

ARCHAEOLOGICAL EXPEDITION AT AKSUM (ETHIOPIA) OF THE
UNIVERSITÀ DEGLI STUDI DI NAPOLI “L’ORIENTALE”;
2012 Field Season: Seglamen

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with a contribution by
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Introduction

In November/December 2012 the Italian Archaeological Expedition of the Università degli Studi di Napoli “L’Orientale” (hereafter UNO), directed by Rodolfo Fattovich, conducted the eighteenth field season of investigation in central Tigray, northern Ethiopia, with a particular focus on the area of Seglamen, ca. 15km to the South-West of Aksum².

¹ Luisa Sernicola is the author of the entire text except for the section “*Knapped and other lithic artifacts*”, which has been provided by Laurel Phillipson.

² Members of the 2012 expedition were Prof. Rodolfo Fattovich, archaeologist and research director, Dr Luisa Sernicola, archaeologist and field director, Dr Marco Barbarino, assistant archaeologist and surface surveyor, Mr Diego Capra, assistant archaeologist, and Dr Michela Gaudiello, ceramic analyst (UNO, Italy); Dr Laurel Phillipson, lithic analyst (UK). The Ethiopian Authority for Research and Conservation of the Cultural Heritage (ARCCH) was represented by Mr. Haileyesus Desta, the Regional Office of Culture and Tourism of Makalle, by Mr Gidey Gebregziabher. The members of the expedition are very grateful to: Ato Yonas Desta, Head, Authority for the Research and Conservation of Cultural Heritage (ARCCH), Addis Ababa, Ato Dessalegn Abebaw Andualem, Director, Cultural Heritage Directorate, ARCCH, Addis Ababa, Mr Aley, Head, Bureau of Culture and Tourism, Central Zone, Aksum, Dr Mebrahtom Mesfin and Dr Aklilu Hailemichael, respectively President and Vice President for Academic Affairs, Aksum University, Aksum, Mrs Berhan Tekie, Dean, Department of Archaeology, Aksum University, Aksum, Mr Selomon Zewdie, Mr Hadgu Zeru, and Mr Yemane Gebru, instructors, Department of Archaeology and Heritage Management, Aksum University, Aksum, H.E. Mario Rosso, Ambassador, Italian Embassy, Addis Ababa, Dr Alessandro Ruggera, Director, Italian Cultural Institute, Addis Ababa, and Dr Enrico Semino, Cambiaso Risso Marine & Aviation Srl, Naples, for their kind support to the expedition. The investigation could not have been conducted without the contribution of all the employed assistants, labourers, students and helpful landowners. The expedition has been funded by the Italian Ministry of Foreign Affairs, Rome; Cambiaso Risso Marine & Aviation Srl, Naples; and UNO.

The site of Seglamen was recorded and partially excavated in the early 1970s (Schneider, 1976; Ricci and Fattovich, 1987; Bernard *et alii*, 1991), and more carefully surveyed by members of UNO expedition as part of the systematic survey of the Aksum archaeological area in 2006 and 2009 (Fattovich & Takla Hagos, 2006; Fattovich *et alii*, 2013). From 2010 UNO expedition is conducting the systematic investigation of the site in collaboration with the Department of Archaeology and Heritage Management of the Aksum University (AU), Aksum, Ethiopia³.

Investigations at Seglamen are part of a broader project aimed at investigating a 100 sq km transect along the Negus/Haselo river valley from Addi Hankara (Medegoy *woreda*) to Adet (Hawesta *woreda*) with the territories around the modern villages of Medogwe, Seglamen, Merina and Adet as major foci of investigation (Fig. 1) in order to provide:

1. a reconstruction of the cultural and environmental history of the region to South-West of Aksum;
2. a detailed archaeological map of this region for the cultural heritage management of Central Tigray (Fattovich *et alii*, 2011, 1; Fattovich *et alii*, 2012, 112).

This transect has been selected as the Negus/Haselo river valley and represented an important traditional exchange route linking Aksum and the Tigrayan highlands to the Tekeze river in the South-West and, through this, to the southern regions of the Ethiopian plateau (Sernicola and Phillipson, 2011, 201; Fattovich *et alii*, 2011, 1; Fattovich *et alii*, 2012, 112).

Fieldwork

Field activities in 2012 included surface survey and archaeological excavations⁴.

³ The collaboration with AU is established within the framework of a formal agreement started in 2009, and aimed at conducting joint research programs and at providing undergraduate students in Archaeology with a theoretical and practical training in archaeological survey, excavation procedures and laboratory analysis.

⁴ For a detailed description of survey and excavation procedures see Fattovich *et alii*, 2011, 2-3 and Fattovich *et alii*, 2012, 113-116.

Survey⁵

Surface reconnaissance was conducted at two different localities in the northern sector of the study area: Addi Holahul and Koranu.

Addi Holahul is located in the south-eastern sector of the village of Seglamen, along the southern edge of the Haselo river, just opposite to site SG1 (Fig. 2). In this area, a large archaeological site extending over about 5 hectares has been recorded along the cultivated terraces following the edge of the river gorge. The site, coded as SG5, is characterized by a continuous, dense surface scatter of lithics with higher concentrations of materials at: 14° 03' 33,380'' N - 38° 39' 28,282'' E, 14° 03' 34,132'' N - 38° 39' 30,232'' E, 14° 03' 35,292'' N - 38° 39' 32,490'' E; 14° 03' 38,080'' N - 38° 39' 36,281'' E, 14° 03' 37,823'' N - 38° 39' 41,313'' E.

Lithics mainly consist of chert cores and flakes, but quartz and chalcedony were also recorded. Ceramic is rare, including very small and eroded fragments of Black Ware, Black Topped Red Ware, Orange Ware and Gray Coarse Ware. The paste often presents mica inclusions. Main decorations consist of incised horizontal lines and notches along the rim. Typological analysis point to a dating to the so-called "pre-Aksumite" period (1st half of the 1st millennium BC). The site deserves further investigations and systematic sampling of archaeological materials for typological analysis.

The area of Koranu is part of the small village of Medogwe, located between Aksum and Seglamen. There, the presence of an ancient cemetery was recorded by Gezau Hailemaryam (1955, 50-51) and Henri de Contenson (1961, 15-23) in the 1950s. On the basis of the description of the materials provided by these scholars, the site was tentatively dated to the Proto-Aksumite (ca. 400 - 50 BC) and Early/Classic Aksumite (ca. 50 BC - AD 350) periods, but the site was never exactly located nor systematically investigated so far.

