

ARCHAEOLOGICAL EXPEDITION AT AKSUM (ETHIOPIA) OF THE UNIVERSITÀ DI NAPOLI
“L’ORIENTALE”
2015-2016 FIELD SEASONS: SEGLAMEN

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Introduction (Luisa Sernicola)

In November/December 2015 and 2016 the Italian Archaeological Expedition of the Università degli Studi di Napoli “L’Orientale” (UNO), Naples, Italy, co-directed by Rodolfo Fattovich, Andrea Manzo and Luisa Sernicola, conducted the twenty-first and twenty-second field seasons of investigations in the region of Aksum (Tigray, northern Ethiopia) the sixth and seventh at the site of Seglamen¹.

¹ Members of the 2015 expedition were: Prof. Rodolfo Fattovich, archaeologist and research coordinator, Dr. Luisa Sernicola, archaeologist, research co-director and field director, Mr. Diego Capra, assistant archaeologist, Ms. Gabriella Giovannone, assistant archaeologist and ceramic analyst (UNO, Italy); Dr. Laurel Phillipson, lithic analyst (UK); Mr. Assefa Getaneh, geophysicist (Addis Ababa University, Ethiopia); Mr. Nigus Gitaw Baraki, lecturer at the Department of Archaeology and Heritage Management of the Aksum University occasionally joint us in the field and for lithic analysis. The Ethiopian Authority for the Research and Conservation of the Cultural Heritage (ARCCH) was represented by Mr. Tefera Senay, the Bureau of Culture and Tourism, Central Zone, Aksum, by Ato Aley Woldeeselasie.

Members of the 2016 expedition were: Prof. Rodolfo Fattovich, archaeologist and research coordinator, Dr. Luisa Sernicola, archaeologist, research co-director and field director, Mr. Diego Capra, assistant archaeologist and lithic analyst, Ms. Gabriella Giovannone, assistant archaeologist and ceramic analyst, Ms. Eleonora Minucci, physical anthropologist (UNO, Italy), Mr. Assefa Getaneh, geophysicist (Addis Ababa University, Ethiopia); Friat Angesom, MA students at Addis Ababa University (Department of Archaeology and Heritage Management) joint the expedition for its entire duration to conduct the systematic study of the ceramics from the building exposed in 2010 at Seg I as part of her MA dissertation. The Ethiopian Authority for the Research and Conservation of the Cultural Heritage (ARCCH) was represented by Mr. Fantahun Zelelew, the Bureau of Culture and Tourism, Central Zone, Aksum, by Ato Aley Woldeeselasie. In 2016, the fieldwork has been organized as a field school for undergraduate students in Archaeology and Heritage Management from Aksum University (AU) and for MA students in Archaeology and Heritage Management from Addis Ababa University (AAU). The field school with the students of AAU is conducted within the framework of the “Italian Contribution to the Education Sector Development Program (ESPD) - Post Graduate Program (PGP)”.

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 (2015) and Ato

The site, located about 15 km to the south-west of Aksum along the Aksum-Adet road, was first recorded and partially excavated in the early 1970s (Bernand, Drewes and Schneider 1991; Ricci and Fattovich, 1987; Schneider 1976), and repeatedly surveyed by members of the UNO expedition and local archaeologists within the framework of the World Bank Ethiopian Cultural Heritage Project (Fattovich and Takla Hagos 2006).

Since 2010, UNO conducts systematic research in the area and its neighbouring regions, in collaboration with the Aksum University (AU). The project is aimed at investigating a 100 sq km transect along the Mai Negus/Haselo river valley, from Addi Hankara to the north of Adet with the territories around the modern villages of Medogwe, Seglamen, Merina and Adet as major areas of investigation (Fig.1).

