10, SU11, SU12, SU13, SU14, SU15, SU16;

SU2 - wall built with medium-size stones without any mortar, 0.93-0.94 m thick with a north-east to south-west orientation, abutting to wall SU10 and

---

<sup>14</sup> The excavation was conducted under the supervision of R. Fattovich and B. Kribus.

apparently wall SU6 (further excavation is necessary to verify the relationship of SU2 with SU6). This SU overlaps SU30 and is adjacent to SU3, SU4, SU17, SU25;

SU3 - medium-size stone rubble (collapse?) in a hard-packed, brown soil matrix to the south of SU2, west of SU10 and north of SU7 and SU14, beneath SU1 and above SU17, adjacent to SU2, SU7, SU10, SU14;

SU4 - medium-size stone rubble (collapse?) in a hard-packed, brown soil matrix to the north of SU2, south, east and west of SU5, and east of SU10, beneath SU1 and adjacent to SU2, SU5, SU6, SU10;

SU5 - southern part of an architectural element, built with medium-size stones in a hard-packed, brown soil matrix and 1.38 m thick (a rectangular raised platform within a room?), with a north-west to south-east orientation direction, beneath SU1 and adjacent to SU4;

SU6 - wall built with medium-size stones without mortar, with a north-west to south-east orientation, abutting wall SU2 (further excavation is necessary to verify the precise relationship of this SU with SU2), beneath SU1 and adjacent to SU2 and SU4; not enough of this structure was excavated to verify this is a wall, but it is like walls SU2, SU7 and SU10 in composition and orientation;

SU7 - wall built with large and medium-size stones, 1.04-1.05 m thick, and abuts to wall SU10. Walls SU8 and SU11 abut to SU7; maybe, SU7 and SU8 are contemporary and SU11 is a later addition because SU7 is built in the same way as SU8, which is different from SU11. Two courses below the surviving top of the wall, a "shelf" was uncovered; the courses of the wall on the northern side extend 8-10 cm to the north of the wall; this may represent an earlier phase of construction of the wall, or a support for beams. SU7 is beneath SU1 and adjacent to SU3, SU8, SU9, SU11, SU12, SU14, SU17, SU22, SU37, SU43;

SU8 - wall built with medium-size stones, 1.02 m thick, with a north-west to south-east orientation, beneath SU1 and adjacent to SU7, SU11, SU12. This wall abuts to wall SU7. Wall SU11 abuts to this wall and is parallel to it.

SU9 - stratum of brown, soft soil (maybe a living floor) to the south of wall SU7 and west of wall SU11, beneath SU1 and adjacent to SU7 and SU11;

SU10 - wall built with medium-size stones, ca, 1.1-1.2 m thick, with a north-west to south-east orientation; wall SU2 and SU7 abut to it. This wall may be the eastern exterior wall of a building that includes walls SU2, SU6,

SU7 and SU10. This SU is beneath SU1 and adjacent to SU2, SU3, SU4, W.SU7, SU12, SU13, SU16, SU26, SU33, SU40, SU42;

SU11 - wall built with medium-size stones, ca 0.48 m thick, with a north-west to south-east orientation; wall SU11 abuts walls SU7 and SU8, and is parallel to SU8, may be a latter addition to W.SU8. This SU is beneath SU1 and adjacent to SU7, SU8, SU9;

SU12 - medium-size stone rubble in a soft, brown soil matrix (collapse?) to the south of SU7, east of SU8 and west of SU10, beneath SU1 and adjacent to walls SU7, SU8, SU10;

SU13 - stratum of soft, dark-brown soil with almost no stones, beneath SU1, adjacent to SU15 and SU16, and partly overlapping SU16. At the interface between SU1 and SU13 a layer with many potsherds and bones was uncovered. SU13 was only recorded as a distinct SU from SU16 in square D1, where SU1 also overlapped directly SU16;

SU14 - stratum of gray/light-brown soil with few, small stones, softer and brighter than the surrounding collapse SU3, to the north of wall SU7 and south of collapse SU3, beneath SU1 and adjacent to SU3, SU7;

SU15 - medium-size stone rubble in a dark, hard-packed soil matrix (collapse?) beneath SU1, adjacent to SU13, SU16, and overlapping SU16;

SU16 - stratum of grayish-brown soil with few, small stones, a little harder than SU13 above it, to the east of wall SU10, beneath SU1, SU13, SU15, adjacent to SU10, SU13, SU18, and overlapping SU18, SU26, SU61;

SU17/19/22 - these SUs, which were initially distinguished, most likely representing an occupation level, consist of a stratum of brown/orange, soft soil with very few small stones, many bones and ash clusters, to the south of wall SU2. A large concentration of ashes and was found in the central and south-western sectors of square B4, and a concentration of big bones was recorded in the south-western sector of square B3. A big grinding stone (21 cm × 29 cm in size) was collected at the interface between SU17 and SU22 in square B4. This stratum is beneath SU3, SU14, adjacent to walls SU2, SU7, SU10, and overlaps SU23, SU24, SU25, SU27, W.SU30, SU31, SU37;

SU18 - small and medium-size stone rubble (collapse?) in a dark brown soil matrix, with a depression in square E2, to the east of wall SU10 beneath SU15 and SU16, adjacent to wall SU10 and overlapping SU26, SU29, SU34, SU36;



SU20/37 - stratum of whitish-brown soil, encompassing the feature SU24, to the south of SU25 beneath SU17/19/22, adjacent to SU24, SU25, SU43 and overlapping SU21;

SU21 - very shallow collapse of small scattered stones in a soft, whitish-brown soil matrix (SU20), adjacent to SU17/19/22. At the interface SU21/SU22 many bones, ash clusters, a stone slab and a grinding stone were found in a brown, soft soil matrix;

SU23 - wall built with medium-size, flat stones in the south-western corner of square A5 and south and west of this square (an extension of the original EU to understand the relationship between walls SU23, SU7, and feature SU24), beneath SU17 and adjacent to SU17, SU24, SU27. Only a side of the wall was cleaned and thus the thickness is not yet assessed. This wall seems to abut to wall SU7, but is built with smaller stones than those of SU7. This wall cuts feature SU24;

SU24 - man-made circular feature consisting of a big and medium-size stone wall, ca 0.39 m thick, and plastered on the inside, forming a large basin, 0.93 m in diameter, in the central and south-western sector of square A5, to the east of wall SU23 and north of wall SU7. The plaster coating the interior of this element is grayish-white in colour. This feature may have been used for storage. The feature SU24 is beneath SU17, SU27, SU38 and adjacent to SU17, SU37. A gap of 5-10 cm between wall SU23 and SU24 suggests that the circular feature was earlier than the wall;

SU25 - small and medium-size scattered stone collapse in a hard, yellowish-white soil matrix to the south of wall SU2, beneath SU17, adjacent to SU2, SU22, SU30, SU37, and overlapping SU30, SU43. Many grinding stones and grinding basins were found in this collapse;

SU26/28/32/33/36/39/42 - stratum of moderately soft, brownish-orange soil to the east of SU10, beneath SU16, SU18, SU26, SU61, SU71, adjacent to wall SU10, SU29, SU34 and overlapping, SU35, SU40, SU 41, SU42, SU52, SU53, SU54, SU59, SU66, SU70. These SUs were distinguished because of their location at different sides of walls SU29 and SU34. A big, roughly conical stone, possibly a fragment of a column or a column base, 35 cm × 40 cm in size, was found in square E1. A ceramic vessel and a tooth were found to the west of wall SU34 and feature SU35 at the interface with SU52;

SU27 - small and medium-size stone collapse in a grey soil matrix in the central and south-western sector of square A5, to the east of wall SU23,

north of wall SU7 beneath SU17, adjacent to walls SU7, SU23 and above SU24, SU38;

SU29 - wall built with big and medium-size stones, ca 0.67 m thick, with a north-east to south-west orientation abutting to wall SU34, adjacent to SU32, W.SU34, SU36, SU66 and above SU18, SU26;

SU30 - wall built with very big, big and medium-size stones, including worked stones and irregular polished stones, ca 0.79-0.85 m thick, with a north-west to south-east orientation; the eastern and western sides of the wall are built with big stones, the core is filled with smaller stones. This wall is beneath SU17, SU25 and wall SU2 and adjacent to SU31, SU43, SU45, SU49, SU63. A possible threshold (SU47, SU48), about 20 cm apart from SU30, occurs to west of this wall; feature SU69 (another threshold or a wall) abuts to SU30;

SU31/44/45 - stratum of brown, moderately hard soil, to the south of SU2 and east of SU30 beneath SU17, adjacent to walls SU2, SU30 and above SU46, with evidence of stone rubble (SU44) in the eastern sector of square B2 above a lower stratum of the same soil (SU45); stone slabs and a polished, curved stone with a circular cross-section were found in square B3;

SU34 - wall built with big and medium-size stones, ca 0.66-0.67 m thick, with a north-west to south-east orientation, abutting to wall SU29, beneath SU26 and adjacent to SU29, SU32, SU33, SU35, SU36, SU40, SU42, SU66. Benches SU35 and SU56 are built against this wall, and are probably contemporary with it; SU56 was probably built to strengthen the foundations of wall SU34; SU35, along with SU41, probably served as a threshold into the building that the wall may have delimited to the west;

SU35 - feature built with small stones cemented with a very hard, dark brown soil and coated with a yellowish plaster in the southern part, where 2 circular depressions, possibly used for liquids or for incense, are molded. The circular depressions are aligned on a north-west to south-east axis; the diameter of the southern one is 25 cm, and the diameter of the northern one is 23 cm. The southern part of the feature is 0.87 m long (north-west to south-east) and 0.46 m wide. The northern part of the feature, ca 1.38 m long (north-west to south east), consists mostly of a very hard soil with inside small stones and probably served as a threshold into the building to the east of it. This feature abuts Wall SU34; SU41, abutting to SU34, may

be a lower step of the threshold. The feature is beneath SU26 and adjacent to SU33, SU34, SU40, SU41, SU42, SU52;

SU38 - stratum of soft, grey soil beneath the collapse SU27, inside the element SU24. A stone with a relief depicting a possible U-shaped letter was discovered in this fill;

SU40 - very hard, reddish brown soil, probably a floor, to the east of wall SU10, west of wall SU34 and north of SU35 and SU41, beneath SU33, adjacent to wall SU10, wall SU34, SU35, SU41, and above SU55, SU60;

SU41 - rectangular feature of yellowish-brown, hard-packed soil, 0.52 m (east-west) × 0.8 m (north-south) in size, coated with plastered, hard-packed soil; this feature abuts to SU35 to west, and probably is a lower step forming a threshold with SU35. The feature is beneath SU33 and adjacent to SU33, SU40, SU42, SU60;

SU43 - fill of soft, bright brown soil, to the south of wall SU2, north of wall SU7 and east of wall SU30, beneath SU22, SU25, above SU47, SU48, SU50, SU51, SU72, and adjacent to SU2, SU7, SU30, SU37. A ceramic strainer was found in this SU in square A3;

SU46 - irregular cluster of large and medium-size stones, beneath SU31, above SU45, and adjacent to SU31; only part of this cluster was uncovered, hence it is currently not possible to know if it is part of a collapse, a feature or a wall;

SU47 - wall built with large, medium-size and small and sandstone stones and brownish-grey, soft soil, 1.36-1.7 m long (north-south) and 0.75-0.84 m wide with a north-west to south-east orientation, beneath SU43 and adjacent to SU48, SU49, SU51, SU65; the two external sides of the wall are built with big stones, while the core is built with smaller stones. This wall is roughly parallel to wall SU30, but a gap, 0.2 m wide, and the different building technique suggest they were not contemporary. This wall occurs beneath the base of wall SU2, but does not continue under SU2. Wall SU47 and SU48 might have been are a threshold to a building represented by wall SU30;

SU48/57/58 - feature made with big stones and brownish-grey, soft soil to the west of SU47, 0.45-0.65 m long (north-south) and 1.65 m wide (east-west), beneath SU43 and adjacent to SU47, SU51, SU65;

SU49 - stratum of hard-packed, whitish-grey soil to the south of SU2, west of SU30, and east of SU47, beneath SU43 and adjacent to SU2, SU30, SU47, SU51, SU65;

SU50 - cluster of small stones in a matrix of hard-packed, brownish-grey soil between them, beneath SU43, above and adjacent to SU51 in square B4;  
SU51 - stratum of greyish-white, hard-packed soil with many ash clusters and big bones, beneath SU43, SU50, above SU64, SU65, SU67, SU69, SU74 and adjacent to SU2, SU30, SU47, SU48, SU49;

SU52, SU55 - stratum of greyish, very hard-packed soil with clusters of plaster, most likely a pavement, to the west of wall SU34, SU35 and SU56, east of wall SU10 and south of SU41, encompassing SU53, beneath SU42 and adjacent to W.SU10, W.SU34, SU35, SU41, SU53, SU56;

SU53 - cluster of medium- and small-size stones, maybe a feature, beneath SU42, and partially SU52, and adjacent to SU35, SU41, SU52. These stones may have been part of the foundation of pavement SU52 (in such a case they correspond to SU59/60);

SU54/56 - stone "bench" made with medium-size stones in a soft, brown soil matrix, 0.36-0.4 m wide (east-west), abutting to the western side of wall SU34, beneath SU42 and adjacent to SU34, SU42, SU52, SU59;

SU59/60 - pavement foundation beneath SU52/55, made with small- and medium-size stones in a soft, brown soil matrix, east of wall SU10, west of wall SU34, and north of SU35 and SU41;

SU61 - stone rubble from collapse in square E1, small. and medium-size stones in a brownish-orange, soft soil matrix beneath SU16, above SU32 and adjacent to SU32, SU34;

SU62/63 - very thin stratum of soft, yellow soil with a thick stratum of brown soil beneath it, south of wall SU2 and east of wall SU30 beneath SU45, adjacent to SU2, SU45 and directly above the bedrock SU67, with many big fragments of a ceramic vessel covering. were uncovered in this SU and photographed. Under this SU is the bedrock, SU67;

SU64 - stone rubble from collapse of small- and medium-size stones in a grey, soft soil matrix with many bones and big potsherds, above SU65 and adjacent to SU65;

SU65 - stratum of greyish-brown, very soft soil with many small stones, to the south of wall SU2 and west of wall SU30, beneath SU51 and SU64, above SU69, SU74 (a large, flat stone) and bedrock SU67, and adjacent to walls SU2, SU30, SU47, and SU48, SU74;

SU66/68 - very uniform stone rubble from a collapse of small- and medium-size stones in a soft, dark brown soil matrix (maybe a pavement foundation) to the north of Wall SU29 and east of wall SU34, beneath SU32, directly

above the bedrock (SU67) and adjacent to SU70; a almost complete big bowl was found in a depression carved into the bedrock (SU72) beneath SU66;

SU67 - bedrock (brownish-red, granite stone) beneath SU51, SU63, SU65, SU66, SU73, SU74.

SU69 - two aligned alignments of large stones (one of them a worked stone, many of them polished), with a core of small stones and light brown soil (maybe a threshold or a wall), 1.44 m long (north-south) and 0.8-0.87 m wide (east-west) with a north-west to south-east orientation in the southern part of square B4, beneath wall SU7, and abutting to the western side of SU30, beneath SU51, SU65 and adjacent to wall SU30, SU65;

SU70 - large, semi-worked stone slabs abutting wall SU34 to the east of wall SU35 (possibly a shelf or bench), 0.47 m wide (east-west) in the northernmost part of square E1, beneath SU32 and adjacent to wall SU34, SU66;

SU71 - large BTRPW bowl, between 20 and 30 cm high and 40 cm in diameter, containing a few other artefacts beneath SU66 in square E2, beneath SU66, above SU67, SU73, and adjacent to SU66, SU73 (Fig. 12).

The artefacts are 3 fragments of a single copper alloy *spatula* (see Seg II, Other finds); 1 small ceramic jar with globular body, rounded base, everted continuous rim, coiled vertical handle on the neck and incised horizontal and wavy decoration, brown fine ware with polished outside surface, 15 cm high, 9.3 cm in diameter at the rim, 0.2 cm thick; 1 rounded base of pot; 1 roughly shaped chert polyhedral core or proto-core, 101 × 99 × 69 mm, in fresh condition as to its knapping, but heavily burnt and calcined; 1 single freshly knapped chert fragment, 68 × 52 × 43 mm; 1 irregularly shaped basalt lump, courted with burnished red clay (see Seg II, Other finds); 1 angular quartzite lump, 97 × 82 × 54 mm, maybe a weathered polyhedral core that was subsequently used as a hammerstone.

SU72 - Stone rubble from collapse of small - and medium-size stones in a soft, bright, greyish-brown soil matrix to the south of SU48 beneath SU43 and adjacent to SU51, SU65.

SU73 - Carved depression in the bedrock to lodge the large ceramic bowl (SU71) beneath SU66, SU71.

SU74 - Big, flat stone, 0.46 m × 0.38 m in size, in SU65, above the bedrock SU67, in square A4.

The bedrock was found at the depth of about 1.3 m.

In excavation unit Seg II three main phases of occupation have been identified (Fig. 13).

The last phase of occupation (*Phase III*) is represented by massive walls over 1 m thick of a monumental building (SU2, SU5, SU6, SU7, SU8, SU10, SU 11). The ceramics might suggest a dating to the 5<sup>th</sup>/4<sup>th</sup> centuries BC.

The second phase of use (*Phase II*) is represented by a thick stratum of soil with evidence of possible fire places and a huge quantity of animal bones associated with a circular structure suggesting a domestic use of the area after the abandonment of the earlier building (SU17, SU19, SU20, SU21).

The earliest phase of occupation (*Phase I*) is represented by walls directly constructed on the bedrock of a building apparently surrounded by an enclosure (SU29, SU30, SU34, SU35, SU41, SU47, SU48, SU56, SU69, SU70). The occurrence of a deposit with a large bowl and other artefacts in a hole associated with the foundations of this building suggests this might have been a shrine or temple. The age of this building is still uncertain but the ceramics suggest a dating to the 7<sup>th</sup> century BC.

*Finds.* Finds include a great quantity of ceramics, knapped stones and grindstones, as well as a few small finds.

*Ceramics*<sup>15</sup> (by M. Gaudiello). The ceramics have been divided into three assemblages corresponding to the three main phases of occupation.

*Phase III* (Topsoil/SU1; SUs 3, 17, 20, 21 [West side]; Interface SUs1/13-SUs 16, 18 [East side]).

---

<sup>15</sup> The analysis of the pottery from Seg II is still in progress. At present, the examined ceramics from Seg II include four fragmentary vessels, 1257 diagnostics and almost 4532 body sherds. The pottery condition is very bad, there are very small fragments and very little broken sherds that help us to piece together them or reconstruct the original shapes.

### Topsoil-SU1:

- 1) red/orange fine ware (ROFW): 72 sherds, 4-7 mm thick, sometimes with scraped or rarely wiped inside surface. Main shapes are open cups, cups with continuous profile, bowls, a few jar and very few dishes and lids. The diagnostic potsherds include mainly direct rounded rims, a few direct pointed rims and very few oblique flat rim; oval and rounded grips; handles with rectangular section; flat bases and one ring-base. Decorations include vertical, horizontal and oblique parallel lines, and more frequently wavy comb incisions;
- 2) Red-brown fine ware (RBFW): 27 sherds, ranging from 10-15 mm to 1-3 mm in thickness. The temper is characterized by limestone and basalt inclusions, rarely mica. Diagnostic potsherds include direct rounded rims; flat rims; cylindrical handles; oval grips. Common shapes are cups, bowls and medium- to big-size jars with a cylindrical neck. Scraped or wiped internal surfaces, wavy comb lines and sometimes the impressed lines and punctuation on the outside;
- 3) black topped red polished ware (BTPW): 26 potsherds, 1-3 mm thick. Smooth to polished, and often scraped, inside surface. Main shapes are cups, open cups, bowls, carinated bowls and jars, flask, bottles and beakers. Closed pots with a thin wall are very frequent. Diagnostic fragments include 1 thin pointed rim; 1 rounded rim; 2 direct rims with oblique lip and 1 thick rounded rim. One sherd is decorated with a molded knob;
- 4) grey fine ware (GFW), 5 body-sherds, 6-8 mm and 11 mm thick, with a polished outside surface or light blue slip, rough to polished, scraped grey inside surface from the squares B1-B4 (Figure 14). Three potsherds are decorated with horizontal and oblique incised lines;

### Interface SU1/SU13, SU16, SU18:

- 1) black polished fine ware (BPFW): 44 fragments with brown or black paste and very few white inclusions (>5 to 25%), sometimes with many very thin limestone (25-50%) and a little red calcite, rarely with few mica inclusions. Diagnostic sherds include: 11 rounded rims, 2 mm to 4.5 mm thick, 10 cm to 28 cm in diameter, cups, bowl and cylindrical neck of jar; 18 rounded rims and 1 everted rounded rim, 5 mm to 8 mm thick, 20 cm to 40 cm in diameter, cups and big bowls; 2 fragments, 16-18 cm in diameter, jar; 5 everted rounded and thickened rounded rims, 9 mm to 14

mm thick, 20 cm to 40 cm in diameter, big bowls; 3 fragments of necks, 8 mm to 10 mm thick, with triangular and circular punctuations along the neck;

- 2) black topped polished ware (BTPW), with smooth or polished slip on the outside surface and top of the rim, very few, small limestone inclusions (<5-25%) and rarely a few mica or red calcite inclusions: 24 body potsherds, 1 fragment with scraped inside surface. Diagnostic potsherds include 3 fragments, rims with a black top; 10 straight rims, 2 mm to 4.2 mm thick, 18 cm to 30 cm in diameter, open cups and/or bowls; 13 straight, pointed and rounded rims, 5 mm to 8 mm thick, 14 cm to 30 cm in diameter, cups and bowls; 2 fragments, cylindrical neck; 1 decorated potsherd with molded rounded decoration on the neck (rounded small eyes shape);
- 3) brown ware (BrW), with very few limestone inclusions and small mica inclusions (<5-10%); brown paste and one with black colour of section, smooth outside and inside surface, sometimes polished outside surface (mainly from SU17): 19 body potsherds, 3 with many small and medium size mica inclusions (10-25%). Diagnostic potsherds include 1 rounded, almost flat rim, 4 mm thick, 34 cm in diameter, big bowl (possibly Brown Fine Ware, BrFW); 1 fragment, base of a handle, 4 mm thick, 10 mm × 6.3 mm × 24 mm in size; 5 fragments, pointed, slightly everted rims and almost flat rim, 5 mm to 8 mm thick, 20 cm to 30 cm in diameter, big jar, a few open cups; 2 fragments, everted rounded rim and everted flat ledge rim decorated with wavy comb incisions on the neck, 5.5-6.5 mm thick, 16-26 cm in diameter, pot with everted neck and jar with a thick rounded rim directly on the shoulder; 1 slightly everted neck with an almost flat rim, 9.71 mm thick, big jar; 6 decorated fragments with incised lines on the outside surface and 1 fragment with an impressed decoration on the inside surface, 2 mm to 7.5 mm thick;
- 4) light red polished fine ware (LRPFW) with polished, brightened surface; small or very thin mineral inclusions (10-50%): 14 body sherds. Diagnostic sherds include 3 rounded or pointed, flat rims, 3 mm to 4.5 mm thick, 10 cm to 28 cm in diameter, 1 big bowl and 1 closed cup; 4 rounded or pointed, almost flat rims, 5 mm to 8 mm thick, 24 cm to 34 cm in diameter, big jar, open big cups/bowls; 1 everted neck with rounded rim, 8.15 mm thick, 18 cm in diameter, jar; 1 ring base, 10.37 mm thick; 1 base of a handle, 7.78 mm thick, 10.49 mm × 15.15 mm × 11.9 mm in size; 1 grip, 15.12 mm × 11 mm in size;
- 5) dark red (Brick-Red) Fine Ware (DRFW), with very few little limestone inclusions and some thin mica inclusions (<5-25%).



