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THE WADI HALFA REGION
(NORTHERN SUDAN) IN THE
STONE AGE

BASED ON THE RESEARCHES OF THE
SCANDINAVIAN JOINT EXPEDITION TO
NUBIA 1962-1963

(Preliminary report)

BY

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HELSINKI 1965

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The concession of the Scandinavian Joint Expedition to Nubia included approximately 55 kilometres on the eastern bank of the Nile and extended from the Sudan-Egyptian border to the Gemai plain south of the already uninhabited town of Wadi Halfa. During the season 1962—1963 the Expedition concentrated their research on sites located during the former seasons in the northern part of the concession (from the border to Wadi Halfa, fig. 1). The writer, together with Mr. Knut Odner from Norway, devoted himself to completing the location work on the stone age sites and to the excavation of some dwelling places.¹ Even during this work on the terrain it became clear how immense was the number of the problems concerning the stone age of these regions. Thus it might be worthwhile to

¹ Lithic material was also collected by The Archaeological Survey of the Sudan Antiquities Service (KUSH X pp. 12, 22, 28; XI pp. 16—18), Columbia University Nubian Expedition in Sudan (KUSH XI pp. 70—92, 96—107), The Franco-Argentine Archaeological Mission in the Sudan (KUSH XI p.139), The Spanish Mission (KUSH XI p.187), The Museum of New Mexico-Columbia University Nubian Expedition (KUSH XII pp. 12—18) and The University of Colorado Nubian Expedition (KUSH XII p. 183—186), but the results of these investigations are not available to the present writer.

present the picture which then emerged — not so much as a final result but rather as a preliminary sketch. This will provide a basis for arranging the material and solving the problems. The whole of the material collected will soon be published as a catalogue in the serial publication dedicated to the Expedition; not until then can the problems be defined exactly for discussion proper.

Excavations were carried out on four stone age sites belonging to three different periods: site 322 represents the palaeolithic age, site 296 the microlithic mesolithic age and sites 18 and 89 the early neolithic age. In addition a statistical sample was taken from sites 320 and 348, contemporary to site 296 (all the finds in an area 5×5 m. were collected.) A similar sample was taken from site 352, contemporary to site 89, and another from the dwelling place marked with the letter A on the map (fig. 1). The position of this site in the relative sequence will be discussed further on. First sites 322 (Levalloisian), 320 (mesolithic) and 89 (early neolithic) will be dealt with in some detail.

Site 322

The site is situated a good kilometre to the east of the Debeira station, approximately two kilometres from the Nile (coord. 933 500 N, 656 850 E) near the eastern slope of a 150 m. long hill rising up in the middle of a great wadi. The hill is covered with quartzite slabs and pebbles (ferricrete sandstone, the so-called »ironstone») among which there were plenty of palaeolithic flakes and artifacts in an area 20×50 m. The wadi surrounding the hill leads to a large palaeolithic site 182, about two kilometres to the ESE, on which Dr. Ville Luho carried out excavations during the former season.

The place for closer study was chosen from the area where the surface finds were densest. A small test pit made earlier in locating the site revealed some sharp-edged flakes and artifacts lying »in situ». The edges of the surface finds were as usual smoothed by wind and sand.

Six test pits were made in all, two of which were completely empty of finds. The observations made on the soil were similar for all the

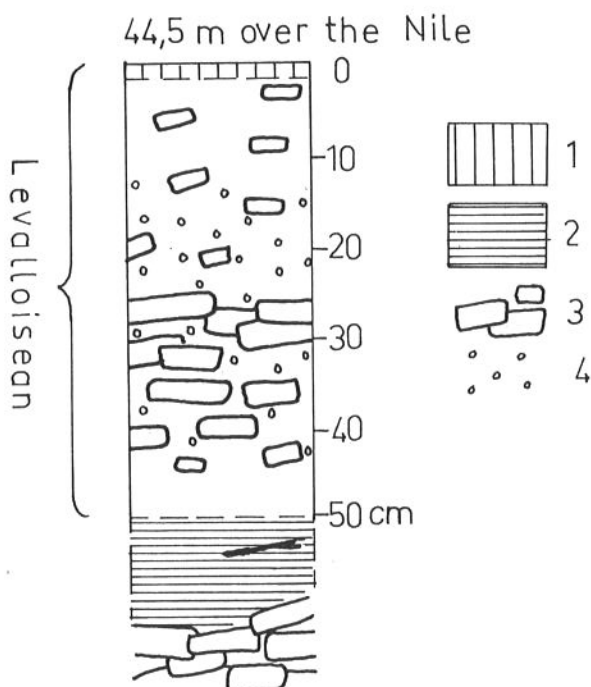


Fig. 2. The schematic profile of the soil of site 322. 1 = the light surface sand; 2 = the hard pink layer of sand; 3 = quartzite slabs; 4 = Cleopatra-shells.

pits (fig. 2). On the surface there was a c. 2 cm. thick layer of light loose sand, with pink sand underneath to a depth of 25 cm. Beneath this, up to c. 40—45 cm. below the surface, there were quite large sharp-edged quartzite slabs; and at a depth of 50 cm a very hard layer of red sand was met. Small shells (Cleopatra) were encountered between a depth of 15—20 cm. and the bottom of the layer of the slabs; they seemed to be densest at a depth of 20—25 cm. Palaeolithic finds were made between the surface and a depth of 50 cm.; in the hard bottom layer there were none.

In the flaking and preparation of the cores the Levallois technique has been used. The striking platforms of the flakes are generally faceted; in addition striking platforms with secondary retouching occur. Mostly the form of the striking platform is characteristically curved («*en chapeau de gendarme*»). The angle between the striking

platform and the bulbar surface is usually almost 90° , but in some cases a wider angle with an unfaceted striking platform occurs (110° , 120° , 135° , 140°), reminding one of the so-called Clacton technique. Some flakes (particularly those with secondary retouching) miss the whole striking platform; in such cases the bulbar end is sharp or cut off or has been broken in use. Intentional removal seems more credible, for the finds included some flakes where the bulb has been flattened through careful knapping.

The flakes are quite thick; but, considering the raw material (quite coarse quartzite, often conglomeratic), rather thin blades of technically high quality occur. Sometimes these blades show lateral retouching. The triangular flake without secondary retouching seems to be very common. They occurred in both the upper and lower parts of the cultural layer. Typical oblong Levallois-flakes with dorsal facets are usual; they are often secondarily retouched.

Retouching the flake after it has been cut from the core (here termed »secondary retouching») seems to be quite rare considering the numerousness of the flakes. (By a rough estimate c. 5 per cent of the flakes had been retouched thus.) And when the retouching appears it is rather faint. The preparation of the cores by retouching in advance seems to have been more carefully done.

The cores are of discoid form, either roundish or oblong. The cross-section is lens-shaped or, if the surface (matrix) of the original stone slab is visible, flatter on the side of the flakes. Of the 52 cores measured 21 were of roundish, 18 of oblong, 4 of globular and 9 of irregular form. The beautifully retouched »tortoise core» in fig. 5 was unique. None of the cores were regularly round; the average index of eccentricity (the ratio of the shorter diameter to the longer as a percentage) was 87 for the roundish ones and 60 for the oblong ones. Some of these cores show vague secondary retouching or wear-marks, indicating that they might have been used as scrapers afterwards.

According to the characteristic features referred to above the material can be grouped into flakes with secondary retouching (artifacts, fig. 4), flakes without it (fig. 3) and cores (mainly discs, fig. 5