Main goals of the project are to provide: 1) a reconstruction of the cultural and environmental history of the region to the south-west of Aksum, and 2) a detailed archaeological map of this region for the cultural heritage management of Central Tigray (Fattovich *et alii* 2011, 1; 2012, 112). This transect has been selected as the Negus/Haselo river valley represented an important traditional exchange route linking Aksum and the Tigrean highlands to the Tekeze river in the south-west and, through this, to the southern regions of the Ethiopian plateau (Fattovich *et alii* 2011, 1; 2012, 112; Sernicola and Phillipson 2011, 201).

Demrew Dagne, Director, Cultural Heritage Directorate, ARCCH, Addis Ababa, Ato Aley Woldeeselasie, Head, Bureau of Culture and Tourism, Central Zone, Aksum, the President, the Vice President, and all the professors and instructors of the Department of Archaeology and Heritage Management of Aksum University, H.E. Giuseppe Mistretta, Ambassador, Italian Embassy, Addis Ababa, Dr. Francesca Amendola, Director, Italian Cultural Institute, Addis Ababa. The investigation could not have been conducted without the contribution of all students, employed assistants, labourers, and helpful landowners. The expedition has been funded by the Italian Ministry of Foreign Affairs, Rome, and by the Università degli Studi di Napoli “L’Orientale”, Napoli.

Description of field activities

Field activities carried out in 2015 and 2016 included archaeological survey and excavations², and geophysical prospections.

Survey (Luisa Sernicola, Laurel Phillipson and Diego Capra)

Surface reconnaissance during these seasons focused in the northern and southernmost sectors of the study area, in the areas of Medogwe and Adet respectively (Fig.1).

Medogwe

The small village of Medogwe, is located between Aksum and Seglamente. In this area, the presence of an ancient cemetery was recorded by Gezau Hailemaryam and Henri de Contenson (de Contenson 1961, 15-23; Gezau Hailemariam 1955, pp. 50-51). Following the general description and the sketches of the area provided by Henry de Contenson, the site was identified and recorded as MDG 1 by the UNO/AU expedition in 2012 (Sernicola 2014, 480-481), and preliminarily surveyed in 2014 (Sernicola, Phillipson and Fattovich 2016, 223-224).

In 2015, a systematic survey has been conducted in the area of the ancient settlement, and the mapping and documentation of the preserved stelae has been carried out at the cemetery.

At the settlement, intra-site surface collections have been conducted at 15 loci, where denser concentrations of materials were observed on surface. There, abundant evidence of collapsed structures are visible, together with lithics, ceramics, beads and a few bricks and grindstones. At one of the loci, a copper alloy coin from an anonymous king, dateable to the 5th century AD has been found together with abundant tokens. The ceramics collected during the survey allow to date the settlement from the Proto- to the Middle Aksumite periods (ca. 400 BC - AD 550); evidence of pre-Aksumite materials has been detected at few loci.

At the cemetery, random collection of archaeological materials (mostly ceramics and lithics), confirmed its attribution to the Proto-Aksumite and Early- to Middle Aksumite times (ca. 400 BC - AD 550). Also there, scanty evidence of pre-Aksumite materials have been noticed. The tombs were marked by syenite

stelae, nowadays heavily disturbed by stone-quarrying activities. Fragments of twenty-two stelae have been recorded and described, most of which are no more *in situ*.

Finally, a small test excavation (1 x 1m) has been conducted at a lithic workshop identified in 2014. This yielded abundance of yellow chert cores, flakes and fragments associated to few Aksumite ceramics. The detailed study conducted on these materials by Diego Capra as part of his MA dissertation provided significant information on the manufacturing process and suggested intriguing hypothesis on the nature of the tools produced in this area (Capra 2015, 2016).

Adet

Systematic archaeological surveys have been conducted in 2015 and 2016 in the southern sector of the study-area, between the modern villages of Adet and Merina. On the whole, thirty-three sites (AD 6 - 32 and MR 2016/01-MR 2016/06) have been detected and documented; two sites (AD 4 and AD 5), already recorded in 2014 (Sernicola, Phillipson and Fattovich 2016, 224), have been revisited for additional collection of surface materials.

