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A survey in the Wadi Awatib near Naga

Introduction

Since 1996 an Expedition of the Egyptian Museum in Berlin led by Professor Dietrich Wildung has been conducting excavations in Naga, in the Central Sudan. During the seasons 2001 and 2002 the authors of the following report encouraged by the leaders of the expedition (Lech Krzyżaniak, Karla Kroeper and Dietrich Wildung) and supported by the approval of the Sudanese Antiquity Service and IAE PAN in Poznań management, launched a surface examination of the middle section of Wadi Awatib, where Naga site is located. Ewa Kuciewicz and Eliza Jaroni from the Archaeological Museum in Poznań occasionally took part in the research. The main objective of the research undertaken was to register every form of settlement which would enable the recognition of the wide settlement context of the above mentioned site, situated relatively far distant from the Nile Valley.

Localization

Wadi Awatib, or more precisely a system made up of the main wadi and a couple of side branches floating into it, is situated on the Butana Plain in the Central Sudan. The Wadi cuts into the surface of the plateau, built mainly of Tertiary sedimentary rocks (mostly sandstone), occurring on the bedrock of the Pre-Cambrian crystalline rocks, the so called Nubian-Arabian Shield (Plit 1996). The Wadi Awatib is over 50 km long and runs from south-east to north-west, flowing into the Nile Valley between the Sixth Nile Cataract (about 60 km to SW) and the town of Shendi (about 40 km to NE), in the vicinity of Wad Ben Naga (Fig. 1)

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Fig. 1. Localization of the Wadi Awatib in Central Sudan.

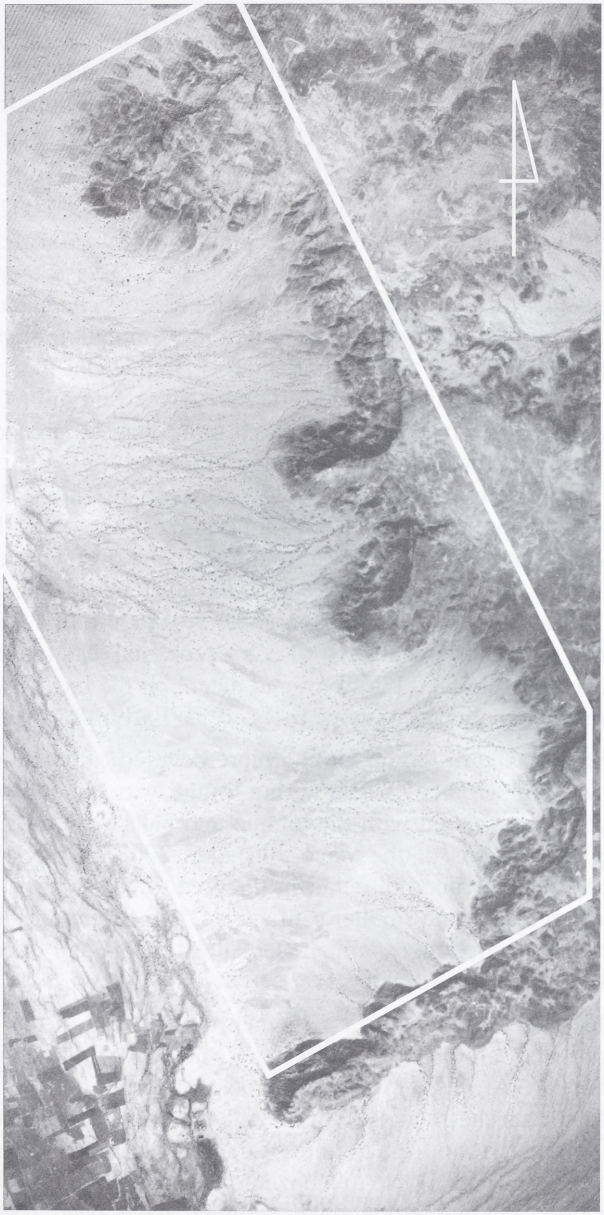

Fig. 2. Wadi Awatib. Tested Area.

Research

The research covered the central section of the Wadi Awatib, lying between Jebel Naga on the south and Jebel Matruk on the north. It is about 6 km long in a straight line and about 2.5 km wide in a transect, comprising both the foot of the wadi and the western edge separating it from the plateau (Fig. 2).

