

# SUDAN & NUBIA

The Sudan Archaeological Research Society

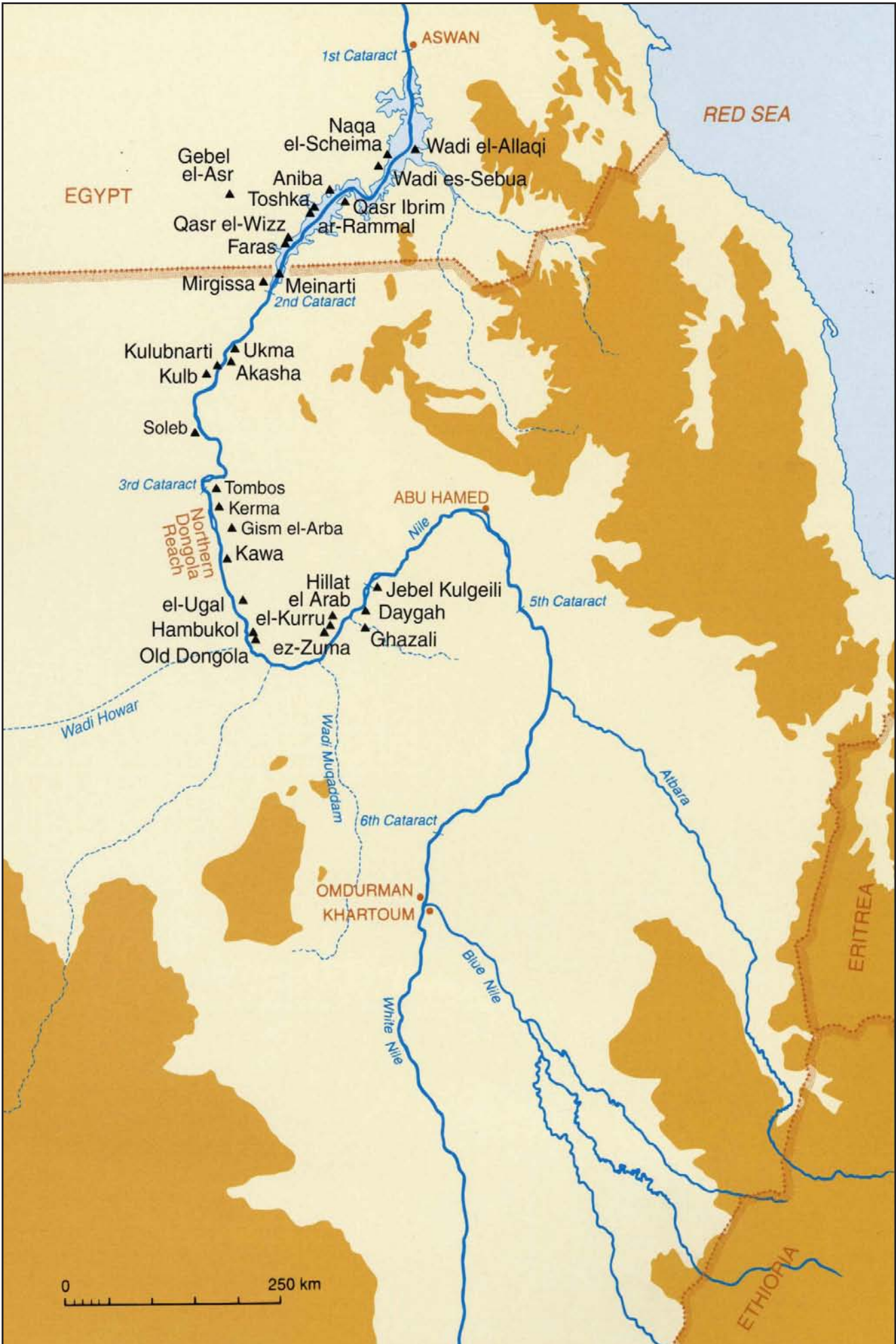


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*Front Cover:* Temple of Amenophis III at Soleb visited by  
F. W. Green in 1909 (Photo D. A. Welsby).