The sites are mostly exclusively lithic, with no evidence of constructed structures nor ceramics; only nine of them show traces of stone buildings and associated ceramics.

Ceramics include typical Aksumite specimens (Red Orange Medium and Coarse Ware, Red Coarse Ware, Orange Medium and Coarse Ware jars, large basins with internal deep grooves, cups and bowls) and possible local imitations of them, as suggested by the occurrence of fragments of Gray Coarse Ware with internal and external orange slipping. Possible Pre-Aksumite specimens have been detected at few sites (fg. of a Black Topped Red Ware bowl or cup, fg. of a possible bowl or pot with a molded horizontal short strip, fg. of Black Medium Fine Ware with incised triangles).

Unknown decoration motifs have been also documented, possibly related to a local tradition.

The study of lithic artifacts allowed to make a useful distinction between the collections made at these southern sites³. Some of them

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

³ See the lithics reports for Seglamente 2011, 2012, 2013, and 2014 (Fattovich *et alii* 2011, 2012; Sernicola 2014, 2015; Sernicola, Habtamu Makonnen and Phillipson 2013;

lack small flakes and tools and the majority of flakes are between 12 and 25 mm thick (Fig. 2); others include more varied and smaller artefacts, some of materials other than chert.

At the earlier group of sites and loci, knapping was aimed at the production of large, thick flakes and proto-cores, most of which would have been carried away from the area. A pattern of localised concentrations within a dispersed landscape of chert exploitation implies repeated, perhaps seasonal, visits by people who may not have lived permanently in this area. The presence of several quartz crystal handstones in the AD 15 and AD 16 collections, two approximately Levallois-style cores from AD 21, and similarities to flake production at SG 1.24 and at Addi Holakul, suggest that these AD sites were probably contemporary with the late Pre-Aksumite occupation of Seglamente. However, the absence of ceramic sherds or directly datable evidence remains a problem. The absence of stone construction and of potsherds suggest that the people responsible for these remains may have belonged to a different cultural group from that of Seglamente's inhabitants. By way of comparison, at Addi Holakul, which is a similar chert exploitation area that is closely associated with Seglamente, occasional potsherds were found. We would like to be able to conclude that these "thick flake industries" were produced by lowland cattle owners who ventured into the area both to trade with the highland Pre-Aksumites and to procure raw materials for their large flake knives and other tools. However, this hypothesis requires much more research before it can be fully supported.

The second group of sites is characterised by a preponderance of flakes that are less than 12 mm thick and a greater proportion of smaller cores. AD 5 and AD 10 ~ 13 also exhibit a greater variety of raw materials. They may be interpreted as, perhaps transient, residential sites, but whether they are better attributed to the Pre-Aksumite or the Aksumite period is uncertain. The inclusion in the collections of several Levallois-style cores suggests a Pre-Aksumite attribution, but the presence of two well-formed arrow points and a notched flake fabricator are more in keeping with an Aksumite attribution. If the materials do not derive from a

mixed palimpsest, they may perhaps represent a transition from the Pre-Aksumite to the Aksumite.

Typological analysis conducted on collected materials suggest that the sites recorded in this southern area cover a time period ranging from at least the mid-1st millennium BC to the late 1st millennium AD.

Excavations⁴ (Luisa Sernicola and Gabriella Giovannone)

Archaeological excavations were solely conducted in 2016 and concentrated exclusively in the area of Mogareb where the remains of the cemetery associated to the pre-Aksumite settlement of Seglamente (site SG 1) had been identified and partially excavated since 2010 (Fattovich *et alii* 2011, 2012; Sernicola 2014; Sernicola 2014, 2015; Sernicola, Habtamu Makonnen and Laurel Phillipson 2013; Sernicola, Phillipson and Fattovich 2016).

In 2016, a new excavation unit, Seg XVI (10 × 10m) was established in order to acquire additional information on the funerary practices performed at the site.

