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The multicultural Early Holocene site E-79-4 at El Ghorab Playa, Western Desert of Egypt

This work presents the latest results of studies of one of the key sites of the Early Holocene prehistory of the Western Desert. These studies are not yet completed; detailed publication will follow.

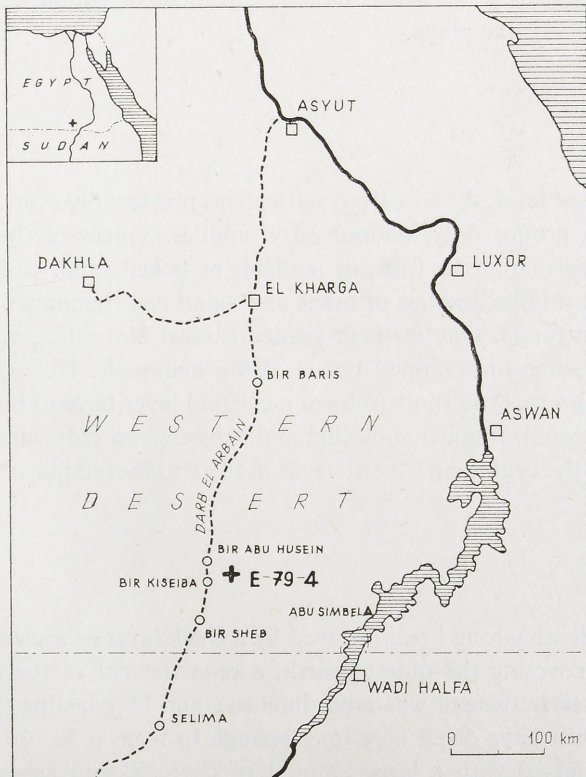


FIG. 1. Location of site El Ghorab E-79-4

Site E-79-4 was unearthed in 1979, in the course of a longterm investigation programme of the Combined Prehistoric Expedition, which aimed at a closer knowledge of the prehistory of the Western Desert. Exploration of the site lasted, seasonally, through 1979 and 1980, and was carried out by excavations. To explain the geomorphological situation a series of stratigraphic diggings and drillings were carried out. The contents of the cultural layer were sifted and partially studied by the flotation method.

Site E-79-4 is situated in the southern part of the Western Desert of Egypt, 80 km north of the Sudanese frontier, about 160 km west of Abu Simbel, and about 25 km east of the route Darb El Arbain, between two wells: Bir Abu Husein and Bir Kiseiba (Fig. 1). On the southern shores of extinct shallow lake, which the discoverers called Playa El Ghorab, abundant traces of settlement were found. In the Early Holocene, rainfall waters, from the nearest vicinity and from the plateau situated about 1 km northwards, accumulated there, forming the El Ghorab reservoir. The supply of water was sufficient to keep the shallow reservoir, about 2 km in diameter, constantly full. The sequence of repeatedly appearing settlement layers, unearthed on the site, prove that this reservoir has always been an attractive site for human settlements. At present, at least five successive settlement period have been confirmed on the borders of the playa.

Level I

This is the oldest level. A short-lived settlement, presumably occupied by one or a few small human groups only, undoubtedly families. Traces of their dwelling are the remains of hearths, in the form of lenticles of baked sand, with an admixture of silt mixed with a large amount of ashes and small coal remnants. Two such fire-hearths have been found. One of them yielded several flint relics, among them one micro-burin and some fine-chipped bones of big mammals. However, the sojourn of the human group was too short to form a cultural layer beyond the lenticle of the hearth itself. The small fragments of charcoal subjected to radiocarbon analysis indicate the date of the beginning of settlement in the El Ghorab playa to ca. 8600 B.P.

Level II

After a considerably long break, proved by a thick layer of archaeologically barren yellow sand covering the oldest hearth, a re-settlement of the playa's borders followed. This time settlement was more intensive and long-lasting (Fig. 2). Several human groups must have dwelt here long enough to form a 20 - 30 cm thick layer containing sand mixed with a large amount of charcoal and ashes. This cultural layer, called "the Lower Cultural Layer", is situated in the eastern part of the site