Smoothed to polished surfaces or brightened slip on both the surfaces: 12 fragments. Diagnostic potsherds include 3 rounded rims and 1 pointed rim, 3 mm to 4.9 mm thick, 14 cm to 36 cm in diameter, 1 jar with everted neck and 1 large bowl; 1 base of a handle, 4 mm thick, 4 × 5 mm in size; 4 fragments, slightly everted neck with a rounded, pointed rim, 5 mm to 8 mm thick, 10 cm to 20 cm in diameter, jars, cup; 1 slightly everted neck with a rounded rim, 8.84 mm thick, 34 cm in diameter, big bowl; 1 decorated potsherd, 1.5 mm thick, thin molded decoration on the body; 1 decorated potsherd, 7.47 mm thick, incised line on wavy comb lines; 1 decorated potsherd, 7 mm thick, almost rectangular impression on the neck (?);

- 6) red-orange fine ware (ROFW): 9 fragments. with small limestone inclusions (5-25%) and few mica inclusions; smoothed internal Diagnostic potsherds include 2 pointed rims, 4.6 mm thick, 16 cm in diameter, cylindrical neck of jar; 2 rounded rims, 7 mm thick, 32-40 cm in diameter, big bowl; 1 pointed rim, 5 mm thick, molded decoration on the rim; 1 rounded rim, 6 mm thick, scraped internal surface; 1 base of handle, 8.16 mm thick, 12.69 mm × 9.91 mm × 10.82 mm in size, zigzag decoration near the handle; 1 decorated potsherd, 9 mm thick, rectangular impressions on the neck; 1 decorated potsherd, 11.42 mm thick, probably cylindrical molded decoration.

Other diagnostic potsherds: 1 fragment, black coarse ware (BCW), everted round rim, 11 mm thick, 32 cm in diameter, vertical burnished lines on the outside, big pot; 5 fragments, red-brown fine ware (RBFW) with a few mica inclusions, including 1 pointed rim, 8.14 mm thick, 2 base of handles, 10.92 × 8.8 mm and 22.65 × 25.83 mm in size, 1 handle 6.92 mm thick, 18.06 × 11.67 mm × 15.93 mm in size; 2 fragments, grey fine ware (GFW), including 1 straight pointed rim, 7.17 mm thick, 24 cm in diameter and 1 decorated sherd, 9.04 mm thick, four deep incised lines and rectangular impressions; 2 fragments, orange ware (OW) including 1 pointed rim, 8.37 mm thick, 24 cm in diameter, big bowl, and 1 decorated sherd, 2.3 mm thick, “eye”-shaped molded decoration; 2 fragments, orange pink ware (OPW) including 1 base of handle, 8 mm thick, 23 × 20 mm in size and 1 decorated sherd, 8.11 mm thick, two wavy comb-engraved lines and three parallel incisions; 3 pink ware (PW) including 2 pointed rims, 2-6 mm thick and 1 decorated sherd, 4.55 mm thick, wavy comb incisions near the handle; 3 light brown ware (LBW) with mica inclusions and smooth to

polished surfaces, including 1 everted rounded rim, 12.91 mm thick, 52 cm in diameter, huge pot, 1 everted pointed rim, 4.8 mm thick, 20 cm in diameter, jar, and 1 thick everted pointed rim, 3 mm thick, 0.8 cm in diameter, cylindrical neck.

Interface SU1/SU13, SU16, SU18 [East side], mainly SU16:

- 1) black topped red polished ware (BTPW), sometime with a few quartz and mica inclusion: 23 fragments. Diagnostic potsherds include 6 straight rounded rims, 4 mm to 4.9 mm thick, 24 cm to 30 cm in diameter, cups, open cups; 1 rounded rim, 3.2 mm thick; 0.8 cm in diameter, small neck of bottle; 13 rounded and pointed rims, 5 mm to 7.5 mm thick, 18 cm to 24 cm in diameter, cup, bowl, flask; 1 rounded rim, 9.1 mm thick, 32 cm in diameter; huge pot; 1-handle, 14.5 × 12.3 mm in size; 1 decorated potsherd, 5mm thick, molded decoration, 16 × 7 mm in size;
- 2) black polished fine ware (BPFW): 21 fragments. Diagnostic potsherds include 4 rounded or pointed rims (1 slightly everted rim), 3 mm to 4 mm thick, 10 cm to 20 cm in diameter, closed bowl, cup, jar; 15 rounded rims (1 almost pointed rim), 5 mm to 8.5 mm thick, 14 cm to 28 cm in diameter; bowl, jar, open cup; 1 rounded rim, 100 mm thick; 20 cm in diameter, big jar; 2 decorated potsherds, 8.61 mm and 11.16 mm thick, rectangular and triangular notches on the neck;
- 3) brown ware (BW) with a few mica inclusions and smoothed or polished surfaces: 16 fragments. Diagnostic potsherds include 1 straight flat rim, 4.58 mm thick, cup; 1 everted round rim, 4.84 mm thick, 16 cm in diameter, small jar; 11 straight rounded rims (1 almost flat rim, 1 slightly everted thick rim), 5 mm to 7.5 mm thick, 12 cm to 26 cm in diameter, bowl, jar, cup; 2 everted rims (1 almost flat), 12-12.5 mm thick, 22-28 cm in diameter; big pots; 1 decorated potsherd, 5.5 mm thick, irregular wavy comb-incised line;
- 4) red-brown polished ware (RBrPW): 8 fragments. Diagnostic sherds include 6 rounded and pointed rims, 4 mm to 6 mm thick, 16 cm to 32 cm in diameter, cup, big bowls, jar; 1 rounded rim, 8.21 mm thick, 36 cm in diameter, big pot; 1 ring base, 10.47 mm thick;
- 5) pink ware (PW), sometime with a polished outside surface: 10 fragments. Diagnostic potsherds include 5 fragments with scraped inside surface; 2 rounded rims, 5 mm and 6 mm thick, 22 cm in diameter, small jar, bowl; 1 base of handle, 7.3 mm thick, 23 × 13.5 mm × 13mm in size, incised lines near the handle; 1 handle,

14.15 × 13.52 mm in size; 4 decorated potsherds, 5 mm to 7.5 mm thick, wavy comb incisions and parallel incised lines<sup>16</sup>;

- 6) dark red (Brick-Red) Fine Ware (DRFW) without or with few small limestone inclusions and little quartz and mica inclusions (<5%), 8 fragments. Diagnostic potsherds include 1 rounded rim, 4.37 mm thick; 5 rounded, almost flat, and pointed rims, 5 mm to 7.5 mm thick, 12 cm to 20 cm in diameter, cups, bowl, cylindrical neck; 1 everted rounded thick rim, 8.11 mm thick, jar without neck; 1 decorated potsherd, 5 mm thick, comb-incised lines over 5 punctuated lines;

Other diagnostic potsherds: 3 fragments, red-orange fine ware (ROFW) with a few mica inclusions, smooth to polished surfaces and slip on both surfaces (1 almost flat rim, 10.33 mm thick, 18 cm in diameter, cup; 1 everted round rim, 8.73 mm thick, 24 cm in diameter; 1 decorated sherd, 8 mm thick, with “eye”-shaped molded decoration; 1 fragment, orange-grey fine ware (OGFW) direct flat rim, 4.58 mm thick; 4 fragments, red-brown fine ware (RBFW) with smooth to polished surfaces (1 almost flat rim, 5.67 mm thick, 22 cm in diameter, open cup; 2 pointed rims, 4-5 mm thick, 16 cm in diameter, jar and bowl; 1 decorated sherd, 6 mm thick, 2 parallel lines and 2 oblique lines); 3 fragments, light red polished fine ware (LRPFW) (1 slightly everted rim, 5.88 mm thick, 18 cm in diameter; 1 pointed rim, 7.21 mm thick, small cup; 1 pointed rim, 4 mm thick, 26 cm in diameter, bowl); 1 fragment, dark red polished fine ware (DRPFW) (everted neck with a pointed rim, 9.21 mm thick, jar); 2 fragments, light brown ware (LBW) with polished surfaces (1 straight pointed rim, 5.24 mm thick, 30 cm in diameter, open bowl; 1 decorated neck, 3.5 mm thick, two bands of wavy comb-incised lines); 3 fragments, red-grey polished ware (RGPW), from SU16 (3 pointed rims, 4.28 mm to 6-6.8 mm thick, 16 cm to 20 cm in diameter, small cup and bowl).

Potsherds from Interface SU1/13: 18 fragments, orange-pink ware (OPW) (3 pointed rims, 4 mm to 6 mm thick, 10 cm to 16 cm in diameter; 1 base of handle, 5.5 mm thick, 12 × 8 mm × 10 mm in size; 14 decorated

---

<sup>16</sup> These fragments occur only at the interface SU1/13.

sherds, 5 mm to 9 mm thick (bands of punctuations and parallel comb-incised lines, 3 also with a molded decoration) (Fig. 15).

*Phase II* (SU22, SU25, SU37, SU38, Su43 [West side]; SU26, SU32, SU33, SU40, SU42 [East side]).

SU22, SU25, SU37, SU38, SU43 (West side):

- 1) red-brown fine ware (RBFW): 1 almost complete fragmentary lid with a handle, 2 mm thick, 11 cm in diameter; molded decoration with a radial motif on the outside surface (Fig. 16);
- 2) black topped red polished ware (BTPW), sometime with a few mica inclusions, 24 fragments. Diagnostic potsherds include 4 pointed rims, 1-2mm thick, 12 cm to 18 cm in diameter, cylindrical neck, beaker, small cup; 1-oblique rim with pointed lip; 8mm in diameter; small cup; 1 straight pointed rim with a triangular cross-section, 5 mm thick, 16 cm in diameter; 3 straight pointed rims, 2-3 mm thick; 10 cm to 12 cm in diameter, cylindrical pot, cup (1 rim with notches on the lip); 6 pointed rims, 3.5 mm to 4.9 mm thick, 16 cm to 34 cm in diameter, bowl, cup and big open cup; 1 straight pointed rim, 6.2 mm thick, 30 cm in diameter; 1 pointed rim, 12.12 mm thick, 30 cm in diameter; big bowl; 2 rounded rims, 4-5 mm thick, 16-26 cm in diameter, cylindrical and conical necks with vertical burnished lines on the outside surface; 2 rounded rims, 2.5-3 mm thick, 12 cm in diameter, beaker and cup; 1 straight rounded rim, 5mm thick, 22 cm in diameter; 1 rounded rim with a thick neck wall, 3.5 mm thick, 24 cm in diameter, lid/dish; 2 base of handle, 8-9 mm thick, 12 × 10 × 16 mm and 13.5 × 13.5 × 12 mm grip size; 2 rim with a handle, 6.15-6.29 mm thick, 24-26 cm in diameter, 13 × 13 × 2 mm - 14 × 14 × 10 mm grip size, big bowl; 1 decorated potsherd with molded decoration on the body;
- 3) black polished fine ware (BPFW), sometime with a few quartz and mica inclusions: 17 fragments. Diagnostic potsherds include 4 pointed rims, 3 mm to 4 mm thick, 18 cm to 34 cm in diameter, cup, bowl; 2 pointed rims, 10-11 mm thick; 20-30 cm in diameter, big bowl, big cup; 1 everted thick, rounded rim directly on the shoulder, 12 mm thick, 42 cm in diameter, big jar; 1 everted neck with a pointed rim, 7.78 mm thick, jar; 4 rounded (almost pointed) rims, 5.8 mm to 6.3 mm thick, 20 cm to 30 cm in diameter, cup/bowl; 1 straight rounded rim, 6.92 mm thick, 24 cm in diameter, cup; 1 everted rounded rim, 6.3 mm thick, 42 cm in diameter; big pot; 1 decorated neck, 6 mm thick, semi-circular

impressions along the neck; 1 everted pointed rim, 9.64 mm thick, 36 cm in diameter, big pot;

- 4) red-orange fine ware (ROFW), with a few mica inclusions, smoothed to polished surfaces, sometime with a bright slip on the surface: 20 fragments, including a few potsherds with scraped inside surface. Diagnostic potsherds include 2 rounded rims, 5-6 mm thick, 16 cm to 20 cm in diameter; 1-everted rounded rim; 5-6 mm thick; 180 mm in diameter; neck of globular jar; 2 straight rims with an oblique lip, 4-5.22 mm thick, 20-24 cm in diameter, cup, bowl; 2 everted neck with pointed rim, 3-5 mm thick, 16-20 cm in diameter, jar; 1 straight rounded rim, 5.8 mm thick, 38 cm in diameter; big bowl; 1 everted neck, 7 mm thick, dark orange burnishing on the outside surface; 1 oval handle, 11 × 23 mm in size, with many mica inclusions on the outside; 1 handle, 16 cm in diameter; 2 bases of handle, 20 × 20 mm and 27 × 27 mm in size; 1 handle, 9 mm thick; 1 decorated sherd, circular molded decoration and wiped inside surface; 1 decorated sherd, 6.4 mm thick, parallel incised lines; 2 decorated sherds, oval and triangular rocker decoration; 2 decorated sherds, 6.4 mm to 8.36 mm thick, deep semicircular impressions;
- 5) red-brown fine ware (RBFW), with mica inclusions, rough or smooth, rarely polished, surfaces, a few potsherds exhibit burned areas on the surfaces: 15 fragments. Diagnostic potsherds include 2 horizontal rims, 5 mm thick, 18 cm in diameter, dish or lid (rough surface with many mica inclusions); 1 thick rounded rim, 5 mm thick, 22 cm in diameter, rough surface, jar; 1 straight flat rim, beaker; 4 pointed, slightly everted pointed and almost pointed rims, 5 mm to 7.5 mm thick, 16 cm to 38 cm in diameter, cup, open cup, bowl, jar; 1 everted neck with flaring pointed rim, 5.23 mm thick, 16 cm in diameter, 5 parallel incised lines between a band of wavy comb-incised lines and a band of zigzag incisions, jar; 2 straight neck with almost flaring rim, 5.84 mm thick; 1 base of handle, 5 mm thick, 15 × 15 × 16.5 mm - 13 × 17 × 24 mm in size; 1 base of handle, 12.83 × 18.39 × 32.96 mm in size; 1 painted neck, 2 mm thick, red line and probably parallel white lines on the outside (Figure 18); 1 decorated potsherd, incised lines on the outside surface and inside wiping;
- 6) brown ware (BW), with mica inclusions: 16 fragments. Diagnostic potsherds include 1 rounded rim, 3.6 mm thick, 16 cm in diameter, small dish; 3 pointed rim, 5.5 mm to 7.3 mm thick, 22 to 40 cm in diameter, large bowls; 1 straight pointed rim, 8.1 mm thick; 1 rounded rim with notches on the lip, 6.84 mm thick, 24 cm in diameter; bowl; 1 rounded rim, 5.37 mm thick, cup; 1 flat rim, 10.16 mm thick, 32 cm in diameter, big bowl; 1 fragment

of lid with base of a handle, 5 mm thick, 10 × 11 × 10 mm - 11 × 13 × 10 mm handle size; 1 base of handle, 3.4 mm thick, 11 × 9 × 10 mm handle size; 1 base of handle, 5.91 mm thick, 15.5 × 13.7 × 8.7 mm handle size, burned areas on the outside surface, 2 parallel incised lines at one handle side; 5 decorated potsherds, 4 mm to 7.14 mm thick, 5 parallel impressions, irregular wavy comb incisions, slightly zig zag (chevron) and three circular molded knobs, 4 parallel incisions below a band of wavy comb incisions, thin parallel comb incisions and two deep wavy comb incisions above them;

- 7) dark red (Brick-Red) Fine Ware (DRFW), polished surfaces with brightened slip on external surface, sometimes on both ones, thin and little limestone inclusions: 14 fragments. Diagnostic potsherds include 1 straight pointed rim, 4.55 mm thick, 22 cm in diameter, cup; 1 everted pointed rim, 11.12 mm thick, big jar; 2 rounded rims, 5 mm to 7 mm thick, 14-26 cm in diameter, cup; 4 slightly everted neck with rounded rim, 6.8 mm to 7 mm thick, 16 cm to 20 cm in diameter, bottle, jar; 4 decorated potsherds, 5.11 mm to 8.7 mm thick, wavy comb incisions, deep parallel incisions; 1 everted neck with thick rounded rim, 6.06 mm thick;
- 8) light brown ware (LBW): 9 fragments. Diagnostic sherds include 2 pointed rims, 4-6 mm thick, 14-26 cm in diameter, cup, jar; 7 decorated potsherds, 5.7 mm to 9.2 mm thick, wavy comb incisions.

Other diagnostics potsherds: 4 fragments, light red polished fine ware (LRPFW) (1 everted neck with a slightly thick rounded rim, 12 mm thick, 32 cm in diameter, big pot; 1 straight pointed rim, 5.75 mm thick, 26 cm in diameter, cup; 1 base of handle, 6 mm thick, 24 × 30 × 8 mm handle size; 1 decorated sherd, 8.16 mm thick, almost rounded rocker impression along the neck); 1 fragment, dark red polished fine ware (DRPFW), strainer vessel); 4 fragments, red-brown polished ware (RBrPW) (2 straight rounded rims, 6.38-12.61 mm thick, 28-32 cm in diameter, cup/bowl; 1 everted rounded rim, big jar, 15 mm thick; 1 decorated sherd, 15 mm thick); 5 fragments, brown fine ware (BrFW) with many mica inclusions (1 thick flat rim, 12 cm in diameter, lid/dish; 1 straight rounded rim, 3 mm thick, 18 cm in diameter, dish/lid; 1 everted neck with everted thick rounded rim, 5 mm thick, 18 cm in diameter, jar; 1 straight pointed rim, 1-2 mm thick, 16 cm in diameter, small cup); 5 fragments, orange ware (OW) (1 flat base, 7 mm thick; 1 base of handle, 4.52 mm thick, 15 × 17 × 5 mm in size; 1 handle, 11 × 12 × 9 mm

in size; 1 rounded rim, 5 mm thick, 42 cm in diameter, big pot; 1 pointed rim, 5.03 mm thick, 20 cm in diameter).

SU26, SU32, SU33, SU40, SU42 (East side):

- 1) black topped red polished ware (BTPW): almost complete small cup with a rounded base, rounded rim and closed profile from Interface Su42/52, 4 mm thick, 11 cm in diameter, 9 cm height;
- 2) black topped red polished ware (BTPW): 20 fragments. Diagnostic potsherds include 1 everted rim with flat lip, 3-4 mm thick; 2-pointed rim, 3-4 mm thick, 12 cm to 18 cm in diameter, bowl, cup; 2 rounded rim, 3.5-4 mm thick, 22 cm in diameter, bowl; 2 rounded rims, 5-6.55 mm thick, 16-36 cm in diameter; cup and large pot; 8 straight pointed rims, 5 mm to 7.27 mm thick, 22 cm to 32 cm in diameter; bowl, cup; 1 base of handle, 6.3 mm thick, 15.41 × 15.33 mm in size; 1 pointed rim with a handle between the rim and the shoulder, 8.69 mm thick, 36 cm in diameter, 10.82 × 11.64 mm in handle size;
- 3) black polished fine ware (BPFW): 20 fragments. Diagnostic potsherds include 6 straight rounded rims, 2 mm to 4.9 mm thick, 18 cm to 20 cm in diameter (2 potsherds with vertical burnishing on the external surface); 6 pointed rims, 4 mm to 4.99 mm thick, 16 cm to 18 cm in diameter, bowl, cup; 3 rounded rims, 5 mm to 8 mm thick, 30 cm in diameter, cup, big bowl; 2 pointed rims, 5 mm to 5.5 mm thick, 16 cm in diameter, cup or neck; 1 almost flat rim, 5.23 mm thick, 30 cm in diameter, big pot; 2 decorated potsherds, 9.7-10 mm thick, triangular or almost circular punctuations;
- 4) red-orange fine ware (ROFW), sometime with scraped inside surface: 16 fragments. 2 rounded rims, 5 mm thick, 14 cm in diameter, scraped inside surface; 1 straight rounded rim, 8.21 mm thick, 26 cm in diameter; 2 everted rounded rims, 14 mm thick; 24 cm in diameter, big jar; 1 everted rounded rim, 3.5 mm thick, 10 cm in diameter, small cup; 1 everted shoulder rim with pointed lip, 1.7 mm thick, 14 cm in diameter, neck of globular pot; 1 polished handle, 12.2 mm thick; 2 handles, 24.54 × 24.7 mm and 22 × 22.4 mm in size; 1 decorated sherd, 6.2 mm thick, 2 bands of wavy comb-incised lines between eight parallel incisions;
- 5) brown ware (BW), with mica inclusions and smooth to polished surface: 7 fragments. Diagnostic potsherds include 2 pointed rims, 5-6 mm thick, 18-30 cm in diameter, small cup and dish; 2 rounded rims, 5.09-9.8 mm thick, 18-42 cm in diameter, everted neck of a jar and large bowl with scraped internal surface; 1

handle,  $6 \times 7.2$  mm in size; 2 decorated potsherds, 4.4-4.7 mm thick, wavy comb-incised lines between parallel incisions and four wavy lines;

- 6) dark red (Brick-Red) Fine Ware (DRFW), polished surfaces with sometimes the slip, rarely rough or smoothed surfaces, thin and small limestone inclusions (<5-25%): 8 fragments. Diagnostic potsherds include 4 pointed rims, 6 mm to 7.94 mm thick, 1 potsherd 10 cm in diameter, small cup, 1 sherd with scraped internal surface; 1 everted thick rounded rim, 6.7 mm thick; 1 everted rounded rim, 12.37 mm thick; 1 polish decorated sherd, 5.75 mm thick, incised lines; 1 decorated potsherd, 3 mm thick.