Archaeological excavations carried out in this area brought to the light the remains of 9 features including 5 tombs (Tomb 25, Tomb 26, Tomb 27, Tomb 28, and Tomb 29), 3 votive deposits and 1 disturbed pit of uncertain interpretation. Tombs types include sub-circular (Tombs 26, 28, and 29) and sub-rectangular (Tombs 25 and 27) shafts without stela. All are single burials except of Tomb 27, which represents the first, secure evidence of a multiple burial with two skeletons overlapping each other.

The burials and the votive deposits released high quantity of fragmented and complete pre-Aksumite pots (bowls, jars, and small flasks) mostly of Red Orange Coarse Ware (ROCW) and Red Orange Medium Ware (ROMW) mostly related to architectural Phase III of the settlement (Fig. 3). In the case of Tomb 27, the marked difference in the fabrics characterising the ceramic assemblages associated to the burials, allow to relate the later one to architectural Phase II or III of the settlement (ca. 700-500 BC) and the earlier to architectural Phase I (ca. 900-800 BC).

Sernicola, Phillipson and Fattovich 2016) for explanations of terms and conventions used in this report, description of core reduction techniques, and bibliography.

⁴ As in the previous seasons, stratigraphic excavations have been conducted according to the procedures established by Harris (Harris 1979).

Other grave goods included ornaments (stone, copper alloy, bone and glass paste beads and ear- or lip-plugs), clay models of houses and compounds (Fig. 4), and obsidian and chalcedony crescents. Unfortunately, due to the geology of the area, bones were very badly preserved.

In addition, Tomb 17, partially investigated in 2014 at Seg XIV, (Sernicola, Phillipson and Fattovich 2016, 226), has been re-opened and its excavation completed. The tomb consisted of a sub-circular shaft cut into the bedrock and backfilled with soil and small to medium size stones. At the bottom, remains of an individual buried in contracted position were uncovered. A high quantity of stone, metal and glass paste beads were found in 2014 and 2016 at the height of the waist and of the ankles of the deceased; a fragmented copper alloy plaque and a copper alloy stamp broken in two pieces were also found at the bottom of the tomb nearby the few fragments of the skull. The skeleton has been documented by a physical anthropologist; the results will be presented in the following section.

Physical Anthropology (Eleonora Minucci)

Skeletal sample of three individuals from the pre-Aksumite site SG 1at Seglamente have been studied. The anthropological analysis has been focusing on sex diagnosis (Acsádi and Nemeskéri 1970; Krogman and Iscan 1986; Buikstra and Ubelaker 1994; White and Folkens 2005), evaluation of the age of death (Brothwell 1981; Lovejoy 1985, pp. 47-56; Burns 1999) and significant morphological alterations⁵.

⁵ All skeletal elements and fragments were examined visually and with the aid of a hand lens for macroscopic evidences of pathological lesions. Paleopathological diagnosis and interpretation followed the protocols established by Ortner and Putschar (1981). Injuries were identified according to general categories summarized by Lovell (1997, pp. 139-170). Musculoskeletal stress markers (MSM) are scored on Hawkey and Merbs' pattern (1995, 324-338). Subadult age of death was estimated through a combined method devised by examining: bone ossification stages (Schaefer, Black and Scheuer 2009); data of epiphyseal closure from Buikstra and Ubelaker's standards volume (1994); observation of the development and eruption of deciduous and permanent dentition, in accordance with Al Qahtani's (2009) and Ubelaker's systems (1989). The sex of juvenile individuals was determined on the basis of non-metric traits, according to Hunt and Gleiser (1955, 479-487) and Schutkowski (1993, pp. 199-205). Dental enamel Hypoplasia (DEH) was observed as linear furrows or horizontal lines on the enamel crown (LEH). The distance of the hypoplastic

Two of them, found in 2014 in the area of the settlement (Seg X, burials A and B) (Sernicola, Phillipson and Fattovich 2016, 225), are well preserved and show a low degree of fragmentation⁶. Although these skeletons in the settlement were found in contracted position and in anatomical connection⁷, grave goods are completely absent and notes regarding the cut of the pits are partially missing.