## Introduction

As the contents of this year's issue clearly demonstrate, *Sudan & Nubia* goes from strength to strength with a developing international profile. The Society's own work in the Dongola Reach is represented by two papers; the first, based on the analysis of human remains, provides fascinating insights into living conditions during the Kerma Period (Judd); the second outlines progress on the continuing research into the geomorphology of the region (Treves *et al.*). A complementary project, carried out in the same region by a French Expedition, has among other things identified a rare native settlement dating to the period of Egyptian conquest (reported on by Gratien). At Kerma itself, exciting new work, uncovering remains of the Napatan and Meroitic Periods, is dramatically extending the history of the site (Salah Ahmed), while of equal importance historically are the results from Hillat el-Arab (near Gebel Barkal), a cemetery with elite burials of the New Kingdom and very earliest Kushite Period (Vincentelli). Research into quarrying and stones receives fresh impetus from work at Gebel El-Asr in Lower Nubia (Shaw and Bloxam) and in Tombos and Daygah at the Third and Fourth Cataracts respectively (Harrell). Surveys in the latter region, threatened by a new dam, are confirming its great archaeological potential (Abdel Rahman and Kabashy Hussein). Among other possibilities, sites in the Abu Hamed Reach can be expected to shed important new light on Nubian monasticism, until recently a neglected subject (Julie Anderson). Further north, Qasr Ibrim, which has long been partially submerged, continues to repay the Egypt Exploration Society's commitment under difficult circumstances (John Alexander). Far from the Nile Valley, museum basements can also be a source of significant 'discoveries' (Wardley and Davies), as may unpublished archival material and archaeological diaries (Welsby Sjöström).

During the course of the year, SARS suffered a serious blow with the passing of its distinguished President, Sir Lawrence Kirwan. Larry was a source of encouragement, support and inspiration for us all. We salute his memory and his contribution to Sudanese and Nubian archaeology (see Obituary, by Harry Smith). We also regret the loss of Prof. Jack Plumley, a specialist in Christian Nubia, who for many years directed the EES excavations at Qasr Ibrim (see Obituary, by John Alexander).





# Some Rural Settlements at Gism el-Arba in the Northern Dongola Reach

*Brigitte Gratien*

## Preliminary Results

Since 1994, the French Archaeological Mission at Gism el-Arba (Ministry of Foreign Affairs, CNRS and University of Lille 3) has been conducting excavations near the modern village of Kadruka, at the northern end of the Wadi el-Khowi. The first four campaigns of a five-year programme were centred on the study of the palaeo-environment, particularly the palaeo-channels of the Nile in connection with the ancient sites, as well as the development of the rural settlements during the second half of the third millennium and the first half of the second millennium BC.

The concession, 8km long by 6km wide, includes 17 identified sites (13 settlements and four cemeteries), some of them occupied during a long period: two Neolithic sites, 13 Kerma sites, two of New Kingdom times and three others, dated to the Napato-Meroitic period.

A study on the ancient courses of the Nile, lead by Dr B. Marcolongo and N. Surian from the Istituto di Geologia Applicata-CNR of the University of Padova, based on SPOT and LANDSAT satellite images and aerial photographs, have shown a gradual shift of the Nile from the east westwards; the archaeological sites are spaced out along four main lines: Neolithic, Kerma, classical Kerma, New Kingdom and Napato-Meroitic. However, the survey of the Kerma sites proved that they were occupied during about one millennium, some since about 2500 BC: five of them were inhabited since Kerma Ancien, Moyen and Classique; two others during Kerma Moyen and Classique; one is dated to Kerma Classique and New Kingdom times; a necropolis, probably originally on an island, spread from the north during Kerma Ancien to the south in the Kerma Classique Period.

Thus it is possible that some channels were, as is now the case with the Argo channel, filled with water only during the flood season. Consequently, the environment was wetter than today and could have supported an expansion of agriculture and of livestock breeding, together forming the foundations of the economy of Kerma kingship.

Two typical sites were selected in order to study the evolution of settlement and dwellings between 2500 and 1500 BC; these are Settlements 1 and 2 at Gism el-Arba. Unfortunately the cemeteries are not rich enough to provide good data, because they are heavily eroded: only the bottoms of some graves survive and are level with the modern surface, others have been completely destroyed. Bones and funerary furniture are scattered on the ground. A depth of 600 to 800mm of archaeological debris was removed by aeolian

erosion, as confirmed by the work on Settlement 1. Nevertheless, the collected material was of top quality, pottery as well as ivory bed inlays, personal ornaments, and even polishing stones and a horn protector, as fine as the objects discovered in the necropolis of Kerma itself.

We preferred to study the settlements, first for a better understanding of the territorial organisation of the Kerma state, the relations between the capital and the countryside, as well as to establish a typology of the rural settlements and the evolution of their dwellings over a long period. Moreover, the domestic artefacts, such as the utilitarian pottery, are still very poorly known.