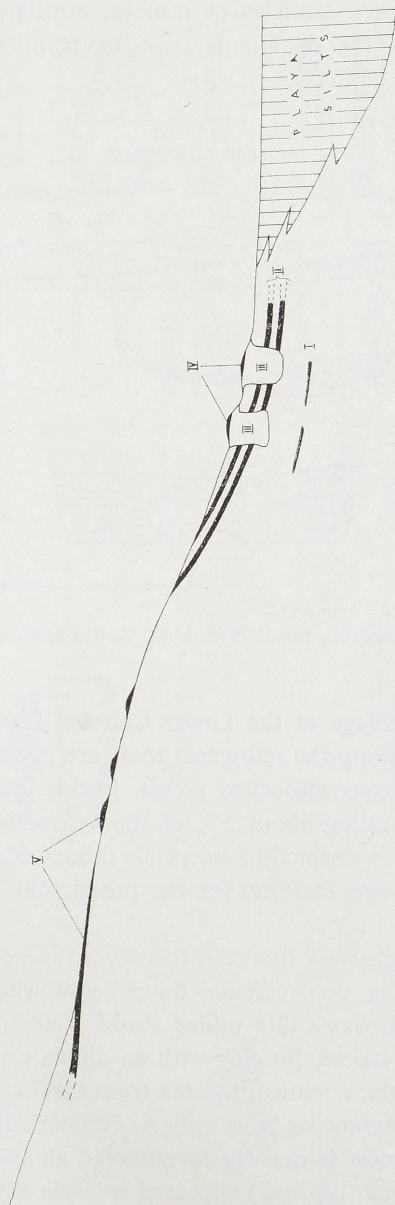


FIG. 2. El Ghorab, site E-79-4. Generalized sketch of the stratigraphy.

and contains numerous flint relics, some fine-chipped and also bigger fragments of bones, as well as ceramics. In the second level, settlement took place repeatedly, as is proved by the red-baked lenticles of hearths, stratigraphically differentiated inside the layer described (Fig. 3). This layer, however, does not continue, and appears in the form of large lenticles.

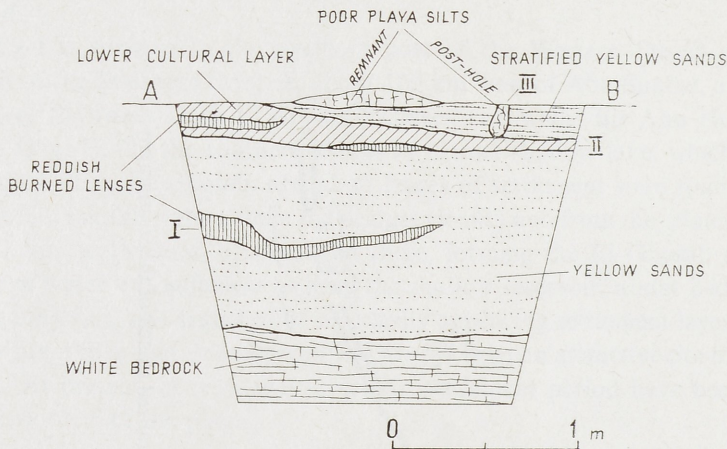


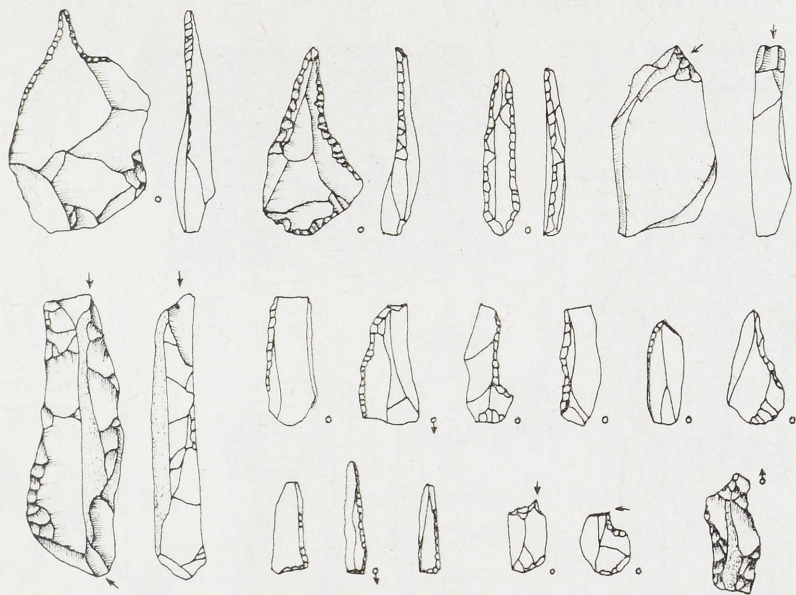
FIG. 3. El Ghorab, site E-79-4. Main stratigraphic profile

In the rich flint assemblage of the Lower Cultural Layer blade technology is insignificant. Dominant among the retouched tools are backed bladelets of various types, triangles and numerous retouched pieces. Burins, perforators, notches and denticulates are sparse, forming about 5% of the assemblage. The application of the micro-burin technique is distinctly perceptible (about 5% among the retouched tools) (Fig. 4). The basic raw material for the production of stone tools was the Egyptian flint.