The third skeleton, from the cemetery area (Seg XIV, Tomb 17) (Sernicola, Phillipson and Fattovich 2016, 226), was buried in contracted position, on the left side and it has been found in a very poor state of preservation⁸. The major part of the osteo-dental material in this primary burial was lacking and this is probably due to the acid nature of the soil. Equally, the composition of the filling influenced the extreme fragility of the bones and it has made difficult the excavation of the remains. *Post-mortem* diagenetic events caused multiple disturbances of the lower limb that, therefore, is not in anatomical connection. In addition, all the joints of the upper limb were disconnected. The skeleton is connoted by a very high degree of incompleteness of the remains, represented mostly by some dental roots and a very few bones fragments of the skull and of the limbs. Pelvis and hip bones are totally missing.

Subadult Seg X - A was buried in contracted position, on the right side, discovered with iron shackles on his ankles (Fig.5). The skeleton belongs to a female individual 11,5 - 13,5 years old. It shows a *peri-mortem*⁹ penetrating injury

defects from the cemento-enamel junction was recorded in order to determine the age of individuals at the time of hypoplasias development and it has been measured and analysed with Goodman and Rose's methods and equations (1990, 59-110). Hypoplasias were assigned to 14 half-year intervals from birth-0.5 years to 6.5-7.0 years.

⁶ All the taphonomic information of these two graves have been collected by displaying field photos.

⁷ The articular connections of upper and lower limbs were close; hip and pelvis joints were wide or disconnected.

⁸ The possible taphonomic documentation of the tomb was done, in person, in the field.

⁹ *Peri-mortem* lesions are characterised by the absence of healing processes, whereas in *ante-mortem* injuries, evidence for bone remodelling can be inspected. Distinguishing between *peri-mortem* trauma and *post-mortem* damage is not always easy, especially when bone preservation at the site is poor or when the injury happens close to the time of death (Ubelaker and Adams 1995, 509-512). In this analysis, to exclude injuries occurring after death, I verified that the site of the injury had a homogenous colouring (Rodríguez-Martín 2006, 197-221).

in the left parietal bone (Fig. 6) caused by a sharp-edged object or a projectile; the lesion caused radiating fractures but not the entire perforation of the bones. A left rib (probably the sixth) exhibits a not-healed, incomplete (“greenstick”) fracture on the convex side of the shaft. This *peri-mortem* trauma, because healing of this fracture is relatively quick, is the consequence of an indirect injury, such as a fall. This type of lesion, in fact, results when a bending or bucking force is applied, such as during a fall¹⁰. If it is an injury due to a violence, the depressed fracture at the right coxae could have been caused by a frontal hit. It would be interesting to carry out more specific researches to verify the existence of a connection between the chain around the ankles and the trauma at the pelvis, the thorax and the skull.

Skeleton Seg X - B was found in contracted position, on the right side. It belongs to a male individual 13 - 15 years old. The skull has a perforating lesion at the right temporal bone (fig.7), just upon the zygomatic process. This injury, not completely oval shaped, needs to be analysed by bevelling, shape, size and fracture lines to find out if the wound has been lethal and to recognize the kind of weapon that caused the damage (Berryman and Haun 1996, 2-9).

The skeleton shows a depression of the osseous medial surface at right and left *tibiae*. These superficial “furrow” into the cortex of the bones could be a stress lesion, recorded as MSM (S3 degree). Although it cannot be said with certainty before further analysis, they might indicate that a substantial amount of stress was placed bilaterally on both tibiae, a form of micro-trauma that would have been caused by more strenuous, continual activity than the normal legs movement practiced by an adolescent. Indeed, this moderate degree of muscle usage is actually high for the age of the subadult here considered and, for this reason, it is interesting to suppose that this adolescent was exposed to a disproportionate use of the legs, possibly due to a vigorous physical activity. However, given the young age of the subject, it is more thoughtful and prudent to suppose that there might be physiologic alterations at the muscle insertions.