At the beginning of the research the authors had neither precise maps nor aerial photos of the area (the latter being available only since 2002), therefore in the first stage of the research it was necessary to draw a sketch plan of the examined area which would allow more or less precise mapping of the archaeological sites. A simple sketch, including the most characteristic elements of the relief, was made in the course of walking examination along the top and bottom edges of the plateau for several times, mapping the most characteristic points of the relief by means of the GPS device (eTrex Summit - GARMIN). As early as during the first stage of the research more than 60 archaeological sites were discovered and tentatively recorded. It was possible to determine superficially the function and chronology of some of them. They included settlements, workshops, burial grounds, single graves, as well as loose findings dated from the Middle Paleolithic, through Early Khartoum and Khartoum Neolithic up to the Meroitic period. A peculiar cluster of Stone Age sites was identified in the northern part of the area under research, in the vicinity of Jebel al Matruk. Prior to the survey professor Lech Krzyżaniak had already discovered in this area a settlement and a burial ground dated, on the basis of pottery found on the surface and some forms of stone tools, to the Early Khartoum period.

At the next stage of the research a more detailed examination of the area in question was undertaken. The starting point was the already identified northern cemetery associated with the temple and palace complex of the site of Naga. During the seasons of the years 2001 and 2002 40 archaeological sites were recorded and catalogued in detail in the area to the north of the cemetery, including four large and nine smaller settlements, two flint workshops, six burial grounds and seven single graves, nine traces of settlement and three structures of unclassifiable chronology and function.

The oldest recorded traces of settlement on the area of the Wadi Awatib, which most probably are dated to Lower and Middle Paleolithic, constitute two small workshops (WA 38, 39) for pretreatment of ferruginous sandstone. They were both situated on the rock shelving of the slope of the plateau, between its culminate point and the foot (the bottom of the wadi). These workshops covered a relatively small area of a couple to a dozen or so square metres. Nodules of raw material, precores and numerous flake debitage have been found (including levallois flakes). A single chopping tool (WA 32) found on the same rock shelving can be dated to the same period (Fig. 3).

Fig. 3. Site WA 32. Chopping tool.

On the basis of stone artefacts as well as pottery four large settlements (WA 4, WA 7, WA 20, WA 23) can be connected with the Early Khartoum and Khartoum Neolithic settlement. The first one, situated on a relatively steep northern slope of the plateau shelving to the valley of a little side wadi, could have been connected with a rock shelter situated in the upper part of the slope. The archaeological material was relatively widely scattered over the area of a few hundred square metres, next to and below the shelter. Among the artefacts that have been found numerous tools and stone debitage deserve special attention. Small quartzite pebbles constituted the dominant sort of raw material, together with a large group of ferruginous sandstone and conglomerate. Quartz is predominantly found in the form of small pebbles of various colours (most often

white, but also bluish, pinkish, yellowish). The pebbles originated mainly from the crumbling of Nubian sandstone. They occurred both in the area of crumbling of the sandstone constituting the bedrock as well as in the form of secondary deposit on the surface of Nile terraces and the wadi flowing into them. It was widely used in the Paleolithic but most commonly in the Neolithic (Arkell 1949; Kobusiewicz 1976; Krzyżaniak 1992). Its percentage contribution into the material structure of stone inventories on some sites in the Central Sudan, e.g. in Kadero, amounts to over 90% (Krzyżaniak 1992; Kobusiewicz 1996).

Single finds of debitage of fossilised wood and chert have been recorded as well. Quartz was predominantly used for small tools. The blanks were produced in two ways: either through traditional exploitation of predominantly small blade or flake cores (mainly single platform ones), or through the slicing technology aimed at obtaining regular crescent-shape flakes with one sharp edge from which segments were produced, used as armatures for composite tools (Kobusiewicz 1996).

A few quartzite cores as well as numerous debitage products from various phases of blank production have been found on the site. Among the tools two finished segments, a few retouched flakes and cortical blades, a side scraper, a notch and a drillbit (all produced by retouching cortical flakes) have been recorded. Ferruginous sandstone was used for producing classic cores as well as plentiful debitage in the form of relatively large flakes and blades struck off the single platform cores. Among other raw materials a scraper is made of fossilised wood and a core with changed orientation for blades and flakes (Fig. 4). Stone macrolithic tools are also abundant, including numerous fragments of querns, mainly flat forms, heavily exploited, often with visible traces of roughing, a number of grinding stone types (from flat to spherical forms, different types of hammers, retouchers and anvils Fig. 5). There can be found numerous examples of remaking large damaged tools into smaller forms. The raw material constituted mainly local types of sandstone, in case of hammers the hard ferrous type as well as quartz pebbles and nodules of conglomerate. Single fragments of Early Khartoum pottery have also been found on the site (identification according to L. Krzyżaniak).

