LATE PREHISTORY OF THE NILE BASIN
AND THE SAHARA
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# The Eastern Sahara from North to South: data and dates from the B.O.S. Project

Shortly after the first Dymaczewo conference in September 1980 an interdisciplinary archaeological research project was started in the Eastern Sahara by a group of scholars and students from the universities of Cologne and Berlin. Until 1984 four expeditions of altogether 15 months' duration were made into the Libyan Desert of Egypt and Northern Sudan. During that time more than 400 prehistoric sites have been recorded, at 142 of which excavations have been carried out.

This project, entitled "Besiedlungsgeschichte der Ost-Sahara" (B.O.S.) is funded by the Deutsche Forschungsgemeinschaft (DFG), its main subject being the history of human settlement in the Eastern Sahara with special emphasis on the interdependence of cultural and economic adaptation, and the changing climate during the last 10,000 years (Kuper 1981). Within this general scope, essential topic of research is the neolithization, but also the later occupation of the area and its relations to the historical development in the Nile Valley.

At the beginning of our fieldwork the Gilf Kebir in Southwest Egypt and the Wadi Howar in Northern Sudan were chosen as research areas, because they represent ecological niches within different geographical settings providing favourable living conditions lasting longer than in the surrounding areas. Furthermore, their geographical position – the one in the most arid part of the entire Sahara, the other at its southern fringe already close to the Sahel zone – do represent different climatic conditions: one is lying in the reach of possible winter rains, the other might receive summer rains. The actual frontier between the two might be located in the Selima Sandsheet, approximately along the present borderline between Egypt and Sudan. This geographical situation and the possible shifting of that climatic limit during the Holocene should have influenced the prehistoric development in that part of Northern Africa at a large scale. In addition, far reaching cultural contacts have to be taken into account as well as the fact that the climatic conditions of the two research areas selected are not representative for the Eastern Sahara in general, especially not for the great plains.