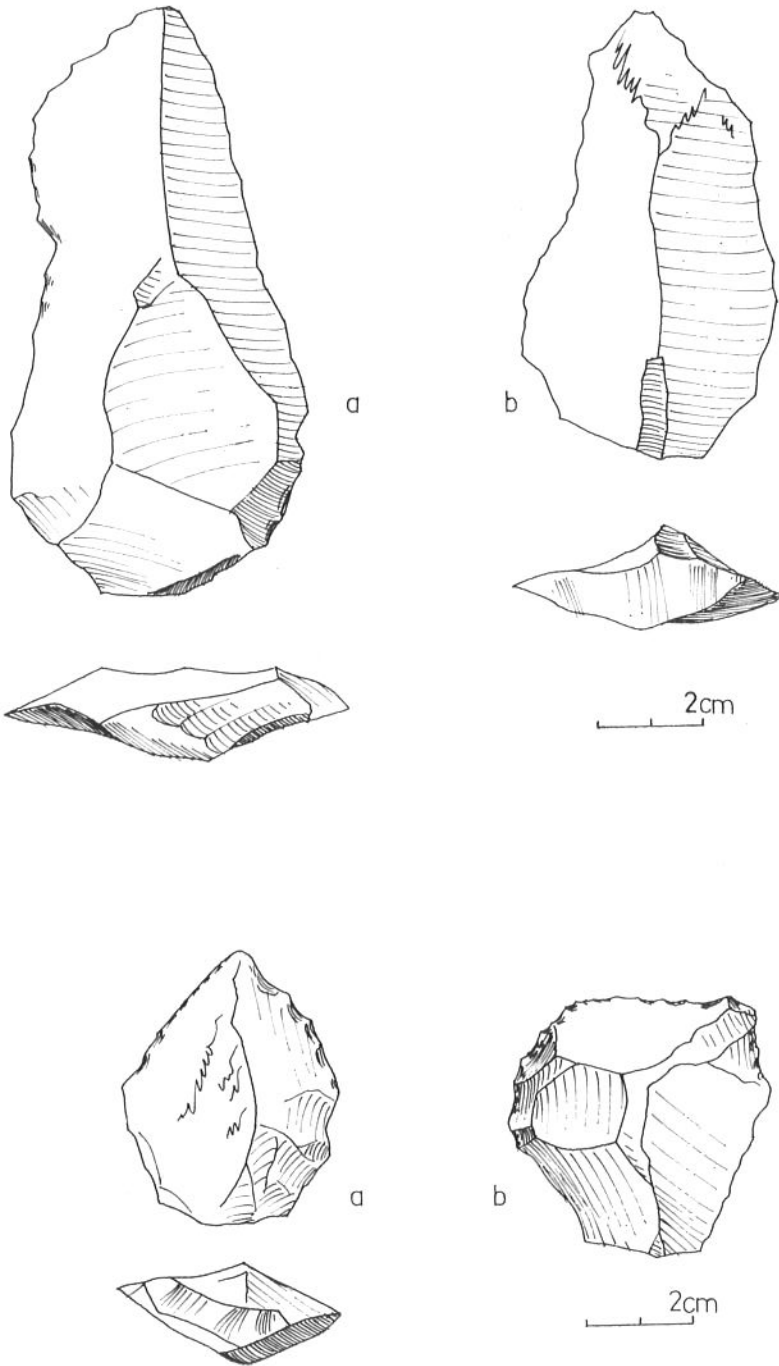


Fig. 3-4. Site 322, quartzite.

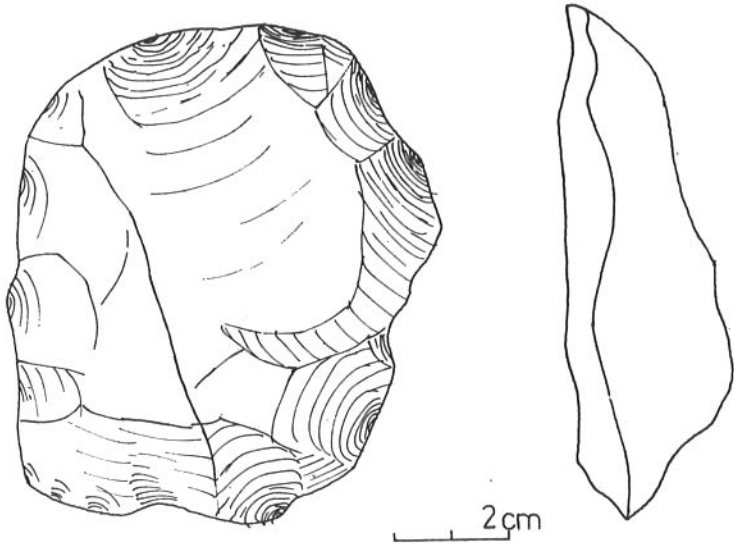
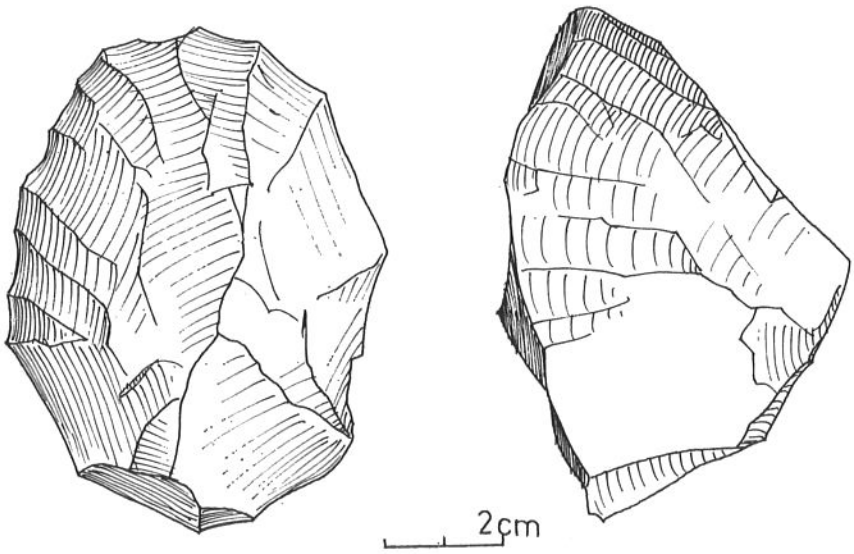


Fig. 5-6. Site 322, quartzite

and 6). The flakes can be further divided according to the form and/or handling of the striking platforms as follows:

- 1) flakes with striking platforms:
 - a) faceted;
 - b) straight;
- 2) flakes with sharp striking platforms;
- 3) flakes with striking platforms cut off;
- 4) flakes with secondarily retouched striking platforms.

The proportion of these secondarily retouched flakes to those without any retouching does not indicate the proportion of the artifacts to the waste, for it may be supposed with very great certainty that unretouched flakes were used as artifacts, as usual with the Levalloisian.

Artifacts typical of the Mousterian (in the European sense) could not be found among the discoveries on the site. There are some flakes retouched to points (fig. 4:a), but they are also met in purely Levalloisian environments (Caton-Thompson 1952 pl. 63:6, 68:6, 69:1, 72:1). The flat retouching typical of the Mousterian seems to be lacking.

I levelled site 322 up to the point of site 182, levelled by Ville Luho 17. 3. 1962. The height of Luho's site at that point was c. 80.5 m. above the Nile on that date. The surface of site 322 turned out to be 36 m. lower than that of site 182; thus its height on 17. 3. 1962 was 44,5 m. above the Nile. The bottom of the wadi to the north of the site was c. 4 m. below this.

The succession of soil layers was similar on sites 182 and 322; but the light grey surface sand, containing Upper Palaeolithic forms, on site 182 was absent from site 322. The hard red bottom layer was without finds on the latter site, as Luho reported finding younger Acheulean on the corresponding horizon of site 182. On the surface of site 322 the same Levalloisian technique occurred unmixed with younger forms; thus the Upper Palaeolithic had not accumulated on the surface here.

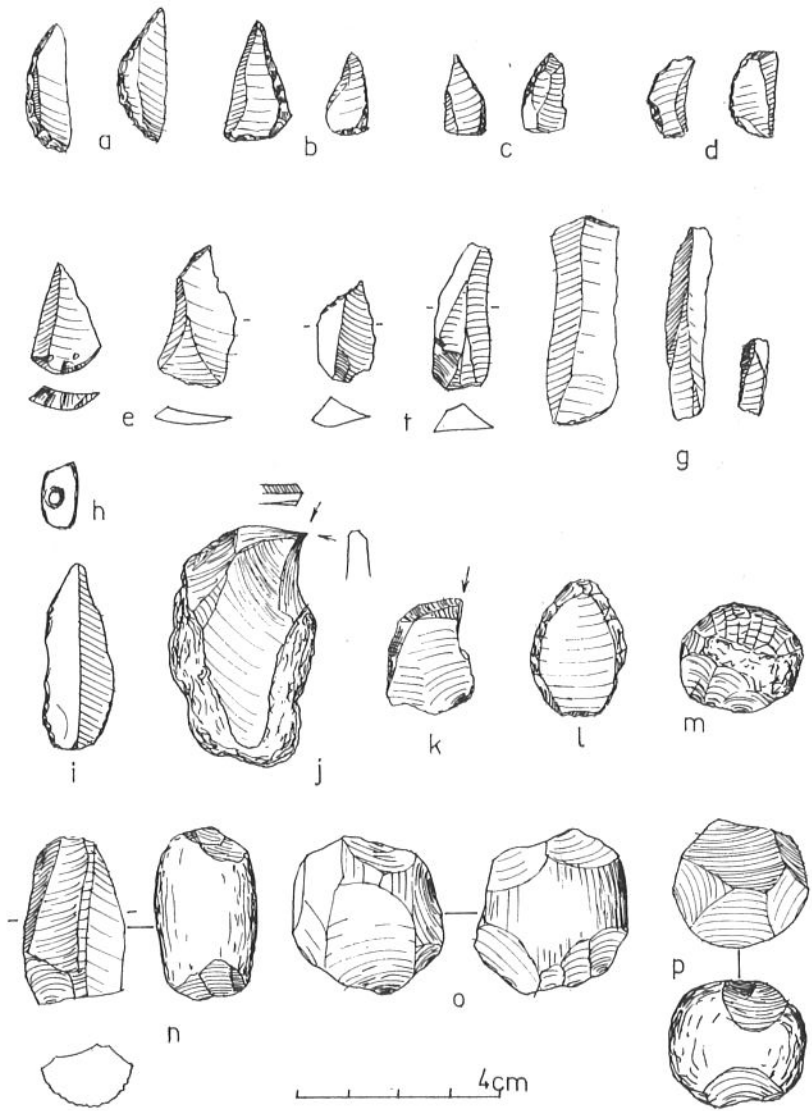


Fig. 7. Site 320, flint (except h: an ostrich egg-shell fragment).