The others of the large settlements mentioned (WA 7, WA 20, WA 23) were situated on a vast dune (originated probably to the close of Pleistocene), adjacent to the plateau forming the edge of the Wadi Awatib. In every case the archaeological material was scattered on the surface of several dozens of acres. The structure of the inventory was similar to the material found in the WA 4 settlement. Small tools, cores and quartzite debitage and also single tools, cores

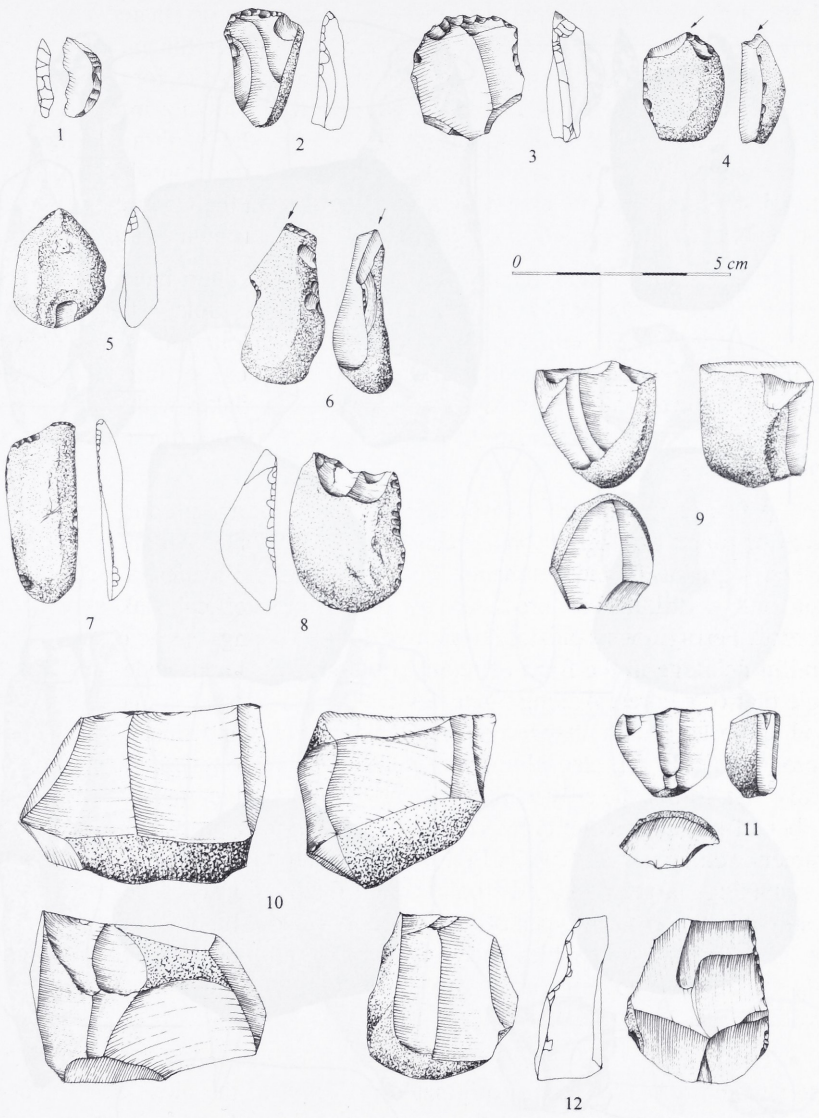

Fig. 4. Site WA 4. Cores and implements of quartz and sandstone.