Other diagnostic potsherds: 6 fragments, red-brown fine ware (RBFW) (1 base of handle, 4.73 mm thick,  $10.91 \times 12.83 \times 9.21$  mm handle size; 1 small circular handle; 2 pointed rims, 3.3 mm thick, 12 cm in diameter; 1 rounded rim, 4 mm thick, 18 cm in diameter, closed bowl; 1 painted potsherd, 6 mm thick, white grid inside red frame) (Fig. 17); 2 fragments, grey fine ware (GFW) (1 straight, almost everted, rounded rim, 5-8 mm thick, 26 cm in diameter; 1 polished body-potsherd, 5.75 mm thick); 5 fragments, light red polished fine ware (LRPFW), sometime with a smooth scraped inside surface (1 flat base, 7 mm thick; 1 almost everted, flat rim, 3.5-5 mm thick, 16 cm in diameter; 2 straight everted rims with a triangular cross-section and inside ledge lip, 3 mm to 4 mm thick, 18 cm to 26 cm in diameter, lid/dishes; 1 polished potsherd, 5.75 mm thick); 1 fragment, dark red polished fine ware (DRPFW) (straight rounded rim, 9-11 mm thick, 24 cm in diameter); 3 fragments, Red-brown polished ware (RBrPW) (2 rounded rims, 4 mm to 7 mm thick, 14 cm-20 cm in diameter, bowl and dish; 1 straight pointed rim, 6 mm thick, 26 cm in diameter, cup); 2 fragments, orange ware (OW) with a polished surface (1 straight rounded rim, 5.6 mm thick, 26 cm in diameter; 1 everted neck with rounded rim, 11.32 mm thick, 30 cm in diameter, big pot); 4 fragments, pink ware (PW) (1 almost pointed rim, 5.35 mm thick, 32 cm in diameter, large open cup; 1 base of handle, 5.03 mm thick, “eye”-shaped molded decoration,  $11.77 \times 13.84$  mm handle size; 1 decorated sherd, 4.88 mm thick, two bands of 8 parallel incisions; 1 decorated potsherd, 3.5 mm thick, triangular and horizontal impressions and 2 flat “eye”-shaped molded decoration); 4 fragments, light brown ware (LBW) with polished slip on the outside surface (2 straight pointed rims, 5-5.5 mm thick, 24-28 cm in diameter,



cup/bowl; 2 everted rims with pointed lip, 4.5 mm thick, 12 cm in diameter, neck of jar); 2 fragments, red-gray polished ware (RGPW), (1 flaring pointed rim, 3.52 mm thick, closed cup; 1 straight pointed rim, 5.05 mm thick, 36 cm in diameter, dish).

*Phase I* (SU66, SU71 [East side]; SU48, SU51, SU62, SU63, SU64, SU65 [West side]).

SU66, SU71 [East side]:

- 1) red-brown fine ware (RBFW), almost complete conical pot (or incense burner) with a circular grip near the base and red and white painted decoration (Fig. 19);
- 2) black topped red polished ware (BTPW), 61 fragments. Diagnostic sherds include 12 straight pointed rims, 2-4.7 mm thick, 10 cm to 36 cm in diameter, cup, bowl, open cup; 2 straight rounded rims, 4-4.85 mm thick, 20 cm to 32 cm in diameter, bowl/pot; 1 pointed rim, 14.09 mm thick; 36 cm in diameter, big bowl; 1 rounded rim, 11.87 mm, 30 cm in diameter, open cup; 12 straight rounded rims, 5 mm to 7.5 mm thick, 20 cm to 40 cm in diameter, cups (1 potsherd with scraped internal surface); 12 straight, almost everted, pointed rims, 5.5 mm to 7.8 mm thick, 12 cm to 30 cm in diameter (1 potsherd with hole on the neck); 2 straight pointed rims, 9 mm thick, 18 cm in diameter, cup; 2 rounded rims, 8.2 mm thick, 30-34 cm in diameter, dish, big open bowl; 1 rim with horizontal handle on the neck, 6 mm thick, 34 cm in diameter, 11 × 12 mm handle size, damaged internal surface probably due to the food; 1 body-potsherd, 7.52 mm thick; 2 bases of handle, 5-6 mm thick, 12 × 11 × 17 mm - 8 × 5 × 4 mm handles size; 2 decorated potsherds, 4-9.5 mm thick, large triangular impression on the neck, semicircular molded decoration;
- 3) black polished fine ware (BPFW), 39 fragments. Diagnostic potsherds include 4 straight pointed rims, 1 mm to 2 mm thick, 22 cm in diameter; 2 rounded rims, 4 mm thick, 18 cm in diameter; 1 everted, almost flaring, rim, 4 mm thick; 1 rounded rim, 12.08 mm thick, 24 cm in diameter, bowl; 1 pointed rim, 10.81 mm thick, 18 cm in diameter, jar; 1 almost flat rim, 4.7 mm thick, cup; 1 slightly everted, rounded rim, 4.84 mm thick, neck; 9 pointed rims, 5 mm to 7.5 mm thick, 18 cm to 26 cm in diameter, cup, jar; 5 rounded rims, 5.5 mm to 7.9 mm thick; 12 cm to 24 cm in diameter, cup, bowl; 1 everted neck with rounded rim, 9.23 mm thick, 10 cm in diameter; bottle or small jar; 1 oblique flat rim, 8.86 mm thick, 2 slightly everted rounded rim, 8 mm thick, 18-22

cm in diameter; 1 decorated potsherd, 5.39 mm thick, grip with pinched decoration;

- 4) red-brown polished fine ware (RBrFW), 20 fragments. Diagnostic potsherds include 1 everted rounded rim, 4 mm thick, 16 cm in diameter, small cup; 1 slightly everted, rounded rim, 11.82 mm thick, 20 cm in diameter, cup; 2 pointed rims, 11.7-11.8 mm thick, 26-34 cm in diameter, open cup, bowl; 2 pointed rims, with notches on the lip, 6.4 mm thick, 32 cm in diameter, cup, bowl; 1 pointed rim with decoration on the neck and on the shoulder, 5.9 mm thick, 20 cm in diameter, zigzag incisions on the neck, two rounded eye-shape on the shoulder, vertical incisions under the neck (Fig. 20); 1 rounded rim, 6.41 mm thick, cup; 1 everted pointed rim, 8.14 mm thick, flask; 1 straight rounded rim, 8.36 mm thick, 24 cm in diameter, cup; 1 decorated potsherd; 10.08 mm thick, circular molded decoration; 1 potsherd with scraped internal surface, 9 mm thick;
- 5) light red polished fine ware (LRPFW), 17 fragments. Diagnostic potsherds include 1 rounded rim; 6.39 mm thick, 22 cm in diameter, cup; 2 slightly everted, pointed rims, 8.5-9 mm thick, jar, 1 rounded rim with a handle between the rim and the neck, 8.79 mm thick, 22 cm in diameter, 26 × 19 × 17 mm handle size, jug; 1 conical neck with everted rounded rim, 9.1 mm thick, 20 cm in diameter; 2 slightly everted rounded rim, 11.95-10.95 mm thick, 16-30 cm in diameter, big jar, big pot; 1 decorated potsherd, 6 mm thick, drop-shape rocker impression on the neck; 1 handle with a deep groove, 24 × 12 mm in size; 2 bases of handle 7-12 mm thick, 19 × 24 mm and 18 × 17 × 40 mm handles size;
- 6) red-brown fine ware (RBrFW) with mica inclusions, 27 fragments. Diagnostic potsherds include 2 rounded rims with rough surface, 4-4.7 mm thick, 32-36 cm in diameter, open cup; 1 straight flat rim, 4 mm thick, 30 cm in diameter, cup; 1 thick everted, rounded rim, 6.33 mm thick, 22 cm in diameter, cup; 2 slightly everted, pointed rims, 7-8 mm thick, 30 cm in diameter, jar/bowl; 1 pointed rim with notches on the lip, 7.56 mm thick, 30 cm in diameter, bowl; 2 pointed rim, 6.8-7.3 mm thick, 20-36 cm in diameter, cups; 1 straight rounded rim, 7 mm thick, 28 cm in diameter, open cup; 2 handles with decoration, 6-6.7 mm thick; 13 × 10 × 15 mm – 9.5 × 15 mm handles size, 6 irregular parallel incisions, 2 semicircular incisions; 5 decorated sherds, mainly wavy comb-incised lines, 1 with slightly impressed line;
- 7) red-orange fine ware (ROFW) with mica inclusions, 14 fragments. Diagnostic sherds include 2 bases of handle, 8-12 mm thick, 23 × 18 - 16 × 20 × 23 mm handles size; 2 decorated neck, 6-8 mm thick, wavy comb-incisions; 1 everted neck with a

- slightly everted, rounded rim, 11.44 mm thick, 12 cm in diameter;  
2 pointed rims, 6 mm thick, 20-22 cm in diameter, cup, jar;
- 8) brown ware (BW) with mica inclusions, 33 fragments. Diagnostic potsherds include 1 flaring pointed rim, 4.9 mm thick, small jar; 1 almost conical neck with everted, almost flaring, pointed rim and decoration on the neck; 4.6 mm thick, 18 cm in diameter, wavy comb-incisions, small jar; 1 straight pointed rim, 3.8 mm thick, 26 cm in diameter, slightly oval impressions on the neck, bowl; 1 pointed rim with notches on the lip, 6.24 mm thick, 26 cm in diameter, cup; 1 pointed rim with decoration on the inside, 5.3 mm thick, 28 cm in diameter, wavy comb-incisions, dish; 4 rounded rims, 5.6 mm to 6.8 mm thick, 24 cm to 40 cm in diameter, cup, open cup, bowl; 4 pointed rims, sometimes slightly everted, 6 mm to 6.8 mm thick, 22-26 cm in diameter; 2 almost flat rims, 6-7.2 mm thick, 22 cm in diameter; 1 slightly everted neck with rounded rim, 8.38 mm thick, 18 cm in diameter, jar; 1 ring base, 11.87 mm thick; 1 base of oval handle, 8.55 mm thick, 40 × 9 × 8 mm handle size; 1 base of handle with decoration, 3 mm thick, slight incisions on one handle side; 1 base of handle, 11.19 mm thick, 22 × 26 × 27 mm handle size; 2 handle potsherds, 14 × 7 mm - 11 × 18 mm handles size; 10 decorated potsherds, 2 mm to 6.5 mm thick; wavy comb-incisions, wavy lines and parallel lines, zigzag incisions, molded wavy line, 1 potsherd with burn marks on the outside; 1 decorated sherd, 8.22 mm thick, 2 deep incisions on the inside;
- 9) dark red (Brick-Red) Fine Ware (DRFW), polished surface with often brightened slip; without or with thin limestone inclusions (<5-10%), 22 fragments. Diagnostic potsherds include 4 pointed rims, 2 mm to 4 mm thick, 20 cm to 32 cm in diameter, open cup/bowl; 7 rounded rim, 5.26 mm to 7.7 mm thick, 16 cm to 32 cm in diameter, neck of jar, open cup, bowl; 2 everted pointed rims, 5.5-6.6 mm thick, 10-20 cm in diameter; cup; 1 flat rim, 5.26 mm thick, 10 cm in diameter, neck; 1 everted neck and rounded rim, 9.67 mm thick, jar; 1 rounded rim, 9.61 mm thick, 30 cm in diameter, open bowl; 1 straight pointed rim, 8.51 mm thick, cup; 1 almost everted neck with almost flat rim and notches on the lip, 8.08 mm thick, 28 cm in diameter, jar; 1 base of decorated handle, 4.62 mm thick, 9 × 12 × 15 mm in size, parallel incisions on a side; 3 decorated sherds, 4.6 mm to 10.08 mm thick. circular molded decoration, parallel incisions (1 potsherd with scraping and burned marks on the inside);
- 10) pink ware (PW), 18 fragments. 1 straight pointed rim, 4 mm thick, 34 cm in diameter, open cup; 2 pointed rim, 6.5 mm thick, 32 cm in diameter, cup; 1 flat rim, 5.25 mm thick, 22 cm in diameter,

small jar; 2 everted, almost flaring, pointed rims, 6-7 mm thick, 18 cm in diameter, jar; 1 straight pointed rim with a rough band under it, 6.6 mm thick, 30 cm in diameter, dish; 1 flat rim with notches on the lip, 8.44 mm thick, cup; 1 straight flat rim, 9.94 mm thick, 24 cm in diameter, cup; 1 everted, pointed rim, 9 mm thick, 30 cm in diameter, jar; 3 handles, 10 × 7 mm - 11 × 11.5 mm - 16.7 × 16 mm in size; 4 decorated potsherds, 3 mm to 7.3 mm thick, irregular parallel incisions, sometimes overlapping, 2 bands of ten parallel incisions, triangular impressions, wavy comb incisions;

- 11) light brown ware (LBW) with mica inclusions, 13 fragments. Diagnostic potsherds include 1 straight pointed rim, 4.62 mm thick, small cup; 1 straight rounded rim, 3.63 mm thick, 18 cm in diameter, cup; 1 slightly everted, pointed rim with notches on the lip, 3.5 mm thick, 34 cm in diameter, cup; 1 almost flat rim, 5.77 mm thick, 18 cm in diameter, small cup; 2 frg., everted neck with pointed rim, 5.3-6.22 mm thick, 14 cm in diameter, small jar; 2 handles, 15 × 16 mm - 8 × 8 mm in size; 1 decorated potsherd, 6.19 mm thick, parallel incisions between two bands of wavy comb-incised lines;
- 12) orange-pink ware (OPW), 8 fragments. Diagnostic potsherds include 1 everted neck with thick rounded rim, 13.86 mm thick, 38 cm in diameter, large pot; 2 pointed rims with notches on the lip, 5-10 mm thick, 20-32 cm in diameter, bowl, open cup; 2 handles with a deep groove, 21 × 15 mm - 20 × 15 mm in size; 1 handle, 23 × 19 mm; 1 decorated potsherd, 8.19 mm thick, 2 parallel incisions filled with white paste; 1 everted rounded rim, 9.73 mm thick.

Other diagnostics potsherds include: 4 fragments, light brown ware (LBW) (3 pointed rims, 6.5-14 mm thick, 16-26 cm thick, 1 decorated sherd, 10.78 mm thick, deep rectangular impression); 4 fragments, red-grey polished ware (RGPW) (1 direct pointed rim, 10.46 mm thick, 32 Cm in diameter, open cup; 2 decorated potsherds, 5-6 mm thick, deep vertical incisions and oval molded decoration, small lines of punctuates; 1 handle, 5 × 5 mm in size; 5 fragments, dark red polished fine ware (DRPFW) (3 rounded rims, 5 mm to 8.5 mm thick, 20 cm to 24 cm in diameter, bottle and cup; 1 flat rim with notches on the lip, 6.22 mm thick, 20 cm in diameter, cup; 1 pointed rim, 8.58 mm thick, cup).

## SU48, SU51, SU62, SU63, SU64, SU65 [West side]:

- 1) black topped red polished ware (BTPW). Partially broken, huge bowl filled with soil and containing the small globular jar; 4 mm thick, 12-20 cm minimum height, 30 cm maximum height, 40 cm in diameter (Fig. 21);
- 2) red-orange fine ware (ROFW). 1 Almost complete small globular jar, 2 mm thick and 70 mm mouth diameter, and 93 mm maximum diameter, 1,05 cm high, polished surface with a small vertical handle 2 × 2 mm in size and wavy comb incisions on the handle sides (miniaturised ceramic) (Fig. 21);
- 3) black topped red polished ware (BTPW), 2 fragments. Diagnostic potsherds include 1 body-potsherd, 6 mm thick; 1 decorated neck, 12 mm thick with a rectangular impression;
- 4) red-brown polished fine ware (RBPFW), 3 fragments. Diagnostic potsherds include 3 pointed rims, 10 mm to 14 mm thick, 32-44 cm in diameter, big bowl;
- 5) black polished fine ware (BPFW), 2 fragments including 1 ring base, 7 mm thick; 1 slightly everted neck with rounded rim, 4 mm thick, 18 cm in diameter, bottle.

Other diagnostics are: 1 fragment, pink ware (PW) (everted neck with pointed rim, 5 mm thick, 18 cm in diameter, jar); 1 fragment, light brown ware (LBW) (pointed rim, 2.1 mm thick, small jar); 1 fragment, brown ware (BW) (rim 5 mm thick, 26 cm in diameter); 1 fragment. Dark Red (Brick-Red) Fine Ware (DRFW) (straight rounded rim, 5 mm thick, 14 cm in diameter, small cup).

*Knapped stones*<sup>17</sup> (by L. Phillipson). SU1 - Tools and retouched pieces from SU1 include 2 obsidian unifacially backed bladelets, 20 × 8 × 4 mm and

---

<sup>17</sup> Material from Seg II is labelled on artefacts bags and record sheets as S2. The large number of stratigraphic units which were quite rightly used in the excavation presents a problem with respect to providing a synopsis of the lithic artefacts recovered. In the primary data records, artefacts are recorded separately for each excavation square and stratigraphic unit. In what follows, they are grouped by stratigraphic units. That is, when a single unit spanned more than one square, the locus of the artefacts within that unit is not generally distinguished in this preliminary report. The recovery of a moderately large quantity of lithic artefacts - including, for example, 127 knapped fragments with maximum

[14] × 10 × 3 mm<sup>18</sup>. The former, which is slightly hydrated, was probably not utilised; the latter is broken and has a probably accidentally field damaged edge. There are also an obsidian snapped blade segment, 18 × 15 × 6 mm, and a fine chert blade segment, 22 × 22 × 12 mm<sup>19</sup>.

A hard slate fragment, 73 × 45 × 10 mm has a shaped, curved edge and a finely rubbed surface. Its function, whether as a tool or an architectural element, could not be determined.

A sandstone tabular fragment, 69 × 48 × 11 mm, with a deliberately cut edge apparently derived from architectural or sculptural stone working rather than from knapping.

Eighteen cores include 3 chert rectangular to sub-rectangular Levallois-style cores, 40 × 20 × 14 mm, 52 × 44 × 23 mm and 62 × 37 × 24 mm; 2 chert plano-convex radial cores, 34 × 31 × 17 mm and 54 × 36 × 32 mm, plus a similar core which had been struck over-forcibly causing it to split longitudinally and creating an overly thick Levallois-style flake, 46 × 45 × 21 mm. There are also a chert core which can be described as steeply plano-convex, 50 × 37 × 25 mm with a prepared edge of 85° to 95° or as hemi-circumferential; a chert multi-platform core, 52 × 36 × 32 mm; 2 chert casual cores, 39 mm and 62 mm; and part of a broken chert radial core - or perhaps a scraper - , 40 × [38] × 19 mm. There are also 1 plano-convex, 28 × 27 × 14 mm; 1 opposed-platform, 22 × 18 × 8 mm; and 2 casual, 34 mm and 48 mm chalcedony cores; and 1 quartz casual core, 46 mm.

---

dimensions of at least 7 mm and 24 whole flakes from SU1 - accords with what might be anticipated for a well-excavated site where some knapping activities had taken place *in situ*. Had the excavated soil been routinely sieved and a portion of it submitted to soil flotation, smaller lithic components might also have been recovered, which would have offered the possibility of additional significant data being obtained.

<sup>18</sup> The inclusion of 2 fragments of modern bottle glass in the SU1 assemblage serves as a reminder that some mixing with modern materials has taken place in this topsoil.

<sup>19</sup> These resemble occasional similar finds from sites on Beta Giorgis; interpreted as parts of composite harvesting knives. Although differing in the method of their manufacture, they probably served the same function as is attributed to the Likanos flakes recovered from Kidane Mehret and to flakes produced from the numerous rectangular Levallois-style cores recovered from many Seglamen contexts and also known from surface collections in eastern Tigray.

Two chert triangular flakes,  $67 \times 53 \times 21$  mm and  $71 \times 45 \times 17$  mm, are more likely, if deliberately produced, to have been intended for use as hand-held knives than as hafted spear points; neither, however had any marks of utilisation. Sixteen chert irregular flakes have maximum dimensions of 11 mm to 40 mm; an additional chert irregular flake, 32 mm, is heavily patinated. Flakes of other materials include 2 obsidian irregular flakes, 14 mm and 15 mm; 1 chalcedony irregular flake, 20 mm; and 2 basalt irregular flakes, 20 mm and 27 mm.

The totals for core and flake fragments plus angular knapping debris are: 93 chert, 8-62 mm; 1 very patinated chert, 35 mm; 20 obsidian, 7-28 mm; 10 chalcedony, 12-29 mm; 2 quartz, 23 mm and 25 mm; and 2 basalt, 38 mm and 40 mm. Among the un-knapped stone fragments, 29 pieces of a laminar, slightly fibrous, micaceous tabular schist have maximum dimensions of 21 mm to 106 mm<sup>20</sup>.

A single piece of hard slate, 57 mm, and one of sandstone, 59 mm, may be natural in their shapes but were probably deliberately introduced to the site. The same may be said of a broken pebble, 31 mm, which has exposed a thin layer of blue-green mineral, perhaps malachite or turquoise.

SU2 - This unit is described by the excavator as “walls related to the latest building” in the central, western and southern portions of the excavated area;

SU2 has yielded only a single chert irregular flake,  $34 \times 36 \times 12$  mm;

SU3, SU4, and SU12 - These stratigraphic units are described as, the “remains of a foundation platform related to the latest building”.

In addition to a number of grind- and hand-stones, SU3 has yielded 1 quartzite sub-cubical hammerstone,  $85 \times 70 \times 55$  mm; 2 quartzite polyhedral cores, each with maximum dimensions of 72 mm, one of which

---

<sup>20</sup> Since there is no immediate outcrop of this stone and since it is much more prevalent here than in or at any of the other Seglame sites, its introduction to the site was most probably deliberate. The material is too soft to have served for tool making, but could perhaps have been used for architectural decoration or been pulverised to serve as a temper for ceramic wares. Petrochemical analysis of selected sherds could investigate this possibility. Some of the tabular schist pieces appeared to have been trimmed to approximately regular ovals of similar size; a few others have what may be deliberate cuts made by a metal or very sharp stone knife.

was subsequently used as a hammerstone; and 2 basalt sub-spherical hammerstones with maximum dimensions of 73 mm and 94 mm. An additional quartzite polyhedral core,  $100 \times 91 \times 69$  mm, appeared to be in transition towards biconvex working. It had produced flakes with length and breadth measurements of  $44 \times 57$  mm,  $52 \times 39$  mm, and  $71 \times 55$  mm. A chalcedony exhausted bipolar core measures  $22 \times 17 \times 11$  mm. Two obsidian irregular flakes, 15 mm and 30 mm; and 1 fragment each of obsidian, 11 mm, chalcedony, 23 mm, and chert, 26, mm, are most probably accidental inclusions in the building foundation. A piece of tabular schist,  $228 \times 111 \times 27$  mm, and a tabular fragment of dressed and carved sandstone,  $93 \times 66 \times 51$  were probably used as foundation material with no particular regard to their shapes or previous utility. The sandstone fragment is part of an arched window frame - or perhaps a quadrant of square feature into which a circular opening had been cut.