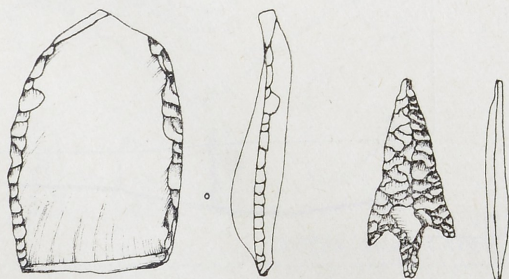
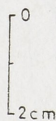
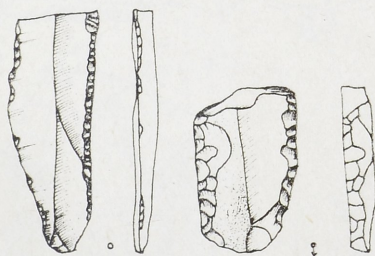
Two fragments of vessels were found in this layer. The outer edge of one fragment is decorated with wide, perpendicular flutes below which runs a band of horizontal lines and points. It was a thin-walled vessel of about 23 cm in diameter at the rim, made of medium-baked, fat clay with an admixture of sand (Fig. 5).

A detailed analysis of the remains of fauna from the Lower Cultural Layer has not yet been finished. At present we have only A. Gautier's initial notations for the site. These show that the most frequently encountered animal is the Dorcas gazelle (*Gazella* sp.). The hare (*Lepus capensis*) appeared sporadically and there were small amounts of remains of big rodents like porcupine (*Hystrix*), and also ground squirrel, wild cat and few birds. Radiocarbon analysis dated this layer to about 8300 B.P.

Chronologically closest to the Lower Cultural Layer is the so-called "Cultural Layer West". It also shows intensive settlement in the western part of the site. This



LOWER CULT. LAYER



LATE NEOLITHIC
LEVEL

FIG. 4. El Ghorab, site E-79-4. Retouched tools from Lower Cultural Layer and from Late Neolithic settlement

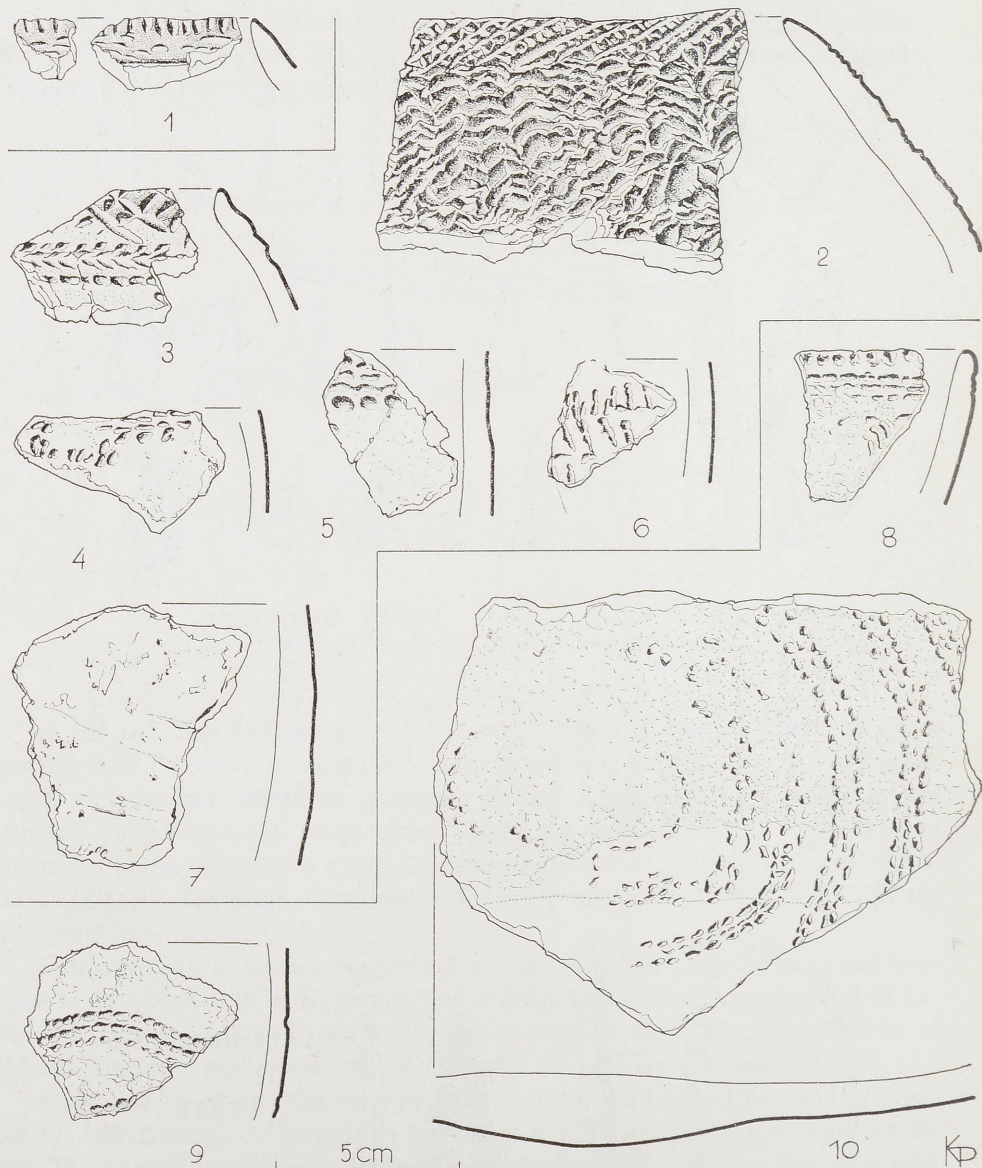


FIG. 5. El Ghorab, site E-79-4;