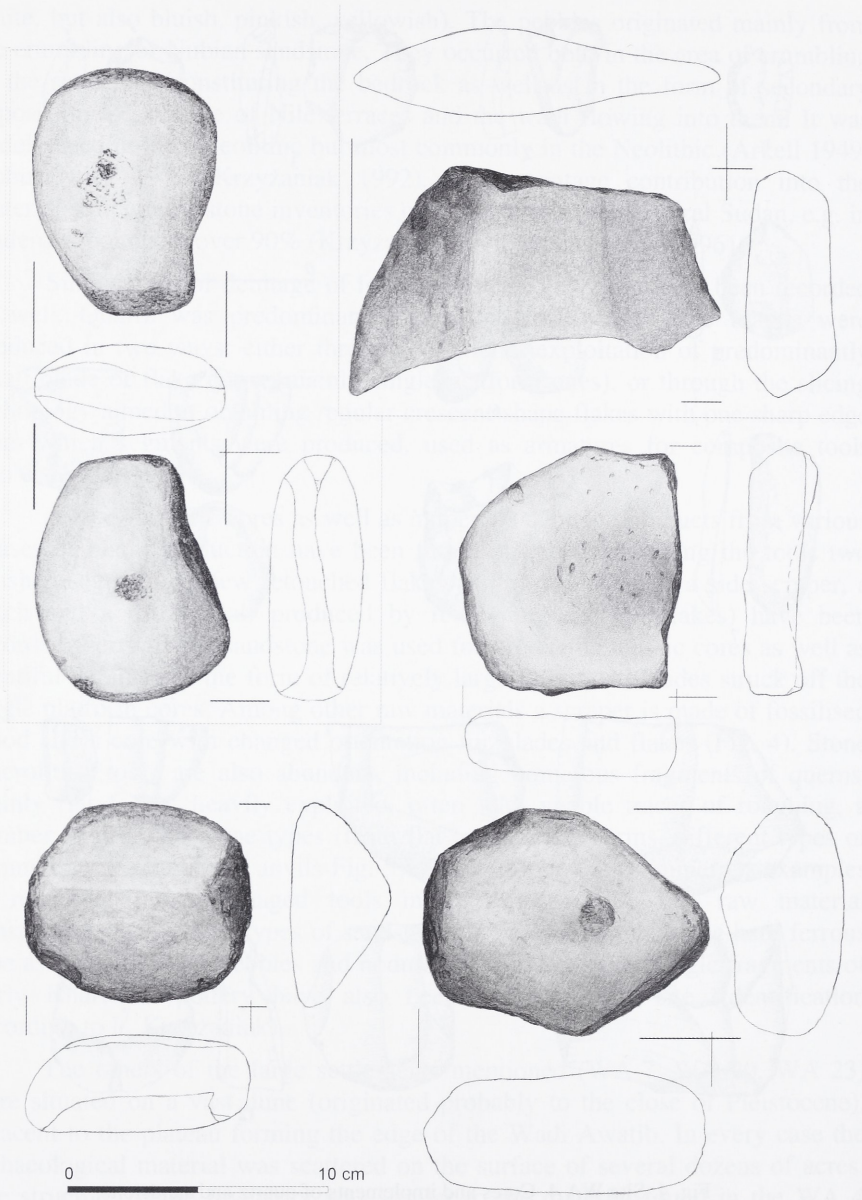

Fig. 5. Site WA 4. Macrolithic stone tools.

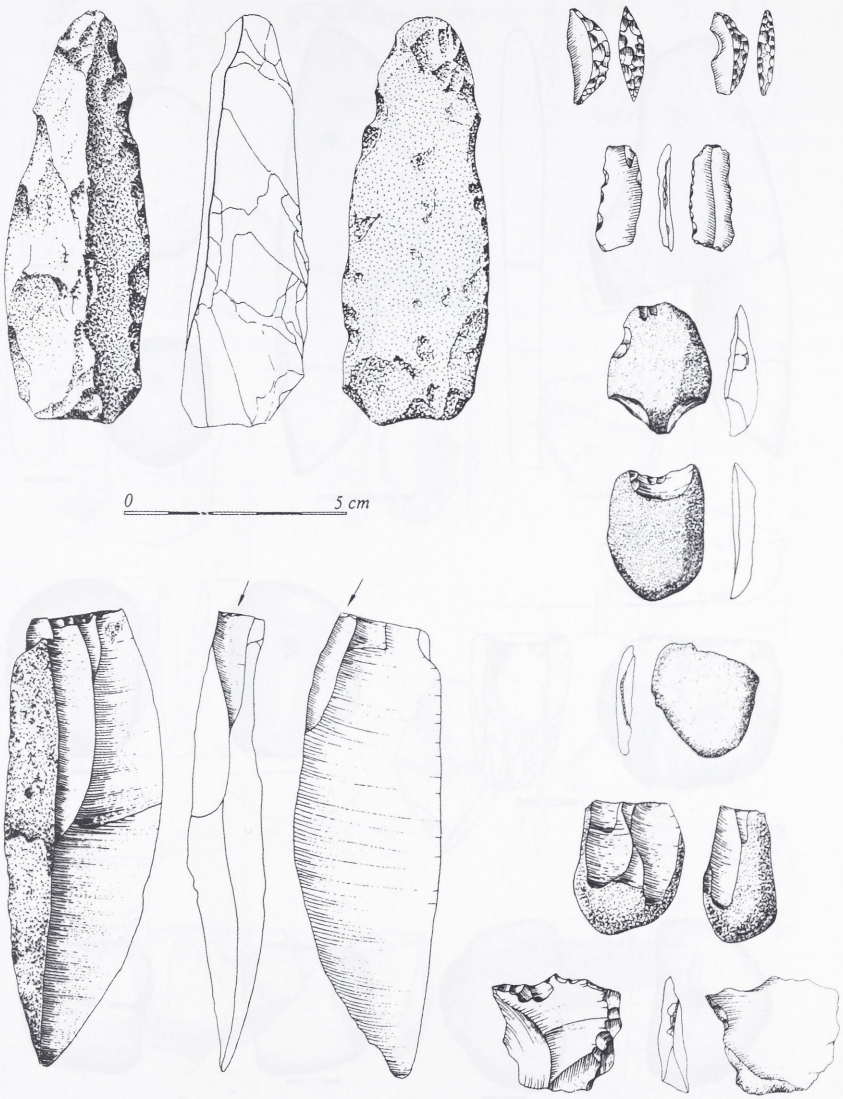

Fig. 6. Site WA 7. Cores and implements of quartz, chert and sandstone.