Two chert irregular flakes, 28 mm and 32 mm, came from su4 feature 1.

SUs13, 16 - These stratigraphic units are described as “layers of soil accumulation after the abandonment of the latest building,” which implies that artefacts from these units postdate those from units 2-8, 10-12, and 23.

SU 13 has yielded 1 chalcedony plano-convex core,  $36 \times 25 \times 12$  mm; 1 chert casual core, 50 mm; 3 chert irregular flakes, 19-41 mm; and 1 marble irregular flake, 41 mm. There are also 3 obsidian fragments, 18-34 mm; 13 chert fragments, 21-57 mm, and 6 fragments of tabular schist, 19-41 mm, some with possible cut marks.

A greater quantity of lithic artefacts derive from SU16. There are an obsidian unifacially backed bladelet,  $[19] \times 9 \times 2$  mm, which may have broken while being used, and a thick basalt flake,  $73 \times 51 \times 26$  mm, which has been utilised as knife on one long edge and as a hammer stone on its stouter end. Cores include 2 chert plano-convex,  $56 \times 41 \times 22$  mm and  $74 \times 62 \times 31$  mm, and 2 chert opposed-platform,  $41 \times 29 \times 22$  mm and  $47 \times 27 \times 21$  mm, examples. An obsidian bipolar core,  $21 \times [14] \times 9$  resembles specimens found at Kidane Mehret; another bipolar core,  $40 \times 37 \times 31$  mm, is of clear quartz. Two chert triangular flakes measure  $39 \times 27 \times 11$  mm, and  $46 \times 39 \times 15$  mm. The longer of these, which could have served as a spear point although there is no evidence that it had been used, has an area of heavy core edge preparation on its platform. A quartzite triangular flake is  $61 \times 59 \times 26$  mm. There are also 1 chert parallel sided flake,  $45 \times 22 \times 8$



mm, and 16 chert irregular flakes, 23-77 mm. The abundant fragments include: 37 chert, 18-60 mm, three of which are heavily burnt; 12 obsidian, 10-32 mm; 3 chalcedony, 22-47 mm; 3 quartz, 20-62 mm; 1 basalt cortex fragment, 42 mm; 1 limestone, 25 mm; and 3 fragments of tabular schist, 31-44 mm. Six fragments of pink sandstone, 47-68 mm, include 4 pieces with uniform thicknesses of 10-12 mm.

An irregular flake,  $30 \times 28 \times 17$  mm, and a core fragment, 43 mm, both from su16, square E4 feature 1, are of variegated chert whose colour and pattern match so closely as indicate their derivation from the same parent core<sup>21</sup>.

SU17 - This stratigraphic unit was characterised by “many bones and ash clusters” in a soft soil matrix. Recovered from square A4 of su17, a basalt sub-spherical ovoid,  $83 \times 61 \times 49$  mm, has had all its surfaces destroyed, calcined and bubbled, while a chert ovate,  $116 \times 70 \times 22$ , with a flat face has surfaces that are bubbled and glassy<sup>22</sup>.

Ten burnt fragments of chert, 27-75 mm, and a burnt chert biconvex core,  $58 \times 57 \times 31$  mm, were also recovered in SU17.

An obsidian unifacially backed bladelet,  $25 \times 9 \times 4$  mm, an unretouched obsidian triangular flake,  $21 \times 13 \times 5$  mm, with utilisation scars - probably resulting from impact damage - on its tip, and a probably utilised or possibly retouched chert rectangular flake,  $49 \times 49 \times 10$  mm, are the only formal tools from this stratigraphic unit. Chert cores, in addition to that mentioned above, are 3 plano-convex Levallois-style examples, two with rectangular plan shapes,  $36 \times 24 \times 36$  mm and  $88 \times 31 \times 21$  mm, and one

---

<sup>21</sup> Their presence reinforces the evidence of abundant knapping debris, that stone working was conducted *in situ* and that the deposit in which they were found is largely or entirely undisturbed.

<sup>22</sup> In both instances, this must have resulted from subjection to greater heat than is produced by an ordinary domestic fire, perhaps from their incorporation in a furnace or kiln, inclusion in a rubbish pit that burned for many days, or other prolonged conflagration. According to the excavator, remains of a furnace or kiln were not found in this area, but the amount of ash and calcined bone in this unit was significantly greater than in other units (Bar Kribus *pers com*) The shapes and sizes of these two stones match those of various topstones, but this is perhaps unlikely as no other instances of have been found of chert used for this purpose.

with a triangular plan,  $33 \times 32 \times 25$  mm. There are also 1 chert irregular core,  $68 \times 57 \times 26$  mm, which is tending towards a plano-convex orientation of flake scars, a chert single-platform core,  $51 \times 37 \times 31$  mm, and a chert casual core, 40 mm. An obsidian exhausted bipolar core,  $20 \times 11 \times 5$  mm, resembles similar specimens from Kidane Mehret; a white quartz irregular core has a maximum dimension of 35 mm.

Whole flakes include in addition to the utilised chert flake mentioned above, 3 unutilised chert rectangular flakes of remarkably uniform sizes:  $37 \times 37 \times 13$  mm,  $40 \times 37 \times 11$  mm, and  $48 \times 40 \times 19$  mm. The largest of these has opposed bulbs of percussion on its ventral face. An obsidian rectangular flake measures  $26 \times 26 \times 7$  mm<sup>23</sup>.

There are also 1 chert core edge flake,  $60 \times 26 \times 13$  mm; 1 chert sub-triangular flake,  $39 \times 39 \times 10$  mm; 13 chert irregular flakes, 21-75 mm; 1 obsidian irregular flake, 27 mm, 1 quartzite irregular flake, 30 mm; and 1 white quartz irregular flake, 37 mm. Fragments in addition to those of burnt chert are: 22 chert, 8-81 mm; 12 obsidian, 8-29 mm; 3 chalcedony, 17-27 mm; 1 basalt, 32 mm; 1 quartzite, 49 mm; 2 quartz, 30 mm and 32 mm; 1 slate, 37 mm; and 4 limestone 42-88 mm.

SU22 - This stratigraphic unit is in part adjacent to and in part underlies SU17, and SU21; like those, it has a matrix of soft soil with *many ash clusters*. The lithic artefacts from SU22 accord well with the more abundant material from SU17 and can probably be attributed to the same phase of the site's occupation .

Two convex chert scrapers,  $34 \times 40 \times 17$  mm and  $51 \times 50 \times 19$  mm, with working edge angles of  $65-70^\circ$ , come from this unit. The larger has an almost circular plan shape. A worked out obsidian bipolar core,  $27 \times 20 \times 10$  mm, would have been used to produce flakes like the rectangular example recovered from SU17. A white quartz plano-convex rectangular core,  $49 \times 37 \times 25$  mm, would have produced more irregular flakes. There are also 2 chert casual cores, 51 mm and 62 mm; 2 chert irregular flakes, 25 mm and 59 mm; and 7 weathered and patinated chert fragments, 28-62 mm.

---

<sup>23</sup> Similar flakes were recognised as components of composite harvesting knives at Kidane Mehret, where they were designated as Likanos flakes.

SU25 - SU25 was a somewhat diffuse area of wall collapse that incorporated many grind- and topstones, which are reported separately.

A single chert plano-convex core,  $99 \times 67 \times 38$  mm, is the only knapped lithic from this unit. Its dorsal surface is heavily burnt and crusted; its ventral surface had been less severely heated<sup>24</sup>.

A schist fragment, 45 mm, also derived from this unit.

SUs26, 32, 33, 40, and 42 - These are described as part of a single large unit of "soil accumulation representing an intermediate phase between the latest building and the abandonment of the most ancient structure"<sup>25</sup>.

An obsidian blade,  $27 \times 13 \times 5$  mm, has utilisation scars on one long edge; the opposite edge has been blunted, probably by rubbing it along another stone, but has not been formally backed. An obsidian multi-platform core measures  $46 \times 30 \times 27$  mm. An obsidian opposed-platform rectangular flake,  $18 \times 11 \times 12$  mm, may have derived from such a core; so too may an obsidian irregular flake,  $22 \times 11 \times 8$  mm. There are also 4 chert rectangular flakes, with sample measurements of  $20 \times 12 \times 4$  mm and  $44 \times 27 \times 11$  mm; 6 chert irregular flakes, 16-49 mm; and 1 basalt irregular flake, 15 mm. Fragments include: 10 chert, 13-51 mm; 2 white quartz, 32 mm and 40 mm; 1 obsidian, 21 mm; 1 basalt, 55 mm; 1 chalcedony geode, 89 mm, and 1 tabular schist, 56 mm.

SU43 - This is an area of accumulated soil beneath SU22 and SU25, but lacking the ashy component of those units.

A group of 1 obsidian bipolar bladelet,  $19 \times 9 \times 3$  mm; 1 obsidian bipolar rectangular flake,  $13 \times 9 \times 4$  mm, and an obsidian fragment, 16 mm, found in square A3 probably derive from a single knapping incident using the same core. Their fragility and pristine condition are evidence that this portion of the deposit was substantially undisturbed. This conclusion is reinforced by the recovery from square B3 of an obsidian bipolar

---

<sup>24</sup> Probably this piece had worked downwards from the overlying SU17, where it had been affected by the intense burning activity.

<sup>25</sup> Depending on the length of time which elapsed between abandonment of the earliest structure and construction of the most recent, the artefacts recovered from these units may not be strictly contemporaneous. The relative paucity of lithic artefacts suggests that this was not a period of intensive occupation of the site.

rectangular flake,  $21 \times 16 \times 3$  mm, and an obsidian irregular flake,  $11 \times 13 \times 2$  mm; both of these are also in pristine condition<sup>26</sup>. Two other irregular flakes, 1 of obsidian, 25 mm; and 1 of white quartz, 18 mm, came from this level together with 4 chert fragments, 19-32 mm; and 3 chalcedony fragments, 12-26 mm.

SU45 - SU45 is an accumulation of soft brownish soil which “may be the continuation of SU31. Clusters of yellow soil were found in this SU”.

Four cores from this unit are 1 obsidian exhausted bipolar rectangular core - for the production of Likanos flakes -  $23 \times 16 \times 6$  mm; a chert sub-rectangular plano-convex core,  $60 \times 37 \times 32$  mm; a chalcedony multiplatform core,  $52 \times 41 \times 32$  mm, and a white quartz multiplatform core,  $59 \times 52 \times 42$  mm<sup>27</sup>.

Two irregular chert flakes, 46 mm and 49 mm; 3 chert fragments, 39 mm and 42 mm; 1 white quartz fragment, 22 mm, 1 chalcedony fragment, 28 mm, and 1 obsidian fragment, 15 mm, were also recovered from SU45.

SU51 - This was a layer of “greyish-white, hard-packed soil with many ashy clusters some of them very large. Large bones were also discovered in this SU”.

One of the two cores recovered is a chert plano-convex example,  $63 \times 39 \times 42$  mm, with heavily stepped edge preparation at an angle of  $95^\circ$ ; the other is a chert casual core, 35 mm. A chert rectangular flake measures  $36 \times 24 \times 7$  mm. A chert irregular flake,  $52 \times 38 \times 21$  mm, has a heavily stepped shoulder which could have derived from being struck in a non-Levallois direction off a core similar to the plano-convex core from this unit. Another chert flake is irregular, 42 mm. Fragments include: 9 chert, 16-64 mm; 3 obsidian, 6-14 mm; 2 white quartz, 21 mm and 30 mm; part of a chalcedony geode, 68 mm; and a tabular piece of basalt, 99 mm.

---

<sup>26</sup> Although these obsidian flakes and bladelet were clearly rejected as too thin to be useful, their production attests to considerable skill on the part of their manufacturer.

<sup>27</sup> The considerable difference in the sizes and particularly in the thicknesses of the obsidian and chert cores at the time they were discarded is a clear indication of the relative value placed upon the two materials.

SU62 and SU63 - Each of these units is described as a “thin layer of soft, yellow soil with a thick layer of brown soil beneath it, south of wall SU2”. SU62 is above SU63.

Only 2 chert fragments, 51 mm and 60 mm, were recovered from SU62.

SU 63 produced 2 chert utilised flakes: a circular flake,  $59 \times 60 \times 18$  mm, struck Levallois-style from a plano-convex core, had its distal end rubbed and worn almost smooth; a sub-rectangular flake,  $81 \times 52 \times 21$  mm, with a stepped shoulder resulting from being struck in the same direction as the stepped core edge preparation, had a slightly concave long edge scaled and worn from use as a knife. Cores from this unit include three with areas of stepped edge preparation at angles of  $85^\circ$  to  $90^\circ$ . One is rectangular plano-convex,  $57 \times 32 \times 23$  mm; 1 is circular and plano-convex,  $69 \times 63 \times 45$  mm; the third is a plano-convex core that was beginning to be used for multi-platform bladelet production,  $43 \times 35 \times 28$  mm. Ten chert irregular flakes, 15 mm to 63 mm, were recovered, plus 2 chert fragments, 23 mm and 24 mm; 1 fragment of a chalcedony and quartz geode, 44 mm; and 1 obsidian fragment, 18 mm.

SU65 - This is a “greyish-brown, very soft soil with many small stones”, overlying bedrock.

Three of the cores and several of the chert fragments in this assemblage are weathered and heavily patinated in a similar manner to the chert angular fragments underlying the stone slabs in the lowest level of Seg I. A possible tool is a chalcedony geode pebble, 34 mm, which may have been utilised as a pot burnisher. The heavily patinated cores are all of chert: 1 single-platform,  $46 \times 39 \times 36$  mm; 1 circumferential core,  $43 \times 32 \times 13$  mm, with stepped edge preparation at  $80^\circ$  to  $100^\circ$ ; and 1 irregular chert, 57 mm. The remaining cores and flakes are: 2 white quartz rectangular plano-convex,  $31 \times 31 \times 22$  mm and  $35 \times 33 \times 21$  mm; 1 white quartz single-platform,  $81 \times 75 \times 49$  mm; 1 chert plano-convex rectangular,  $44 \times 31 \times 26$  mm; 3 chert plano-convex sub-circular,  $42 \times 37 \times 26$  mm,  $58 \times 46 \times 32$  mm and  $88 \times 76 \times 31$  mm; 2 chert biconvex,  $59 \times 50 \times 29$  mm and  $60 \times 45 \times 33$  mm; 1 chert multi-platform,  $61 \times 50 \times 47$  mm; and 1 chert casual core, 82 mm.

There are also 9 chert irregular flakes, 25-73 mm; 1 white quartz irregular flake, 41 mm; and 1 basalt cortex flake, 68 mm. Twenty-four chert

fragments, 18-80 mm; 4 chalcedony fragments, 19-71 mm; and 1 obsidian fragment, 16 mm, comprise the remainder of the SU65 assemblage.

SU66 - This SU is either the “remains of an artificial stone platform related to the most ancient building or it may be a floor foundation”; it is also described by the excavator as a “collapse composed of small and medium-sized field stones and soft, dark brown soil” immediately overlying bedrock.

The only knapped lithics from this unit are 1 obsidian flake fragment with a utilised, rubbed edge, 22 mm; and 1 obsidian fragment, 10 mm. Both are in moderately fresh condition<sup>28</sup>.

SU71 - This stratigraphic unit comprises the contents of a large ceramic pot found buried within the foundation of the lowest level of the site. These were: parts of two different sandstone broken grindstones, one of which had been almost worn through before it broke; a basalt cortex-backed flake, 116 × 89 × 31 mm, perhaps from a burnishing stone; and an extraordinary, irregularly shaped basalt lump, 83 × 61 × 60 mm, which had been carefully covered with burnished red clay. The uniformity and hardness of the clay coating and the fact that it had been carefully burnished before it was fired make it apparent that this object had been deliberately produced<sup>29</sup>. A roughly shaped chert polyhedral core or proto-core, 101 × 99 × 69 mm, was in fresh condition as to its knapping, but had been heavily burnt and calcined. An angular quartzite lump, 97 × 82 × 54 mm, may have been a weathered polyhedral core that was subsequently used as a hammerstone. There was also a single freshly knapped chert fragment, 68 × 52 × 43 mm. Altogether, this is a disparate and somewhat surprising group of artefacts, which must have been deliberately selected for placement in the pot as a foundation deposit.

---

<sup>28</sup> The absence of any of the older, weathered chert artefacts or natural fragments in this lowest level is interesting. The evidence from Seg I indicates that surface exposures of such material had been locally abundant at the time the sites were first occupied. Their absence here suggests that the ground had been cleared down to the bedrock before the first earliest stone-walled structure was erected.

<sup>29</sup> No ethnographic parallels for this artefact could be found and no purpose can be suggested - unless, perhaps, it was intended for the bafflement of malign spirits or future archaeologists.

*Grindstones and related objects (by L. Phillipson).* SU3 - The clustered distribution of grind-, top-, and hammerstones is most notable in Seg II SU3, from which a total of 19 such artefacts were recovered, distributed as follows.

square	A2	A3	A4	A5	B2	B3	B4	B5
quantity	1	1	4	4	2	3	1	3

These pieces include 4 grindstones, 4 topstones, 2 handstones, and 3 hammerstones, pestles, or similar implements. In addition, 5 small, heavily abraded fragments were unidentifiable as to function since their original size could not be reconstructed. Eleven of the grindstones and related objects were recovered from three adjacent excavation squares: A4, A5, and B5. This may have been a specific activity area or it may represent the deliberate discard of abandoned artefacts in a defined locality. Since SU3 is described by the excavation supervisor, Bar Kribus, as the “remains of a foundation platform related to the latest building”, it seems likely that these artefacts has been re-used as building rubble. A water-worn basalt fragment,  $36 \times 28 \times 15$  mm, from square B3 has a scratched concave face that would be concurrent with it having been used to assist in shaping the exterior of clay pots with a diameter of approximately 85 mm. Only one handstone, one topstone and three hammerstones, all from B3 SU3, were unbroken. The remainder of the upper and lower grindstones were found medially broken.

SU16 - This unit had a cluster of 3 unbroken handstones, each of which weighed approximately  $\frac{1}{4}$  kg. The finest example was neatly trimmed and shaped to an oval, sub-circular plan and plano-convex cross section. It had been smoothed on its convex reverse. Its obverse was much used and finely worn before it acquired a dimple in the centre of this face. Small cut marks and scratches within the dimple indicate that it had served as a hand-held anvil or cutting platform subsequent to the abrasive wear. SU 16 is described as a “layer of soil accumulation after the abandonment of the latest building earlier than the phase of collapse of SU15”. Part of the soil build up may have resulted from use of the area as a small workshop whose tools included these handstones.

SU17, Interface SU17/SU22, and SU22 - Three out of the 7 grindstones and related artefacts from SU17 derive from square B4. These include a small complete top- or handstone with a slightly convex worn face

on which there are possible red ochre stains. Also from B4 there are a small broken grind - or topstone of vascular basalt with a possible red ochre stain, and a very small well-worn, fine handstone<sup>30</sup>. A corner fragment of a very finely polished basalt burnisher, [22] × 36 × [15] mm comes from square B2 of SU17.

SU18 - This stratigraphic unit, which is the “phase of collapse of the latest building earlier than the one represented by SU15 and of the phase of soil accumulation represented by su13”, yielded a fine, polished, rectangular fragment of banded pink sandstone with a somewhat wedge-shaped cross section, [114] × 132 × 31 mm, from square E3<sup>31</sup>.

SU25 - A cluster of 12 grind-, hand-, and topstones was recovered from squares A3 and A4 of SU25, six from each square. Included among this group are 3 unbroken handstones and 3 ovate to long ovate topstones which are also unbroken. Each of the handstones weighs between about ¼ to ½ kg; the complete topstones weigh approximately 2, 4½, and 6 kg<sup>32</sup>.

SU26 - This stratigraphic unit, comprising soil accumulation subsequent to the abandonment of the earliest structure and pre-dating the most recent building, yielded part of a large grindstone.

SU27 - A biconvex oval topstone was recovered from square A5 of this unit of building collapse.

---

<sup>30</sup> Their diversity of shapes and probable functions suggests possible ownership by an individual or a family rather than indication of an area of specialised function. Description of the stratigraphic unit strengthens this interpretation. “Many bones and ash clusters .... [in] square B4, a large concentration of ash clusters. It is estimated that the bones and ash which were found represent an occupation level.”

<sup>31</sup> Since it is too smooth to have served as a grindstone and too coarse-grained to be a satisfactory burnishing material, it may be conjectured that this was part of some architectural feature or decoration. Part of a very fine basalt topstone also came from SU18. It is not clear from the excavator’s notes whether these artefacts may have been contained within the room prior to the building’s collapse or whether they are more likely to have constituted part of the rubble out of which the walls had been constructed.

<sup>32</sup> While the sizes and shapes of the two larger specimens suggest that they were mobile topstones rather than stationary grindstones, this identification is uncertain owing to their heaviness. It may be speculated that they could have been used for an abrasive function other than grain grinding, such as to smooth or polish paved or plastered floors.



SU64 - Square B4 of this unit yielded an ovate basalt cobble,  $90 \times 65 \times 51$  mm,  $\frac{1}{2}$  kg, with a bi-planar cross section, one face of which had been finely worn from use as a handstone<sup>33</sup>.

SU65 - The presence in SU65 of 3 handstones all from square A4, but no grindstones suggests that this may have been an area used for a particular function, perhaps for hide dressing. One of the handstones, the convex face of which was probably used for fine burnishing, was subsequently so heavily used at one end as a hammerstone as to cause the entire piece to split longitudinally. As the stratigraphic unit was one of “soil accumulation after the abandonment of the most ancient building”, use as a workshop would not have been a primary function of the building. A surprising find, also from square A4, is a fine rectangular quartzite burnishing stone,  $50 \times 26 \times 19$  mm, which had been utilised mainly at its rounded end. Areas of wear from the users fingers indicated how it had been held and that it had been subjected to much use<sup>34</sup>. A burnishing stone with a worn facet, a geode pebble from square B4, is likely to have served as a burnisher for ceramic wares.