1: Sherd from Lower Cultural Layer; 2 - 7: Sherds from Upper Cultural Layer, 8 - 10: Sherds from the Late Neolithic settlement

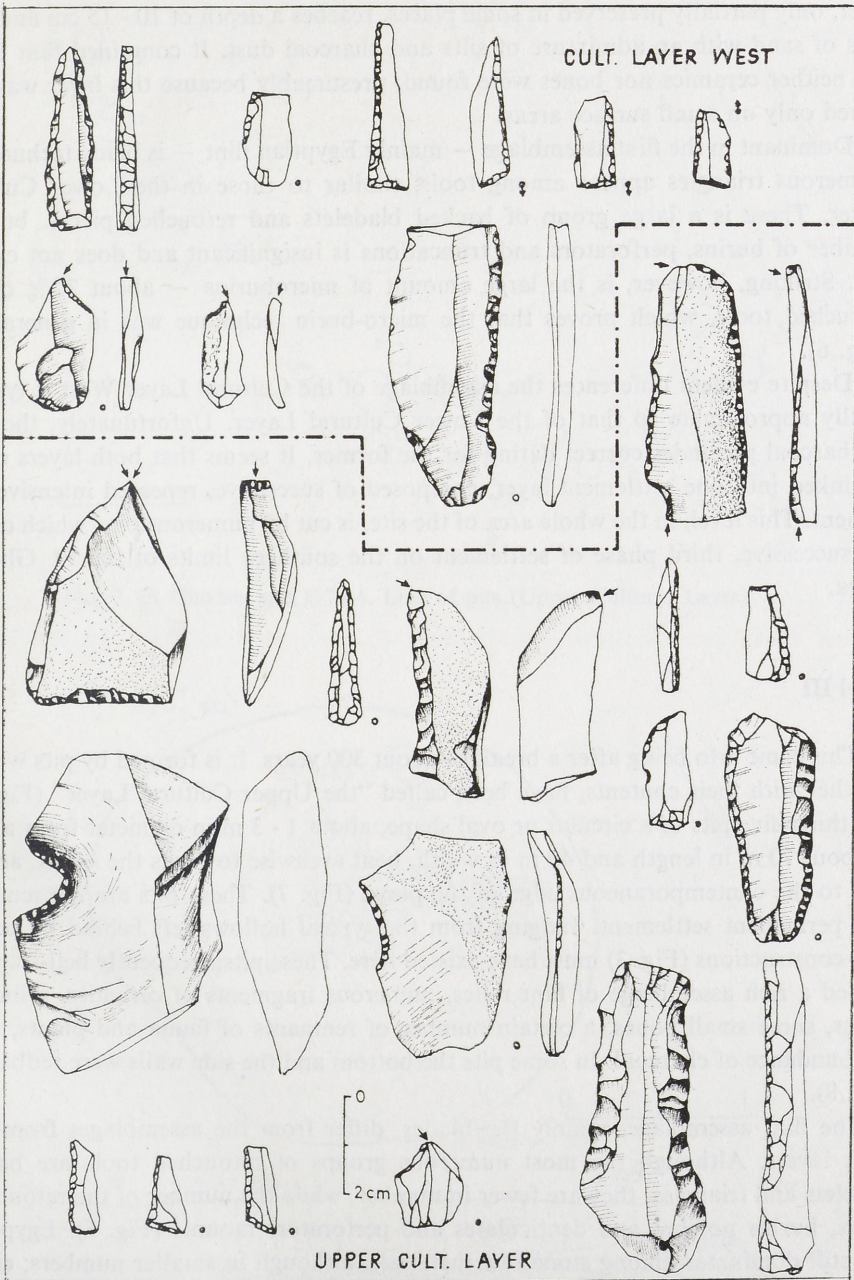


FIG. 6. El Ghorab, site E-79-4. Retouched tools from Cultural Layer West and Upper Cultural Layer

layer, only partially preserved in some places, reaches a depth of 10 - 15 cm and consists of sand with an admixture of silts and charcoal dust. It contained flint relics, but neither ceramics nor bones were found; presumably because this layer was preserved only on small surface areas.

Dominant in the flint assemblage — mainly Egyptian flint — is blade technology. Numerous triangles appear among tools, similar to those in the Lower Cultural Layer. There is a large group of backed bladelets and retouched pieces, but the number of burins, perforators and truncations is insignificant and does not exceed 4%. Striking, however, is the large amount of microburins — about 37% of the retouched tools, which proves that the micro-burin technique was in general use (Fig. 6).