¹⁰ Greenstick fractures are due to indirect trauma and occur commonly in children; in this type of lesion a portion of the cortex remains intact and the fracture stops before it completely penetrates the bone (Jones 1994, 1-13).

In both the dental samples a remarkable presence of linear enamel hypoplasia¹¹ was observed. The number of hypoplastic defects and of the consequent stressing events was higher in Seg X - B than in Seg X - A. The communal frequency of enamel growth disruptions occurs between range 4-5 years of age. Because many different conditions may result in an enamel hypoplasia, it is difficult to determine the exact cause (Pindborg 1982)¹². However, since hypoplasias provide a nearly permanent record of stresses occurring during enamel development, they may offer a general index of the poor health condition of these two individuals (Sarnat and Schour 1941). It is interesting to note the absence, on the female dental elements, of hypoplastic defects occurred between ages 0 - 2 corresponding to stress episodes of weaning.

The fragmentary state of the few remains from Seg X - Tomb 17 does not allow a precise age diagnosis and permit to classify it just as a generic adult. Amongst the sexually dimorphic elements, just the fragmented right condyle and part of left mandibular angle were found. The condyle seems quite small, the inferior margin of the mandible results thin, the mandibular angle is delicate and without gonial eversion. These features would induce to sexing the individual as a female, but without reference data it is impossible to determine the certain sex of the subject.

Geophysics (Assefa Getaneh)

The reconnaissance survey with the magnetic method conducted in 2014 covered almost entirely site SG 1 at Seglamente (Sernicola, Phillipson and Fattovich 2016, 230-231). The analysis of the obtained data has outlined the geophysical anomalies of potential archaeological interest.

¹¹ Enamel hypoplasia is an aspecific indicator of stress, due to a disruption in amelogenesis, the *formation* of enamel on teeth. This condition is observed in erupted teeth as a circumferential line, band, or pitting of decreased enamel thickness and it has been associated with a wide variety of disease and nutritional deficiencies, including vitamin A and D deficiency, fever, maternal diabetes, gastroenteritis, neonatal asphyxia and jaundice (Goodman, Armelagos and Rose 1984, 259-266).

¹² Corruccini *et alii* (1982, 443-459) suggest that linear defects can be considered an indication of “extreme dietary deficiency or starvation which causes growth to cease for a relatively prolonged period”.

In 2015, two techniques, namely the electrical resistivity tomography (ERT) and the magnetic method were employed to investigate the anomalies outlined after the 2014 survey with further detail and resolution. A syscal R1+ switch 72 was used to collect ERT data. The unit has 72 electrodes lied on a profile line driven 5 to 10 cm into the ground to maintain galvanic contact with the ground. The electrodes were spaced 0.75 m in a dipole-dipole configuration in a profile line and with this configuration it is possible to probe the ground to a depth of about 7 m; the profile lines have 0.75 m spacing.

With this setting, 268 ERT data have been collected at 268 measure points on a vertical section of the ground. These dense ERT data have then been processed and a 3D model of the subsurface from which possible archaeological anomalies have been inferred and compared to those resulted from the magnetic method has been provided.

In 2016, three test excavations were conducted in the area of the settlement at site SG 1. These were aimed at defining the nature of subsurface anomalies highlighted by the combined results from magnetic method and electrical resistivity tomography (ERT) employed during the previous field seasons to detect, with non destructive procedures, the presence of archaeological features in the ground. Test excavations were conducted in the northernmost terrace of the settlement area and confirmed the presence of ancient structures (walls, wall collapses and paved areas) at a depth of 15-20 cm below the present ploughed top-soil, as suggested by the corresponding imagery.