Site 320

The period of the microlithic mesolithic culture is represented in our area by sites 320, 348 and 296. The first will be briefly discussed here.

The site is situated about 100 m. to the east of the village of Nag' Abd-el-Karim (coord. 942 750 N, 662 350 E) on the top of a silt slope sloping steeply to the Nile; the height is 15 m. above the level of the river. The silt accumulation was highest here, sloping gently to the south, north and east, too. In the sand layer stratified on the silt the remains of the dwelling place were found in an area c. 100 × 50 m. (There were artifacts and flakes of flint, ostrich egg-shell fragments, Unco-shells and partly fossilized bones of animals.) The sample was taken from an area 5 × 5 m. at the spot where the finds seemed to be densest. All the finds were gathered to obtain the most reliable statistical survey.

The artifacts and the flakes were almost completely made of flint (agate); only a few of them were made of quartzite. The finds were the following:

1. Geometric microliths	% (appr.)	
a) as fig. 7:a	61	15
b) as fig. 7:b	71	18
c) as fig. 7:c	8	2
d) as fig. 7:d	17	4,5
2. microburins	31	8
3. burins (fig. 7:j—k)	2	0,5
4. blades (fig. 7:g)	34	8,5
5. microperforators	1	0,25
6. perforators	2	0,5
7. triangular flakes (fig. 7:e)	56	14
8. like 7, more high-ridged (fig. 7:f)	22	5,5
9. big crescents (as 1:a)	6	1,5
10. blade-scrapers	11	3
11. flake-scrapers (often originally a core)	39	10
12. cores	91	(not incl.)
13. fragments of microliths (forms like 1)	35	9
14. an oblong, pointed biface (quartzite, like Garrod 1932 fig. B:1)	1	0,25
	total 397	100,5

The artifact environment is purely microlithic. For a long time a microlithic surface site has been known to the north of Wadi Halfa, in Debeira West, on the western bank of the Nile (Sandford & Arkell 1933 p. 49, 79). Characteristic of the artifact complex of this site are the numerous unretouched blades, cores of the type »with two butts», cylindrical blade-cores, flake-scrapers and the absence of burins. Microliths play an inconsiderable part; Sandford & Arkell illustrates only one crescent. The complex has, surprisingly enough, little in common with site 320 of ours, where microliths (only crescent-shaped ones here, too, indeed) dominate and burins are common. Also the cores are more various on the latter site: cores »with two butts» (fig. 7:n), discs (fig. 7:o), transitional forms between these (fig. 7:p) and cylindrical blade-cores. Blades are not so common: they were often retouched (blunted back, fig. 7:i). A group of unretouched triangular flakes seems extremely clearly discernible (»Levallois-flakes», fig. 7:e); these are lacking in the artifact complex described by Sandford & Arkell. The delicate retouching of the scraper (Sandford & Arkell 1933 pl. XLII:78) has a parallel on site 320 (fig. 7:m).

The burins (fig. 7:j and k) catch the eye immediately. The types — the polyhedral burin (fig. 7:j) and curved angle-burin (fig. 7:k) — are, as far as I know, rare in the African finds. Although big burins are lacking in the industry of Sebilian III on its eponyme site, they are found connected with this technique not so far from Sébil (Vignard 1955 c); the reader is also referred to the burin complex on the site of Champ de Bagasse, Nag Hamadi, Upper Egypt (Vignard 1957). Vignard connects this latter technique with the European »Protomagdalenian». In the Capsian of Maghreb and in the microlithic cultures of Cyrenaica the big burins belong to the artifact environment (Alimen 1957 pp. 53, 57, 66, 75 and McBurney 1960 pp. 193, 197, 202).

Sandford & Arkell correlates the site of Debeira West with Vignard's Sebilian III (1933 p. 49), and to this same complex belong the sites of our territory, too. The differences between Debeira West and our site may be due to the following: Debeira West is probably a flaking floor of flint and the artifacts were gathered from a quite



Fig. 8. Site 89, from the SE. To the right of the car the rocky surfaces with rock-carvings; beneath them the excavation area. To the right (marked with x) the area of the unmixed quartzite technique (cf. the text).

large area, while the sites in our region are presumably concise dwelling places. From another point of view, a technique quite correspondent to that of Debeira West is described by Sandford & Arkell (1933 pp. 49, 80) from Darau, Edfu (Upper Egypt), c.300 km. to the NE from Debeira; thus this kind of technique could have had a wide and compact distribution along the Nile.

Site 89

Site 89 is situated in the desert c. 4 km. from the village of Nag' Faqir Tibirki on the Nile (coord. 928 500 N, 656 425 E); it is at the foot of a steep-sloped rocky hill (fig. 8). The dwelling place is situated (about 183 m. above sea-level) on a low ridge extending from the hill straight to the SE and limited at the north and south by two branches of a great wadi. Large sandstone blocks have fallen from the slope of the hill, leaving even surfaces on the slope. Rock carvings can be clearly distinguished on these three surfaces and on the vertical surface of the greatest fallen block.

Beneath these walls, on the surface at the foot of the hill, there were plenty of quartzite flakes (as a rule unretouched), flint flakes, artifacts and some ceramic sherds. The area of the surface finds was divided into squares, 5×5 m., and the finds were gathered sepa-

rately from each of the squares. In this area there were also plenty of natural quartzite pebbles, but outside it they were fewer. A 5 m. broad and 13 m. long shakt was excavated beneath the large loose block; the surface sand was removed 19 m. further. The soil in the whole area was pink sand accumulated by wind; on the surface there was a 5 cm. thick loose layer of grey sand. The bottom of the excavation, at a depth of 0,5 m. consisted of sandstone rock.

There are no quartzite flakes among the discoveries in the hard sand layer. This has an important stratigraphical significance. The technique has either been eroded from the upper parts of the cultural layer or has lain on the surface since man left it there. Its connection with the surface finds cannot be determined accurately, but in any case it is certainly not older than the finds from the cultural layer. A small quartzite slab, from the edge of which microflakes had been cut, is the only piece connecting the quartzite industry with that of the cultural layer. The slab came from near where the light surface sand found contact with the hard sand.

The finds made under the surface were not so abundant, but they nevertheless made determination of the age of the dwelling place possible. There were not only flint artifacts and flakes but ceramics (the so-called Dotted Wavy Line), stone artifacts (grindstones and pounders of quartzite and sandstone), some remains of flora (lichen-like plants and seeds, which probably belonged to the food supply of the dwellers), fragments of ostrich egg-shells and one *Corbicula*-shell. The latter finds proved that the dwelling place has been inhabited during a moister and more favourable climatic period.

The ceramics have best parallels among those of the Khartoum Mesolithic (=Early Khartoum) and Khartoum Neolithic cultures, which were studied by Arkell (Arkell 1949 b pl. 72 and p. 84, 1953 pl. 38:3 and pp. 7, 68, 101, and 1959 pl. XII:a-d; cf. also Arkell 1949 a p. 44 and Otto 1963 pl.XX:1). As regards the flint industry, one should mention pebble-cores and quite clumsy blade-cores, a couple of microliths (crescents, comp. fig. 7:a), which also belong to the artifact assemblage of the Khartoum Mesolithic and the Khartoum Neolithic

Cultures, and in particular flat flake-cores with flakes cut from both surfaces (as Alimen 1957 fig. 78:21). One discoid core (flint) was found on the surface. A remarkable feature is the absence of micro-blades and clear blades on the whole.

On site 89 we are dealing with two truly separate but probably contemporary techniques (flint — quartzite). This becomes evident from two facts: quartzite flakes were found only on the surface of the site; and similar flakes occurred in abundance, but completely isolated, c. 100 m. to the east of the dwelling place, also on the surface (fig. 8, marked with x). Here there were also natural quartzite pebbles as raw material.

The excavation of site 89 revealed no finds that could connect the rock-carvings with the dwelling place. All that can be said is that all the archaeological finds beneath the carvings belonged to the early neolithic culture. Finds indicating some later period of occupation did not occur. No another neolithic dwelling place situated so great a distance from the Nile is known in our territory, and thus it would be a coincidence if some at least of the carvings were not from the same period as the dwelling place. Some of these engravings most probably originate in the times of the C-group people (Säve-Söderbergh 1962 p. 84), but different carving styles can be distinguished in them.