Despite evident differences the assemblage of the Cultural Layer West is typologically approximate to that of the Lower Cultural Layer. Unfortunately, the lack of charcoal precludes correct dating for the former. It seems that both layers could be linked into one settlement layer, composed of successive, repeated intensive settlement. This level, in the whole area of the site, is cut by numerous pits, which define the successive, third phase of settlement on the southern limits of the El Ghorab playa.

Level III

This came into being after a break of about 300 years. It is formed by pits which, together with their contents, have been called "the Upper Cultural Layer" (Fig. 2). The thirty-five pits of a circular or oval shape, about 1 - 3 m in diameter form a line of about 70 m in length and 40 m in width, bent archwise towards the south, according to the contemporaneous edge of the playa (Fig. 7). These pits are the remains of a permanent settlement. Judging from the typical hollows left behind by poles, pole-constructions (Fig. 3) must have existed here. These pits, frequently bell-shaped, yielded a rich assemblage of flint relics, numerous fragments of ceramics, grinding stones, some small bones, a certain number of remnants of fauna and plants, and an abundance of charcoal. In some pits the bottom and the side walls were redbaked (Fig. 8).

The flint assemblage, mainly the blades, differ from the assemblages from the older layers. Although the most numerous groups of retouched tools are baked bladelets and triangles, they are fewer in number, while the number of the retouched pieces, burins notches and denticulates and perforators mounts (Fig. 6). Egyptian flint still dominates among stone raw materials, although in smaller numbers; chert and quartz play a more significant role. Apart from numerous stones of different sizes the pits contained also a number of spherical grinders or their fragments, made of sandstone, and some fragments of vessels (Fig. 5: 2 - 7).

A detailed analysis of some sherds, made by K. M. Banks, has permitted partial

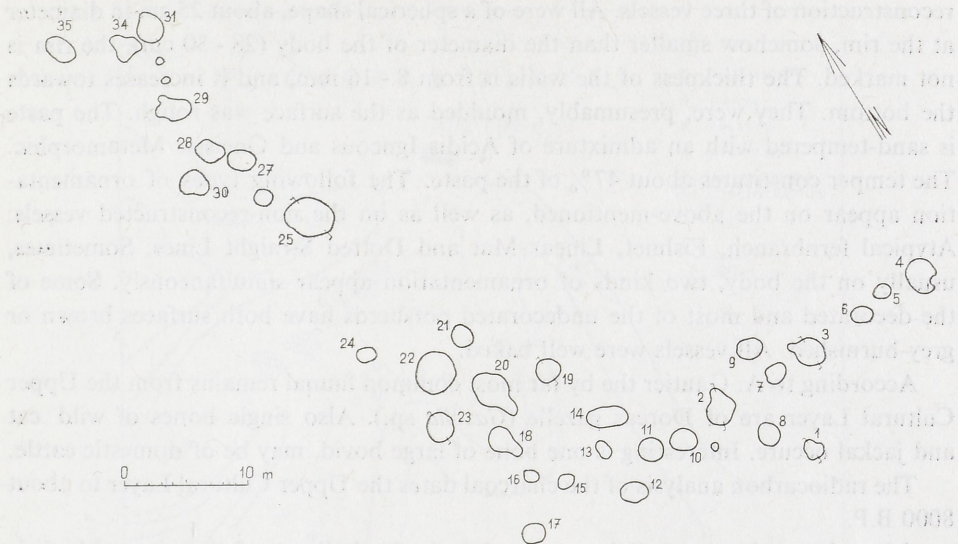


FIG. 7. El Ghorab, site E-79-4. Line of pits (Upper Cultural Layer)