SU66 and SU71 - Squares E2 SU66 and E2 SU71 invite different functional interpretations. Two broken grindstones and 2 small handstones were recovered among the “remains of an artificial stone platform related to the most ancient building” which constituted SU66. Most probably their inclusion in the platform make up was not deliberate. More unusual are the two broken grindstones, both of sandstone rather than basalt, that were

---

<sup>33</sup> Subsequent to this use, it had acquired two dimples on one face as a result of serving as a small anvil for some hammered task - perhaps for bipolar knapping of lithic artefacts or perhaps for fine metal working. In addition, both ends were battered from use as a hammerstone. This was indeed a multi-function tool. Its stratigraphic association with “many bones and large pottery sherds” in an area of building collapse suggests that it was not part of an industrial site, but is more likely to have been an individual possession.

<sup>34</sup> Its nearest ethnographic analogies are with similar tools used for burnishing metal work and/or as a final stage in the preparation of manuscript vellum. In view of the probable age of the deposit, manuscript preparation seems unlikely.

recovered from within a large pot, designated SU71, over and around which SU66 had been constructed<sup>35</sup>.

*Small finds (by L. Sernicola).* SU1, A2 - 1 short cylinder bead in dark gray stone (11 mm; diam. 0.9 mm).

SU1, E3 - 1 fragment of a cylinder bead of translucent yellow glass (14 mm).

SU71, E2 - 1 copper alloy spatula. One end is rounded, the other is straight (9×1×0.1 cm).

SU71, E2 - 1 basalt lump covered with burnished red clay (ca 8.3×6.1×6 cm).

*Miscellanea (by L. Phillipson).* SU31 - A portion of a carefully dressed pink sandstone, probably architectural, element, 380 × 130 × 115 mm has a round cross section and is annular in plan, surrounding a hole with a reconstructed radius of approximately 280 mm, or it may have been half of the top of a window arch or similar structure. It was dressed on all surfaces by use of a metal punch or chisel about 5 mm wide, and further smoothed by use of a hard hammerstone. Contrary to the excavator's initial assessment, it was not polished.

SU38 - Part of a pink sandstone element carved on all surfaces to an annular shape, with an external radius of approximately 155 mm, an internal radius of approximately 80 mm, and an approximately square cross section with sides of 70 × 80 mm. It does not match the carved sandstone element from su31 in its dimensions, shape of cross section, or quality of carving. On its surface is a prominently carved Y-shaped, raised symbol which resembles a curved form of the Pre-Aksumite or South Arabian letter H.

SU 38 - 1 fine, uniform, hard-fired terracotta brick with a brown-red exterior surface and a tan interior. The intact end is rounded; its cross section is

---

<sup>35</sup> The obviously deliberate placement of grindstones as a foundation deposit suggests that cereal cultivation may have been of dominant economic and cultural significance to the inhabitants of Seglamen. That the grindstones so placed were of sandstone rather than of the more readily available basalt may also have been significant.

approximately square with sides of 79 mm and 73 mm; the surviving length is 140 mm.

SU 25 - 1 fragment of fine, uniform, hard-fired terracotta brick with a light brown exterior surface and a tan interior. The intact end is slightly pointed; its cross section is approximately square with sides of 44 mm and 36 mm; the surviving length is 63 mm.

The thickness of these bricks relative to the walls of even the largest ceramic vessels recovered from the site, as well as the density and uniformity of its material make it obvious that it was produced and fired by a different process than was used for any other ceramic wares.

### Seg III (by L. Sernicola)

#### Structure and stratigraphy

Excavation Unit S6 was delimited near the northern edge of a cultivated terrace at Mogareb about 130 m north-west of Seg II and 170 m northwest of Seg I. This EU corresponded to *locus* S6, and was opened in the area where a small sandstone monolith was visible. Only a trench, 5 m × 5 m in area, corresponding to squares A1, A2, ½A3, B1, B2, ½B3 and ½C1, ½C2, ½C3, was excavated in this unit to test the occurrence of grave.

After removing the topsoil (SU1), about 15-20 cm thick, which was heavily disturbed by ploughing, a pit-grave (SG T1), cut in the foliated weathered syenite bedrock (SU2), was found. The grave was originally marked with a roughly cylindrical, broken monolith, 35 cm × 18 cm in cross-section, and depth, and 85 cm high. The monolith was erected in the upper fill at the south-western edge of the pit (Figs. 22a, b and c).

The pit, 1.06 m × 1.5 m × 0.8 m, was rectangular in cross-section and was filled with a dark brown clay soil mixed with large- to medium-sized irregular stones (SU3). Two almost complete pots, probably broken by ploughing, were found *in situ* near the stela, at the interface between the topsoil and the upper filling of the pit. Miniature beakers and cups were also collected at the interface between the topsoil and the bedrock around the pit. Other fragments of vessels were found in the fill of the pit and at the base of the monolith in the southern sector of the grave.

Traces of badly preserved human bones together with ceramics and metal objects were recorded at the bottom of the shaft suggesting a single burial in a contracted posture with the head to the south, probably facing west. Due to the high soil acidity, only five teeth, including incisors and pre-molars, could be collected, while traces of almost completely weathered fragments of the skull, femurs and possibly a tibia were recorded but could not be sampled.

Four pits in the bedrock were also recorded around the grave. These pits were surely not graves and most likely were excavated by the farmers for agricultural practices or collecting ancient objects.

The following stratigraphic units were recorded at Seg III:

SU1 - Topsoil, over the whole excavation unit; brown soil with small stones, 18-20 cm deep, above SU2, SU3, SU6, SU11, SU12/13, SU14, SU15, SU16/17, SU18; high quantity of ceramics, few lithics and two beads;

SU2 - Bedrock, brown-yellowish weathered granite with a foliated structure, over the whole excavation unit; beneath SU1 and cut by SU6, SU11, SU15, SU18;

SU3 - Uppermost fill of the grave (SU6) with big irregular stones in a soft brown clay soil, about 18 cm deep; two almost complete vessels occurred at the interface SU1/SU3 near to the standing monolith, beneath SU1 and above SU4/5;

SU4/5 - Upper fill of the grave, soft brown soil mixed to medium-/big-size irregular stones, about 55 cm deep; High quantity of ceramics and 1 bead; beneath SU3 and above SU8 and SU9/10;

SU6 - Grave cut in the bedrock; roughly rectangular pit. 1.50 m × 1.06 m in area and 0.80 m deep. beneath SU1, and filled with SU3 and SU4/5;

SU7 - Standing stela; sandstone monolith in the south-western corner of the grave, 0.85 m high, 0.35 m wide, 0.18 m thick;

SU8 - Human remains beneath SU4/5 and above SU9/10;

SU9/10 - Stone slabs, about 0.40 × 0.20 × 0.10 m, at the bottom of the grave, immediately above the bedrock; complete and almost complete pots as well as potsherds and metal objects (see Seg III, Finds); beneath SU4/5 and SU8;

SU11 - Roughly circular pit in the bedrock, about 0.70 m deep, in the north-western sector of the excavation unit; this SU is beneath SU1, cuts SU2, and is filled with SU12/13;

SU12/13 - Stratum of brown moderately compact clay soil with medium-size stones, filling SU11; medium quantity of ceramics; beneath SU1;

SU14 - Stratum of brown moderately compact clay soil with medium-size stones, filling SU15, about 25 cm deep; medium quantity of ceramics; beneath SU1;

SU15 - Irregular pit in the bedrock in the north-eastern sector of the excavation unit; beneath SU1, filled with SU14;

SU16/17 - Stratum of brown moderately compact clay soil with medium-size stone blocks, filling of SU18, about 18 cm deep; medium quantity of ceramics, 1 fragment of metal ear-ring or ring and 1 obsidian crescent; beneath SU1;

SU18 - Irregular pit in the bedrock in the south-eastern sector of the excavation unit; beneath SU1.

*Finds.* The finds from Seg III included eleven unbroken or almost unbroken vessels, 192 diagnostic potsherds (rims, bases, necks, shoulders, handles, decorated potsherds) and 983 body-potsherds, three beads and two metal ear-rings or rings, as well as knapped stones<sup>36</sup>.

## SG T1

*Ceramics.* The ceramics from SG T1 have been divided into three assemblages:

- 1) ceramics from topsoil above the grave, which may be ascribed to a later phase of use of the area than the burial;
- 2) ceramics from upper fill of the grave, which were apparently associated with a funerary ritual;
- 3) ceramics from the lower fill of the grave, which were directly associated with the body (Fig. 23).

Topsoil (SU1; interface SU1/SU2 and SU1/SU3). The ceramics included two almost complete vessels *in situ* close to the standing stela, 88 diagnostic fragments and 523 body-potsherds.

Almost complete vessels:

---

<sup>36</sup> The ceramics, beads and metal artefacts from Seg III were examined by L. Sernicola. The knapped lithics were examined by L. Phillipson.

- 1) jar with S-profile and rounded rim, red-orange coarse ware (ROCW), gray in cross-section; two molded circular knobs on the shoulder, 11.5 cm in diameter at the mouth, 0.5 cm thick;
- 2) open vessel with an everted rim and slightly pointed lip, black fine ware (BFW), 0.4 cm thick.

#### Diagnostic potsherds:

- 1) red-orange coarse ware (ROCW): 1 fragment of a bottle with a globular body, long cylindrical neck and rounded rim, mica inclusions, 0.35 cm thick; 3 fragments of small globular or ovoid jars or pots with S-profile and slightly pointed rim, 0.35 cm to 0.45 cm thick; 3 fragments of cups with a rounded rim, straight to slightly concave profile and rounded base, 0.4 cm to 0.8 cm thick, 6 cm to 10 cm in diameter at the mouth; 1 fragment of open bowl with a flat, outside slightly thickened rim, mica inclusions, two zigzag incisions on the lip, 0.4 cm thick; 1 fragment of cylindrical handle, 0.5 cm thick; 1 fragment of coil handle with mica inclusions; 1 decorated body-potsherd with a lunate handle, 0.45 cm thick; 1 body-sherd with mica inclusions and scraping/wiping on the outside, 0.5 cm thick;
- 2) red-orange coarse ware (ROCW), gray in cross-section: 1 fragment, cup with a rounded rim, slightly concave profile and rounded bottom, 0.3 cm thick; 1 fragment, cup with a rounded, outside slightly thickened rim, straight profile and rounded bottom, 0.5 cm thick; 1 fragment of bottle with globular body, long cylindrical neck and rounded rim, mica inclusions, 0.55 cm thick; 1 fragment, globular or ovoid small jar with S-profile and slightly pointed rim, 0.65 cm thick; 1 slightly pointed rim, 0.7 cm thick. 1 fragment of miniature cup with slightly concave profile and rounded rim, 0.05 cm thick;
- 3) red coarse ware (RCW): 3 fragments of small globular or ovoid jars with S-profile and slightly pointed rim, 0.4 cm to 0.5 cm thick; 1 fragment, jar with S-profile, 0.7 cm thick; 1 fragment, globular or ovoid jar with S-profile and rounded rim, 1.2 cm thick; 2 fragments, bottle with globular body, long cylindrical neck and rounded rim, 0.55 cm and 0.6 cm thick. 3 fragments, miniature cups or beakers with flat bottom, 2.5 cm, 3.2 cm and 5.0 cm in diameter at the base;
- 4) red coarse ware (RCW) gray in cross-section: 2 fragments, cups or bowls with a straight profile and rounded rim (1 fragment with mica inclusions in the paste), 0.5 cm and 0.8 cm thick; 1 body-potsherd with a band of ellipsoidal pre-firing holes, 0.6 cm thick;

- 5) black topped, red polished coarse ware (BTRPCW): 2 fragments, cups or bowls with a straight profile and slightly pointed rim, 0.35 cm and 0.45 cm thick;
- 6) brown coarse ware (BrCW): 1 fragment, cup with convex profile and slightly pointed rim, mica inclusions, 0.7 cm thick.
- 7) gray ware with many coarse mineral inclusions: 1 fragment, open bowl with straight profile and flat rim, 0.45 cm thick; 1 fragment, large shallow bowl with straight profile and out-flaring rim, 0.7 cm thick; 1 decorated body-potsherd with incised single horizontal line and short vertical ticks on the inside and outside, 0.35 thick. 1 fragment, small (miniature?) flask or jar with everted neck, 0.1 cm thick;
- 8) gray coarse ware (GCW), red/orange inside surface: 1 fragment, rounded bottom, 1.2 cm thick;
- 9) black polished coarse ware (BPCW): 1 fragment, small globular or ovoid jar with everted neck and slightly pointed rim, 0.2 thick; 1 straight rounded rim, 0.2 cm thick;
- 10) red-orange fine ware (ROFW): 1 fragment, open bowl or cup with straight profile, slightly pointed lip and vertical incisions around the outside rim, 0.25 cm thick; 1 fragment, open bowl with straight profile, flat, outside slightly thickened rim, 0.6 cm thick; 1 fragment, open bowl with straight profile, flat, outside slightly thickened rim and incised notches on the lip, 0.7 cm thick; 1 fragment, cup with concave profile, slightly pointed rim, incised notches on the outside rim and a band of pre-firing holes below it, 0.45 cm thick; 4 fragments, globular or ovoid jars with everted neck and slightly pointed rim, 0.3 cm to 0.8 cm thick; 4 fragments, globular or ovoid jars with everted neck and rounded rim, 0.23 cm to 0.5 cm thick; 2 fragments, bottles with a globular body, long cylindrical neck and rounded rim, 0.3 cm and 0.4 cm thick; 2 body-potsherds with traces of cylindrical handle, 0.15 cm and 1.0 cm thick; 1 decorated body-potsherd with an incised small pointed arch, 0.5 cm thick; 1 body-potsherd with traces of outside scraping/wiping, 0.8 cm thick; 2 fragments, miniature cups or beakers, 0.15 cm and 0.3 cm thick;
- 11) red-orange fine ware (ROFW), gray in cross-section: 1 fragment, cup with a straight sided profile, slightly pointed rim, incised notches on the outside and a band of pre-firing holes below it, 0.3 cm thick; 2 fragments, small globular or ovoid jars with everted neck and slightly pointed rim, 0.4 cm thick; 1 fragment, ring-foot base, 1 cm thick; 1 fragment, bottle with a globular body, long cylindrical neck and rounded everted rim, 0.25 cm thick; 1 body-potsherd with traces of a short, flat horizontal handle, 0.6 cm thick; 1 decorated body-potsherd with 2 continuous horizontal

- incised lines, 0.4 cm thick; 1 fragment, flat base of a miniature cup, 2 cm in diameter; 1 body-potsherd with one band of possibly roulette circular impressions, 0.6 cm thick;
- 12) red-brown fine ware (RBFW): 1 everted angular rim with slightly pointed lip, mica inclusions, 0.4 cm thick; 1 fragment, cup with convex profile and slightly pointed rim, 0.55 cm thick; 1 decorated body-potsherd with a horizontal incised line, 0.5 cm thick; 1 fragment, cup or bowl with flat, inside slightly thickened rim, 0.2 cm thick;
  - 13) light red polished fine ware (LRPFW): 2 fragments, cup or bowl with straight profile and rounded rim, red slip on both surfaces, 0.3 cm and 0.4 cm thick; 2 fragments, small globular or ovoid jar with everted neck and rounded rim, traces of red slip on the outside, 0.3 cm thick; 1 fragment, small jar or pot with everted neck and slightly pointed rim, red slip on the outside, 0.4 cm thick; 1 body-herd with traces of scraping/wiping on the outside;
  - 14) dark red polished fine ware (DRPFW): 1 fragment, bottle with globular body, long cylindrical neck and slightly pointed rim, red slip on both surfaces, 0.3 cm thick;
  - 15) black topped, red polished fine ware (BTPW): 2 fragments, cups or bowls with straight profile and rounded rim, 0.3 cm and 0.7 cm thick; 1 fragment, cup with straight profile and rounded rim, 0.4 cm thick; 1 fragment, cup with straight profile and slightly pointed rim, 0.5 cm thick; 1 fragment, globular or ovoid pot or jar with everted neck and rounded rim, 0.55 cm thick;
  - 16) black fine ware (BFW): 1 fragment, cup with straight profile and rounded rim, 0.6 cm thick; 1 fragment, cup with straight profile and slightly pointed rim, 0.5 cm thick; 1 fragment, small jar or pot with everted neck and pointed rim, 0.3 cm thick.

#### The body-potsherds include:

- 1) red-orange coarse ware (ROCW): 91 fragments, 0.2 cm to 0.9 cm thick; 1 fragment with traces of inside scraping/wiping;
- 2) red-orange coarse ware (ROCW) with mica: 11 fragments, 0.4 cm to 1.1 cm thick;
- 3) red-orange coarse ware (ROCW), gray to black in cross-section: 91 fragments, 0.3 cm to 1.0 cm thick;
- 4) red coarse ware (RCW): 127 fragments, 0.2 cm to 1.2 cm thick;
- 5) red-orange fine ware (ROFW): 150 fragments, 0.2 cm to 1.2 cm thick;
- 6) red-orange fine ware (ROFW) with mica: 49 fragments, 0.2 cm to 1.2 cm thick;



- 7) red-brown fine ware (RBFW): 2 fragments, 0.3 cm to 0.4 cm thick;
- 8) grey fine ware (GFW): 17 fragments, 0.2 cm to 0.8 cm thick;
- 9) light red polished fine ware (LRPFW): 2 fragments, 0.2 cm to 0.4 cm thick;
- 10) black topped, red polished ware (BTRPW): 1 fragment, 0.6 cm thick;
- 11) orange ware (OW); 15 fragments, 0.4 cm to 0.7 cm thick;
- 12) pink ware (PW): 17 fragments, 0.4 cm to 0.5 cm thick;
- 13) black topped, red polished coarse ware (BTRPCW): 2 fragments, 0.4 cm thick;
- 14) brown coarse ware (BrCW): 11 fragments, 0.5 cm to 1.3 cm thick; 1 fragment with traces of inside scraping;
- 15) grey coarse ware (GCW): 29 fragments, 0.2 cm to 1.0 cm thick;
- 16) black coarse ware (BCW), sometime with mica: 5 fragments, 0.5 cm to 0.7 cm thick;
- 17) black fine ware (BFW), sometime with mica: 9 fragment, 0.2 cm to 0.6 cm thick;
- 18) brown fine ware (BrFW), sometime with traces of brown outside slip: 9 fragments, 0.2 cm to 0.6 cm thick;

Upper fill (SU4/5). The ceramics from the upper fill of the grave include one almost complete vessel, 27 diagnostic fragments and 125 atypical-potsherds.

The almost complete vase is an elongated, highly stylized, anthropomorphic vessel (bottle?), broken at the base, with two knobs in the upper part of the body (breasts), a prominent knob in the lower part of the body, a perforation for an ear-ring on the preserved ear, two holes on the shoulders and a punctuated decoration on the chest, apparently representing a female or hermaphrodite figure, 11 cm in diameter at the shoulder, 0.4 cm rim diameter, 25 cm preserved height, 0.6 to 1 cm thick; red-orange coarse ware (ROCW) (Fig. 24).

The diagnostic potsherds include:

- 1) red-orange coarse ware (ROCW): 4 fragments, cups/bowls with a straight profile and rounded rim, 0.4 cm to 0.8 cm thick; 1 fragment, small globular or ovoid jar with everted neck and

slightly pointed rim, 0.4 cm thick; 2 fragmentary globular jars with everted neck and rounded rim, 10 cm to 12 cm in diameter at the mouth<sup>37</sup>; 1 decorated body-potsherd with 2 continuous horizontal lines and three short parallel lines below them, 0.5 cm thick;

- 2) black topped, red polished fine ware (BTRPW): 1 fragment, open bowl or cup with rounded bottom and a outward slightly thickened, rounded rim, 0.55 cm thick;
- 3) orange polished ware (OrPW): 1 base, by conical pot-stand with a red slip on the outside, 12 cm in diameter; 1 fragment, globular jar or pot with everted angular neck, slightly pointed rim, and black slip on the inside, 0.5 cm thick; 1 fragment, globular jar or pot with everted angular neck, slightly pointed rim, and red slip on both surfaces, 0.9 cm thick; 1 fragment, small globular jar or pot with everted angular neck and rounded rim, red slip on the inside, 0.5 cm thick;
- 4) Brown coarse ware (BrCW): 1 body-potsherd with mica inclusions in the paste, decorated with 2 horizontal incised lines;
- 5) red-orange fine ware (ROFW): 1 fragment, globular or ovoid jar with everted continuous neck and slightly pointed rim, 0.95 cm thick; 1 fragment, small globular or ovoid jar or pot with everted neck and rounded rim, 0.3 cm thick; 1 fragment, globular or ovoid jar with everted angular neck and slightly pointed rim, 0.3 cm thick; 1 fragment, flat base, 0.5 cm thick. 1 fragment. small jar with S-profile, 0.5 cm thick;
- 6) light red polished ware (LRPFW): 1 fragment, small jar with continuous profile, everted rim, mica inclusions and traces of red slip on the outside, 0.5 cm thick; 1 fragment, small jar with continuous profile, everted rim and rounded rim, traces of red slip on both surfaces, 0.6 cm thick; 1 body-potsherd decorated with one band of two incised lines combined with three parallel alignments of circular impressions, 0.4 cm thick;
- 7) black topped red polished ware (BTRPW) with many fine mineral inclusions: 2 fragments, open bowls or cups with a nearly straight profile, rounded rim and bottom, 0.4 cm and 0.6 cm thick; 1 fragment, small globular or ovoid jar or pot with everted neck and rounded rim, 0.6 cm thick; 1 fragment, bowl with a straight profile and rounded rim, 0.6 cm thick;

---

<sup>37</sup> One jar is decorated with a band of incised horizontal lines and two couples of molded circular knobs on the shoulder.

- 8) black fine ware (BFW): 1 fragment, small beaker with straight walls and slightly pointed rim, 0.2 cm thick.

The body-potsherds include:

- 1) red-orange coarse ware (ROCW): 44 fragments, 0.2 cm to 1.2 cm thick;
- 2) red coarse ware (RCW): 9 fragments, 0.5 cm to 1.4 cm thick;
- 3) red-orange fine ware (ROFW): 29 fragments, 0.3 cm to 1.1 cm thick;
- 4) dark red polished fine ware (DRPFW): 16 fragments, 0.3 cm to 0.6 cm thick;
- 5) pink ware (PW): 1 fragment, 0.8 cm thick;
- 6) grey coarse ware (GCW): 5 fragments, 0.4 cm to 0.8 cm thick;
- 7) brown coarse ware (BrCW), with mica: 20 fragments, 0.5 cm to 0.6 cm thick; 2 fragments with traces of scraping/wiping on the inside, 0.5 cm thick;
- 8) black fine ware (BFW): 1 fragment, 0.5 cm thick.

Lower fill (interface SU4/5 and SU9/10). The ceramics directly associated with the burial include 6 complete and almost complete vases, 12 diagnostic potsherds and 32 atypical potsherds.