Site 89 does not alone represent its cultural period. The same group can include not only sites 18 and 352 but many flaking floors of flint in Debeira and Serra and also the ceramic discovery in Kom Sahaba. On the western bank of the Nile opposite Kom Sahaba I encountered a flint technique quite comparable to that of site 89, together with Dotted Wavy Line ceramics.

Some other important sites and separate finds.

The wide chronological gaps between the sites discussed above can be filled at least partly with the material from site 182, the only stratified site in our region, and with some surface finds. Several of

the latter studied by the writer clearly indicated a mixture of industries of two or more cultural periods, but certain homogenous sites also occur.

The quartzite-using blade culture represented by sites 34 (Solecki etc. 1963 p.86 and fig. 6), 81, 82, 136 and 341 belongs to the local Upper Palaeolithic. Stratigraphically this culture can be distinguished from the Levalloisian on site 182 (Säve-Söderbergh 1963 p. 50). The industry of this phase is characterized by the abundant blade complex, where the rather coarsely performed lateral retouching is general (fig. 9). Knives, scrapers and perforators belong to the assemblage, as do some burins, although doubtful. The cores are as a rule minor discs, but flakes with faceted striking platforms are rare, though they do occur, too. The blades have straight striking platforms; it is impossible to determine what kind of cores they were taken from on the basis of the material from these sites. This industry — which, as far as I know for the present, has no precise parallel — is up to now the only one to be taken into consideration in searching for the local environment influenced by the Aterian culture, which is discussed further on (p. 27).

A reference is made to the middle stratum of Dr. Chiemelewski's site DIW-3 on the western bank of the Nile opposite Kom Sahaba (Wendorf etc. 1964 p. 16).

One unique site is situated c. 130 m. above the sea-level in Debeira, in the east vicinity of the village of Nag' el-Leithi; it has no concession number (being marked on the map, fig. 1, with the letter A). The material from this dwelling place (fig. 10) consists exclusively of small-sized flakes of flint and quartzite, some in Levallois form, some in random forms. These often have wear-marks, and almost every flint flake has preserved the matrix of the original agate pebble (fig. 10: d-e). The last-mentioned flakes have been delivered from simple pebble-cores without any preparation before flaking (fig. 10: g); these cores were common among the finds. The Levallois flakes (fig. 10: a-c), again, presuppose the existence of cores retouched before-

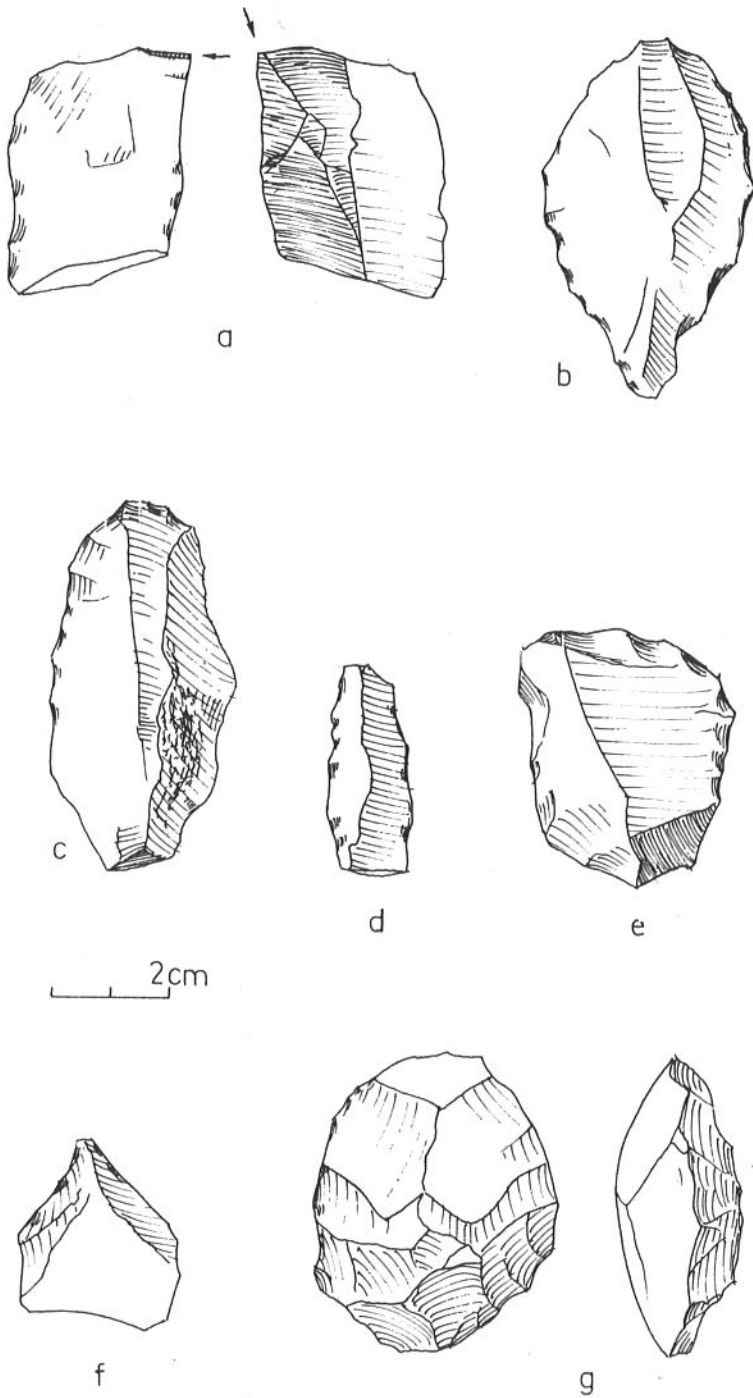


Fig. 9. Site 82, quartzite.

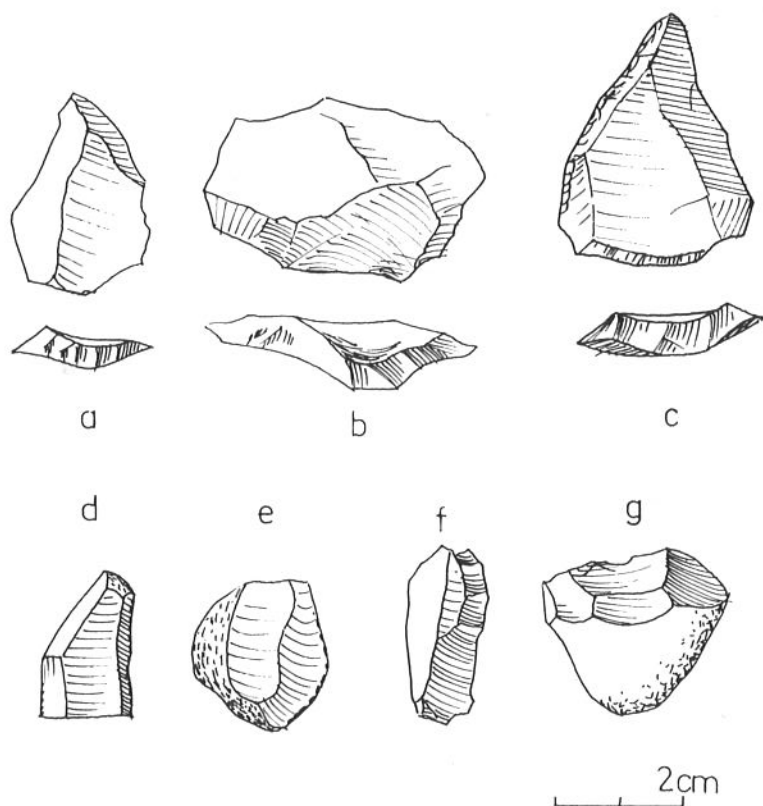


Fig. 10. Site Debeira A, flint (except b: quartzite).

hand, although these did not turn up among the discoveries. It is quite remarkable that secondary retouching did not occur except in one artifact type, the so-called Mousteroid point (fig. 10:c), which was found frequently.

In connection with this technique the reader is referred to the researches carried out by G. Caton-Thompson in the Kharga Oasis not too far from our territory. The site discussed above might well be compared with her Bellaida KO 5 B and KO 15 sites (Caton-Thompson 1952 pp. 151, 157), which Caton-Thompson named epi-Levalloisian on the basis of typology and placed chronologically between the Aterian and microlithic mesolithic epoch. The occurrence of the

Mousteroid point has been noted in rather young artifact environments (Alimen 1957 p. 151), so that these do not by any means offer the possibility of dating¹.