Conclusions (Luisa Sernicola, Laurel Phillipson and Rodolfo Fattovich)

Archaeological investigations conducted in 2015 and 2016 at Seglamente (site SG), Medogwe (site MDG I) and in the southern sector of the study-area, added new significant pieces of information for the puzzling out of the complex pattern of social, economic and cultural interactions that characterized and intertwined the people leaving along the river valley linking the central Tigrean highlands and the southwestern lowlands between the early 1st millennium BC and the 1st millennium AD.

Excavations carried out at the cemetery of SG 1 provided additional evidence on the

different types of funerary features and practices adopted at this site during the mid 1st millennium BC. In addition to the rectangular and circular single-burial shafts, whether or not associated with funerary stelae, we now have evidence of at least one multiple burial where two individuals, whose funerary kit included ornaments and stone crescents, were placed within the same tomb at a presumably relatively long-time distance from each other.

A good quantity of clay models of houses and compounds has been collected during the 2016 excavations at the cemetery. These, coupled with the few other specimens from previous seasons, give additional indications on the construction techniques and the use of internal space in pre-Aksumite private houses. Their occurrence within the grave goods, suggests that the compound had a relevant role in the social and ideological sphere of the people living in this area early in the 1st millennium BC. This probably continued during the subsequent centuries if we consider these clay models of compounds has prototypes of the so-called architectural basins found in Proto-Aksumite and Aksumite tombs at Bieta Giyorgis (Fattovich *et alii* 2000). Further studies on the distribution of these objects within the Seglamente pre-Aksumite cemetery, and of their possible association with a peculiar type of burial and grave good might provide information on the social organization of these people. Unfortunately, the very bad general state of preservation of the skeletons deprives us of a prominent source of data in this sense.

Little information has been obtained so far from the analysis of the very few relatively better preserved skeletal remains found at the cemetery. On the contrary significant indications on age, sex and paleopathologies resulted from the study of the two burials recorded in the settlement area, which released evidence of two subadults (a boy and a girl between 13-15 and 11.5-13.5 years old respectively). Intriguingly, both have traces of head injuries as well as of exposure to maltreatment and overexertion. Additional analysis and more precise dating may provide indication about the nature of these intriguing burials located within the settlement.

Finally, the results of the latest phases of geophysical survey not only confirmed the efficiency of the prospection procedures employed so far, but also allowed to define with a greater detail the location of ancient structures

and to outline the general extent of the ancient settlement and cemetery.

Last, but not less relevant, with the valuable work done in the 2015 season in locating new sites away from Seglamente and making surface collections at most of these, it is becoming possible to attempt the construction of a diachronic picture of human settlement in our research area. However, in the absence of firm dating evidence, it must be remembered that such a reconstruction is necessarily tentative, simplistic, and likely to be revised by further research. The majority of the southernmost sites show evidence of a local tradition in stone knapping and ceramics production, and of contacts with the people living in and around Aksum (including Seglamente) since at least the pre-Aksumite period.

Concomitant with occupation at Seglamente, chert exposures close to Adet were exploited by,

probably transient, perhaps cattle-herding, visitors who left no remains of permanent structures and no potsherds. A principle aim of their lithic activity was the production of unusually thick, large flakes. If these people were of a different cultural tradition from the Pre-Aksumites there may have been a Pre-Aksumite temple or administrative building where contact was monitored and trade controlled. Such a site has yet to be located.

The survey in this area has revealed a different settlement pattern from the area of Aksum and its surroundings, with large, dispersed settlement probably occupied by pastoral groups. The complete analysis of the evidence recorded in these years as well as future investigations would contribute additional information.