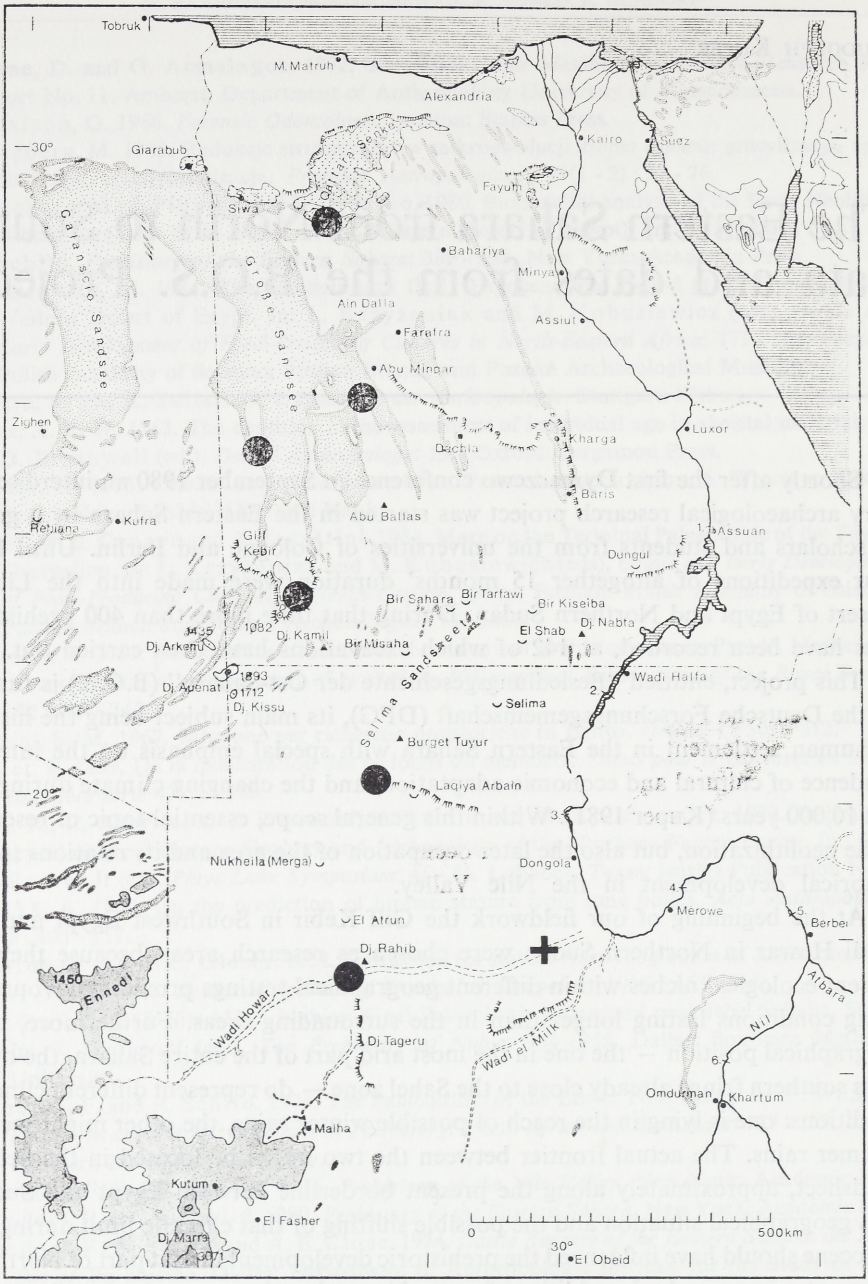


FIG. 1. Map of the Eastern Sahara showing the main research areas of the B.O.S.-project: Qattara/Siwa, the eastern and western Great Sand Sea, the Gilf Kebir, the Laqiya area and the Wadi Howar. The cross marks the position of the Makurian (?) fortress

For this reason later fieldwork has concentrated on establishing a chronological sequence for a transect of more than 1,200 kilometres, from the coastal region in the north to the Sahel zone in the south. Five different areas have been investigated in detail along this transsect at a distance of 300 to 350 km from each other: The Qattara/Siwa area, the Great Sand Sea and the Gilf Kebir plateau in Egypt, and in Northern Sudan the area west of Laqiya Arbain and the Wadi Howar (Fig. 1). In addition, the Selima Sandsheet, the Abu Ballas area and – if once possible – the Uweinat mountain should be subject of further research.

Starting from the North, some preliminary fieldwork has been done in the Qattara/Siwa area near Sitra (Cziesla, this volume). More extensive excavations, however, were carried out at the eastern and western margins of the Great Sand Sea. At both sites the onset of occupation could be placed into the first half of the seventh millennium B.C. (Klees, this volume). Further south in the Gilf Kebir two playa sites offered geological sections up to 10 metres high, one of them containing undecorated pottery dated to the 6th millennium B.C. On the playa surfaces rich archaeological material, including well worked ceramics, indicates intensive occupation between 4,000 and 3,000 B.C. (Schön, this volume). This period is also well represented west of the oasis of Laqiya Arbain in Northern Sudan, in particular in Wadi Shaw, where also pottery of the Khartoum type was discovered. The greater part of the archaeological material in that area, however, belongs to the third and second millennium B.C., with the pottery indicating close relations to the Nubian Nile Valley (Schuck, this volume). In the Wadi Howar extremely rich sites, containing abundant pottery, well preserved faunal remains and also bone harpoons apparently represent the complete sequence from the "Aqualithic" up to historical times (Richter, this volume). Evidence from a more recent phase in the history of Wadi Howar was discovered in 1984 during a reconnaissance trip from Rahib Wells to the Nile and back, proving that the course of the wadi does not end at Djebel Rahib as shown on all existing maps, but that it has to be regarded – as Berlin geologists had already concluded from satellite imagery – as a former, and the northernmost, greater tributary to the Nile. It might have played an important role as a corridor between Central Africa and the Nile Valley as late as the Christian period in Nubia. Evidence for this comes from a large stone fortress discovered some 100 kilometres west of the Nile where the wadi joins the river just opposite Old Dongola, the capital of the Christian kingdom of Makuria. Some architectural features of the enclosure, 120 × 200 metres wide, with walls of up to four metres high, strongly resemble Christian fortresses along the Nile and suggest its importance as a control post at a main migration route into the Nile Valley.