Another fixing point is offered by the studies of Ed. Vignard in Kom Ombo (Burg el Makkazin), Egypt (Vignard 1955 a p. 437). Certain characteristic features connect our site A with his niveau I (= Sebilian I): the clear Levallois technique, the ascetic milieu of the artifacts, the limitation of the secondary retouching to the Mousteroid point (Vignard 1955 a fig. 2:4—8) and the simple unretouched triangular flake points. The main differences are two: in the raw material (quartzite and plenty of agate in Debeira A, and mainly diorite in Burg el Makkazin)²; and in the core complex (both discs and cores »with two butts« in Debeira A, and only discs in Burg el Makkazin). The last-mentioned features connect our technique with Vignard's niveau II (= Sebilian II), but the differences from this technique, especially in the typology of artifacts, are remarkable.

Further, in Heliopolis (Egypt) an epi-Levalloisian site is known to whose artifact assemblage the so-called »chopping tool« is peculiar (Montet 1957 fig. 1—2). In principle this form and our pebble-core are comparable with each other: the flakes cut from both are identical. The core »with two butts«, so common in Heliopolis³, belongs in our concession among the remains of the next cultural phase, the microlithic mesolithic.

The dwelling place of Debeira A has a duality of techniques similar

¹ Nevertheless, epi-Levalloisian Sebilian I has been regarded as contemporary with the former half of the Würmian glacial period in the European Pleistocene chronology (Caton-Thompson 1946 a p. 117). If this is true, the Mousteroid point of Sebilian I was of the same antiquity as its European counterpart.

² Although the question of raw material is connected with the stone available locally, this observation is not without value, as in the investigation area of Vignard there is also flint, which did not attain approbation as a raw material until during niveau III (Vignard 1955 a p. 443). This point will be returned to later (p. 31).

³ For the distribution of this type cf. Montet 1957 p. 338. It belongs to the characteristics of Middle Sebilian (Sebilian II, Caton-Thompson 1946 a p. 105).

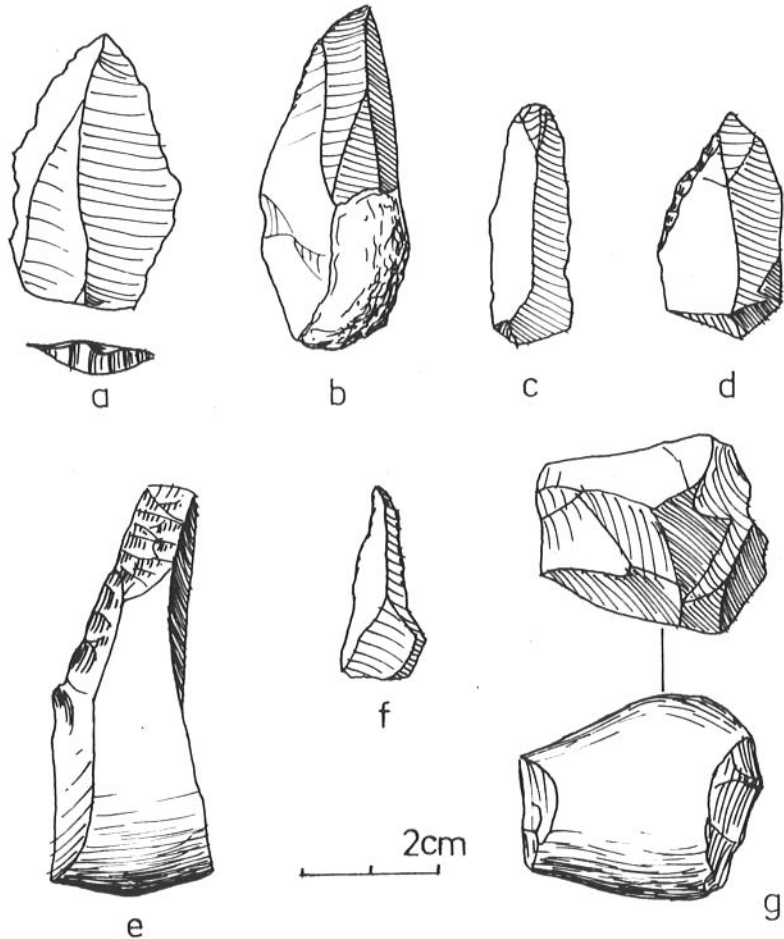


Fig. 11. Flint.

to that of dwelling places 348 and 89 (see p. 14). The site obviously represents one of the specializations of the epi-Levallois technique, one of which is Vignard's Sebilian I. Sandford speaks about the «Lower Sebilian» of Nubia (Sandford 1934 p. 82).

There are two surface sites in the Kharga Oasis (in Umm-ed-Dabadib and Bellaida), where the microlithic complex (the so-called «Bedouin Microlithic») is mixed with the local neolithic («Peasant Neolithic») forms (Caton-Thompson 1952 p. 34). A corresponding situation

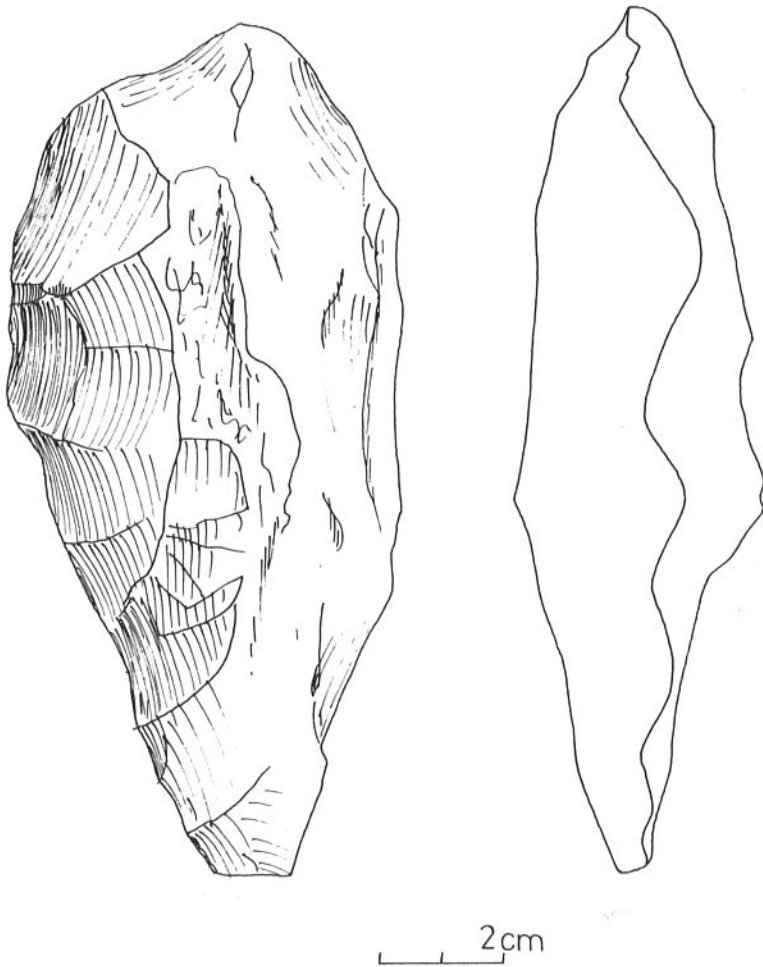


Fig. 12. Quartzite.

could be observed on sites 320 and 348 of ours. Here, in the very close vicinity of the concentration of the microtechnique, but nevertheless unmixed with it, flakes and retouched artifacts were found. The lithic technique of these produced larger forms (blades and flakes in occasional forms, fig. 11) than those of the microlithic dwelling places. The cores included both small discs and the type «with two butts». That the macrotechnique and the microtechnique occurred totally

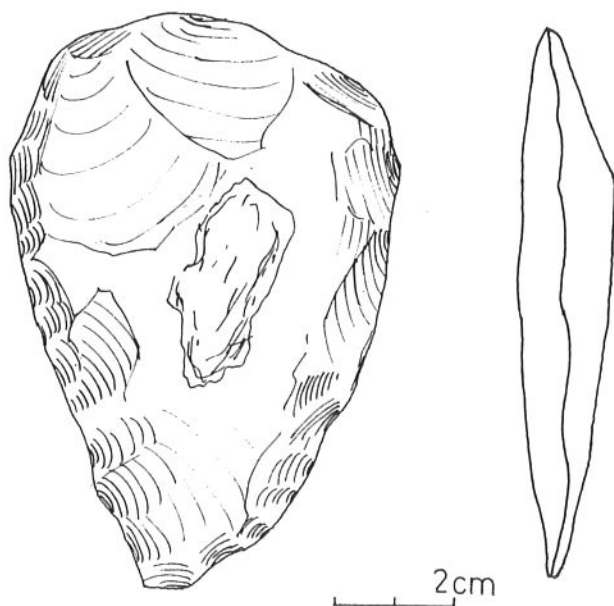


Fig. 13. Quartzite.

unmixed with each other on both sites makes it evident that these techniques belong to different ages.