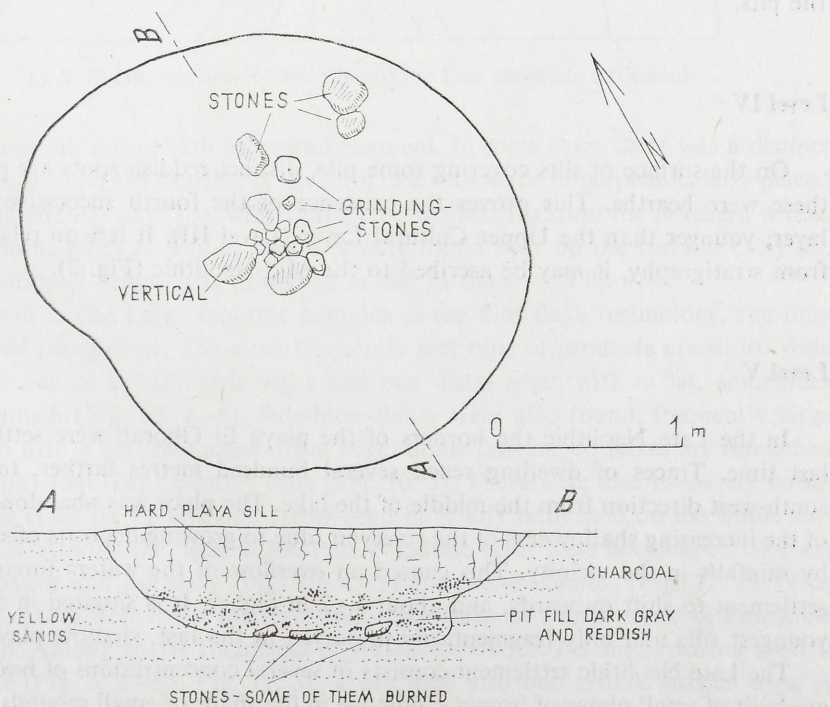


FIG. 8. El Ghorab, site E-79-4. Pit No. 25

reconstruction of three vessels. All were of a spherical shape, about 25 cm in diameter at the rim, somehow smaller than the diameter of the body (28 - 30 cm), the rim is not marked. The thickness of the walls is from 8 - 16 mm, and it increases towards the bottom. They were, presumably, moulded as the surface was rough. The paste is sand-tempered with an admixture of Acidic Igneous and Gneissic Metamorphic. The temper constitutes about 47% of the paste. The following types of ornamentation appear on the above-mentioned, as well as on the non-reconstructed vessels: Atypical fernbranch, Fishnet, Linear Mat and Dotted Straight Lines. Sometimes, usually on the body, two kinds of ornamentation appear simultaneously. Some of the decorated and most of the undecorated potsherds have both surfaces brown or grey-burnished. All vessels were well baked.

According to A. Gautier the by far most common faunal remains from the Upper Cultural Layer are of Dorcas gazelle (*Gazella* sp.). Also single bones of wild cat and jackal occur. Interesting is one bone of large bovid, may be of domestic cattle.

The radiocarbon analysis of the charcoal dates the Upper Cultural Layer to about 8000 B.P.

After the settlement had been abandoned, the hollows of the pits, with their cultural contents, were flooded by silts, due to the aggradation of the lake in a humid period. When the waters receded the hard silt contents fixed the shape and closed the pits.

Level IV

On the surface of silts covering some pits, distinct reddish spots are perceptible; these were hearths. This proves the existence of the fourth successive settlement layer, younger than the Upper Cultural Layer (Level III). It left no relics. Judging from stratigraphy, it may be ascribed to the Mid-Neolithic (Fig. 2).

Level V

In the Late Neolithic the borders of the playa El Ghorab were settled for the last time. Traces of dwelling reach several hundred metres farther, towards the south-west direction from the middle of the lake. The place was abandoned because of the increasing shallowness of the reservoir, due to growing deposits of silt brought by rainfalls in the vicinity. This caused an overflow of the waters forcing the last settlement to shift outwards, and about 1 - 2 m higher. It is situated in and on the youngest silts and only fragmentarily preserved in the last, shallow playa (Fig. 2).

The Late Neolithic settlement consists of several concentrations of hearths which are built of small plates of brown sandstone in the shape of small mounds composed of charred stones, reaching 50 cm in height and 1 - 3 m in diameter, and placed in a

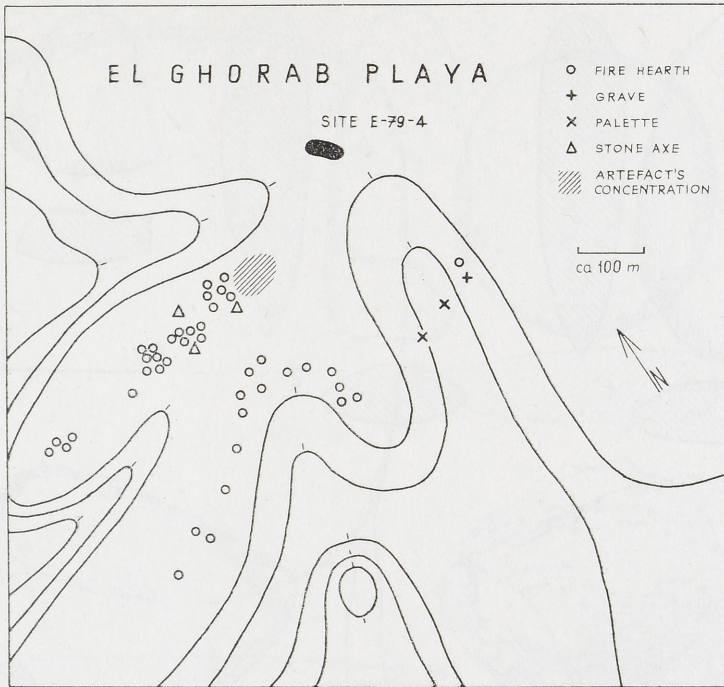


FIG. 9. El Ghorab, site E-79-4. Map of the Late Neolithic settlement

layer of sandy silt mixed with ashes and charcoal. In some cases there was a distinct stone setting around the hearths, in the form of a wall made of perpendicularly placed stones, semi-circular in shape, which protected the hearths from the northern winds. Flint and stone relics as well as ceramics were found only on the surface. Only the burial, mentioned below, was preserved *in situ* in the silts (Fig. 9).