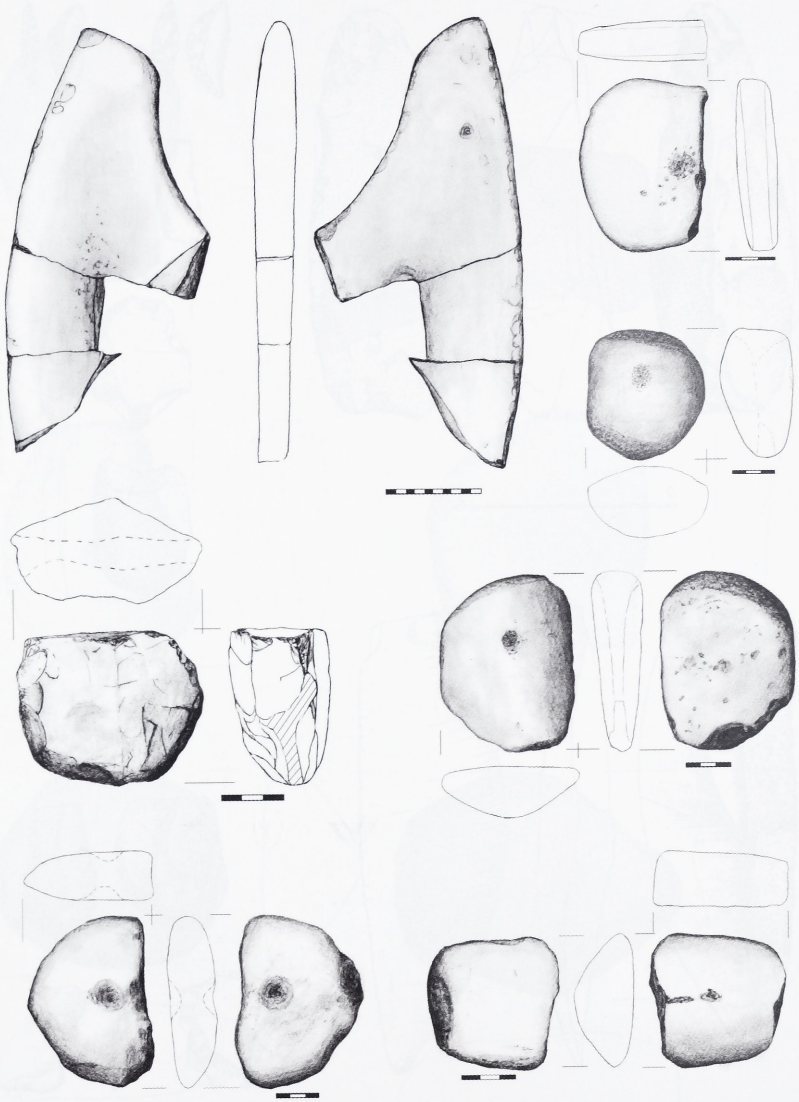

Fig. 7. Site WA 7. Macrolithic stone tools.