The industry discussed was not centred into concentrations that could be marked as sites on the terrain. On the contrary, the industry occurred here and there in our area, particularly to the east of site 320, in the vicinity of Kashkush and on the terrain between site 348 and the hill of Gebel Sahaba; also, according to my hasty observations, to the NE of Wadi Halfa. The specimens in fig. 11 were collected from near site 348.

It should be mentioned that the artifacts closest to this technique were found in Kashkush on the rock base under an one metre thick layer of silt. (The surface was c. 135 m. above the sea-level.) Not far from the place an A-group cemetery had been dug into this silt. Before the accumulation of the silt the artifacts had rolled from the upper rocky terrace, the edge of which is situated immediately to the east of the spot.

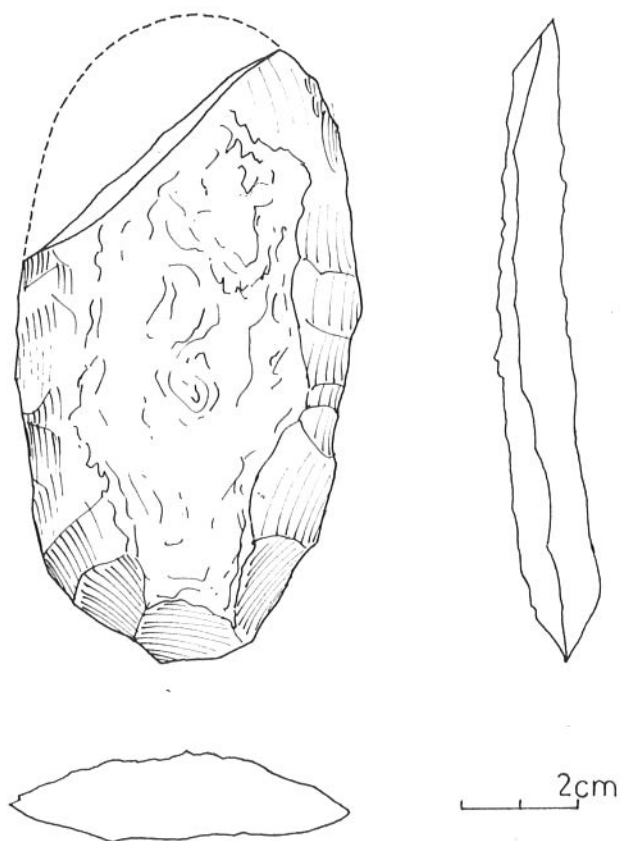


Fig. 14. Quartzite.

The Expedition's finds included an interesting group of separate finds representing cultural periods and influences not appearing in the material from the dwelling places of the region.

In addition to the numerous hand-axes of the Lower Palaeolithic Chellean and Acheulean types (fig. 12 and 13, the latter perhaps representing the late cordiform-type in the Acheulean series)¹, these

¹ Hand-axes with a triangular cross-section, belonging to the early Chellean series, (the so-called Chalossian type) did not occur among our discoveries. These are known from Upper Egypt (Sandford & Arkell 1933 p. 33 and Sandford 1934 p. 110).

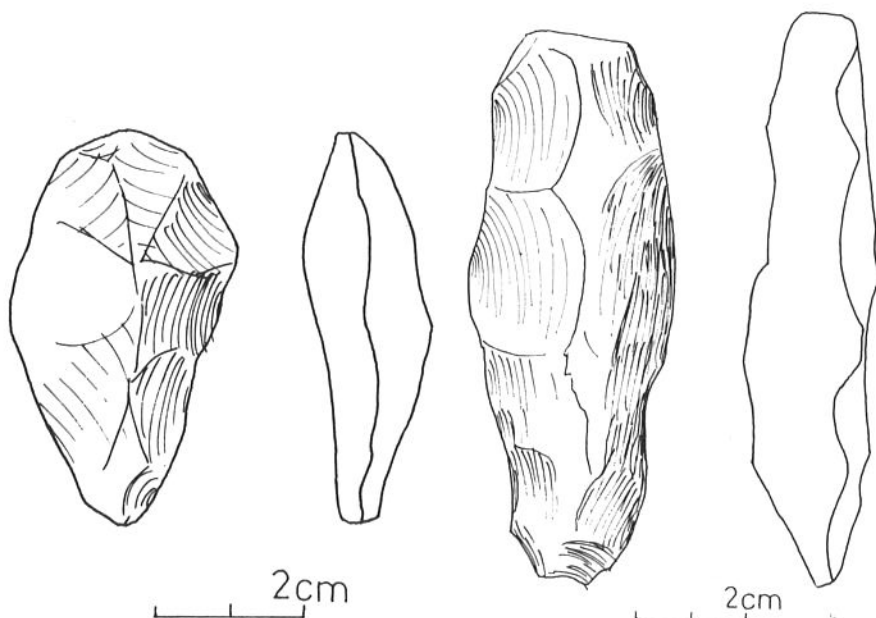


Fig. 15—16. Quartzite.

separate finds include a group of bifacially flaked and prepared, typologically pronounced and definite specimens of post-Acheulean age. These are of five forms, illustrated in fig. 14—18.

There are four examples of the type in fig. 14, two being from site 323. Unfortunately this site is mixed: among the discoid cores and Levallois flakes with faceted striking platforms blades could be distinguished with lateral retouching and forms that, on the whole, obviously belong to the Upper Palaeolithic. All the artifacts retouched bifacially are fragments; their form has been oblong (*limande*), and they are as a rule made from a thin quartzite slab. Only the edge has been retouched; this might represent the true Mousterian flat retouching. On the other hand the «Zweiseiter» of fig. 15 could be regarded as an indicator of the Mousterian culture. These were found frequently in the region. (The specimen in fig. 15 is from the surface of site 182.)

The biface of fig. 16 is unique. It was found near the village of Nag'Ashmenna Birki, about one kilometre to the south of site 82,

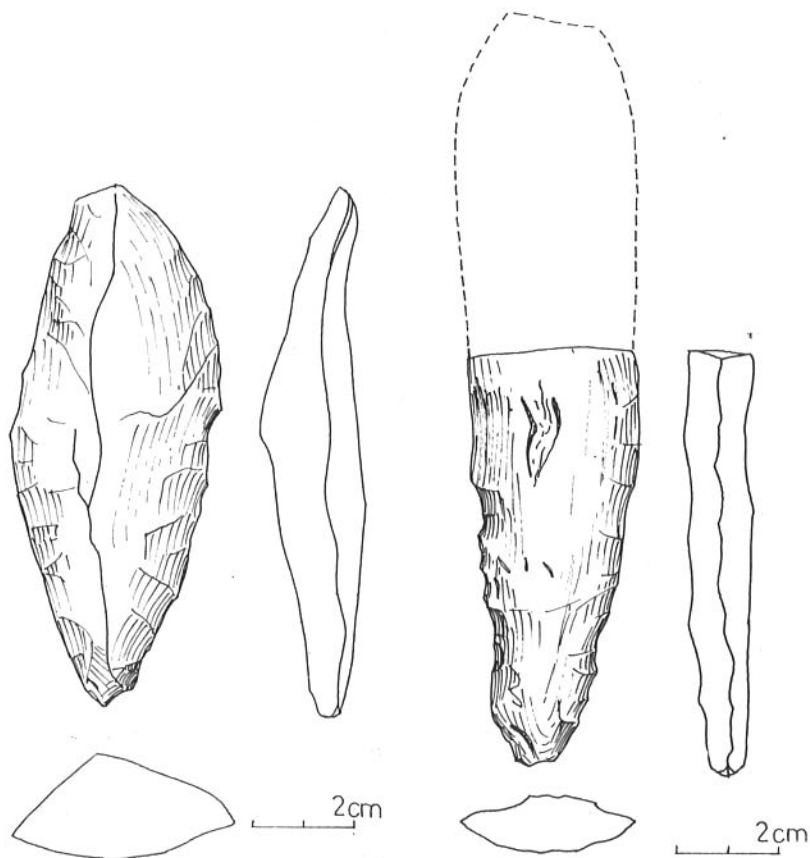


Fig. 17—18. Quartzite.

135 m. above sea-level, but it has certainly been driven down from the upper terraces; here these terraces are cut by great wadis. This pick-formed biface has been manufactured with heavy percussions; it well represents the bifaces of the Tumba-series. Similar ones from the vicinity of Khartoum are described by Arkell (Arkell 1949 a pl. 13:2).

The artifact shown in fig. 17 (one of the two finds of this kind) was taken from site 82, which, together with some other surface sites, belongs to the Upper Palaeolithic. If this is the case, the artifact could, on the basis of both typology and chronology, be placed among the so-called Sbaikian group of bifaces of the Aterian. This

is geographically nearest known from the Kharga Oasis in the north (Caton-Thompson 1952 p. 30) and from Wanyanga Kebir and Katam in the west (Arkell 1959 p. 19)¹. The profile of this biface type is gently S-formed, one of the sides being straight, one convex. The form is, slightly irregularly, oblong and sharp.