Following the general description and the sketches of the area provided by de Contenson, the site was identified during the survey and recorded as MDG1 (Fig. 2). The site is located at 14° 05' 17,70'' N - 38° 40' 6,70'' E, on top of a small, terraced hill along the eastern edge of the Haselo river, and is characterized by a high quantity of ceramics scattered

⁵ The survey was conducted by L. Sernicola and D. Capra.

on surface and eroded down along the hill slopes. A random sampling of the exposed materials has been conducted for typological description⁶.

Ceramics include fragments of red, orange and pink coarse and fine ware, and one fragment of Black Topped Red Ware. Main forms are: cups, beakers and bowls with rounded base, straight or slightly everted profile, rounded or slightly flaring rim; pots with rounded base with ring-foot, straight or slightly everted profile, flattened or rounded rim; jars with rounded or flattened base, globular body and everted rim; bottles with rounded base, globular body, short cylindrical neck, rounded rim and vertical handle between the neck and the shoulder; circular basins with slightly everted profile, flattened rim and decorated foot-rest; quadrangular basins; fragments of strainer vessels. Decorations are incised, impressed, molded and painted. Incisions include: one or more horizontal lines running below the rim, lines and triangles on flattened rim, circles on the internal and external surface of bases of open cups, various patterns of oblique and vertical lines on foot-rests. Impressions include: dots, circles and notches combined in various patterns on the internal and external surface of open cups. Molded decoration mainly consists of a single short, horizontal strip below the shoulder of globular bottles or below the rim of cups, beakers and bowls. White painted decoration is present only on the internal surface of the fragment of a quadrangular basin.

Observed ceramics confirm the attribution of the site to the Proto-Aksumite (circa 400 - 50 BC) and Early/Classic Aksumite (circa 50 BC - AD 350) periods, and suggest an use of the area also during the Middle Aksumite period (circa AD 350 - 550).

Unfortunately, none of the *stelae* mentioned by de Contenson (1961, 16-17) are nowadays visible, all the area being disturbed by stone-quarrying activities. According to the priests, the small syenite stela presently erected in the courtyard of the church of Enda Mikael, located few hundred meters to the south of the site, comes from MDG1; local people state that coins and other metal objects are occasionally exposed on surface at the site. The site deserves protection and further investigations.

⁶ The material collected are presently kept in the store-rooms of the Archaeological Museum of Aksum.

Excavations

In 2012 archaeological excavations concentrated exclusively at site SG1, a pre-Aksumite village extending for about 7 hectares on a cultivated terrace at the easternmost edge of the modern village of Seglamen (Fig. 2). The site encompasses the localities of Amda Tsion and Mogareb, where remains of overlapping structures and a cemetery had been respectively identified and partially excavated in 2010 and 2011 (Fattovich *et alii*, 2011, 17-55; Fattovich *et alii*, 2012, 138-202; Sernicola *et alii*, 2013, 345-354) (Fig. 3).

In order to continue the investigation of the buildings started in 2010 and to increase our knowledge about the different phases of use of the settlement, a new excavation unit, SegVIII (10×10m, North/South oriented), was established in 2012 in the area of Amda Tsion, immediately to the north of EU SegII and to the West of EU SegVI (Fig. 4)⁷.

Moreover, a small portion of excavation unit Seg II, opened in 2010 (Fattovich *et alii*, 2011, 23-44; Fattovich *et alii*, 2012, 148-185), was reopened to complete the investigation⁸. Excavations allowed to better clarify the general layout and function of the most ancient structure, to get a more precise interpretation of certain stratigraphic units, and to increase our knowledge about the major architectural phases detected so far which can be summarised and described as follows.

Phase I (red colour in the map) (Fig. 5a-b), corresponds to the most ancient architectural phase documented in the area. At SegVIII and SegII is represented by the remains of orthogonal walls delimiting a rectangular room and of an unroofed front yard respectively. Walls are directly constructed on the bedrock and consist of a lower course made of large, undressed, rounded stones and upper courses made of smaller, undressed, rounded or roughly tabular, fieldstones. It was excavated to a depth comprised between 1.70 and 1.90m from the surface.

Phase II (light-blue colour in the map) (Fig. 5a-b), is a so far poorly represented intermediate occupation recorded in the south-western and central sectors of EU SegII. It is characterised by the remains of two circular

⁷ Excavations at SegVIII were conducted under the supervision of L. Sernicola.

⁸ Excavations at SegII were conducted under the supervision of M. Barbarino and D. Capra.

stone features, a cooking kiln and a possible furnace, and by a roughly North-East/South-West oriented arrangement of medium undressed rounded stones. Phase III (green colour in the map) (Fig. 5a-b), has been recorded in both EUs SegII and SegVIII and is so far represented by the remains of 4 square or rectangular rooms, the northernmost of which released evidence of a square stone feature interpreted as a base of a pillar or of a stairway leading to an upper floor. It was excavated to a maximum depth of 0.60m from the surface.

Archaeological materials

Archaeological materials collected at SegII and SegVIII include pottery, small clay objects, knapped lithics and other stone artifacts, metals and shell fragments.

*Pottery*⁹

During the 2012 field season about 40% and 90% of the ceramics collected respectively at SegVIII and SegII was analysed. Analysed ceramics from SegII mostly come from Phase III, transitional phase between Phase II and Phase III, Phase II, and Phase I. Analysed potsherds from SegVIII come from topsoil, transitional phase after the abandonment of Phase III, Phase III, transitional phase after the abandonment of Phase I, and Phase I. Not all the materials from each stratigraphic units have been analysed insofar.

Similarly to what already recorded in 2010 and 2011, ceramics from all phases at Amda Tsion can be entirely referred to the so-called “pre-Aksumite” period and include mainly domestic types consisting of cups, beakers, open bowls, cooking cauldrons, bottles, flasks, small and big jars with depurated pastes predominantly characterised by medium/fine mineral inclusions.