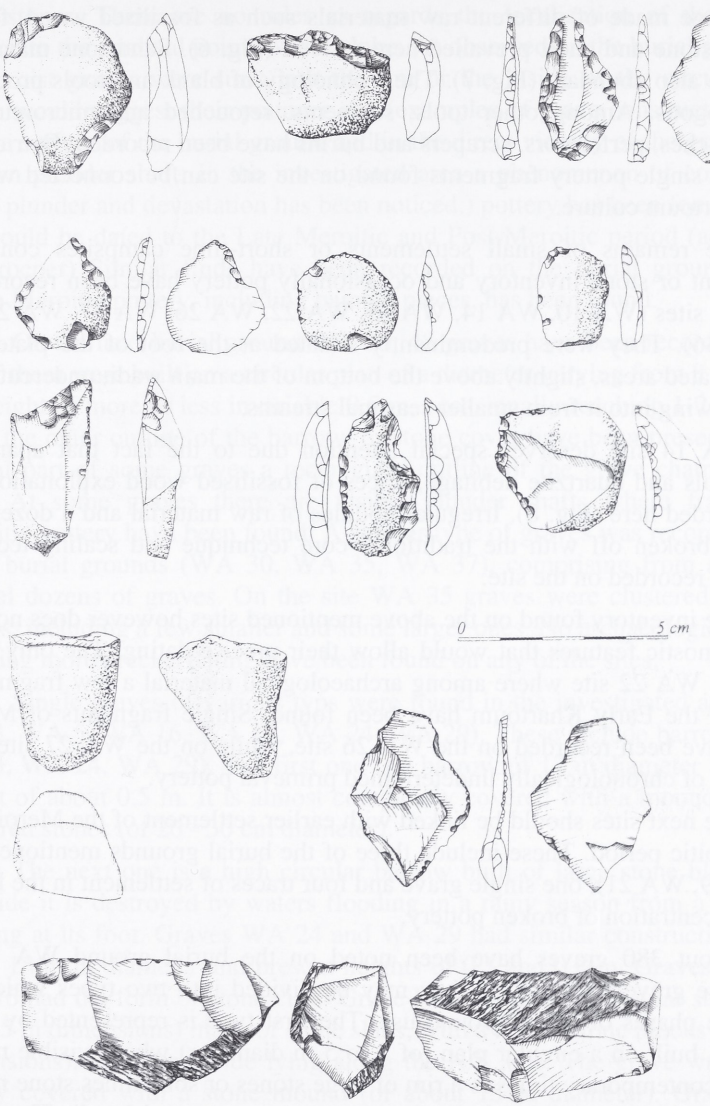

Fig. 8. Sites WA 14 (1-3) and WA 15 (4-12). Cores and implements of quartz and fossilised wood.

and debitage made of different raw materials such as fossilised wood, ferruginous sandstone and chert prevailed here as well (Fig. 6). Sandstone macrolithic tools were also abundant (Fig. 7). The technology of blank and tools production was analogous. Among other tools, segments, retouched and microretouched flakes, notches, perforators, scrapers and burins have been recorded. Ostrich eggshells and single pottery fragments found on the site can be connected with the Early Khartoum culture.

The remains of small settlements or short-time campsites containing similar flint or stone inventory and occasionally pottery have been recorded on nine other sites (WA 10, WA 14, WA 15, WA 22, WA 26, WA 27, WA 28, WA 34, WA 36). They were predominantly situated at the foot of the plateau, on small elevated areas, slightly above the bottom of the main wadi, undercut by the waters flowing into it from smaller seasonal streams.

WA 14 site deserves special attention due to the fact that apart from typical tools and quartzite debitage, traces of fossilised wood exploitation have been recorded here (Fig. 8). Irregular nodules of raw material and a dozen or so of flakes broken off with the traditional core technique and scaling technique have been recorded on the site.

The inventory found on the above mentioned sites however does not show clear diagnostic features that would allow their precise dating. The only exception is the WA 22 site where among archaeological material a few fragments of pottery of the Early Khartoum have been found. Single fragments of Meroitic pottery have been recorded on the WA 26 site, while on the WA 27 site single fragments of chronologically undetermined primeval pottery.

The next sites should be linked with earlier settlement of the Meroitic and Post-Meroitic period. These include three of the burial grounds mentioned (WA 13, WA 19, WA 21), one single grave and four traces of settlement in the form of small concentration of broken pottery.

About 380 graves have been noted on the burial ground WA 13. As regards the grave construction they may be divided into two types which may reflect the phases of burial ground use. The first type is represented by graves (barrows), built on a circular plan (of 2 to 5 m diameter) whose visible remains up to the contemporary times is a rim of large stones or sometimes stone mounds not more than 1.5 m high (above the contemporary ground level). The dimensions were worked out on the basis of an analysis of 34 graves, i.e. approx. 10% research of all graves on the burial ground. The other type is represented by graves in the form of stone cists (of 2-3.5 x 1-2.5 m) built on a rectangular plan and covered with a stone mound (of 2.5-5 x 1.5-4 m of height not exceeding 1.5 m at the highest point). Sometimes the grave cists have an additional rim made of

large stones. There are no rules as regards the localization of the graves in relation to the cardinal points of the globe. As observed on the burial ground, part of the cist graves were sunk into the rim or the inside of the circular graves, which would suggest their younger age (examples of grave construction Fig. 9). On the surface of the burial ground and in the direct vicinity of the graves (in the modern plunder shaft; in the investigated area a phenomenon of contemporary grave plunder and devastation has been noticed.) pottery has been found (Fig. 10) that could be dated to the Late Meroitic and Post-Meroitic period (according to K. Kroeper) Similar finds have been recorded on the burial ground WA 21, where Meroitic pottery, including painted pieces, has been found.

On the next burial ground WA 19, 48 graves have been recorded in total. All of them were built on a circular plan of a diameter varying from 8 – 20 m and the height of more or less invariable 0.5 m, occasionally reaching 1-2 m. In most cases the outer outline of the barrow, or stone cover have been preserved. In the central part of some graves a rectangular outline of the grave chamber can be seen. At some graves there are visible plunder shafts where fragments of Meroitic pottery have been found. A similar type of graves was recorded at three other burial grounds (WA 30, WA 35, WA 37), comprising from a couple to several dozens of graves. On the site WA 35 graves were clustered into a few groups, including a few smaller and some larger ones. No archaeological material allowing more precise dating have been found on any of the sites.