Although none of the excavated sites has been evaluated definitively so far, some preliminary statements may be presented: A North-South trend observed during the earlier periods seems to have been replaced by a regional development with prevailing West-East connections, obviously due to the influence of the above mentioned climatic dividing line between summer and winter rains. On the other hand,

the role of the Selima Sandsheet as a cultural buffer, as now suggested by this absolute desolate area of thousands of square kilometres of flat sand, seems not to have existed even during Later Neolithic times. This is demonstrated for example by the comb impressed herringbone ornament, typical of the pottery of the fourth millennium B.C. in the Gilf Kebir, which also occurs about 400 kilometres further southeast in the Laqiya area. There it persists until 2,000 B.C., combined with a specific decoration of little knobs that are well represented in the Wadi Shaw material which clearly shows relations to the Kerma culture in the Nile Valley, but also to the Gilf and Uweinat mountains in the West. For the same period similar far reaching connections can be demonstrated by the distribution of the special form of a grinding stone, named the "Gilf type", that is abundant in the Laqiya area but also occuring as far north as the Great Sand Sea. So, for the earlier part of the Holocene wet phase the discovery of typical wavy line sherds in the Gilf Kebir, up to now their northernmost occurrence in the Sahara, was not unexpected, since in the Selima Sandsheet, too, some Khartoum related pottery was found. That their wide-spread distribution is related to a northward shift of the climatic belt favouring the Sudanic environment, is demonstrated by a site near Abu Ballas in the Western Desert of Egypt, where Khartoum ceramics, rock engravings of giraffes, and also giraffe bones have been found as far north as the latitude of Aswan and Kufra, *i.e.* more than 1000 kilometres north of their present habitat. In the north, the Great Sand Sea might have been a barrier to the related ecocomplex. However, at the western fringe of the Sand Sea in the so called "silica glass area" pottery does occur with comb decoration mostly executed in the rocker-stamp technique that strongly recalls southern parallels. On the other hand some sherds from this site apparently are of the same manufacture, but undecorated and characterized by a flat, notched rim. This form, again, has its parallels in the eastern part of the Sand Sea at the site of Lobo, that otherwise is linked to the Egyptian oases and even to the Nile Valley by a strong component of flat retouched stone artefacts. It remains an open question if the two kinds of ceramics are resulting from the influence of the one kind upon the other, or if they represent different periods, since radiocarbon dates from both sites accumulate beetween 7,000 and 4,000 B.C.

Up to 1984 more than 200 radiocarbon dates from the Eastern Sahara were available. For its eastern part they originate from Fred Wendorf's Combined Prehistoric Expedition (Wendorf and Schild 1980; Wendorf *et al.* 1984), for the more western region from the B.O.S.-excavations (Table 1) supplemented by some dates from Fekri Hassan's fieldwork around Siwa (Hassan 1978). Going through these dates it becomes obvious that certain periods yield more dates than others. Most striking is a lack of data between 5,000 and 5,500 B.C., a hiatus also known from the Near East that has been attributed there to an increasing drought.