Ceramics associated to Phase I (Fig. 6) may be typologically related to assemblages recorded in the phase Yeha II at Yeha (Fattovich 1980) suggesting a preliminary chronological attribution of the structure and

⁹ Pottery has been described and analysed by M. Gaudiello in the framework of her PhD research project conducted at UNO. For a detailed description of the procedures used for ceramics classification see Fattovich *et alii*, 2011, 4-6 and Fattovich *et alii*, 2012, 117-120.

associated contexts to the 7th/5th centuries BC. Ceramics from Phases II and III are predominantly characterised by orange and light orange medium/coarse ware (Fig. 7) can be related to what has been designated as phase Yeha III at Yeha (Fattovich 1980) and tentatively dated to the 5th/4th century BC. Nevertheless, radiocarbon dating are required to corroborate this interpretation.

Clay objects¹⁰

Other clay objects from SegII and SegVIII include:

1. Brown Ware clay ear - or lip-stud, circular section, flattened ends, length 11mm, central diam. 5mm, ends diam. 9 and 12mm (SegII, unknown stratigraphic unit);
2. fragment of a female figurine, Brown Ware at the external, Orange Ware in the core, medium mineral inclusions, external surface burnished. The head and half of the body is missing, the preserved half shows a molded decoration representing the left arm holding the breast, the base is flattened. Preserved height 82mm, diam. at the base 37mm). (SegII, SU 89, inv. 2012/30) (Fig. 8);
3. two clay lumps (ROW) with fragments of bones inside (41×44×26, 34×26×14mm) (SegVIII, SU 82, C4, inv. 79);
4. fragment of a clay, truncated-cone object with rounded end (lower part of a pendant?), Light Brown Fine Ware with burnished surface, preserved length 9mm, base diam. 9mm (SegVIII, SU 82, D2, inv. 2012/09);
5. unidentified spherical object made of fired clay with one smooth and flat side (diam. 26mm) (SegVIII, SU 1, inv. 2012/10);
6. fragment of a clay (Red Ware) object, possibly a human figurine, square section, external surfaces smoothed with punctuated and incised decoration (SegVIII, SU 22, E2, inv. 2012/11). Preserved height 60mm, base width 37mm, top width 28mm. A similar object was recorded in 2011 (Sernicola *et alii*, 2013, 384, 430, fig. 13);
7. fragment of unidentified clay object, Orange Fine Ware with small mineral inclusions, uniform colour in section, polished external surfaces. Three horizontal lines incised on one side; the incisions have been possibly made using a metal tool.

¹⁰ Clay objects have been described and analysed by L. Sernicola.

Dimensions 127×82×68mm (SegVIII, SU 82, C3, inv. 2012/18). Another fragment, same context, same fabric and surface treatment, but with a curved edge, may belong to the same object. Dimensions 48×32×30mm);

8. fragment of unidentified clay object, Orange Coarse Ware, slightly curved profile, traces of a moulded decoration in the shape of a crescent are visible on one side. Dimensions 74×69×34mm (SegVIII, SU 82, A3, inv. 2012/32).

Knapped and other lithic artifacts (by L. Phillipson)

All knapped and ground lithic artefacts recovered from excavations at Seglamen in 2012 have been measured, described and sorted according to their chronological phase attributions. They consisted of: knapped tools, flakes and fragments, cores (Fig. 9), handstones, hoes (Fig. 10) or choppers, burnishers, grindstones and topstones, and other artefacts including a possible lightweight hammerstone, two portions of architectural elements, a casual mortar, two possible ornaments and two fragments of a carefully shaped and uniformly polished basalt statue [VIII/82, >71×>74×63mm] of a cow in a resting posture with its legs folded underneath. The extant portion depicts its rump and tail wrapped around one side.

Sundry economic and cultural inferences can be preliminarily drawn from the Seglamen lithics recovered in 2012. Some of the following points may, of course, be modified by the results of future research.

Knapping strategies: The predominant knapping strategy in all phases was aimed at the production of rectangular, approximately square flakes of approximately standardised size, according to the following steps, all involving hard hammer, stone-on-stone direct percussion. A lump of chert, or less frequently white quartz, was trimmed by the removal of a few flakes or by splitting a cobble to produce a pre-core with a usable flat face. Core trimming and irregular flakes were then removed circumferentially from the edges of the flat face to produce a high-backed or pyramidal core with a square, rectangular, or sub-rectangular face. Desired, useful flakes of a pre-determined size and shape were then removed parallel to the shaped face. As knapping progressed, the core, described as Levallois-style, evolved from pyramidal to plano-convex, to relatively flat or exhausted. Where possible, chalcedony was worked in a similar fashion to the more abundant chert, but since chalcedony was obtained in the form of flawed and irregular

lumps, knapping it tended to be an *ad hoc* process and the flakes produced tended to be small and irregular. Although obsidian fragments and some retouched artefacts are included in the assemblages, there is a dearth of obsidian cores. Probably obsidian was a scarce commodity that was knapped and used to the point where only a few shattered fragments and no recognisable cores remained. Possibly some obsidian artefacts were brought to the site in a finished state.

The general impression given by examination of the limited variability of the flakes and cores and by the occasional use of white quartz as well as the more common chert is that knapping was not the work of professional artisans, but was practised with a high degree of proficiency by all those who needed to do so. The stone materials were so immediately abundant that chert and quartz cores would be discarded at any stage in the knapping sequence, as soon as sufficient flakes had been obtained for the task in hand.

A variety of other techniques, including pressure flaking and bi-polar percussion, were used for working other materials including obsidian and chalcedony, for the production of occasional Likanos flakes, blades, bladelets, triangular points, and backed pieces. Radially-struck ovate or circular flakes were uncommon. A type of core edge treatment by multiple striking, that results in the production of flakes with deliberately stepped or shouldered butts was sometimes used, probably to facilitate the hafting of some flake tools. This treatment may also assist with controlling the sizes and shapes of flakes. It occurs at other pre-Aksumite sites in the general Aksum area, but has not been observed on surface-collected, presumed pre-Aksumite, flakes and cores from eastern Tigray.

Cultural continuity: The presence of an older series of lithic artefacts, pre-dating the earliest phase of pre-Aksumite occupation at Seglamen was recognised by the presence of a few heavily patinated and weathered flakes found mixed in with a rubble foundation fill underlying a paved area in trench SegI. Additional examples of patinated and weathered flakes and cores have also been found as occasional, accidental occurrences in all phases of pre-Aksumite occupation. Comparison of the materials, shapes and dimensions of the older series flakes and cores with those of the pre-Aksumite shows a very high degree of similarity, with only a few differences. As might be expected, only the relatively larger chert and quartz

older series flakes and cores have survived. There are no older series obsidian artefacts. Also, older series Levallois-style cores may have been intended to produce somewhat less uniform rectangular flakes than were those of the pre-Aksumite phases.