Dominant in the Late Neolithic complex is the flint flake technology, the only raw material being chert. The most frequently met type of products are short, wide flakes with one or two longish edges and one distal edge, with a flat, sometimes bifacial retouch (Fig. 10: 4-6). Side-blow-flakes were also found, frequently large in size, also with a flat, retouched distal edge. Some fan-shaped flakes are retouched in such a way that they resemble celts (Fig. 10: 5). There were also massively retouched blades (Fig. 10: 7), and one arrow-head bifacially retouched on the whole surface (Fig. 4). Among the finds in the Late Neolithic layer were hoe-shaped hatchets made of basalt and porphyry (Fig. 10: 1-3) and stone palettes (Fig. 11: 1). Near the hearths there were lower (*matate*) and upper (*manos*) querns made of sandstone (Fig. 11: 2). Among sparse fragments of vessels were some decorated with a Dotted Wavy Line (Fig. 5: 8-10; Fig. 11: 3). There were also two broken ostrich eggs. A child's burial was unearthed in the layer described. It was deep-seated in the silts, in a crouched position, the head turned westwards, the face southwards, hands

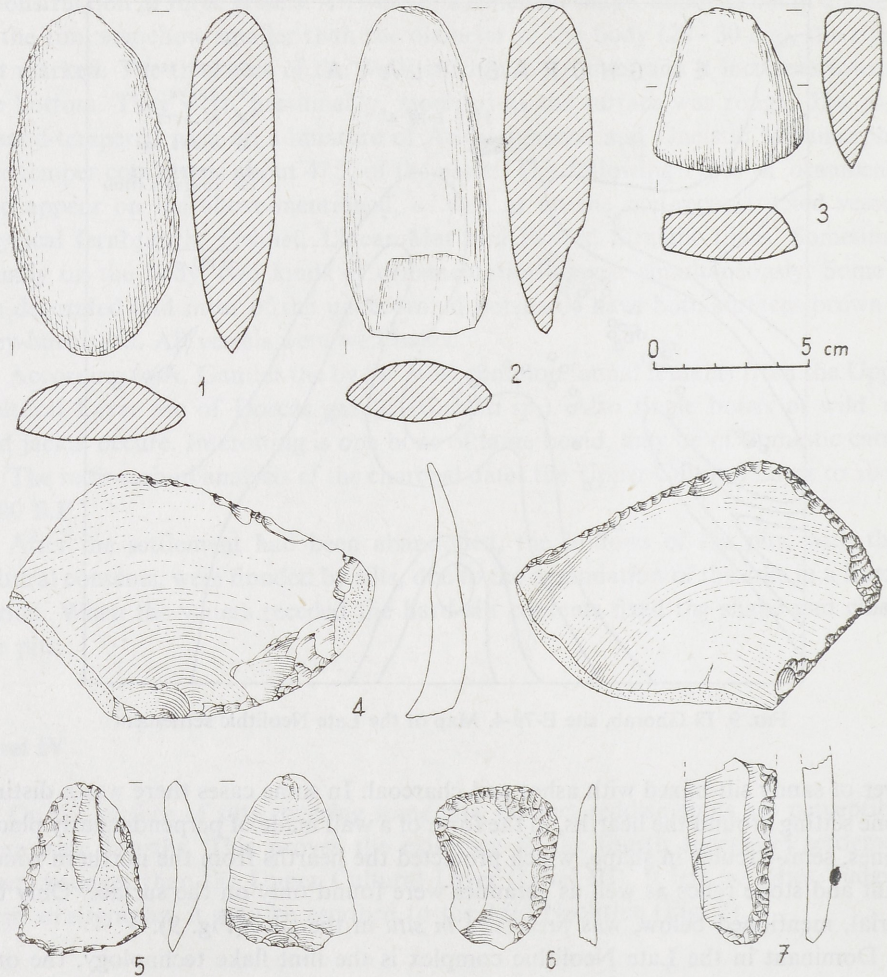


FIG. 10. El Ghorab, site E-79-4. Artifacts from the Late Neolithic settlement

1 - 3: Stone axes; 4 - 7: Retouched tools

placed under the head (Fig. 12). The skeleton was badly preserved, hindering measurements. On the basis of the preserved teeth the child was — according to M. Henneberg — 4-5 years old. The degree of abrasion of the milk-teeth is 1-2 and is only insignificantly stronger than in living contemporary children. This would be proof of a diet of soft food, uncontaminated by sand.

The samples of charcoal collected from the hearths delivered the date of about 6300 B. P.

This was the last stage of settlement in the site under discussion. The encroaching desert hindered further human existence in this part of Sahara.