For a more detailed analysis of the radiocarbon dates a computer programme was applied that demonstrates a 99% age probability of the available data summarized in one curve. Separate calculation of these curves for single research areas

Table 1

**Radiocarbon dates from the B.O.S. excavations in the Egyptian Western Desert** (as of 1984)

| Area | Site | Date b.c. | Lab. No. | Material |
|---|---|---|---|---|
| QATTARA/SIWA | Sitra 83/11 | 4.340 +- 65 | KN 3222 | C |
| | Sitra 83/12 | 4.890 +- 65 | KN 3223 | C |
| GR.SANDSEA | Lobo 81/55-1 | 6.700 +- 80 | KN 3186 | C |
| | | 5,950 +- 75 | KN 3017 | C |
| | Lobo 81/55-2 | 4,400 +-500 | KN 3140 | C |
| | | 4.210 +- 65 | KN 3141 | E |
| | | 4.120 +- 60 | KN 3142 | E |
| | Lobo 81/55-3 | 4.230 +- 65 | KN 3198 | E |
| | Lobo 81/55-5 | 5.840 +- 65 | KN 3357 | C |
| | Willmann's Camp 81/61 | 6.910 +-300 | KN 3102 | C |
| | | 6.650 +-700 | KN 3395 | C |
| | | 6.250 +-300 | KN 3359 | C |
| | | 5.050 +-250 | KN 3396 | B |
| | | 4.110 +- 65 | KN 3197 | E |
| | Willmann's Camp 81/62 | 3.320 +- 60 | KN 3018 | C |
| ABU BALLAS | Mudpans 83/39 | 6.200 +-100 | KN 3401 | C |
| GILF KEBIR | Wadi el Akhdar 80/7-1 | 7.420 +-215 | KN 2879 | C |
| | | 5.750 +- 60 | KN 2878 | C |
| | | 5.720 +- 75 | KN 2934 | C |
| | | 3.830 +- 80 | KN 2935 | C |
| | | 3.720 +- 75 | KN 2882 | C |
| | Wadi el Akhdar 80/7-2 | 3.660 +- 60 | KN 2936 | C |
| | Wadi el Akhdar 80/7-5 | 3.220 +- 70 | KN 2880b | C |
| | | 3.110 +- 55 | KN 2880a | C |
| | Wadi el Akhdar 80/12-1 | 3.470 +- 65 | KN 2881a | C |
| | | 3.410 +-210 | KN 2881b | C |
| | | 3.200 +-125 | KN 2933 | C |
| | Wadi el Akhdar 80/14 | 2.200 +- 55 | KN 3173 | E |
| | | 2.000 +- 55 | KN 2926 | E |
| | | 1.910 +- 60 | KN 2925 | E |
| | Wadi el Akhdar 80/15-2 | 3.300 +-140 | KN 3104 | C |
| | Wadi el Akhdar 80/32 | 4.560 +-220 | KN 3191 | C |
| | Wadi el Akhdar 81/2 | 3.490 +- 60 | KN 3106 | C |
| | Wadi el Akhdar 81/4 | 3.850 +-450 | KN 3358 | C |
| | | 3.720 +- 65 | KN 3016 | C |
| | | 3.700 +-130 | KN 3381 | C |
| | | 3.550 +- 60 | KN 3187 | C |
| | Wadi el Akhdar 81/8 | 3.990 +-230 | KN 3176 | C |
| | | 3.480 +- 65 | KN 3103 | C |
| GILF KEBIR | Wadi Bakht 82/13 | 6.250 +-500 | KN 3096 | C |
| | | 6.030 +- 90 | KN 3095 | C |
| | | 4.130 +-420 | KN 3179 | C |
| | Wadi Bakht 82/15 | 3.230 +- 60 | KN 3079 | C |
| | | 3.120 +- 60 | KN 3149 | C |
| | Wadi Bakht 82/16 | 2.870 +- 60 | KN 3098 | C |
| | Wadi Bakht 82/18 | 2.930 +-390 | KN 3182 | C |
| | Wadi Bakht 82/19 | 2.820 +-130 | KN 3184 | C |
| | Wadi Bakht 82/21-2 | 4.650 +-300 | KN 3410 | C |
| | Wadi Bakht 82/22 | 4.200 +-200 | KN 3328 | C |
| SELIMA SANDSHEET | Djebel Kamil 80/63-2 | 5.190 +-160 | KN 3175 | C |
| | Bir Misaha 83/29 | 3.650 +-150 | KN 3355 | B |
| | Bir Misaha 83/30 | 4.350 +- 80 | KN 3412 | C |