It may be Aterian, again, which is represented by the biface of fig. 18. Two examples of this type were found (loose finds), both fragments making it possible to deduce the form of the original unbroken artifact. The reader is referred to some finds made by Arkell in Khor Abu Anga near Khartoum (Arkell 1949 a pl. 13:3) and in Wanyanga Kebir (Arkell 1959 pl. X:a) and also to the specimen from the Kharga Oasis described by Caton-Thompson (Caton-Thompson 1952 pl. 91:1, cf. also Seligman 1921 fig. 4 and p. 122).

Cultural succession

The Chellean and Acheulean periods reflected in the material (Säve-Söderbergh 1962 p. 84) were succeeded by the period when a group of palaeolithic cultures extended their influence into our region from their centres situated far away. Unfortunately, the intensity of these influences and the local milieu in which they can be seen cannot be determined on the basis of the industries in our area; but nevertheless the succession of different cultural influences or rather one might say, artifact-influences, is clear from the researches carried out elsewhere.

The unique pick-formed artifact (fig. 16) would hardly justify our speaking of a Tumbian influence if we did not know that this culture extended its influence from the central region, the forests of Central Africa, along the Nile to the area around Khartoum and, indeed, as far as the 3rd Cataract (Arkell 1949 a pp. 9, 43). According to

¹ One of the bifaces found in our territory (a separate find) was almost identical with the artifacts Caton-Thompson presents from the Kharga Oasis (Caton-Thompson 1952 pl. 85). They represent the Aterian culture. The specimen is at Cambridge for the moment, and so it cannot be presented here.

Arkell the Tumbian influence already touched these regions during the older periods, at a time when the unretouched by percussion manufactured bifaces of the Kalinian facies belonged to the artifact environment. As far as I can see, some of Arkell's finds together with the pick of our area indicate the ultimate northern distribution of the Tumba influence along the Nile (cf. Arkell 1949 a p. 45 and Solecki etc. 1963 p. 78).

The majority of the flakes and cores showing the *Levallois* technique, which are met at every step in these terrains, have been eroded and driven from the dwelling places and flaking floors represented by site 322. The facies is purely Levalloisian with no Mousterian indicators. The Levalloisian (*sensu strictu*) is abundant in Northern Africa: Maghreb, where it precedes the local Aterian (Alimen 1957 p. 40); the Libyan coast (Levalloiso-Mousterian, McBurney 1960 p. 168); Egypt (Caton-Thompson 1946 a p. 61 and Alimen 1957 p. 92); Fezzan and Tidikelt (Alimen 1957 p. 151); Abyssinia and Somaliland (Alimen 1957 p. 186). The industry of site 322 differs from the Egyptian Levalloisian in its Clacton-formed flakes (a broad flake with a straight striking platform plus an obtuse flaking angle); these, again, are numerous in Kharga. The chronological position of this technique in the sequence is probably after the Acheulean (see p. 9); no signs of the bifacial technique (Tumbian or Acheulean f.ex.) were observed.

The *Aterian*, which occurred as a cultural phase in the Kharga Oasis, did not show itself in our area. Some bifaces characteristic of the phase indicated, however, just like the earlier Tumbian from the south, that some influences can be distinguished. The tanged point typical of the Aterian seems to be absent from our finds¹. Again we are in the periphery, this time the eastern one, of a western cultural range². As was already stated above (p. 16), the Aterian influence most likely extended into the area when the local Upper Palaeolithic

¹ The tanged point is known to occur further north in the Nile Valley (Seligman 1921 p. 128 and fig. 31—33).

² For the distribution of Aterian see Caton-Thompson 1946 b p. 89.

blade culture was prevailing. This is suggested by not only the chronological position of the latter culture but also the fact that one of the bifacially retouched artifacts, making the Aterian influence obvious here, belonged to the industry of site 82. This site belongs, indeed, to the blade culture and is evidently homogenous; there is no reason to regard the biface as secondary on the site. The other bifaces of the Aterian relationship were loose finds. The comprehension is also supported by a biface found by Sandford in the Faiyum depression. This can, in Caton-Thompson's opinion, be placed closest to the sphere of the Aterian technique (Caton-Thompson 1946 a p. 84). The specimen belongs to the stage of 34 m. of the Faiyum Lake. This stage, «Late Mousterian» (Upper Levalloisian) in the cultural succession, directly precedes the late palaeolithic Early Sebilian (Sebilian I, Caton-Thompson 1946 a, diagram 4, p. 94).

Here mention should be made of sites 132 and 354. When I visited them, their perforators, small scrapers and steep retouching reminded me strongly of the Levallois traditional industry called *Khargan*. This Khargan industry was identified by Caton-Thompson in the Kharga Oasis (Caton-Thompson 1952). Certainty concerning the existence of this culture in the area around Wadi Halfa will not be achieved until the material has been analysed, a task beyond the purpose of this article¹. The relative age of Khargan compared with that of Aterian has remained obscure in its eponyme region and will not become clear through the sites just mentioned, as they are surface sites.

We arrive at the *epi-Levalloisian*, which introduces itself on site Debeira A. I place it here in our succession, referring to the researches of Caton-Thompson in the Kharga Depression (Caton-Thompson 1952). The distribution of this technique, according to research thus far, is the Nile Valley in Egypt and Northern Sudan, The Kharga Oasis and the Faiyum basin (see Caton-Thompson 1946 a p. 100). The importance of the technique lies in its constituting a

¹ In Qara, Egypt (near Nag Hamadi), Khargan also appears in the Nile Valley (Caton-Thompson 1952 p. XII).

typological as well as a chronological link between the Levalloisian and microlithic mesolithic. The process of evolution is purely regional and is restricted to the distribution area of the Sebilian complex.

There are, of course, regional differences in the North African microlithic mesolithic cultural range: Sebilian III — Khargan »Bedouin Microlithic« — Typical Capsian — the different microlithic cultures in Sahara. But these do not necessarily indicate chronological differences; the similar general features and the clear difference between each of these and the immediately preceding and succeeding techniques justify one in regarding this clear microlithization as a fairly synchronous phenomenon. In our area this chronological horizon can be distinguished by sites 296, 320 and 348. These dwelling places are no doubt of equal age, and their lithic environment very sharply reveals the local characteristics of the Wadi Halfa region. The most significant of these, compared with Sebilian III, are the absence of microlithic trapeze and triangle forms and the dominating presence of crescent and lunate forms (cf. also Solecki etc. 1963 p. 84). The industry is otherwise comparable to the niveau III of Burg el Makkazin (Vignard 1955 b), but also the end-of-blade scrapers with straight and concave edges are lacking. Differences from the microlithic cultural epoch of the Kharga Depression are larger; in fact there are no parallel features. If one is inclined to regard this as a chronological difference, the microlithic habitation of the Kharga Oasis will certainly have to be considered younger than Sebilian III in the Nile Valley. If, again, these two techniques turn out to be contemporary with each other, as Caton-Thompson is inclined to think (Caton-Thompson 1952 p. 33), the two possibilities she presents would be supported: either the artifact milieus of the Nilotes supporting the Early Khartoum culture and the nomades (see Caton-Thompson 1952 p. 34) of the Kharga Oasis are not parallel; or the ages of these groups are different. The latter possibility, at least, is correct, but probably both are. This becomes obvious when we know that Early Khartoum influenced the Wadi Halfa regions after the conclusion of the microlithic mesolithic cul-

tural phase. This, in turn, is shown because the characteristic Early Khartoum ceramics occur together with a completely different and typologically younger flint industry unmixed with the microtechnique discussed above (sites 18, 89, 352, 360).