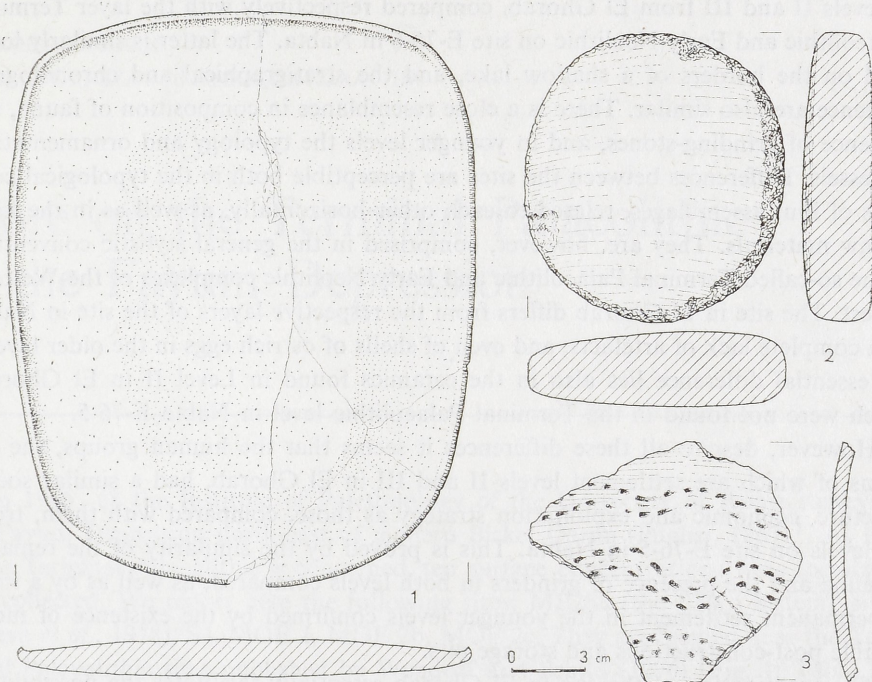


FIG. 11. El Ghorab, site E-79-4. Artifacts from the Late Neolithic settlement

1: Stone palette; 2: Grinding stone; 3: Sherd with Dotted-Wavy-Line design

The above characterized five settlement levels constitute one of the most comprehensive chronological sequences known from Early Holocene sites of the Western Desert.

Site E-79-4 from Playa El Ghorab shows numerous common features with site E-75-6 from Nabta Playa, situated about 50 km eastwards. This applies mainly

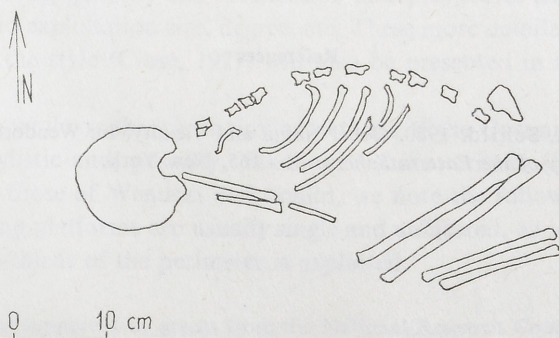


FIG. 12. El Ghorab, site E-79-4. Skeleton of a child

to levels II and III from El Ghorab, compared respectively with the layer Terminal Palaeolithic and Early Neolithic on site E-75-6 in Nabta. The latter is similarly localized on the borders of a shallow lake, and the stratigraphical and chronological sequence are also similar. There is a close resemblance in composition of fauna, the presence of grinding-stones, and in younger levels the typology and ornamentation of vessels. Differences between the sites are perceptible both in the typological contents of flint assemblages, related to each other horizontally, as well as in the kind of raw materials. They are, however, comprised in the general stylistic convention of the so-called Terminal Palaeolithic and Early Neolithic complexes of the Western Desert. The site in El Ghorab differs from the respective layers of the site in Nabta by a complete lack of artefacts, and even of shells of ostrich eggs in the older layers. An essential difference lies also in the ceramics found in Level II in El Ghorab, which were not found in the Terminal Palaeolithic level in Nabta E-76-5.

However, despite all these differences it seems that the human groups, the remains of which are settlement levels II and III in El Ghorab, had a similar social structure, economic and exploitation strategy as those, compared with them, from the levels on site E-76-5 in Nabta. This is proved by the similarity of the remains of fauna and the presence of grinders in both levels compared, as well as by a kind of permanent settlement in the younger levels confirmed by the existence of more durable post-constructions and storage pits.

The examination of the site in El Ghorab essentially facilitates the possibilities of interpretation of the discoveries in Nabta. It permits the conclusion that at the turn of the 7-th and 6-th millennia B.C., essential changes took place in the structure of — at least — several human groups living in the areas of what is the Western Desert today. These changes consisted in the formation of more durable, multi-family settlements. In various places of the area the use of ceramics was widely diffused, although this had been known here before. Analyses of the archaeozoological and archaeobotanical materials will reveal whether, and to what degree, these changes resulted from economic transformations.

References

- Wendorf, F. and R. Schild. 1980. Gebel Nabta and Vicinity. In: Wendorf, F. and R. Schild (eds.). *Prehistory of the Eastern Sahara*: 81 - 165. New York.