Nevertheless, the core shapes and knapping strategies employed are sufficiently alike to provide a very good indication of population continuity and thus of the essentially indigenous nature of the pre-Aksumite culture at Seglamen. The site was occupied in pre-Aksumite times by the descendents of the same people as had occupied it before the earliest building phase. Any non-local or non-indigenous influences which may have contributed to site's development did not affect the lithic tool making and using strategies of its inhabitants.

On the basis of the recorded material, there seem to be no significant changes in the types or proportions of knapped or ground stone artefacts between the several pre-Aksumite phases. From this, it may be surmised that there were no major changes in the population, culture or economic basis of the Seglamen settlement. It may perhaps also suggest that the entire period of all phases taken together was not of very long duration.

Demography: Intriguingly, a little over half of all the knapped artefacts recovered, 546 out of a total of 1067 pieces or 52%, came from transitional phase one-two, after the phase one building had been abandoned and before that of phase two was started. Another 142 knapped artefacts, 13%, came from transitional phase two-three, with smaller quantities deriving from each of the three construction phases recognised in trenches II and VIII. This unanticipated disparity may warrant further investigation. Possibly some of the transitional materials were re-deposited from earlier contexts.

More probably, the site was not depopulated during the phases when some structures were allowed to fall into ruins. As a general observation, the evidence of surface collections from pre-Aksumite and later sites both in the general Aksum area and in eastern Tigray is that the most abundant lithic artefacts are found on sites which lack evidence of large-scale architecture and in locations near, but not amongst, building remains. Most lithic tools were used to assist with agricultural, subsistence and crafts activities that were conducted outside of or away from the larger stone-built structures. It may be that during the transitional phases the archaeologically investigated area at Seglamen comprised open spaces where such activities were

conducted, or spaces that was occupied by lightly-built shelters and workshops whose remains were not preserved.

Economic activities, agriculture and farming: As far as knapped lithics were involved, the dominant economic activity at Seglamen entailed the use of rectangular, approximately square flakes of approximately uniform dimensions. Characteristic utilisation scars on their edges (L. Phillipson, 2009, 360-361 for description) and silica gloss on a few of these flakes indicates their use as replaceable inserts for grain-harvesting knives.

Stone hoes, of which several examples have been recovered, were used for at least some planting and weeding tasks. These rather small tools would have been particularly effective for working the soft alluvium of seasonally flooded fields in the valley bottom overlooked by the site.

While grindstones and related artefacts were moderately abundant in the “pre-Aksumite” excavated assemblages from Kidane Mehret, near Aksum (L. Phillipson, 2000), they constitute a significantly larger proportion of the lithic artefacts found at Seglamen (L. Phillipson, 2012, 509-530). This difference is accounted for partly by the numbers of grind - and topstones recovered in the earlier phases at Seglamen, and especially by the numerous handstones which were apparently used for varied purposes.

Handstones with a shallow pounded dimple on one or sometimes on both faces have an apparently close ethnographic parallel in stones which are used by some traditional housewives in the Wuqro area of eastern Tigray to mash dried castor bean seeds in order to obtain an oily paste that is spread onto the trays used for baking *injera*. Replication experiments were unsuccessful in duplicating the dimpled configuration when natural, suitably shaped granitic stones were hammered against wood, stone or metal, but were successful when hammered against small avocado seeds. As mentioned above, the closest ethnographic parallel for the pattern of use wear that combines a smooth polished face with the simultaneous or alternate imposition of a central hammered area is the use of handstones to mash castor beans (*Ricinus communis*) and to spread the resultant pulp on a heated baking surface. This use of handstones is presently maintained by some traditional rural housewives in eastern Tigray, where they are called *gulé* stones, but seems to be unknown in western Tigray around Seglamen and Aksum. Simoons (1960, 122) reports that, *Castor-oil seeds, which are harvested [in northern Ethiopia] from December to February, are used to*

soften leather and to clean the frying plate used for cooking the flat bread injera, and are burned for light.

Specialist crafts: Handstones were used like varying grades of sandpaper for refining, thinning, smoothing and polishing moderately resistant surfaces including, most likely, for smoothing wood, for leather dressing and for parchment production. Some very flat tabular examples could have been used for polishing stone or clay floors or similar surfaces. The use of predominantly ovate and sub-rectangular handstones of varying degrees of roughness and of stone burnishers for the production of parchment writing sheets is described in L. Phillipson, 2013b. Flake scrapers of any type are scarce at Seglamen and those with evidence of use as hide-working tools are completely absent, their place being taken by some of the various grades of handstones.

Other, generally circular and evenly convex, handstones were used in the formation of hammered ware ceramics (L. Phillipson, 2013a). Carefully-knapped scraper-like tools were used as pot-formers, and small smooth pebbles as ceramic burnishers.

As compared with pre-Aksumite surface collections seen in eastern Tigray, the Seglamen lithic assemblages have relatively few cutting implements such as points, backed microliths and knives. Of those that have been recovered, many are small obsidian tools. Probably their numbers are underrepresented because other similar examples of these fragile artefacts have not survived. It may also have been the case that such tools were frequently of metal. Although no evidence of smelting or forging has been encountered at Seglamen, the presence of a large furnace for the prolonged, controlled firing of ceramic materials and the possible evidence of glass-working indicate that the site's inhabitants may have had the technical ability to forge metals. Alternatively, their agricultural wealth could have been sufficient to allow for the importation of metal knives and other implements.