C – charcoal; B – bone; E – ostrich eggshell.
All dates come from the radiocarbon laboratory of the Institut für Ur- und Frühgeschichte der Universität zu Köln (Dr. J. Freundlich) and are not calibrated and not corrected

shows a remarkable correspondence in particular by a peak a 6,000, and other maxima around 7,000 and 4,000 to 5,000 B.C. This is most obvious for the Egyptian part of the research area. So far there are not yet enough data available from the Wadi Howar, and in Wadi Shaw the latest period is over-represented by the oasis-like settlement during the second millennium B.C.

The five areas chosen in the Western Desert of Egypt show so clearly corresponding intervals that they can be summed up into one curve (Fig. 2), in spite of the fact that they are distributed over a distance of almost eight hundred kilometres, or at least 7 degrees of latitude, covering the Mediterranean area as well as the above mentioned zone of Sudanic influence. In addition the weight of the results is strenghtened by the circumstances that they come from different geographical situations – from the wide plains as well as from the Sand Sea or the Gilf mountains – and originate from different research teams, different kind of dating material, and different radiocarbon laboratories.

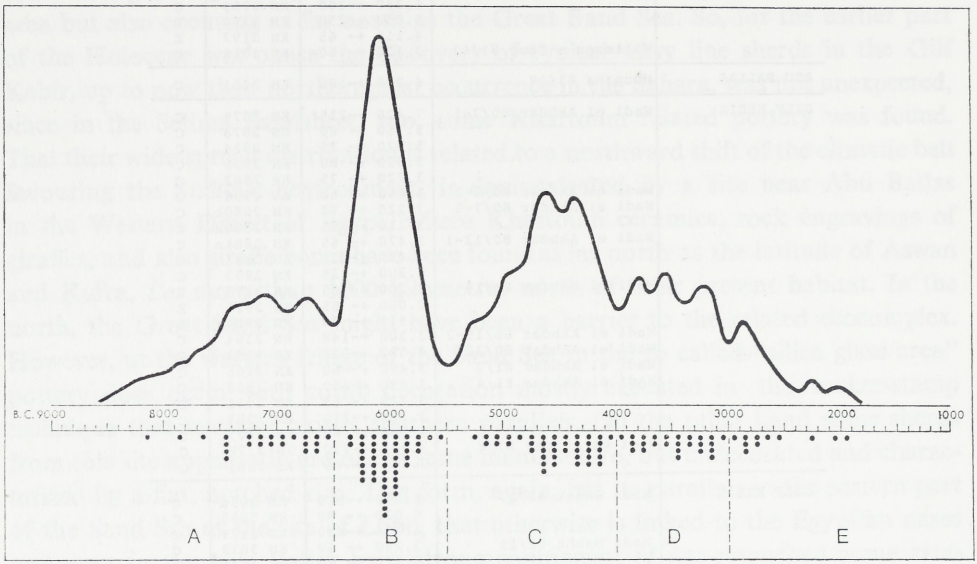


FIG. 2. Radiocarbon curve calculated from 145 dates from the Western Desert of Egypt representing the age probability of human settlement during the Holocene

Even if further evidence might modify these conclusions, five phases of occupation of the Egyptian Sahara may already be defined, the limits of which are to be drawn at about 6,500, 5,5000, 4,000 and 3,000 B.C. Disregarding the impact that future calibration might have on this sequence, for practical purposes a preliminary numbering of the intervals by the letters A to E is proposed. How far this radiocarbon sequence coincides with an archaeological one – from the Epipalaeolithic, to the Early-, Middle- and Late Neolithic to the Protohistoric – will depend on further research. For the time being it seems reasonable to avoid the well known terminological difficulties.

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