Complete or almost complete vases are:

- 1 biconical pot-stand with a red slip on the outside; 17 cm in diameter at the mouth and base; red-orange coarse ware (ROCW);
- 1 pear-shaped bottle with a slightly flat rounded bottom, long cylindrical neck and slightly everted rounded rim; two molded circular knobs on each side of the shoulder; 5.7 cm in diameter at the mouth, 7 cm in diameter at the base, 25 cm high; grey coarse ware (GCW), red slip on the rim;
- 2 small pots with a flat bottom, globular body and short everted cylindrical neck; 4 cm and 5 cm in diameter at the mouth, 7 cm and 8 cm in diameter at the base, 13.5 cm high; red-orange coarse ware (ROCW);
- 1 deep bowl with a flat bottom, convex profile and rounded rim; 12.5 cm in diameter at the mouth, 9.1 cm at the base, 7 cm high; red polished coarse ware (RPCW);
- 1 deep bowl with a rounded bottom, slightly concave profile and rounded rim, 30 cm in diameter at the mouth; black topped, red polished fine ware (BTRPW).

### Diagnostic fragments:

- 2 jars with a close profile and flaring rim, 0.3 cm and 0.4 cm thick; light red polished fine ware (LRPFW);
- 2 jars with a close profile, red-slipped, everted angular neck/rim, 0.3 and 0.9 cm thick; red-orange coarse ware (ROCW);
- 1 jar (?) with a close profile and flaring rim, 0.4 cm thick; orange-pink ware (OPW);
- 1 cup or small bowl with an inside slightly thickened, straight rounded rim, about 0.3 cm thick; red-orange coarse ware (ROCW);
- 1 deep bowl with an almost straight profile and flat rim, 26 cm in diameter at the mouth; black topped, red polished fine ware (BTRPW);
- 1 bowl, with an almost straight profile and rounded rim, 0.5 cm thick; black topped, red polished coarse ware (BTRPCW);
- 1 bottle/jar with a straight cylindrical neck and rounded rim, 0.5 cm thick; red-orange coarse ware (ROCW);
- 1 bottle/jar with a straight cylindrical neck and everted rounded rim, 0.3 cm thick; red-orange coarse ware (ROCW);
- 1 bottle/jar with a straight cylindrical neck and everted rounded rim, molded decoration with a Y-shape on the shoulder, 0.4 cm thick; red-orange coarse ware (ROCW);
- 1 decorated fragment with a molded Y motif, orange ware with traces of red slip on the outside.

### Atypical potsherds:

- 1) red-orange coarse ware (ROCW): 22 fragments, 0.3 cm to 0.8 cm thick<sup>38</sup>;
- 2) dark red polished ware (DRPFW): 6 fragments, 0.2 cm to 1.1 cm thick;
- 3) black fine ware (BFW): 1 fragment, 0.1 cm thick;
- 4) red polished coarse ware (RPCW): 3 fragments, 0.4 cm to 0.5 cm thick.

### *Beads*

SU1 - (topsoil) - 1 stone bead.

SU1 - (topsoil) - 1 glass bead.

---

<sup>38</sup> 1 fragment with mica in the paste.

SU4 -1 glass bead. The stone bead is a 4 mm-long square-ended cylinder of pale red/orange stone with a 4 mm diameter and a 1 mm perforation.

The glass beads are short rounded oblates in dark blue or turquoise glass measuring between 4 and 3 mm in diameter with a 2 mm perforation.

*Metal artefacts.* 1 complete copper lunate ear-ring or ring with pointed end, 18 mm in diameter, from the bottom of the tomb in the northern sector of the shaft.

1 fragment of copper ear-ring, ca 16 mm in diameter, from bottom of the tomb in the northern sector of the shaft.

Pits around SG T1 (SU12/13, SU14, SU 16)

The following finds from the pits around SG T1 were recorded:

*Ceramics.* The ceramics included 2 complete miniature vessels, 42 diagnostic potsherds and 303 atypical potsherds.

SU12/13 - Complete pots:

1 miniature beaker with a straight profile and rounded rim, short vertical handle below the rim, 2 cm in diameter at the base, 2.6 cm in diameter at the mouth, 4 cm high; red-orange coarse ware (ROCW).

1 miniature cup with rounded rim, 2 cm in diameter at the base, 4.5 cm in diameter at the mouth, 4.6 cm high; red-orange coarse ware (ROCW):

Diagnostic potsherds:

- 1) red-orange coarse ware (ROCW): 1 fragment, globular or ovoid jar with everted neck and slightly pointed rim, 0.8 cm thick; 2 fragments, open bowl with a straight profile and flat rim, 0.4 cm thick; 1 fragment, large bowl with slightly concave profile and pointed rim, 0.3 cm thick, 30 cm in diameter at the mouth; 1 decorated body-potsherd with a molded lunate handle, 0.5 cm thick; 1 fragment, small globular or ovoid jar with everted neck and rounded rim, 0.4 cm thick; 1 fragment, molded horizontal handle, 0.8 cm thick;
- 2) red coarse ware (RCW): 2 fragments, small, globular or ovoid jar or pot with everted neck and slightly pointed rim, 0.4 cm and 0.5 cm thick; 2 fragments, globular or ovoid jar with everted neck and flat rim, 0.65 cm thick;

- 3) red-orange fine ware (ROFW): 1 fragment, small, globular or ovoid jar with everted neck and rounded rim, 0.5 cm thick; 1 fragment, small globular or ovoid jar or pot with everted neck and rounded rim, 0.5 cm thick; 1 fragment, cup with concave profile and slightly pointed rim, 0.2 cm thick; 2 fragments, ring-bases, 0.4 cm and 0.5 cm thick; 1 body-potsherd with traces of two incised horizontal lines, 0.2 cm thick;
- 4) red-brown fine ware (RBFW): 1 body-potsherd with an incised, horizontal wavy line;
- 5) dark red polished fine ware (DRPFW): 1 fragment, small globular or ovoid jar or pot with everted shouldered neck and slightly pointed rim, dark red slip on the outside, 0.5 cm thick;
- 6) black topped, red polished fine ware (BTRPW): 1 fragment, open vessel with nearly straight profile and inside thickened, slightly pointed rim, 0.9 cm thick; 1 fragment, open bowl with nearly straight profile and rounded rim, 0.5 cm thick, 30 cm in diameter at the mouth;
- 7) Brown coarse ware (BCW): 2 fragments, flat bottom, 0.85 cm thick;
- 8) Black polished coarse ware (BPCW): 1 fragment, cup with nearly straight profile and rounded rim, 0.5 cm thick.

#### Atypical potsherds:

- 1) red-orange coarse ware (ROCW): 80 fragments, 0.1 cm to 2.5 cm thick;
- 2) red coarse ware (RCW): 21 fragments, 0.3 cm to 0.9 cm thick;
- 3) Red-orange fine ware (ROFW): 84 fragments, 0.2 cm to 0.8 cm thick;
- 4) black topped, red polished fine ware (BTRPW): 2 fragments, 0.2 cm to 0.5 cm thick;
- 5) brown coarse ware (BrCW): 1 fragment, 0.4 cm thick.
- 6) grey coarse ware (GCW): 1 fragment, 0.6 cm thick.
- 7) black polished coarse ware (BPCW): 3 fragments, 0.3 cm thick.

#### SU14 - Diagnostic fragments:

- 1) red-orange coarse ware (ROCW): 2 body-potsherd with inside scraping, 0.4 cm thick;
- 2) red-orange fine ware (ROFW): 1 fragment, straight rounded rim, 0.3 cm thick;
- 3) light red polished fine ware (LRPFW): 1 fragment, globular or ovoid jar or pot with everted rim and rounded lip, red slip on both

surfaces. 1 fragment, globular or ovoid jar with everted rim and rounded lip, outside red slip 1 cm thick;

- 4) black topped, red polished coarse ware (BTRPCW): 1 fragment, open cup or bowl with straight profile and rounded rim, 0.6 cm thick; 1 fragment, open cup or bowl with straight profile and rounded rim, incised line under the lip, 0.6 cm thick;
- 5) black topped, red polished fine ware (BTRPW): 1 fragment, small jar or pot with everted neck and slightly pointed rim, 0.4 cm thick.

#### Atypical potsherds:

- 1) red-orange coarse ware (ROCW): 8 fragments, 0.2 cm to 0.7 cm thick, 4 fragments, red ware with many coarse mineral inclusions and gray interior (1.A.2), 0.6 cm to 0.7 cm thick;
- 2) red-orange fine ware (ROFW): 26 fragments, 0.4 cm to 1.1 cm thick.

#### SU16/17 - Diagnostic fragments:

- 1) red-orange coarse ware (ROCW): 2 fragments, 1 open bowl with a nearly straight profile and slightly pointed rim, 0.5 cm thick, 16 cm in diameter at the mouth; 1 fragment, cup with a nearly straight profile and rounded rim, 0.45 cm thick, 10 cm in diameter at the mouth; 2 fragments, globular or ovoid jar with everted neck and pointed rim, 0.3 cm and 0.4 cm thick, 8-10 cm in diameter at the mouth; 1 body-potsherd with traces of molded decoration, 0.2 cm thick; 1 fragment, base with a ring-foot, jar, 0.5 cm thick;
- 2) red-orange fine ware (ROFW): 1 fragment, base with a ring-foot, 0.6 cm thick;
- 3) dark red polished fine ware (DRPFW): 1 fragment, globular or ovoid jar with everted neck and pointed rim, red slip on both surfaces, 0.6 cm thick;
- 4) black topped, red polished fine ware (BTRPW): 2 fragments, 1 cup with a nearly straight profile and slightly pointed rim, 0.4 cm thick.
- 5) grey coarse ware (GCW): 1 fragment, straight rounded rim, 0.55 cm cm.

#### Atypical potsherds:

- 1) red-orange coarse ware (ROCW): 7 fragments, 0.2 cm to 0.5 cm thick;
- 2) red coarse ware (RCW): 23 fragments, 0.4 cm to 0.6 cm thick.

- 3) grey fine ware (GFW): 2 fragments, 0.3 cm thick;
- 4) light red polished fine ware (LRPFW): 31 fragments, 0.3 cm to 0.6 cm;
- 5) brown coarse ware (BCW): 7 fragments, 0.4 cm thick;
- 6) grey coarse ware (GCW): 3 fragments, 0.5 cm thick.

*Metal.* 1 fragment of ear-ring or ring, ca 12 mm in diameter (SU17).

*Knapped stones*<sup>39</sup>(by L. Phillipson). Some very weathered and hydrated chert pieces included in the Seg III assemblages most probably belong to an older series of artefacts which had become generally distributed about the landscape. It remains an open question whether the much fresher lithic material, which is almost entirely confined to su1 of Seg III is contemporaneous with or postdates the excavation and re-filling of the burial shaft. Attention should be called to a chalcedony backed bladelet from su1 and to an obsidian elongated crescent from SU12. There is good evidence that the deliberate placement in grave shafts of fine, elongate chalcedony crescents was a customary Proto-Aksumite practice.

SU1 - A fine translucent chalcedony backed bladelet, 22 × 11 × 4 mm has possible utilisation scars on its long edge. ten chert cores include 3 that are rectangular Levallois-style, sample dimensions 51 × 26 × 17 mm and 56 × 31 × 30 mm; 1 plano convex sub-circular, 49 × 42 × 24 mm; 2 multi-platform, 46 × 44 × 30 mm and 57 × 40 × 30 mm; and 4 casual and irregular examples, 25-47 mm. Excluding a few heavily weathered and patinated or hydrated chert pieces, a total of 19 chert whole flakes and 53 fragments relative to ten cores is an not unexpected ratio for an excavated lithics assemblage from a site that was not a knapping workshop. The flakes include 1 end struck rectangular flake, 43 × 36 × 9 mm, 15 that are irregular, 17-40 mm, 1 cortex-backed flake, 31 mm, and 2 core edge flakes, 33 × 30 × 19 mm and 53 × 24 × 25 mm. The chert fragments have maximum dimensions of 13 mm to 49 mm. There are also 4 chalcedony fragments, 13-31 mm, and part of a broken geode, 41 mm.

---

<sup>39</sup> Seg III lithics are identified on their bags and on artefact record sheets as S6.



The hydrated and weathered chert artefacts from su1 include 2 irregular flakes, 35 mm and 44 mm, and 10 fragments, 30-52 mm.

SU12 - An obsidian elongated crescent,  $28 \times 11 \times 12$  mm, has a slightly worn backed edge and a utilised tip, suggesting it had served as a small finger-held knife for some delicate task. It is a very fragile artefact and, so far, is unique among lithic materials found at Seglamen.

SU17 - The only other lithic artefact from this excavation is a chert core fragment, 58 mm, from SU17.

*Grindstones (by L. Phillipson).* Among the few lithic artefacts recovered from the small Seg III excavation, a heavily burnt, round basalt cobble,  $97 \times 87 \times 50$  mm, with a plano-convex cross section derived from feature 1 at the interface between SU9 and SU10. It had probably been used as a handstone. A basalt spheroid,  $110 \times 104 \times 103$  mm, shaped by use wear or by deliberate trimming, came from square E3 of SU16<sup>40</sup>. Also from SU16 square E3, a broken sandstone topstone with plano-convex cross section was recovered.

#### Seg IV<sup>41</sup> (by L. Sernicola) Structure and stratigraphy

Excavation unit Seg IV was delimited on a lower terrace at about 50 m to the north-west of Seg III at Mogareb. A trench,  $2.5 \times 2.5$  m in area (squares A1,  $\frac{1}{2}$  B1,  $\frac{1}{2}$  A2), was opened to test the occurrence of a grave marked on the ground with a sandstone stele. No potsherd or any other artefact was visible on the surface.

After removing the topsoil (sophrolite like at Seg III) the excavation demonstrated that the monolith was originally erected inside an almost circular hole, 1.03 m in diameter and 0.82 m deep, which was cut in the bedrock. The hole was filled with soft black clay soil and irregular granite blocks along with a few potsherds and lithics. Three fragments of the

---

<sup>40</sup> For the use of similar tools to reconfigure the worn surfaces of grindstones see L. Phillipson 2001.

<sup>41</sup> The excavation was supervised by L. Sernicola.

monolith were recorded, 0.27 m × 0.5 m × 0.1 m, 0.2 m × 0.48 m × 0.1 m and 0.28 m × 0.68 m × 0.11 m in size respectively. A fourth fragment of the monolith was apparently missing. This evidence suggested that the monolith was a carved sandstone slab with a roughly rectangular cross-section and a flat top, about 1.6/1.7 m high, 0.28 m wide at the base and 0.15 m thick<sup>42</sup>. No evidence of a burial was found inside the hole.

The following stratigraphic units were recorded at Seg IV:

- SU1 -Top-soil, dark brown soil with small stones, about 0.18 m deep, above SU 2, SU 3 and SU4; very low quantity of ceramics and lithics;
- SU2 - Bedrock, brown-yellowish foliated weathered syenite, beneath SU1 and cut by SU3;
- SU3 - Roughly circular hole, 1.03 m in diameter at the top, 0.61 m in diameter at the base and 0.82 m deep, filled with SU4, beneath SU1;
- SU4 - Fill in SU3, soft dark brown clay soil with granite blocks, beneath SU1 and inside SU3: small quantity of ceramics and lithics.

*Finds. Ceramics (by L. Sernicola).* A few potsherds were collected from SU1 and SU4.

SU1 - Atypical potsherds:

- 1) red-orange coarse ware (ROCW): 8 fragments;
- 2) black topped, red polished fine ware (BTRPW): 2 fragments;
- 3) black fine ware (BFW): 1 fragment.

SU4

- 1) red-orange coarse ware (ROCW): 1 fragment, everted neck with rounded rim, probably a small jar or pot, 0.6 cm thick; 1 fragment, coil handle, 1.2 cm in diameter; 1 body-potsherd with traces of an incised decoration; 17 body-potsherds;
- 2) red-orange fine ware (ROFW): 1 fragment, by conical pot-stand, 5 cm in diameter at the base; 4 body-potsherds;

---

<sup>42</sup> This monolith was still standing in 2006, when R. Fattovich (UNO) and Tekle Hagos (ARCCH) visited the site.

- 3) black topped, red polished fine ware (BTRPW): 1 fragment, small cup with a concave profile, rounded rim and a vertical coil handle, 0.3 cm thick; 10 body-potsherds;
- 4) black topped, red polished coarse ware (BTRPCW): 1 fragment, cup with a slightly concave profile and flat rim, 0.15 cm thick; 1 fragment, open bowl with straight profile and rounded rim, 0.4 cm thick;
- 5) light brown polished ware, black polished inside, with many medium-size mineral inclusions: 3 body-potsherds;
- 6) brown coarse ware (BrCW): 1 fragment, straight flat rim, open cup, 0.4 cm thick; 8 body-potsherds;
- 7) black fine ware (BFW): 1 body-potsherd;
- 8) black polished fine ware (BPFW): 1 fragment, straight rounded rim, open bowl with traces of inside decoration on the body, 0.3 cm thick; 1 fragment, base with a ring-foot, small jar?, decorated with an incised horizontal line around the base and short vertical incisions below it, 6.6 cm in diameter at the base.

*Knapped stones*<sup>43</sup> (by L. Phillipson). SU1 - A remarkable total of 9 chert and 1 chalcedony core was recovered in this excavation together with only 5 whole flakes, 2 chert flake fragments, 10 chert angular fragments, and 2 small obsidian fragments. Two of the chert cores are plano-convex rectangular Levallois-style,  $48 \times 34 \times 29$  mm and  $50 \times 37 \times 35$  mm; 2 are plano-convex  $77 \times 61 \times 41$  mm and  $40 \times 29 \times 30$  mm. The smaller of these had been used as an opposed-platform core for its final few flake removals. There are also irregular and 1 casual cores, 51-61 mm, a multi-platform core, 47 mm, and a single-platform hemi-circumferential core,  $88 \times 62 \times 41$  mm, with a heavily stepped core edge of  $80^\circ$  to  $90^\circ$  and some superimposed field damage. The single chalcedony core,  $39 \times 31 \times 29$  mm, is irregular. Five chert flakes with sample dimensions of  $20 \times 14 \times 5$  mm and  $34 \times 31 \times 15$  mm are all irregular. Not all of the angular fragments may be artefacts<sup>44</sup>.

---

<sup>43</sup> Material from this site is labelled S9 on artefact bags and on lithic record sheets.

<sup>44</sup> Reasons for the disproportion between the number of cores and the amount of knapping debris recovered will require consideration as the work at Seglamen progresses. In their description of lithic tool production by the Hadiya of Southern Ethiopia - a present-day people probably totally unrelated to the Pre-Aksumite occupants of Seglamen - Yonatan Sahle and Agazi Negash (2010, 38) refer to the care taken to dispose of knapping debris

*Grindstones* (by L. Phillipson). No grindstones or related artefacts were found in the Seg IV excavation.

## Conclusions

Investigation at Seg IV suggests that the hole which was cut in the bedrock was not a grave, but most likely the foundation hole for a standing monolith which was apparently erected at the edge of a graveyard at Mogareb. This hole was probably disturbed by later excavations by local farmers and thus the direct association of potsherds from the hole with the stela is uncertain.

## Reconnaissance near Seglamen

(by L. Phillipson and L. Sernicola)

*Mai Lelgi*: SG 2 (2010/02) and SEG 4 (2010/04)

Sites SG 2 and SG 4 were located in the area of Mai Lelgi, about 4 km from SG 1 (Fig. 25).

Fragments of typical Pre-Aksumite orange ware with a grey core and miniature ceramics (pot-stands) like those from Yeha (Fattovich 1972; 2010) were recorded at these sites.

*Mebahol*: SG 3 (2010/03)

Site SG 3 was located in the area of Mebahol, about 1 km to the southeast of SG 1, on a cultivated terrace close to the modern road to Merena (Fig. 25).

This is a potentially important site with a wide and moderately dense spread of lithic artefacts which appeared to be Pre-Aksumite on a sloping terrace, where there is a possibility of finding relatively undisturbed archaeological deposits. In addition to an abundant superficial scatter of yellow chert cores, chips and flakes, a few artefacts of red chert, of chalcedony, and a single un-worked obsidian fragment were found. Several

---

which, falls into a piece of broken ceramic, basket, or, in some cases, wooden bowl.... [and] is disposed of carefully as it can cut into the soles of people. A similar process may have been at work here, with most flakes and debris removed from the site, the flakes for use elsewhere and the sharp fragments to be dispersed outdoors or otherwise disposed of.

chert pre-cores were also recorded. No ceramics or other materials were found. We were informed by a local informant, an older woman who showed us the extent of the site, that her family and their neighbours were aware of it and that they collected the sharp flakes they found in their fields for use as knives. This re-use of archaeological materials would be well worth investigating further. It will have affected the density and relative proportions of surface-exposed lithic artefacts, and may present an important opportunity for ethnographical and ethno-archaeological observations concerning the use and re-use of knapped lithics and the development of utilisation traces on their surfaces and edges. It is recommended that the site be revisited, that a larger surface collection be made, and a small excavation.

No potsherds were found.

*Knapped stones.* Somewhat irregular plano-convex cores were seen to be fairly numerous; among the few pieces collected are 2 chert plano-convex sub-rectangular cores,  $49 \times 32 \times 22$  mm and  $60 \times 38 \times 31$  mm; 1 chert plano-convex sub-triangular core,  $61 \times 52 \times 17$  mm; and 1 chert plano-convex sub-circular core,  $43 \times 42 \times 19$  mm. There are also 5 chert irregular flakes measuring  $42 \times 38 \times 18$  mm to  $46 \times 58 \times 24$  mm, one of which is heavily patinated; and 2 chert fragments, 51 mm and 62 mm.

#### Reconnaissance near Merena and Adet

(by L. Phillipson and L. Sernicola)

A surface reconnaissance was conducted near New Adet and Merena, 7 and 17.5 km south of Seglamen respectively (Fig. 25).

No grindstones or related artefacts were found in the areas covered by several surface collections at sites away from Seglamen.

*New Adet.* Three sites were recorded at New Adet.

*ADI* (Site code: 2010/05)

Site Name: Tseha. Coordinates: X 461987; Y 1537193.

Surface description: Dense scatter of lithics on surface, mainly yellow chert flakes. Very few cores including a green chert example; 1 obsidian flake. Big white quartz blocks observed along the terrace.