Metals

Metal artefacts from SegII and SegVIII mainly consisted of complete or non-integer tools from transitional phases and from the living floors of Phase III and Phase I. They include:

L. Sernicola

1. copper alloy circular hollow fragment with a flat round head (nail head?), length 15mm, diam. 7mm (SegII, SU 89, C4, inv. 2012/24);
2. small copper alloy rod with circular section, preserved length 57mm, section 2 mm (SegVIII, int. SU 1-22, A3, inv. 2012/19);
3. complete copper alloy awl pointed at one end, flattened and rounded at the other, circular section, length 61cm, section 3mm (SegVIII, SU 83, D4, inv. 2012/20);
4. complete copper alloy awl pointed at one end, flattened and straight at the other, circular section, length 57cm, section 3mm (SegVIII, SU 82, C4, inv. 2012/21);
5. complete copper alloy awl pointed at one end, rounded at the other, square section, length 117cm, section 2mm (SegVIII, int. SU 92-94, D4, inv. 2012/25);
6. composite tool comprising a 68mm long, square-sectioned, pointed awl with a bone haft. A similar tool was recorded in 2011 (SegVIII, int. SU 92-94, E3, inv. 2012/26) (Sernicola *et alii*, 2013, 414, 438 fig. 24).

Shells

Small flakes of a pearly oyster (*Pinctada margaritifera*) were found at SegVIII (SU 92, E4, inv. 2012/22) and SegII (SU 17, C3, inv. 2012/08). A fragment of *Pinctada margaritifera* showing an abraded edge and a polished surface had been already recorded in 2011 (Sernicola *et alii*, 2013, 415, 438 fig. 25). This species, living in the Red Sea and the Indo-Pacific Ocean, was widespread in the Nile Valley and used for making ornaments and inlays (Aldred 1979, 124, 131; Andrews 1990, 65; Bourriou 1988, 154; Winlock 1932). Its occurrence at Seglamen suggests direct or indirect contacts of this area with the Red Sea and the Nile Valley regions.

Archaeozoology

A great quantity of faunal material has been recorded at SegII and SegVIII from almost all stratigraphic units. All the bone specimens have been collected and are presently stored in the store rooms of the Archaeological Museum of Aksum for archaeozoological analysis. A

selected sample from various stratigraphic units has been exported to Italy for radiocarbon dating.

Overview

Archaeological investigations conducted in November 2012 increased our knowledge about the occupational history of Seglamen and neighbouring regions between the 1st millennium BC and the early 1st millennium AD.

Archaeological survey allowed to identify and locate two large sites, one in the area of Medogwe and the other in the area of Seglamen. The first (site MDG1) corresponds to the Proto-Aksumite (circa 400 - 50 BC) and Early/Classic Aksumite (circa 50 BC - AD 350) cemetery described by de Contenson in 1961 (de Contenson, 1961, 15-23), the second (site SG5) consists in a wide lithic site with high quantity of chert cores and flakes, very few eroded ceramics and no traces of constructed structures. The latter, preliminarily dated to the so-called “pre-Aksumite” period on the basis of observed potsherds, requires more systematic investigations for a definitive assessment of its extension, chronological and cultural affiliation, and function.

Excavations exclusively concentrated in the area of Amda Tsion, in the easternmost sector of the pre-Aksumite site SG1, where the remains of four occupational phases were exposed in 2010 and 2011. On the basis of recently acquired information we can summarise the available evidence for all phases as follows.

Phase IV (Fig. 11): This phase, the latest identified so far, is represented by the remains of walls delimiting a rectangular structure with traces of a possible internal division. The general orientation of the building is the same of the one recorded for Phase III, with orthogonal walls following a north north-east/south south-west and a north north-west/south south-east alignment, but masonry and dimensions present substantial differences. Walls belonging to Phase IV have an average width of 0.70m and are made of medium-size undressed stones or roughly dressed stones in a weak mud mortar. Unfortunately, Phase IV structures and associated layers have been only exposed but not excavated so far, therefore, no information of their

stratigraphic relation with the other structures is available. Future investigations would fill this gap and provide data for their interpretation. The structure may represent a fourth phase of occupation of the area or belong to Phase III.

Phase III (Fig. 11): This phase is represented by the remains of orthogonal, massive walls (between 1 and 1.20m wide) with a north north-east/south south-west and a north north-west/south south-east alignment. Construction technique represented in this phase employed dressed facing stones laid with roughly clear courses in a mud mortar and a rubble infill. Foundation trenches varied, and some walls laid directly on walls of earlier phases. The walls delimit 3 rooms aligned from North/West to South/East; the remains of the lower part of a living floor, made of small, roughly dressed stones, has been recorded in all rooms. In the centre of the northernmost room, a square feature made of small, roughly dressed stones (possibly the base of a pillar or of an altar) is preserved. A large cobbled surface with several fragments of schist slabs, probably representing an external yard, has been recorded to the north and to the east of the structure, abutting the external walls.

Phase II (Fig. 11): This phase is so far very poorly represented, consisting of two circular stone features with plastered internal surfaces associated to a thick layer of ashy soil with high quantity of faunal remains. Between the two circular features, located in the northern and south-western sector of EU SegII, a roughly East/West oriented alignment of rounded, undressed stones was recorded. Three orthogonal walls possibly related to this phase of occupation have been also recorded at the same elevation in the south-western sector of EU SegV but there is currently no direct evidence of a correlation between Phase II exposed at SegV and Phase II exposed at SegII. Future investigations will provide more information about this phase; for the moment, preserved features and associated materials can be referred to open-air activities somehow related to the use of fire.

Phase I (Fig. 11): While the later phases (II, III, and IV) are currently poorly represented, Phase I is becoming fairly well defined, although it requires further investigations. Current available evidence consists of the remains of a rectangular building, north north-east/south south-west oriented, comprising three roughly quadrangular rooms North-West/South-East

aligned, and two probably unroofed courtyards, one to the east of the exposed rooms and one to the west of at least the two southernmost rooms. Both yards were likely delimited by partially preserved stone walls abutting the building, two steps gave access to the western yards and, from it, to the dwelling. A stone bench, similar to the ones nowadays visible in local rural compounds, abutted the external face of the western precinct. Other two steps and a stone bench abutted the external face of the wall delimiting the central and the southern room to the west. The steps gave access to the central room which was connected to the northern one. No traces of threshold have been detected between the central and the southern room. In the northern and central rooms a roughly circular boulder with flattened top and base was standing above the living floor, probably serving as pole-hosts or as bases for grindstones or jars. Southern room was characterised by an L-shaped stone bench with almost complete pots preserved *in situ* on top of it. The masonry is generally characterised by stone walls with an average thickness of 0.80m, made of roughly dressed facing stones in a weak mud mortar and rubble infill.