## Settlement 1

Settlement 1, now a mound reduced to 150 x 80m in size, rises about 2m above the surrounding fields. It is one of the best preserved sites of Gism el-Arba. A C-14 date, taken from a sample recovered from an adjoining channel, gave us a date of 4640 ± 40 BP. A stratigraphical sondage extended down to a level with fire-places, layers of ashes and pottery datable to the late 'pre-Kerma' period, that is about 2600-2500 BC: sherds are of fine silt, black with a red polished surface and rippled, but very similar in style to those of Kerma Ancien.

However, the first known structures are of Kerma Ancien date. All the northern part of the mound, now eroded and level with the modern surface, is covered with hundreds of post-holes, among them several circular huts, 4m in diameter, sometimes with one or two posts in the centre. Another structure is a rectangular one, maybe an administrative or cult building. This kind of architecture was in use throughout the Kerma period until the end, for the outbuildings of the large compounds, at Gism el-Arba.

We were able to analyse the development of the architecture, in another sondage, from the Kerma Moyen (sometime after 2000 BC) until the Late Kerma period (about 1500 BC). A quadrangular unit, the walls of which seem to be made of *jalous* (adobe), connected with several domestic hearths, is dated from the ceramics to the beginning of the Kerma period. Nearby, several kilns are characterised by concentrations of whitish indurated ashes, as also are two other structures filled with fragments of unfired bricks, one surrounded by a circle of post-holes, perhaps a fence. They may have been used as granaries.

During an occupation phase, later than Kerma Moyen, this unit was replaced by three separate ones, more than 5m square, probably contemporaneous, judging from the foundation levels of the walls: two of them belong to a type very much used by the Kerma people. There is a main rectangular room, with, on the eastern side, a longitudinal one, that often contains a large fire-place. In this architectural type, a column supports the roof in the main room, and pillars in the angles or buttresses along the walls strengthen the extremely weak walls built in unfired bricks. Red bricks were sometimes used for thresholds and/or door jambs (Colour Plate VI). In the present case, one of these units (House M



2) was modified in the Kerma Classique period; a built threshold forms a small raised floor, and a place to fix the folding-door; sealings with prints of small cords were also discovered. This first occupation phase is also marked by a hard floor, coated with red ochre. This house may have had a special function, although whether administrative or religious is unclear. Close by, a circular brick-masonry structure seems to be the base of a silo.

During the following phase, at the end of Kerma Moyen, house M 2 was refurbished and enlarged with the addition of a new room on the northern side, while the two other units no longer survived.

This house became, in Kerma Classique times, a large farming compound and others of the same type cover the *kom*. They are 15 to 20m in size and consist of a central courtyard surrounded by several quadrangular rooms. These residences are similar to the contemporary houses uncovered by Charles Bonnet and the Swiss Archaeological Mission in the ancient town of Kerma. Numerous kilns of a primitive type were in use nearby: they are simple pits covered by a whitish, hard, burnt material, sprinkled with some charcoal.

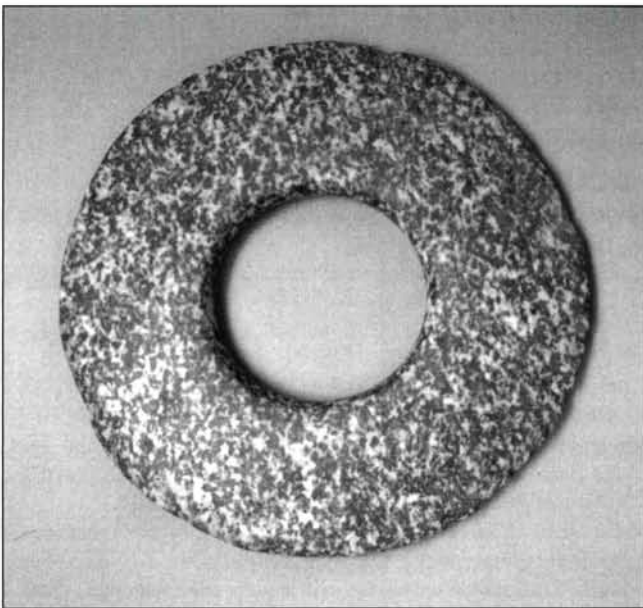


Plate 1. Settlement 2, reused Neolithic mace-head.