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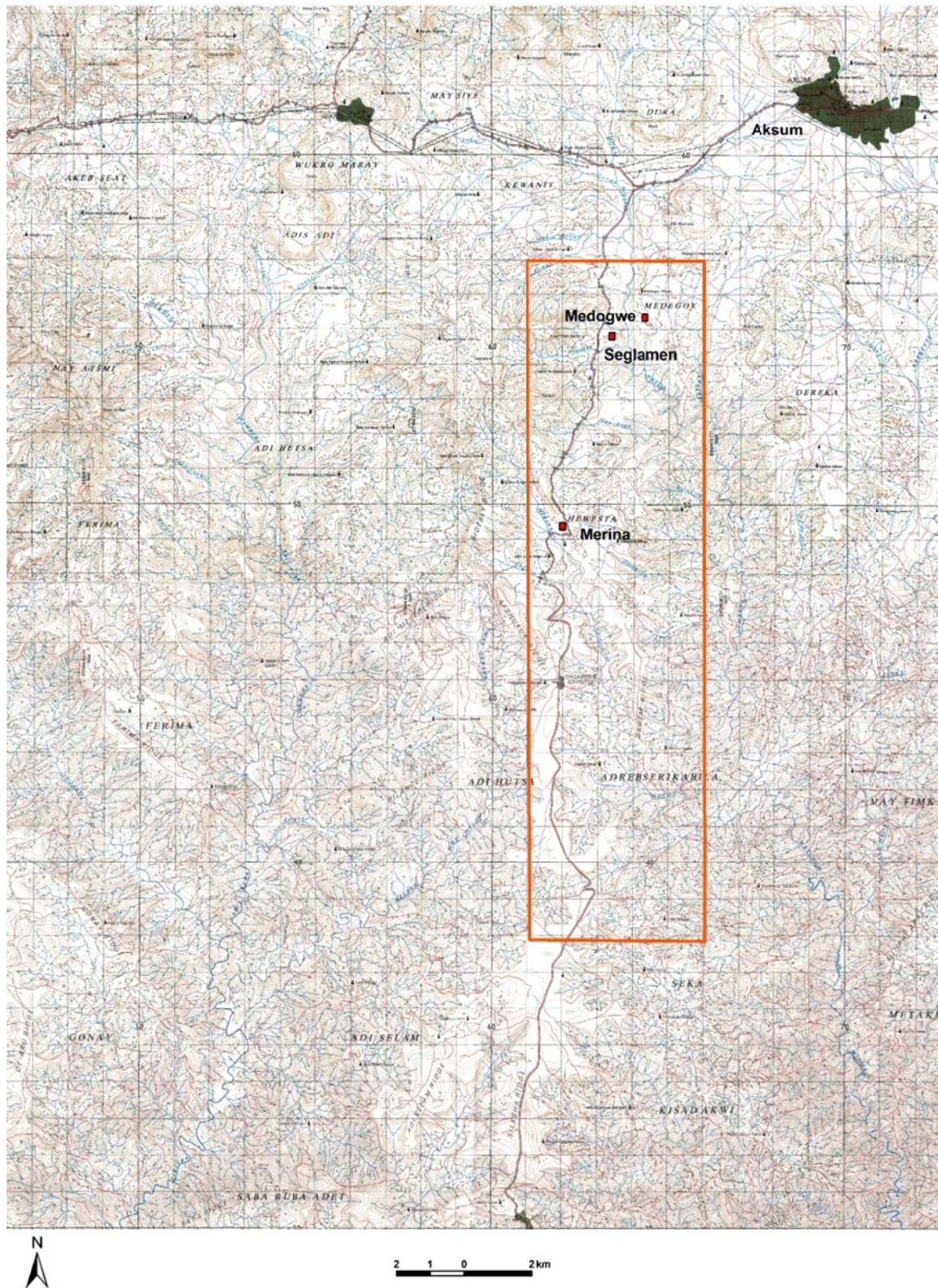


Fig. 1 - Map showing the study-area with major sites of investigation



Fig. 2 - Large chert flakes from site AD 17



Fig. 3 - Complete pot from Tomb 26 at Seg XVI



Fig. 4 - Clay model of a house from Feature 6 at Seg XVI



Fig. 5 - Iron shackles around the ankles of SEG X - A



Fig. 6 - *Peri-mortem* penetrating injury in the left parietal bone of SEG X - A



Fig. 7- Perforating lesion at the right temporal bone of SEG X - B