Research conducted in 2012 at site SG1, highly contributed to the reconstruction and interpretation of the building of Phase I, modifying what hypothesized after the first two field seasons of investigations conducted in 2010 and 2011 (Sernicola *et alii*, 2013, 439, fig. 26). Due to the complex occupational history of this area, characterised by at least four phases of overlapping structures, the stratigraphy of the site is likely marred by mixture and contamination as pits and artificial layers of dumping and levelling, highly disturbing the preservation of more ancient contexts, were created to prepare the surface for the foundations and erection of subsequent structures.

The construction technique, general layout and associated artefacts present close similarities with what recorded at D site, in the area of Kidane Mehret, to the north-east of Aksum conurbation (Phillipson ed., 2000, II, 267-379). The abundance of storage vessels and other domestic ceramic types, the great quantity of grindstones and the scarce occurrence of metal objects, if compared to what recorded at the monumental structures investigated at Yeha (Anfray 1963; 1972; 1974; 1997; Fattovich 1972a; 1972b) suggest that domestic activities were mainly performed at this site during the main architectural phases, while agriculture and/or craft works were conducted in the area during the transitional phases.

Anyway, a difference in status between SG1 and the pre-Aksumite settlement at D site should be remarked. The occurrence at SG1 of imported items together with the dimension of the building exposed so far, indicate that the structure was quite wealthier than the domestic site excavated at Aksum (Phillipson ed., 2000, II, 267-379). The presence of votive deposits recorded in 2010 and 2011 beneath the pavement of the central room (Fattovich *et alii*, 2011, 59; Fattovich *et alii*, 2012, 207, 223 fig. 10; Sernicola *et alii*, 2013, 417, 426, fig. 6), and the remains of a female clay figurine beneath the pavement of the northern one (Fig. 28), may suggest that the structure was somehow related with a ritual complex or temple present in this area, testified by the royal inscription (RIE1) mentioning the restoration (or re-erection) of a temple dedicated to the god HBS (Schneider, 1976; Bernard *et alii*, 1991, I: 68, II, pl. 1), or may indicate a so far never attested ritual practice related to the foundation of a private structure.

Archaeological investigations at SG1 site, are providing important evidence relating to the pre-Aksumite subsistence economy, settlement pattern and population history of this area. Future research at the site and, generally throughout the study-area, will contribute to better clarify these aspects, by providing new insights into the diachronic changes occurred in the local pre-Aksumite subsistence economy and additional information on the role that this area played within the social, political and economic *scenario* of the Tigrean plateau during the 1st half of the 1st millennium BC.