After modifications at the end of the Kerma Classique period, two new units were built on the ruins of the previous level. They employ the same dimensions and the same plans: that is with a quadrangular house (House 3) or with two adjoining rooms, a main one and the other for domestic activities with a large fire-place (House 4).

The equipment is very homogeneous: a lot of grindstones and grinders, numerous stone tools and flints mainly in quartz, palettes for ochre, bone awls, perforated polishing stones, and abundant ceramics. These are mainly decorated cooking pots the typological evolution of which can be studied from the form and the decoration. Some models of cattle, one model of a bucranium and models of

vases complete the collection.

## Settlement 2

Settlement 1 was abandoned at the end of the Kerma period. Settlement 2 (150 x 100m at the present time) is about 3.5km from the first, to the west-north-west, and appears to be one of those that succeeded it. It is partly destroyed by vehicle tracks and covered by sand dunes. The western limit is formed by a deep wadi. Our attention was drawn to the extensive ash on the surface and the mixture of the surface pottery: traditional fine red black-topped bowls of Kerma type, mat-impressed sherds and a lot of orange wheel-made pots of New Kingdom 'Egyptian' type. After a test pit dug in the winter of 1997-98, the central sector was completely cleared during the last season. Structures were occupied during a short period, dating to the beginning of the XVIII<sup>th</sup> Dynasty, the period of the conquest of Upper Nubia by Egypt. This village is one of the first known indigenous settlements of the period to be studied.

Three kinds of structures can be observed. They show the adaptation of the ancient models to the use of new techniques. Although known in the south of the Wadi el-Khowi from the excavations lead by Derek Welsby on behalf of the Sudan Archaeological Research Society, it is the first time that at Gism el-Arba such a four-angled building built with ferruginous sandstone blocks plastered with mud, and very badly preserved, has been found. They are subdivided by internal walls. On the northern side of the *kom* stood a quadrangular dwelling, made of regular, well-made, solid bricks. Two rows are used for each wall, so it was no longer necessary to employ buttresses or angle pillars. Building 23, in the central south-western part of the site, is probably a house, 5.3 by 3.8m in size, built with the same methods as the previous one, but it copies the traditional Kerma plan: a square room and a secondary room with the fire-place preceded, in the present case, by an open courtyard (Colour Plate VII). Several kilns and fire-places were laid out and some typical Egyptian jars (dated to the beginning of the XVIII<sup>th</sup> Dynasty) were set deep into the mud floors.

The central part was occupied by a large zone for domestic and artisan activities. Nearly 20 ovens/kilns and fire-places were uncovered; among them are circular bread ovens with a red silt top, sometimes perforated by a circular hole, and sometimes lined with bricks. Others were intended to fire pottery, being either primitive kilns covered by white ash, like so many that were excavated on Settlement 1, or, like structure 14, mud laid on branches that had collapsed onto an as-yet unfired pot. A large quadrangular kiln (3 x 2.5m) recalls a kiln for copper (?) smelting, as had one found in Settlement 1.

The material is characteristic of the beginning of the New Kingdom: amulets, a scarab, beads, fine Kerma red burnished black-topped ceramic, sometimes with the white band of Kerma Classique, mat-impressed cooking-pots (made on a square-mat, as opposed to the round mat of the Kerma





Plate 2. Some of the models of animals found at Gism el-Arba.

Classique). The fabric is fine enough, comparable to the orange fabric, but not well fired, with oxidised surfaces and a black or grey core. There is in addition a coarse pinky, wheel-made pottery (ovoid or globular jars, sometimes with an incised line on the neck and with 'pinched' bases) and finer pottery (plates and cups with flat or annular bases, and an interior red polished slip well-known from New Kingdom cemeteries). A Neolithic mace-head was worked and halved to allow it to be used as a hammer (Plate 1).

In addition, dozens of animal models, of a very fine quality, were probably made and fired on the site as some are still in unbaked earth (Plate 2). They are the expression of a symbolic herd, with rams and sheep, calves, cows and bulls. Some wear a frontal disk, others, always cattle, have marks incised on the shoulder and/or the leg; they are very often geometrical signs, but sometimes a bird is executed on the model.

The region of Gism el-Arba was densely inhabited in antiquity and it is representative of the countryside, near the capital. From the New Kingdom onwards, the main settlements moved onto Argo Island and it is only in very recent times that the area has become once again occupied.

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*Plate VI. Gism el-Arba. Settlement 1, House 2 at the end of the Kerma Moyen.*



*Plate VII. Gism el-Arba. Settlement 2, house from the beginning of the XVIII<sup>th</sup> Dynasty.*