Single graves of various typs were found in the investigated area (WA 1, WA 3, WA 5, WA 16, WA 17, WA 24, WA 29). These include barrows (WA 1, WA 3, WA 24, WA 29). The first one is a barrow of 12 m diameter and present height of about 0.5 m. It is almost completely covered with a mound of loosely scattered stones (of 20 - 30 cm diameter).

The next one is a high circular barrow built of large stone blocks. From one side it is destroyed by waters flooding in a rainy season from a small wadi running at its foot. Graves WA 24 and WA 29 had similar construction, both of about 18 m in diameter and present heights of 0.5 and 0.8 m. Graves WA 5 and WA 16 had the form of stone cists. Grave WA 5 was a rectangular stone cist (of 3 x 1.5 m dimensions) made of stone slabs, with a rim of stone blocks (of 5 x 9 m dimensions), the longer side lying along the N/S axis. The grave was probably totally covered with a stone mound (of about 15 m diameter). Grave WA 16 originally must have had a form of a small rectangular stone mound of 1.7 x 2.2 m dimensions, its longer side lying parallel to the N/S axis. The large tomb (WA 17), of 28.5 x 10.5 m in dimensions, was built on a rectangular plan, with its longer side parallel to the W/E axis and an asymmetrically situated rectangular grave cist (of 6 x 3 m dimensions), to which a small corridor was leading from the East of 1 x 1 m dimensions. WA 3 was the only grave whose chronology

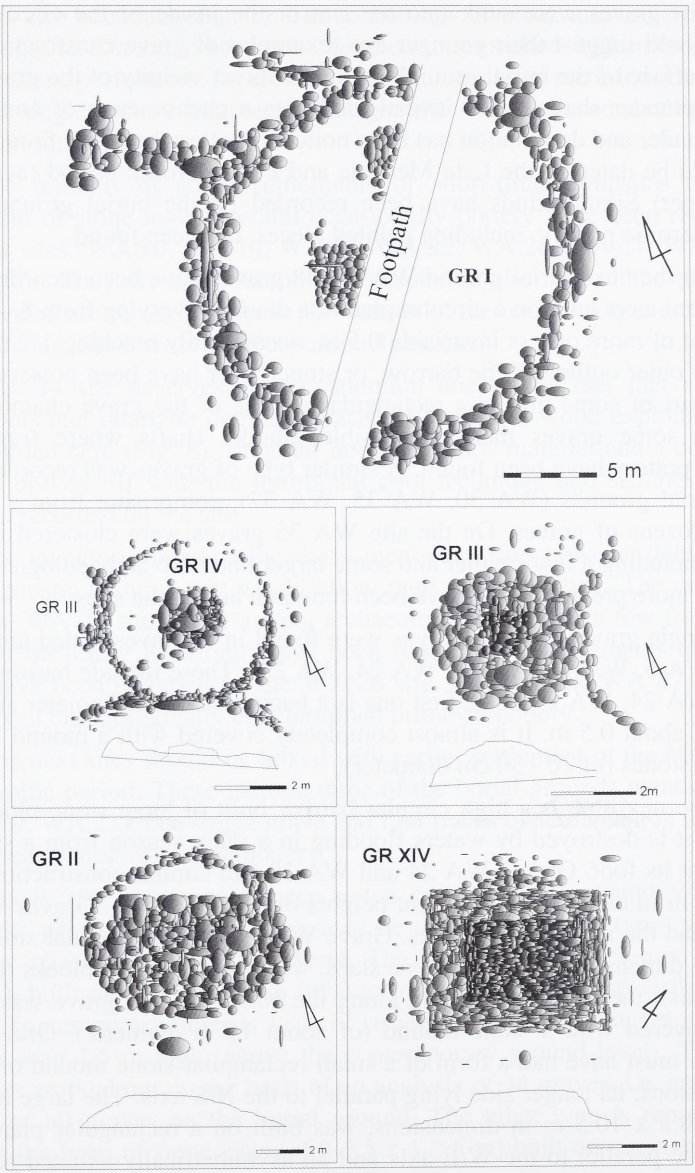

Fig. 9. Site WA 13. Plans of exemplary grave constructions.