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FIGURES

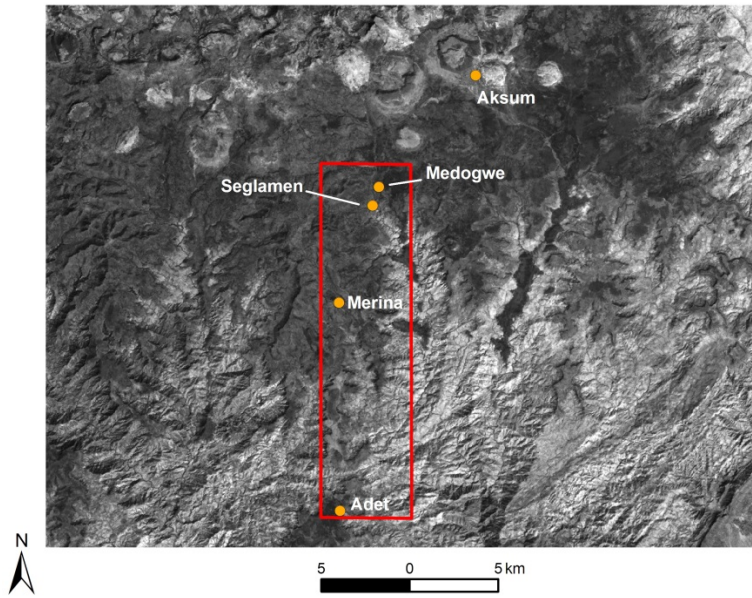


Fig. 1 - Map showing the UNO/AU study-area

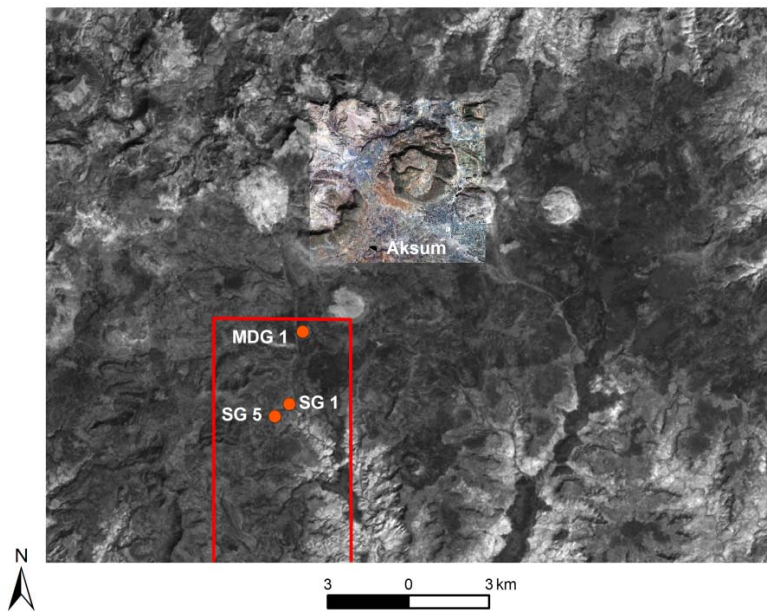


Fig. 2 - Map showing the location of sites investigated in 2012

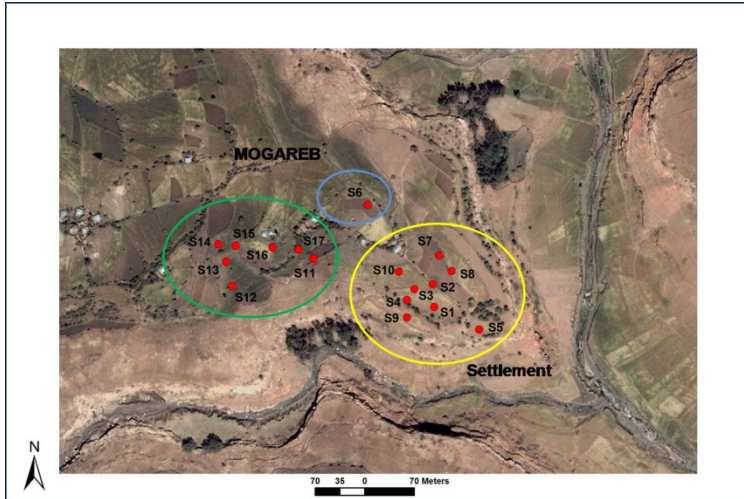


Fig. 3 - Map showing the location and general layout of site SG1

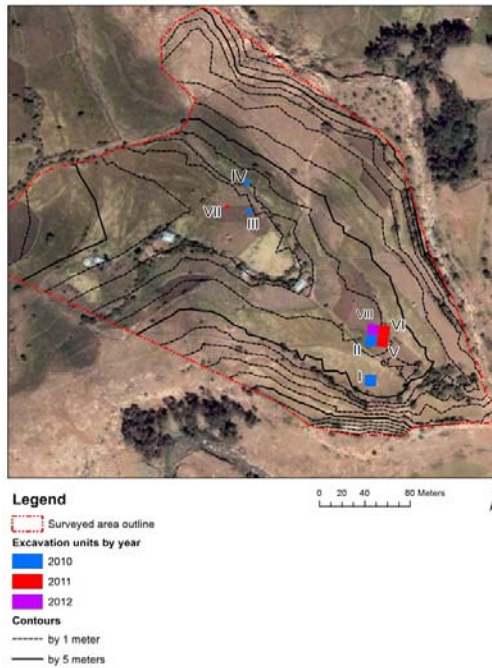


Fig. 4 - Map showing the location of all excavation units established between 2010 and 2012

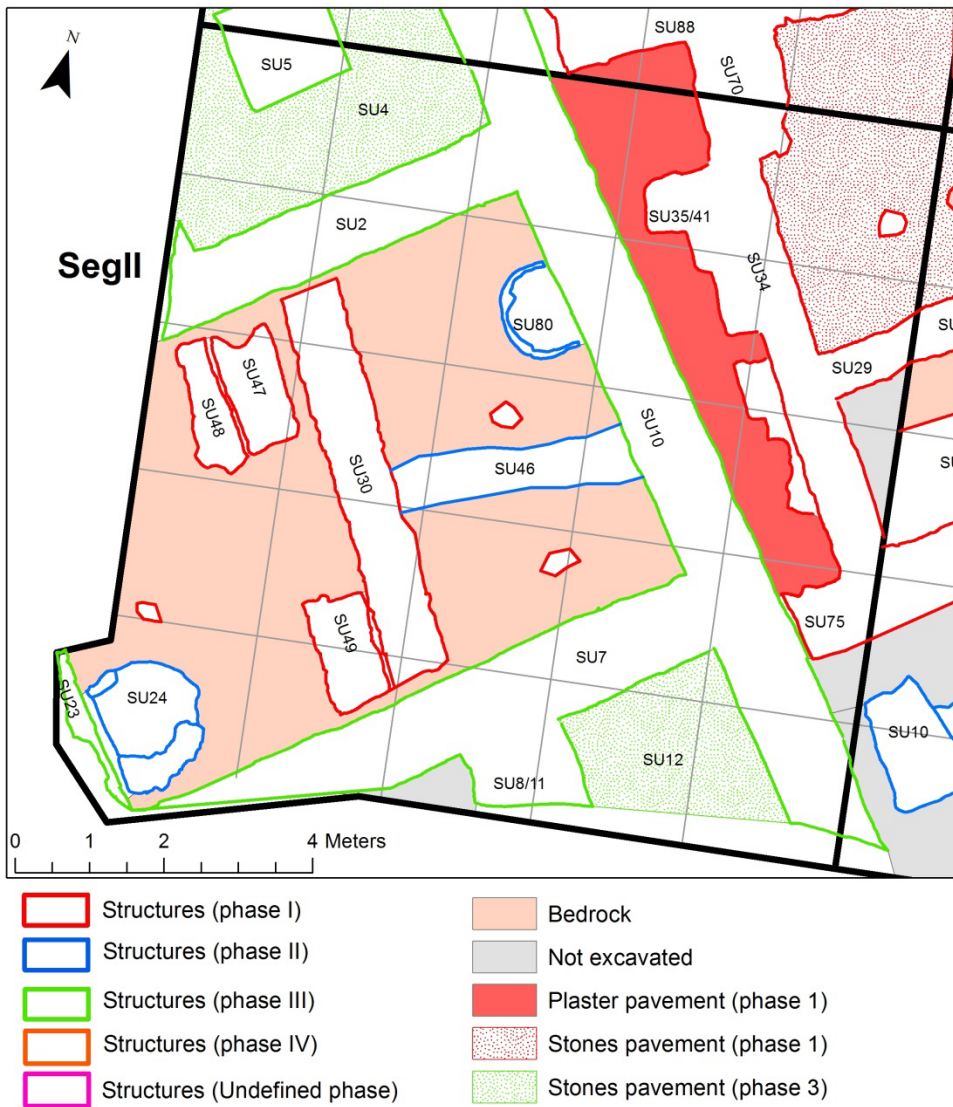


Fig. 5a - Plan showing the structures emerged during excavations at SegVIII and their attribution to the major architectural phases