*Knapped stones.* A moderate density of cores, flakes and fragments was found in a surface exposure at this site. Eleven chert somewhat irregularly plano-convex cores have sample measurements of  $46 \times 41 \times 21$  mm,  $59 \times 49 \times 27$  mm, and  $79 \times 52 \times 51$  mm. A chert single-platform bipolar core which had been used to produce small bladelets is  $36 \times 27 \times 27$  mm; a chalcedony irregular core is  $41 \times 32 \times 28$  mm. Whole flakes include: 1 chalcedony bipolar flake,  $25 \times 19 \times 9$  mm; 12 chert sub-rectangular flakes,  $21 \times 20 \times 8$  mm to  $67 \times 35 \times 18$  mm; 2 sub-triangular flakes,  $32 \times 22 \times 8$  mm and  $33 \times 26 \times 11$  mm; and 25 irregular flakes, 22-58 mm. Fragments collected include 27 chert, 24-55mm, and 1 chalcedony, 19 mm. There were no associated ceramic or other materials and no evidence of pre-modern construction or habitation other than that provided by the presence of the lithic artefacts.

AD2 (Site code: 2010/06)

Site Name: Tseha - Coordinates: X 461798; Y 1537304

Surface description: Well preserved deposit of lithic flakes on small knob dominating the cultivated terrace. A yellow chert outcrop is recorded at X 461846 Y 1537311<sup>45</sup>.

*Knapped stones.* A chert single-platform, circumferential blade core,  $48 \times 37 \times 30$  mm, resembles cores found occasionally in the Aksum area, where their most probable attribution is Pre-Aksumite. Six chert irregularly plano-convex cores have sample measurements of,  $39 \times 36 \times 27$  mm,  $42 \times 41 \times 25$  mm, and  $63 \times 51 \times 29$  mm. Two chert core edge rejuvenating flakes,  $13 \times 9 \times 19 \times 12$  mm and  $52 \times 16 \times 12$  mm were collected together with 16 chert irregular flakes, 21-45 mm; 10 chert fragments, 31-50 mm; 1 obsidian fragment, 15 mm; and 1 chalcedony fragment, 45 mm. As at site 2010/5,

---

<sup>45</sup> The site is suitable for excavations.

there were no other associated artefacts and no other signs of ancient occupation.

*AD3* (Site code: 2010/07)

Site Name: Tseha - Coordinates: X 461815; Y 1537401

Surface description: Dense scatter of yellow chert flakes and cores along cultivated terraces. Quartz has also been recorded.

*Knapped stones.* Three chert roughly plano-convex cores,  $58 \times 57 \times 29$  mm,  $94 \times 91 \times 46$  mm, and  $99 \times 95 \times 40$  mm; 1 white quartz irregular core tending towards a plano-convex form,  $54 \text{ mm} \times 46 \times 31$  mm; 1 chalcedony irregularly plano-convex core; and 1 chert casual core, 51 mm were collected together with a battered chert fragment, 81 mm, that was perhaps a core. The collection also includes 2 chert irregular flakes,  $50 \times 75 \times 24$  mm and  $69 \times 58 \times 21$  mm; and 1 chalcedony fragment, 29 mm. As at the other New Adet sites, there was no other archaeological material.

*Merena.* Two sites were recorded at Merena:

*MER1* (Site code: 2010/08)

Site Name: Beta Emanuel - Coordinates: X 461510; Y 1548418

Surface description: High quantity of ceramics around the new basement of Beta Emanuel church and eroded down along the surrounding slopes. A concentration of ceramics and lithics, probably eroded down from upslope, at the end of the slope.

*Ceramics (by L. Sernicola)*

- 1) red-orange coarse ware (ROCW): 2 fragments, coil handles, diameters 1 and 1.8 cm; 1 decorated body-potsherd with incised bands of horizontal and cross/oblique lines, thickness 0.6 cm, 1 decorated body-potsherd with traces of incised triangles, thickness 0.5; 1 everted continuous neck and flaring rim, jar, thickness 1 cm;
- 2) red-orange fine ware (ROFW): 1 decorated body-potsherd with traces of incised bands of triangles and oblique lines, thickness 0.6 cm; 1 decorated body-potsherd with two incised horizontal lines, mica inclusions, thickness 0.7 cm; 1 fragment, cup with a slightly convex profile, flattened rim with notches around the lip

and 3 lines incised around the rim, mica inclusions, thickness 0.4 cm; 2 straight rounded rims, cups, thickness between 0.2 and 0.6 cm; 1 decorated body-potsherd with three horizontal lines incised on the exterior, thickness 0.7 cm; 1 everted, angular rim with flaring lip, thickness 0.5 cm; 1 decorated body-potsherd, incised line around the rim, thickness 0,55 cm;

- 3) grey coarse ware (GCW): 1 decorated body-potsherd with traces of a pattern of combined oblique and horizontal incised lines, thickness 0.5 cm, 1 decorated body-potsherd with traces of a pattern of combined oblique and zigzag incised lines, thickness 0.6 cm;
- 4) 1 fragment of decorated body-potsherd, dark brown ware with abundant coarse mineral and micaceous inclusions, burnished internal surface, incised decoration beneath the external rim consisting of horizontal, wavy and oblique lines, thickness 0.6 cm. This fragment is attributable to Eastern Desert Ware (EDW), type EDW 188 (Barnard 2008, 180).

*MER2* (Site code: 2009/18)<sup>46</sup>

Coordinates: X 461926; Y 1549276

Surface description: Relatively abundant ceramic potsherds are found associated with lithics<sup>47</sup>.

*Ceramics (by L. Sernicola)*. The ceramics from this site have not yet been exhaustively examined. Preliminary field observation suggests the occurrence of typical Pre-Aksumite specimens together with Classic and Middle Aksumite types. Forthcoming analysis on collected materials as well as a systematic collection conducted on the whole site will provide more detailed information at least about the chronology of this site.

*Knapped stones (by L. Phillipson)*. A chert single-platform hemi-circumferential core, 62 × 47 × 28 mm, together with a chert sub-circular

---

<sup>46</sup> This site of the 2009 field school (L. Phillipson 2010) was briefly re-visited. It is a very extensive site, or perhaps as at Seglamen a cluster of contiguous sites, whose boundaries have yet to be identified.

<sup>47</sup> It is recommended that the entire area be systematically examined, surveyed and assessed for its full archaeological potential.



flake, 52 × 53 × 19 mm, with a heavily stepped platform edge, and an obsidian rectangular bipolar Likanos flake, 21 × 25 × 26 mm, were collected. These several forms occur more frequently in Pre- and Proto-Aksumite than in later collections from the Aksum area.

Less distinctive are 1 white chert casual core, 37 mm; 1 chalcedony irregular core, 49 mm; 2 obsidian irregular flakes, 19 mm and 24 mm; 2 chert irregular flakes, 34-57 mm; and 1 quartzite irregular flake, 42 mm. Eight obsidian fragments, 12-22 mm; and 4 chert fragments.

### General Remarks

(by R. Fattovich and L. Phillipson)

In 2010 the joint UNO/AUC investigation focused mainly on the site at Seglamen, where the remains of monumental buildings and graves dating to the so-called Pre-Aksumite Period (ca 900/800 - 400/300 BCE) have been found<sup>48</sup>.

A preliminary reconnaissance of the surroundings of Seglamen and around the villages of Merena and New Adet, to the south of Seglamen, was also conducted and provided evidence of sites most likely dating from the late prehistory to Aksumite time.

*Architectural remains* (by R. Fattovich). Evidence of buildings has been recorded only at Amda Tsion, in the eastern sector of Seglamen.

Despite the limited extent of the excavation units Seg I and Seg II (10 m × 10 m), the architectural remains suggest that Seglamen was, at least initially, a ceremonial centre.

The occurrence of a large bowl containing many different objects (SU71) beneath a pavement at the entry of a room in the earliest building in Seg II (Phase I) may be interpreted as a votive deposit in the foundations of a shrine or temple, in conformity with a tradition which is well documented in Egypt and Nubia from the 3<sup>rd</sup> millennium BCE (see e.g., Bonnet 1990, 57; Wilkinson 2000, 38-39). If the wall (SU34) delimiting a courtyard to the

---

<sup>48</sup> For a definition of Pre-Aksumite Period and/or Culture, and the debate about the appropriateness of this terminology see Anfray 1969; Fattovich 1990; 2009; 2010; Finneran 2007, 109-145; Phillipson 2009.

west of the former building is interpreted as a temenos similar to those enclosing the ancient Egyptian and Nubian temples (see e.g., Bard 1999, 656-657, 769-773), the earliest building at Seg II maybe compared with the Pre-Aksumite small temple at Gobochema (Melazo) (Leclant 1959).

The meaning of the monumental building which was erected above the previous one (Seg II, Phase III) is still uncertain, as the excavated area was too small to demonstrate whether this was a palace or a temple.

Unfortunately, the building in Seg I is in a very bad state of preservation and cannot be fully interpreted. The occurrence of many miniature vases, mainly in square C1, might point to a ritual use of at least part of the structure, but the great quantity of animal bones, ashes and grindstones from the same square may contradict this interpretation and suggest a domestic use of the building. The ritual or domestic use of the southeastern sector of the building may be not in opposition with each other, as the area might have been used for ritual sacrifices and/or consumption of food (in such a case, the two stone slabs on the ground might have been an altar), or for communal or commercial food preparation in a ritual contest. The occurrence of a temple at Seglamen is also supported by the Pre-Aksumite royal inscription RIE 1 in Epigraphic South Arabic (ESA) A from the area of Amda Tsion. This inscription records the restoration of a temple dedicated to the god HBS by the king W'RM 'YWT and queen SM'TM 'RKTN (Schneider 1976, 81-89; Bernard *et al.* 1991, I, 68).

*Cemetery (by R. Fattovich).* The discovery of a pit-grave in the area of Mogareb at Seglamen (SEG 1) suggests that a cemetery was located in the north-western sector of the site. Just one tomb has been recorded so far, but we cannot exclude that some empty pits in the bedrock were originally graves that have been plundered by the farmers or perhaps robbed in antiquity. The ceramics from the pit-grave (SEG T1) surely date to the Pre-Aksumite time, as they are consistent in fabric and forms with the ceramics from the Yeha II and Yeha Ib assemblages at Yeha (Fattovich 1980; 2009).

The association of a monolith with the grave is particularly intriguing, as to date no evidence of a direct association of one stela with one grave has been recorded in Pre-Aksumite cemeteries. Neither is this practice related to the Aksum tradition; Proto-Aksumite and Aksumite stelae were erected to mark funerary areas rather than single tombs (Fattovich 1987; D. W. Philipson 1994; Bard and Fattovich 2001).

A rectangular monolith may have been erected at the margin of the funerary area to mark the presence of multiple tombs, as we can infer from the fragments of a slab in Seg IV. If confirmed, this may suggest the Pre-Aksumite inception of typically Aksumite funerary ideology in this region.

The discovery of an anthropomorphic vase in SEG T1 is also very intriguing as this vessel is very uncommon in the archaeological assemblages of Tigray and Eritrea. Anthropomorphic clay figurines with similar facial features, posture of arms and steatopygia have been only recorded at the site of Mai Adrasha (Shire), to the west of Aksum, where they are dated to Pre-Aksumite and Aksumite times on the basis of surface observations (Finneran *et alii* 2005, 20-22). This vessel may be a prototype of the necked jars with a molded human head at the top, which frequently occur in the elite Aksumite tombs, but the evidence is too scant to support any serious hypothesis.

Finally, two sandstone carved slabs, most likely from the area of Mogareb, might have been anthropomorphic stele<sup>49</sup>. Despite their bad state of preservation, both slabs show traces of carving that might represent the decorations of a dress on the upper part of the slab.

This evidence, though scarce and ambiguous, may point to local traditions, which were not previously recorded, and rises interesting questions about the peopling dynamics of Tigray during the 1<sup>st</sup> millennium BCE.

*Ceramics (by R. Fattovich).* The study of the ceramics is still in progress, but the examined samples are sufficient to provide a chronology for the recorded sites<sup>50</sup>.

Ceramics from all excavation units (Seg I, Seg II, Seg III) at Seglamen (SG1) are similar in fabric, surface treatment, forms and decoration to those from the tombs and the so-called palace of Great Ba'al

---

<sup>49</sup> These slabs were reused to build the walls of the compound of a farmer, who told us they were found at Mogareb. farmers, however, said that the slabs were found at Amda Tsion.

<sup>50</sup> The various groups of ware from SG1 and other recorded sites in the 2010 field season are described in the introduction.

Guebry at Yeha, from Sobea and Mazber (Gulo Makeda) near Adigrat in Tigray, and from the lower strata at Matara (Fattovich 1980) to be ascribed to the so-called Pre-Aksumite Culture (ca 800/700-400/300 BCE) (Fattovich 1990, 2010b). The assemblages from Seglamen exhibit the same main groups of ware and types as the Yeha II and Matara III-IV assemblages, supporting the occurrence of one main ceramic tradition in central Eritrea, eastern and central Tigray (Fattovich 1980; 2009) in the mid-1<sup>st</sup> millennium BCE. The assemblages at SG1, however, contain a great quantity of red orange coarse (ROCW) and fine ware (ROFW), which are almost completely absent in the assemblages at Yeha and Matara, and might point to a local variant of the main tradition.

A few potsherds with a scraped outside and/or inside surface also occur at SG1. These fragments are frequent in the Pre-Aksumite assemblages at Mazber (Adigrat) (A. Manzo and M. Gaudiello, *personal communication*), but are extremely rare at Yeha and, so far, do not occur at Matara (Fattovich 1980), possibly suggesting contacts between the regions of Aksum and Adigrat bypassing Yeha. Ceramic external scraping-wiping as well as lithic pot scrapers from the area of Aksum have been recorded in small numbers in the Pre-Aksumite levels at Kidane Mehret (D. Phillipson ed. 2000; L. Phillipson 2000; 2009) and from surface collections at Hamed Gebez (Sernicola 2008; L. Phillipson 2009).

The same groups of ceramics from SG1 occur in surrounding surveyed sites, suggesting that this area was intensely inhabited in the mid-1<sup>st</sup> millennium BCE.

The ceramics from Beta Emanuel (MER1) near Merena suggest that this site was used in Pre-Aksumite and again Middle and Late Aksumite times (ca 400/450-700 CE). Aksumite potsherds decorated with incised bands of horizontal and cross/oblique lines, and two incised horizontal lines occur on the surface. The use of the site in Middle Aksumite time is also confirmed by the presence of 1 EDW fragment, which is dated to the 4<sup>th</sup>-6<sup>th</sup> centuries CE.

*Knapped stones (by L. Phillipson).* At present, we can remark:

- 1) as compared with the obsidian lithics recovered from sites in and near Aksum, that used to produce the few obsidian lithics and fragments found in the Seglamen sites is less glassy and,

probably, of a more basic composition; this suggests it originates from a different source. Although many of the chert artefacts are of a predominantly yellow ochre colour, this is less uniform than the yellow ochre coloured chert which is common to the Aksum area. Its patterns of stripes, veins and broader bands of red are matched by outcrops in the immediate vicinity of Seglamen. Basalt, which is exposed in major areas of sheet formation, is also abundantly present locally as water-worn field boulders, as weathered field stone, and in beautiful, large columnar formations. Chalcedony and quartz geodes, vein quartz and quartzite are also available in the immediate locality. The nearest sources of sandstone, schist, shale, limestone and obsidian have yet to be located;

- 2) a potentially significant difference between cores recovered from the Aksum area and those from Seglamen concerns the direction in which flakes were removed from the core. A sizable proportion of the Seglamen examples have had most removals in a direction that parallels the major surfaces of the core, whether as relatively low angle radial flake removals that take away a portion of the core's dorsal surface, or as even lower angle Levallois-style removals that remove most or all of a pre-shaped core's ventral surface. Radial striking of flakes is generally done by direct hard hammer against a hand-held core. Removal of Levallois-style flakes requires somewhat greater control and may be done with the core steadied against a firm surface. If the firm surface is another stone (anvil), force will be transmitted upwards from the anvil as well as downwards from the hammer (bipolar technique). As yet, there is very little evidence of possible use of the bipolar technique at Seglamen; this suggests that the core was steadied against a softer surface (wood, a leather pad, of the ground) while it was struck. In the immediate vicinity of Aksum, there was a tendency in all periods from the Pre-Aksumite onwards to remove flakes at right angles to a core's principal faces (single-platform, opposed platform, bipolar, and Mai Agam flake removals). If confirmed by future research, this underlying technological differentiation may have interpretative implications.

*Grindstones and related objects (by L. Phillipson).* A distinctive feature of the excavated assemblages from Seglamen Seg I, Seg II, Seg III and the several surface collections of lithic artefacts from adjacent areas is the relatively large number of grindstones and related forms that were recovered. While all such excavated pieces were recorded in detail, only a few of those observed in surface exposures were collected or recorded.

	grind- stones	top- stones	hand- stones	hammer- stones	fragments and uncertain
Seg I all excavated units	3	6	6	0	3
Seg II all excavated units	23	13	17	7	5
Seg III all excavated units	0	1	2	0	0
all surface collections	2	3	3	2	2

This relatively dense concentration of grindstones and topstones has implications for the economic interpretation of the sites' functions and, thus, for the culture and lifestyles of their inhabitants. The principal use of grindstones and their associated topstones, both at present and in the recent past in northern Ethiopia as in many other parts of the world, is for food preparation particularly for grinding seeds or grain to produce flour. Grindstones recovered from the Pre-Aksumite as well as from the Aksumite levels at Kidane Mehret, near Aksum, were found within the context of a moderately prosperous domestic village or settlement, where they could reasonably be interpreted as evidence of household activity. The Seglamen examples, however, were not so clearly associated with domestic-scale dwellings, but were found within and around much larger communal, administrative or monumental buildings. This situation suggests that some food production activities may perhaps have taken place as a collective or commercial activity. Similar conjectures may be made with respect to the Seglamen handstones, some of which may have been used for other non-domestic industrial processes. Frequently attested uses of handstones include the preparation of spices and medicines, and to assist with the initial stages of preparing leather, animal skins and vellum. They are also used for assisting with the production of clay vessels, burnishing metal, and for various other smoothing, abrading and polishing activities. Without engaging in fine micro-wear and trace chemical analysis, which are beyond the resources of this research, it is not possible to determine how the various sizes and shapes of the Seglamen handstones had in fact been used. There is evidence that some of these implements served as multi-function tools.

By ethnographic analogy, grindstones are primarily used for grinding grain (for other uses see L. Phillipson 2001). Almost all of the grindstones recovered from Seglamen had been broken and not re-used before they

were discarded. The thicknesses of the broken edges make it apparent that such damage was not accidental. This same feature was found at Kidane Mehret (L. Phillipson 2001). However, unlike at Kidane Mehret, there is almost no evidence from Seglamen that any of the grindstones were re-used after they had been broken; the broken edges of the Seglamen examples are generally moderately fresh, with no worn or rounded corners to suggest use of the remaining portions subsequent to their breakage. As at Kidane Mehret, it appears that they were deliberately broken before they became worn through. This cultural pattern, which characterises many topstones and almost all grindstones, is unknown to present-day residents of the Seglamen area; it was also unknown to farmers and residents living near Kidane Mehret. Most of the Seglamen grindstones are made of a dense, dark grey basalt of which there are extensive local outcrops. In recording the individual artefacts, it was noted that their utilised faces vary from very fine to coarse. Such differences on grindstones probably indicate nothing more than the amount of use they had received subsequent to their most recent re-roughening prior to their discard. Similar textural differences on topstones and on handstones are more likely to have been determined by the uses to which they were put, since such smaller implements were not generally re-tooled. A few (5) grindstones were made of well silicified sandstone. Reconstructed weights of the complete grindstones probably ranged from about 2 to 18 kg, with a mean of 7 kg. These figures depend on estimates of the completeness of the portions recovered and are therefore only approximate. Sample dimensions of grindstones are  $290 \times 155 \times 60$  mm and  $155 \times 125 \times 77$  mm for unbroken specimens; a broken specimen measures  $[98] \times 126 \times 37$  mm and another is more than twice as large at  $[370] \times 220 \times 133$  mm.

## REFERENCES

- Anfray, F. (1969) Aspects de l'archéologie éthiopienne, *Journal of African History*, 9, 345-366.
- Arthur, J.W. (2006) *Living with Pottery: Ethnoarchaeology among the Gamo of Southwest Ethiopia*. Salt Lake City: University of Utah Press.
- Bard, K.A. (1999) *Encyclopedia of the Archaeology of Ancient Egypt*, London: Routledge.
- Bard, K.A. et alii (2003) The BU/IUO Archaeological Project at Bieta Giyorgis (Aksum), Ethiopia: Results, research procedure, and computer applications, in M. Forte and P.R. Williams (eds.), *The Reconstruction of Archaeological Landscapes through Digital Technologies*, Oxford: Hadrian Books Ltd., 1-14.
- Bard, K.A. and Fattovich, R. (2001) The Proto-Aksumite Period: An Outline, *Annales d'Ethiopie*, 17, 3-24.
- Barnard, H. (2008) *Eastern Desert Ware: Traces of the Inhabitants of the Eastern Deserts in Egypt and Sudan during the 4<sup>th</sup>-6<sup>th</sup> Centuries CE*, Oxford: Archaeopress.
- Bernard, E., Drewes, A.J. and Schneider, R. (1991) *Recueil des inscriptions de l'Éthiopie des périodes pré-axoumite et axoumite*, I-II, Paris: Académie des Inscriptions et Belles Lettres.
- Bonnet, Ch. (ed.) (1990) *Kerma, royaume de Nubie*, Genève: Musée d'Art et d'Histoire.
- Fattovich, R. (1980) *Materiali per lo studio della ceramica preaksumita etiopica*, Naples: Istituto Universitario Orientale.
- Fattovich, R. (1987) Some Remarks on the Origins of the Aksumite Stele, *Annales d'Ethiopie*, 14, 43-69.
- Fattovich, R. (1990) Remarks on the Pre-Aksumite Period in Northern Ethiopia, *Journal of Ethiopian Studies*, 23, 3-33.
- Fattovich, R. (2008) *Kings and Farmers. The Urban Development of Aksum, Ethiopia: ca. 500 BC-AD 1500*, (PSAE Research Series, 4), Boston: Boston University, African Studies Center.
- Fattovich, R. (2009) Reconsidering Yeha, c. 800 - 400 BC, *African Archaeological Review*, 26, 275-290.



Fattovich, R. (2010a) UNO Archaeological Expedition at Aksum (Tigray): 2009 Field Season Final Report, *Newsletter di Archeologia CISA* 1, 85-112, electronic publication ([http://www.unior.it/userfiles/workarea\\_231/Fattovich.pdf](http://www.unior.it/userfiles/workarea_231/Fattovich.pdf)).

Fattovich, R. (2010b) Pre-Aksumite Culture, *Encyclopaedia Aethiopica*, IV, Hamburg: Harrassowitz Verlag, 201-205.

Fattovich, R., Bard, K.A., Petrassi, L. and Pisano, L. (2000) *The Archaeological Area of Aksum: A Preliminary Assessment*, Naples: Istituto Universitario Orientale.