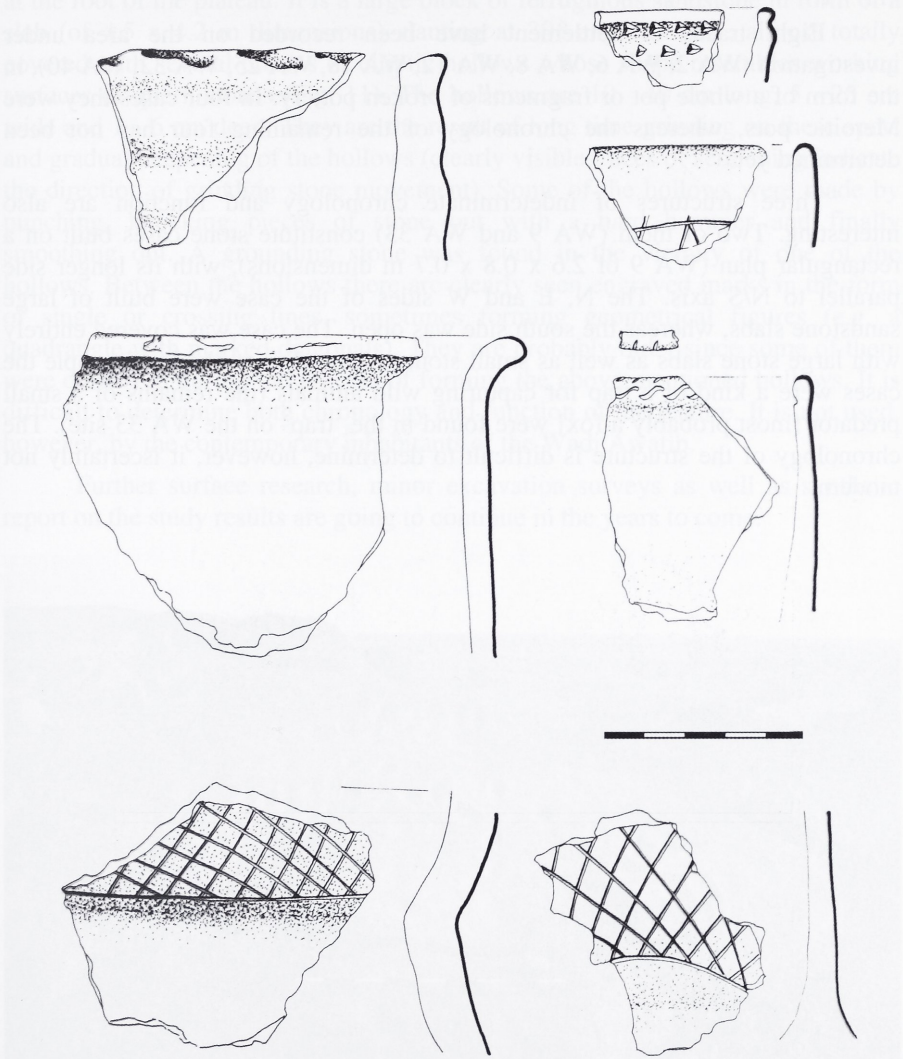

Fig. 10. Site WA 13. Pottery fragments.

could be determined, due to pottery found in a small plunder shaft situated in the upper part of the barrow.

Eight traces of settlement have been recorded on the area under investigation (WA 2, WA 6, WA 8, WA 12, WA 18, WA 25, WA 32, WA 40), in the form of a whole pot or fragments of broken pottery. In four cases they were Meroitic pots, whereas the chronology of the remaining four has not been determined yet.

Three structures of indeterminate chronology and function are also interesting. Two of them (WA 9 and WA 33) constitute stone cases built on a rectangular plan (WA 9 of 2.6 x 0.8 x 0.7 m dimensions), with its longer side parallel to N/S axis. The N, E and W sides of the case were built of large sandstone slabs, whereas the south side was open. The case was covered entirely with large stone slabs as well as small stones. According to the local people the cases were a kind of a trap for capturing wild animals (the remains of a small predator [most probably a fox] were found in the 'trap' on the WA 33 site). The chronology of the structure is difficult to determine, however, it iscertainly not modern.

Fig. 11. Site WA 11. Indeterminate feature.

The third feature (WA 11) is situated in the central part of a wide hill lying at the foot of the plateau. It is a large block of ferruginous sandstone in form of a slab (of 4.5 x 4.2 m dimensions) slanting at 30° angle to NW, almost totally covered with several dozens of elliptic hollows whose shape resembles working surfaces of quern stones (Fig. 11). The hollows are 10 - 40 cm long, 5 - 25 cm wide and 1 - 6 cm deep. They are the result of long time grinding on these spots and gradual deepening of the hollows (clearly visible traces of scratching indicate the direction of grinding stone movement). Some of the hollows were made by punching, knocking pieces of stone out with a hard hammer and finally smoothing out. A grounding stone was found in the vicinity of one of the hollows. Between the hollows there are clearly seen engraved marks in the form of single or crossing lines, sometimes forming geometrical figures (e.g. a quadrangle with marked diagonals). They are probably older since some of them were destroyed during the process of forming the above mentioned hollows. It is difficult to determine both chronology and function of the feature. It is not used, however, by the contemporary inhabitants of the Wadi Awatib.

Further surface research, minor excavation surveys as well as synthetic report on the study results are going to continue in the years to come.

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