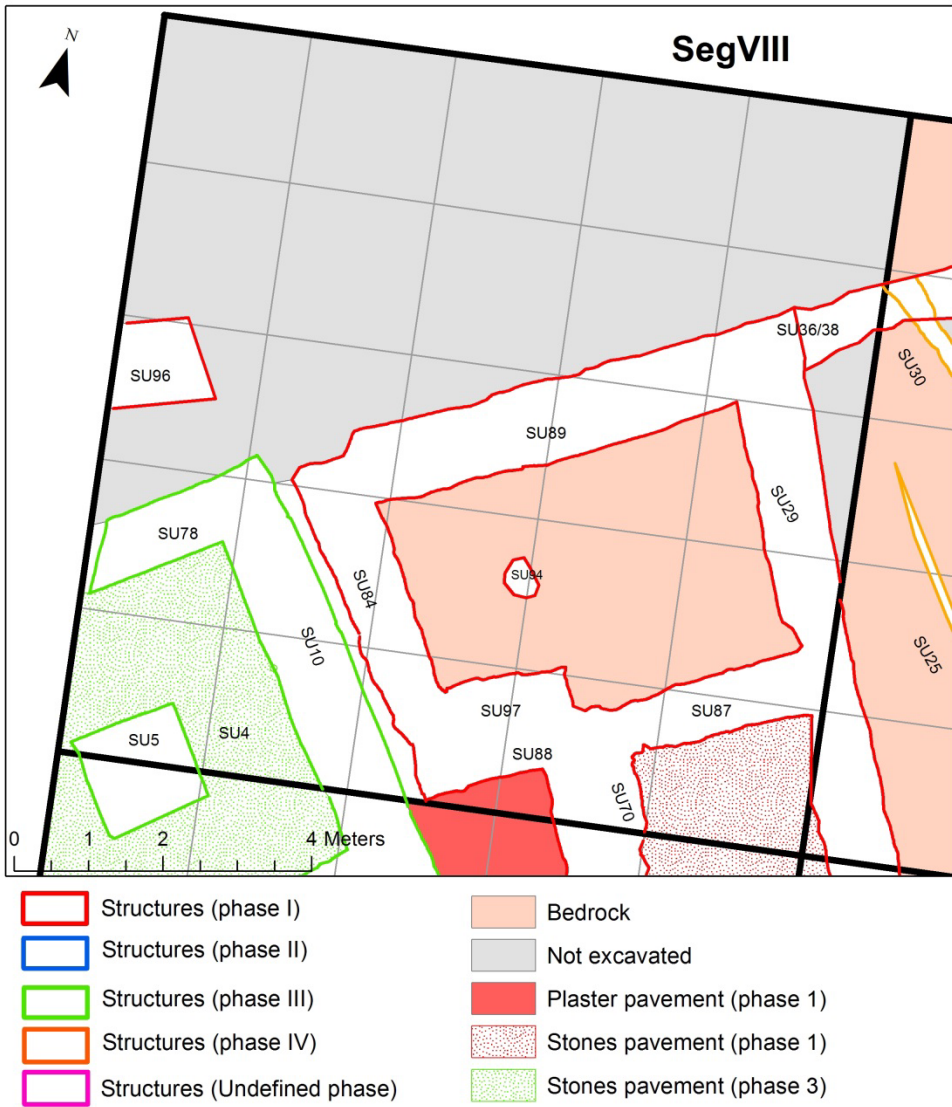


Fig. 5b - Plan showing the structures emerged during excavations at SegII and their attribution to the major architectural phases



Fig. 6 - Fragments of a red fine ware decorated jar



Fig. 7 - Fragment of orange coarse ware with applied arch and vertical notches



Fig. 8 - Fragment of a clay female figurine with the left arm holding the breast



Fig. 9 - Selection of chert Levallois-style cores



Fig. 10 - Basalt ground stone hoe

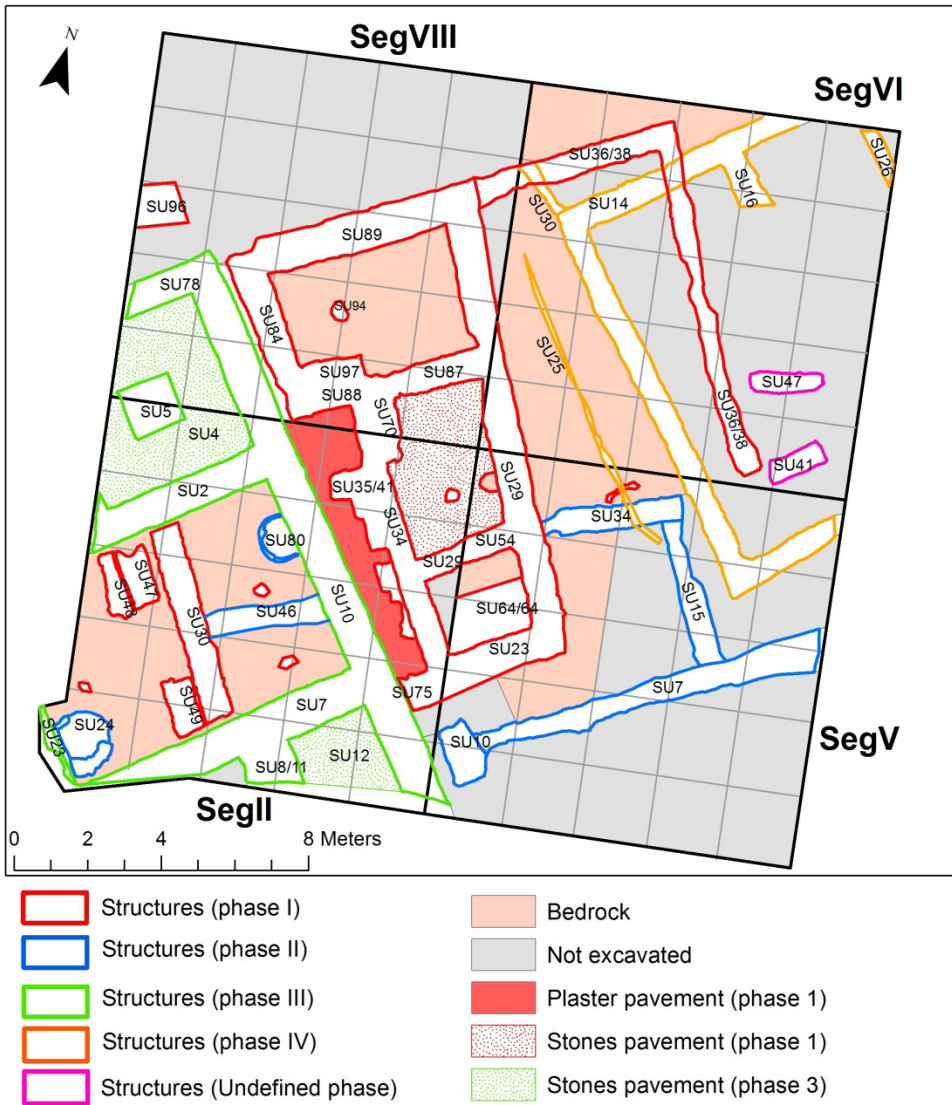


Fig. 11 - General plan of all EUs with principal structures and features, and their attribution to the major architectural phases