We now come to the rather complicated early neolithic cultural stage, which seems to the present writer to be characterized by a certain duality: on the one hand a group without any ceramics (see p. 20) can be distinguished, which could indicate the existence of the so-called »Neolithic with Capsian Tradition» (cf. Vaufrey 1958); and on the other hand there is a separate group, of which the Wavy Line ceramic is typical (Arkell 1949 b and 1953). Thus we were again in the peripheral area of two cultures: on the eastern margin of the former, the western culture, and on the northern margin of the latter, the southern culture. As regards the ceramics, both the southern route offered by the Nile and the western one from the Tibesti massives come into consideration. Here Arkell reports having found plenty of this ceramic (Arkell 1959). The centre of Tibesti is rendered equally credible by the table of pluvial phases worked out by S. A. Huzayyin; the last and minor of these phases (the Post-Glacial Climatic Optimum) corresponds with the neolithic period (Alimen 1957 pp. 88, 86)¹. In R. Fairbridge's climatic phase succession the Mid-Holocene Transition Phase (c. 5000—1000 B.C.) could correspond with the early neolithic. This phase was marked by progressive deterioration of living conditions in Nubia and the Sahara, but with certain favourable oscillations (Fairbridge 1963 p. 106). It is obvious that the ceramic under discussion belongs to a moist climatic era. This conclusion can be drawn both in Wanyanga and the region of Wadi Halfa. In the case of Wanyanga it is only after the habitation of the dwelling places including this ceramic that one can follow the decline of the local quaternary lake-levels (at least 38 m.). And concerning

¹ This pluvial also makes the dense neolithic population of the Sahara credible (comp. Zeuner 1962 p. 248).

the region of Wadi Halfa, the location of site 89 far from the Nile as well as the remains of flora among the discoveries serve as positive evidence for this view. The preceding microlithic cultural phase belongs to Fairbridge's Late Würm Tropico-Equatorial Arid or somewhat moister Postglacial Transition Phase (10,000—8000 B.C., Fairbridge 1963 p. 105). This also explains the marked restriction of the microlithic dwelling places to the bank of the Nile in our area. Further, during the pluvial the east — west oriented contacts were firmer.

As the results obtained during the 1963—1964 season, particularly in the research on the neolithic dwelling places, have been of the greatest interest, the present writer does not intend to enter more deeply into the problems at this stage. One interesting question is already worth discussion here, however. That is the raw material used in the lithic industries and the changes in this material. Here the observation made on site 89 is important: the quartzite technique, so abundantly represented, differs from the same site's flint technique in its slightly archaic features; but the finding circumstances indicate that the quartzite is at least as old as the flint technique. The different characters of the materials have caused the differences between the techniques, and this by no means presupposes any chronological distinctions. This utilization of quartzite is distinct from the period of the preceding cultural era, microlithic mesolithic on site 348; by the side of the dwelling place on this site there was a dense concentration of flakes and small quartzite discs. These flakes were unretouched, as on site 89, but larger and more reminiscent of the Levallois technique. Following the succession backwards we come to the site of Debeira A, where the quartzite flakes formed considerable part of the discoveries. The majority of the flakes were unretouched even here, the first exception being the already discussed Mousteroid point. Debeira A is the oldest dwelling place with flint (agate) as the dominating raw material in our territory; on older sites quartzite is exclusive. The moment when man changed over to flint depended, naturally, on the stone available locally, but the time of

the change-over nevertheless has some average significance: for the time-limit seems to fall quite similarly in the cultural succession even elsewhere in the Nile Valley (Alimen 1957 p. 97 and Vignard 1955 a p. 443). Quartzite, however, remained as a raw material, evenly decreasing in use, until neolithic times. In the A-group dwelling places it already seems to have vanished. The archaic, palaeolithic, features survived in the quartzite technique, while the retouching was transferred to flint and was already absent from quartzite in the microlithic phase. These phenomena are closely related to both the flaking character of quartzite and the gradual, even deminishment of the artifact forms.

The geographical position of the Middle Nile Valley is of extreme interest as regards many stone age cultural ranges. As a marginal region for northern, western and southern areas of influence, it presents a promising theoretical opportunity: perhaps the mutual chronological problems of the areas of activity situated far away from each other can be solved here. The location of stratigraphical and »in situ» sites is of ultimate importance. Since the construction of the High Dam in Assuan the opportunities are diminishing, but the outside areas, particularly to the south of the great artificial lake, are still worth close surveying and excavation.

The present writer hopes to have the chance to return to the above problems after the accurate analysis of the material partly introduced in this paper.

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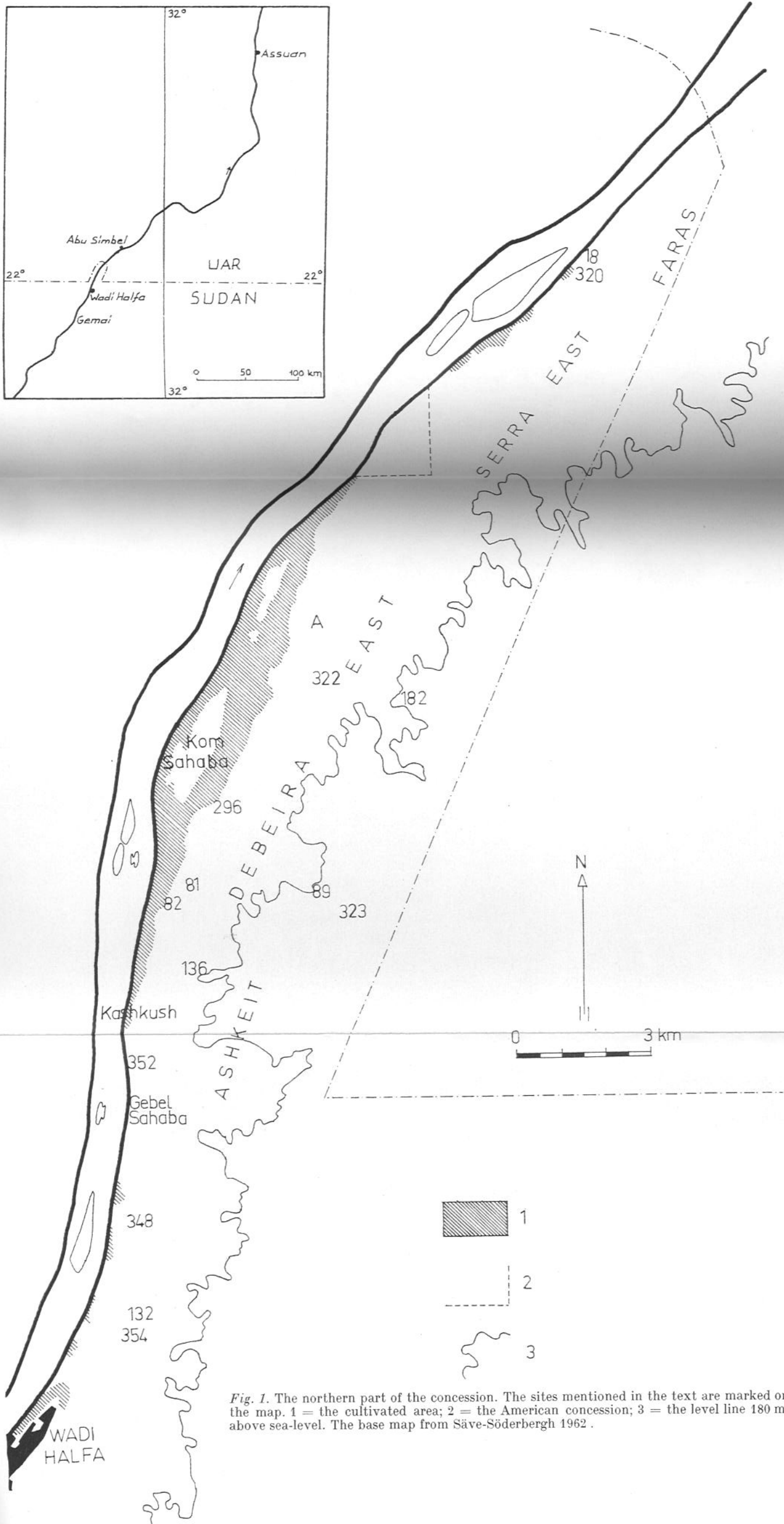
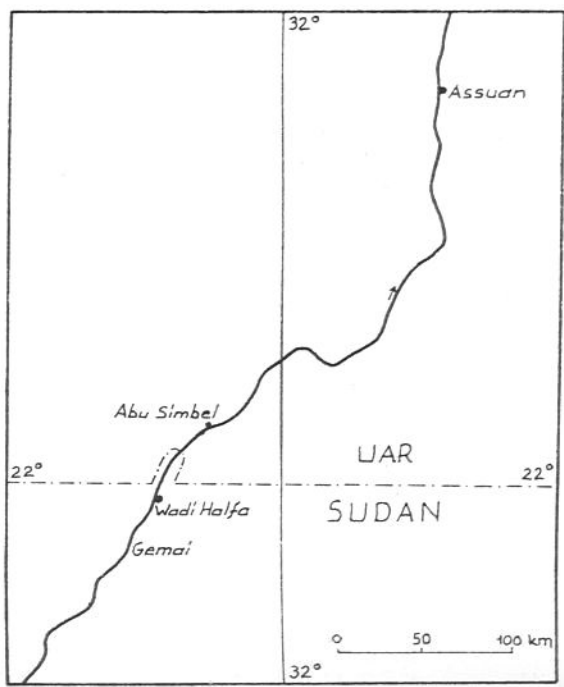


Fig. 1. The northern part of the concession. The sites mentioned in the text are marked on the map. 1 = the cultivated area; 2 = the American concession; 3 = the level line 180 m. above sea-level. The base map from Säve-Söderbergh 1962.