Fattovich, R., Beyene, Y., Manzo, A., Perlingieri, C., Phillipson, L., Sernicola, L. and Sulas, F. (2009) Archaeological Investigations at Aksum of the University of Naples "l'Orientale (2005-2007)," *Newsletter di Archeologia CISA* 1, 91-100, electronic publication ([http://www.unior.it/userfiles/workarea\\_231/Fattovich.pdf](http://www.unior.it/userfiles/workarea_231/Fattovich.pdf)).

Fattovich, R. and Hagos, T. (2005) *Ethiopian Cultural Heritage Project, Aksum Branch, Site Inventory And Documentation Component, Archaeological Survey: Report of Activity, October-November 2005*, The World Bank and Federal Democratic Republic of Ethiopia, Addis Ababa - Firenze: Hydea.

Fattovich, R. and Hagos, T. (2006) *Ethiopian Cultural Heritage Project, Aksum Branch, Site Planning And Conservation Component, Archaeological Survey: Report of Activity, March-May 2006*, The World Bank and Federal Democratic Republic of Ethiopia, Addis Ababa - Firenze: Hydea.

Finneran, N. (2007) *The Archaeology of Ethiopia*, London: Routledge.

Finneran, N., Phillips, J., Dessie, A., Cain, C., Harlow, M., and Hagos, T., (2005) The archaeological landscape of the Shire region, western Tigray, Ethiopia, *Annales d'Éthiopie*, 21, 7-29.

Harris, E.C. (1979) *Principles of Archaeological Stratigraphy*. London: Academic Press.

Leclant, J. (1959) Haoulti-Melazo (1955-1956). *Annales d'Éthiopie*, 3, 43-57.

Phillipson, D.W. (1994) The Significance and Symbolism of Aksumite Stelae, *Cambridge Archaeological Journal* 4 (2), 189-210.

Phillipson, D.W. (2000) *Archaeology at Aksum, Ethiopia, 1993-97*, British Institute in Eastern Africa and Society of Antiquaries London. British Institute in Eastern Africa and Society of Antiquaries.

Phillipson, D.W. (2009) The First Millennium BC in the Highlands of Northern Ethiopia and South - Central Eritrea: A Reassessment of Cultural and Political Development, *African Archaeological Review*, 26, 257-274.

Phillipson, L. (2000). Lithics from the D site at Kidane Mehret; Lithic Industries; Surface Collections of Aksumite Lithics, in D. W. Phillipson *et al*, *Archaeology at Aksum, Ethiopia 1993-7, I-II*. London: The British Institute in Eastern Africa and The Society of Antiquaries of London, 217-222, 216, 408-411, 433-448, 449-453.

Phillipson, L. (2001) Grindstones and related artefacts from Aksum, Ethiopia, *Lithics, the Newsletter of the Lithic Studies Society* 22, 13-22.

Phillipson, L. (2009) *Using Stone Tools: the evidence from Aksum, Ethiopia*. Oxford: Archaeopress.

Phillipson, L. (2010) The First Joint Archaeological Field School of the University of Aksum and the University of Naples "l'Orientale", November 2009, *Nyame Akuma*, 73, 88-91.

Phillipson, L. and Sulas, F. (2005) Cultural Continuity in Aksumite Lithic Tool Production, the evidence from Mai Agam, *Azania* 40, 1-18.

Ricci, L. and Fattovich, R. (1987) Scavi archeologici nella zona di Aksum. A. Seglamien, *Rassegna di Studi Etiopici*, 30, 117-169.

Schneider, R. (1976) Documents epigraphiques de l'Ethiopie - V, *Annales d'Ethiopie* 10, 81-93.

Sernicola, L. (2008) Il modello d'insediamento sull'altopiano Tigrino (Etiopia settentrionale/Eritrea centrale) in epoca Pre-Aksumita e Aksumita (ca. 700 a.C. - 800 d.C.). Un contributo da Aksum, Ph.D. Dissertation, Naples: University of Naples "L'Orientale."

White, G.G. and King, T.F. (2007) *The archaeological survey manual*, Left Coast Press, Walnut Creek.

Wilkinson, R.H. (2003) *The Complete temples of Ancient Egypt*, Cairo: AUC Press.

Sahle, Y. and Negash, A. (2010) An Ethnoarchaeology of lithic site-formation patterns amongst the Hadiya of Ethiopia: Some initial results. *Nyame Akuma*, 74, 36-41.

# FIGURES

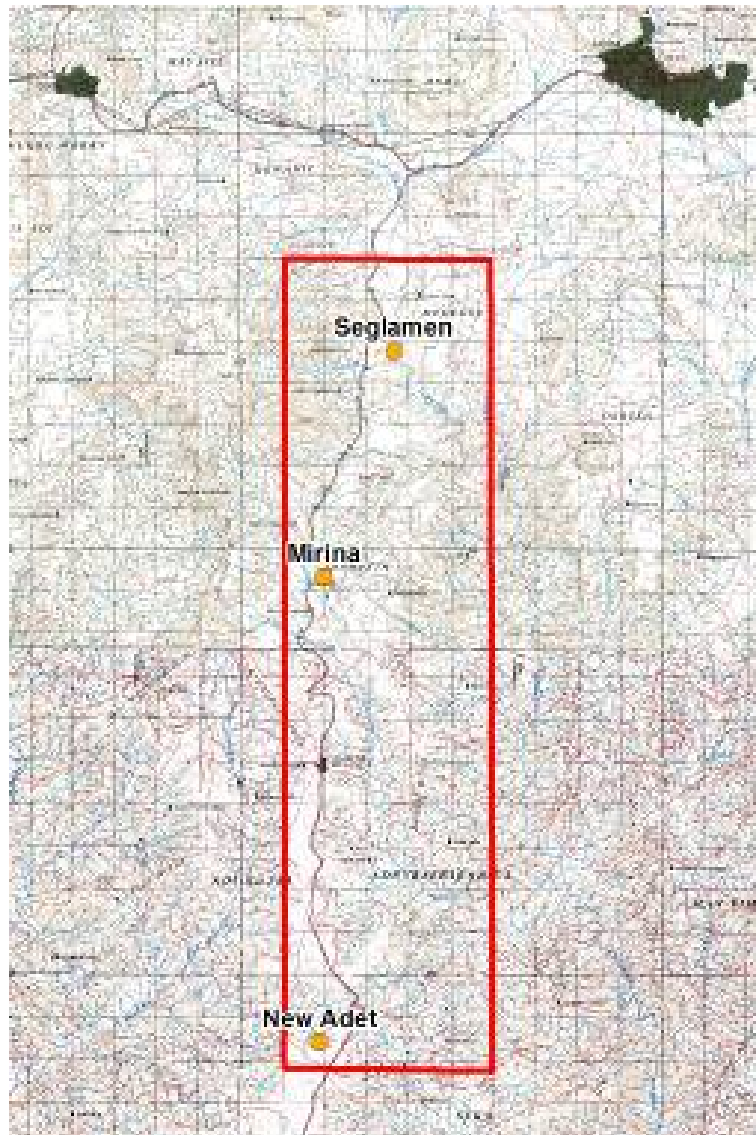


Fig. 1 - Concession area

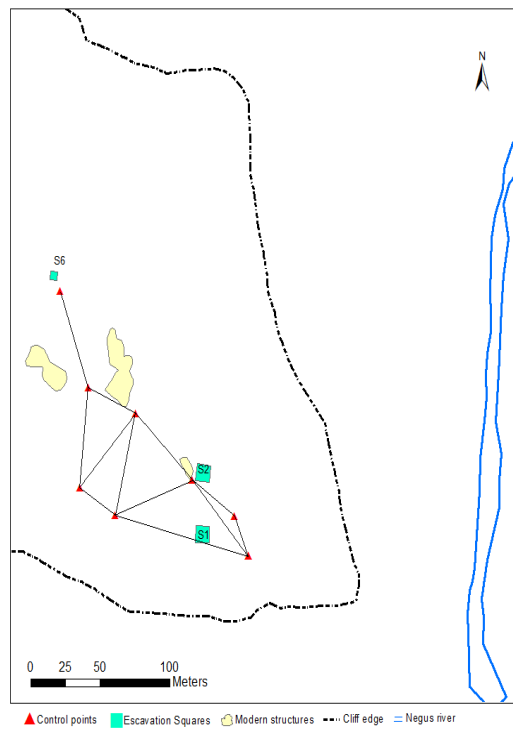


Fig. 2 - Map of the eastern sector of SG1 based on TS survey and remote sensing



Fig. 3 - Seg III, SU1, 3D model

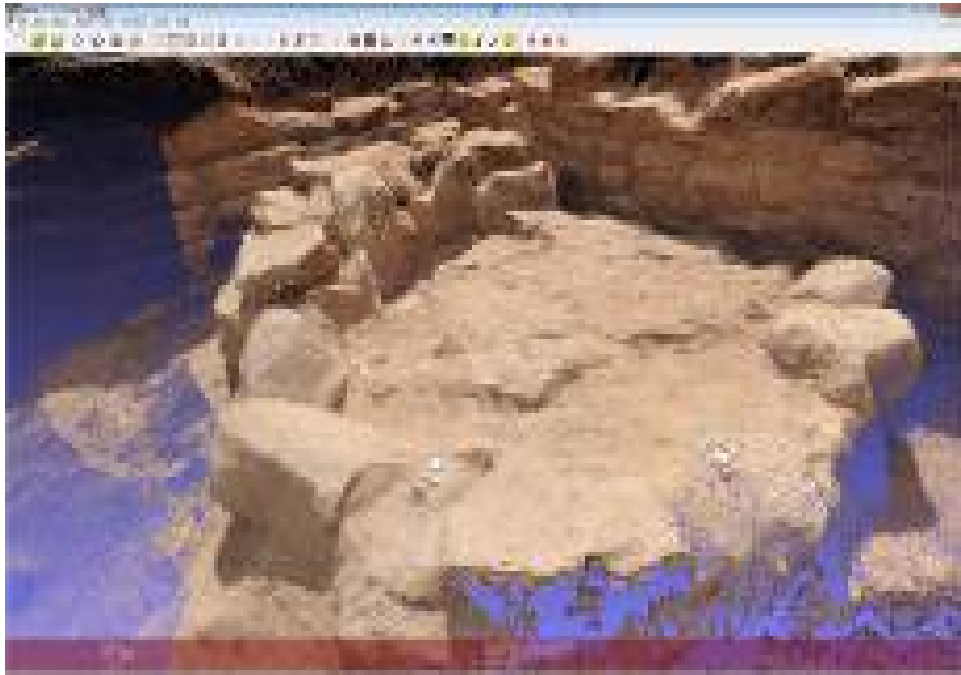


Fig. 4 - Seg II, 3-D model

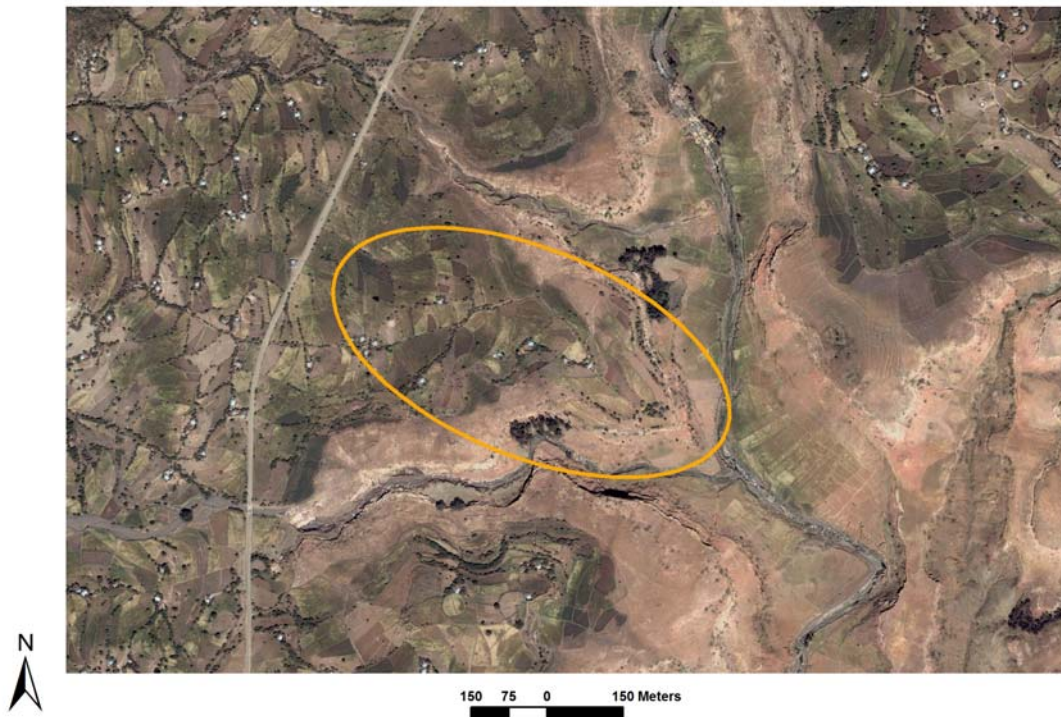


Fig. 5 - Satellite image of Seglamen

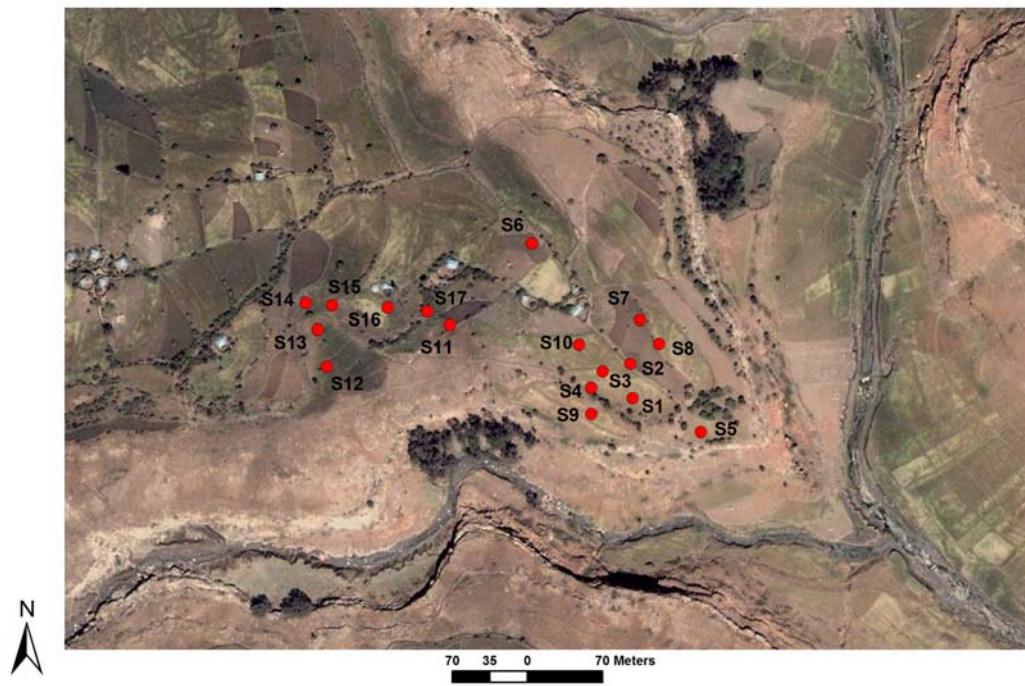


Fig. 6 - Map showing the *loci* recorded at SG 1

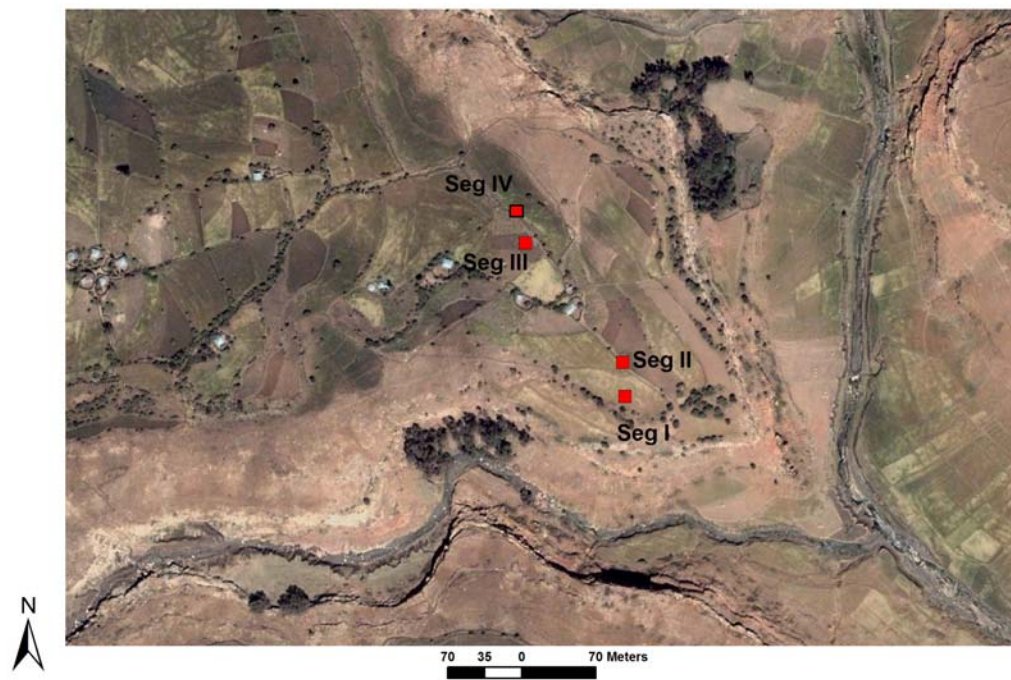


Fig. 7 - SG 1, location of the Excavation Units



Fig. 8 - Sketch of Seg I and reconstruction of the building



Fig. 9 - Seg I, C1 a) burnt stone blocks, b) flat stone slabs, c) chert fragments beneath the slabs





Fig. 10 - Seg II, SU7

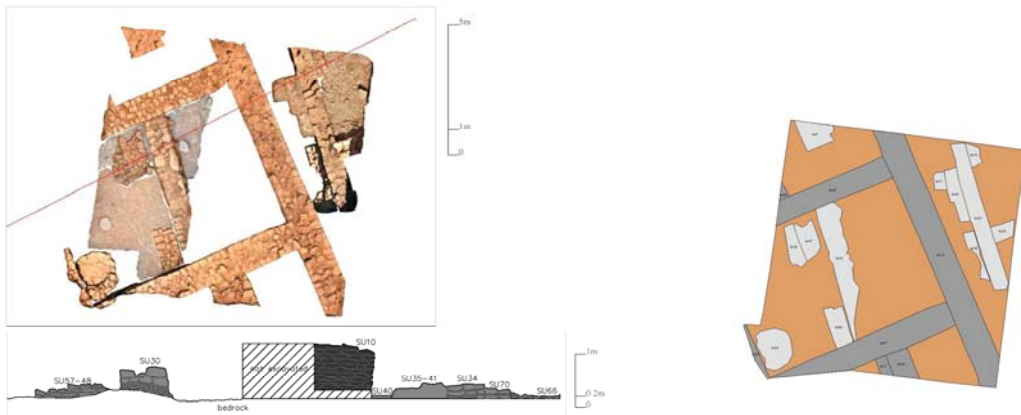


Fig. 11 - Seg II, plan showing the main phases of occupation and NE-SW cross-section



Fig. 12 - Seg II, SU1, Gray/light-blue ware, 5 body-sherds



Fig. 13 - Seg II, Interface SU1/13, atypical decorated sherds



Fig. 14 - Seg II, SU32, decorated sherds



Fig. 15 - Seg II, SU65, Red brown fine ware (RBFWR), painted pot



Fig. 16 - Seg II, SU51, decorated sherd (RBrPW 2.B.4)



Fig. 17 - Seg II, SU71, big bowl BTRPW (2.B.3) and small globular jar ROFW (2.A.1)



Fig. 18 - Plan and N-S section of T1 at Seg III



Fig. 19 - A selection of ceramics from T1 at Seg III



Fig. 20 - Seg III T1, antropomorphic vase

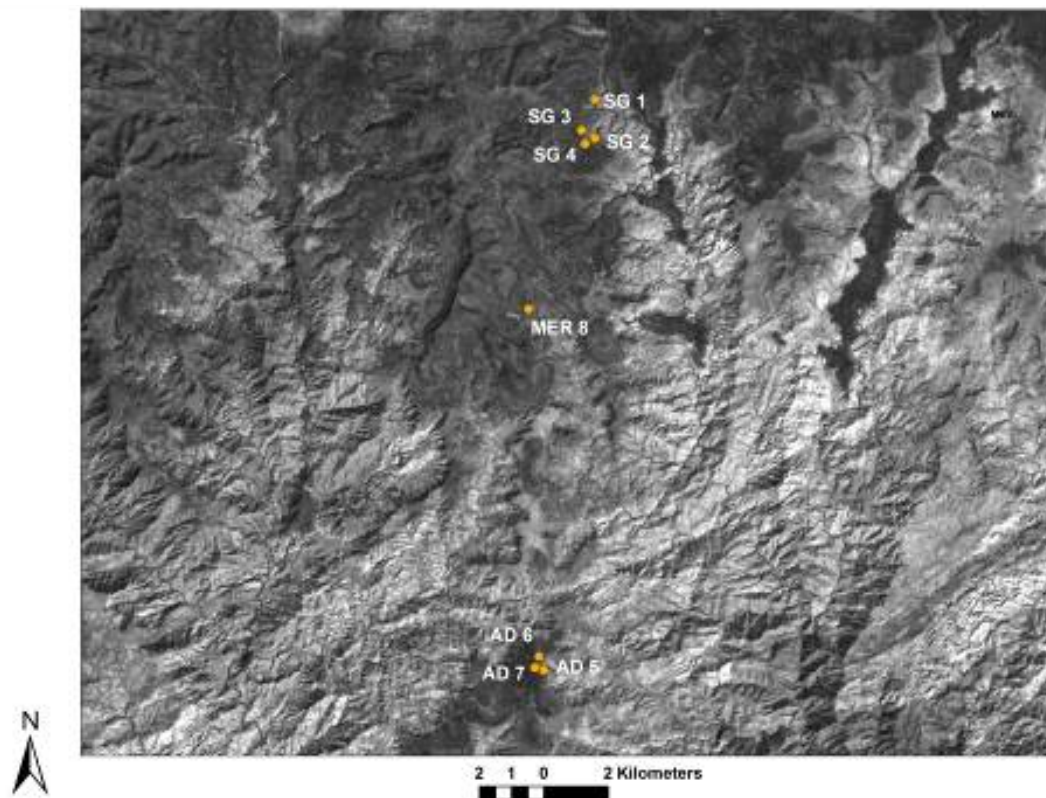


Fig. 21 - Location of surveyed sites at Seglamen, Merena and Adet