

# Tides of the Desert

# Gezeiten der Wüste

HEINRICH-BARTH-INSTITUT



UNIVERSITÄT ZU KÖLN

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Tides of the Desert –

Gezeiten der Wüste

Contributions to  
the Archaeology and Environmental History of Africa  
in Honour of Rudolph Kuper

Beiträge zu Archäologie und Umweltgeschichte Afrikas  
zu Ehren von Rudolph Kuper

Edited by Jennerstrasse 8

Jennerstrasse 8 comprises Tilman Lenssen-Erz, Ursula Tegtmeier and Stefan Kröpelin as well as Hubert Berke, Barbara Eichhorn, Michael Herb, Friederike Jesse, Birgit Keding, Karin Kindermann, Jörg Linstädter, Stefanie Nußbaum, Heiko Riemer, Werner Schuck and Ralf Vogelsang

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## Gezeiten der Wüste - Herausgeber: Jennerstrasse 8

Die Herausgeber sind (mit einer Ausnahme) Mitarbeiter im Heinrich-Barth-Institut an der Universität zu Köln. Dieses befindet sich in der Jennerstrasse 8 in Köln-Ehrenfeld, einem multikulturellen Stadtviertel. Es sind ehemalige Räume der Kölner Müllabfuhr und sie mussten, bevor sie für das Institut nutzbar waren, in mehreren Monaten in Eigenleistung renoviert werden. Seit die Jennerstrasse 8 im Jahr 1986 bezogen wurde, ist sie – obwohl eine Sackgasse von nur 50 m Länge – an der größten Universität Deutschlands zu einem festen Begriff und für die dort Arbeitenden zu einem identitätsstiftenden Label geworden.

## Tides of the Desert - The Editors: Jennerstr.8

The editors are, with the exception of one, all members of the Heinrich-Barth-Institut at the University of Cologne, located in Köln-Ehrenfeld, a part of city renowned for its multicultural flair. The building of the institute used to belong to the Cologne refuse disposal service and was renovated over a period of several months by the staff. Since the establishment of the institute in the Jennerstrasse in 1986, the address – despite it being a cul-de-sac of only 50 m in length – has become a well known institution of Germany's largest university. Those working here are pleased to be identified with this appealing label.



# Abstracts

John Alexander

The Global Significance of African Civilisation

## Abstract

Definitions of civilisation have, for far too long, been restricted to complex urban societies whose attributes included literacy. The result has been to see civilisation in Asia-european terms and exclude African (except for Pharaonic Egyptian) and American societies. This has badly distorted understanding of the development of our species. Archaeological research, particularly in recent years in Africa but also in the Americas, allow this to be corrected for it shows that in many regions in all continents except Australia and North America, after the emergence of efficient agricultures based on locally available plants, indigenous complex urban societies developed without the aid of any kind of writing. They are so similar to those with literacy that either both or neither must be called "civilised".

In global terms this suggests that in all those continents, human social development has followed a similar pattern; all major subdivisions of the human species evolved agriculture which became efficient enough to support urban communities in which many kinds of skills became established. These civilisations are surprisingly similar among peoples who had no connection with each other in time or space. Does this mean that urban complexity is a condition which best suits our species, and that to it we unconsciously aim and unconsciously arrive at similar societies? If so then long abandoned teleological explanations should be reconsidered.

Keywords: civilisation, indigenous agricultures, complex urban societies, teleology.

Ginette Aumassip

Les formations quaternaires du secteur de Tin Hanakaten (Tassili n Ajjer, Algérie)

## Abstract

In the region of Tin Hanakaten (Tassili n Ajjer, Algeria) a stratigraphy is preserved which, within a few kilometres, covers the whole quaternary. Four levels of colluvial deposits were dated to the Pleistocene, except for the highest one, by means of prehistoric tools. The most recent fossil level stands in relation to the base of human deposits with humans dwelling in a rock shelter during the entire Holocene. Two short hyperarid episodes show in the deposits, the last one of which ended around 7200 BP with the complete deterioration of the vegetation. The present day desert was established with an inconspicuous threshold at about 4500 BP.

Keywords: Sahara, Pleistocene, Holocene, climate.

Hans E. Back

"Jouets chameau" – Steinartefakte der Nomaden-Kinder

## Abstract

From northern Sudan (Wadi Howar) through Niger (Kauar and Air) and Libya (Messak Mellet, Erg Murzuk) into Algeria (Hoggar, Tassili n'Ajjer, Tadrart, Tin Rhero) the author found "jouets chameau" in Tamashek "imenas n'ökade". Their recent production and use as toys for nomads' children could be proved. Such objects are also made of ostrich eggshell, sherds of broken pottery and clay. From Niger (Kauar) an example wearing an iron nose-ring is known. The presumption is that many of these so-called "T and Y shaped objects", partly ascribed to the Atérien, partly to the Neolithic period, are significantly more recent.

Keywords: T-objets, Y-objets, "jouets chameau", Tuareg.

Hubert Berke

An Unusual Fireplace in the Middle Wadi Howar (Sudan)

Abstract

During the intensive surveying in the Middle Wadi Howar by the SFB 389 (ACACIA) a site from the latest referred settlement activities (HOELZMANN et al. 2001) was discovered and investigated. The organic tempered pottery is well preserved and shows matt-impressions and rough geometric patterns as decoration.

Besides some burials, a fireplace with burned bones of scimitar horned oryx (*Oryx gazella dammah*) was excavated. Obviously the bones of the animal were used as firing material.

Keywords: Sudan, archaeology, fireplace, oryx.

Helga Besler

with a contribution by Alexandra Hilgers

The Formation of Artefact-stabilized Dunes near Lower Wadi Howar (Sudan)

Abstract

During a survey trip in 1997, a geo-archaeological team of the sub-project A2 "Wadi Howar – prehistoric occupation and palaeoenvironment at the southern margin of the Libyan Desert/Northwest Sudan" in the Cologne Collaborative Research Centre 389 ACACIA investigated the dunes S97/1 and S97/2 in the Abu-Tabari region. The geographical study aimed at gaining knowledge about their formation and their age. Therefore, sands were sampled for sedimentological analysis and luminescence (L) dating along two drilling profiles from base to top. According to analytical investigations the dunes have different histories concerning formation processes and sand sources. The L-dating however, gives comparable model ages ranging between 11000 and 8000 years for the top three metres. Thereafter the dunes became fixed but they seem to have been occupied by man much later. The discussed results are in good agreement with evidence from other literature on the region.

Keywords: dune formation, dune age, luminescence dating, granulometry, palaeoenvironment.

Klaus Bokelmann

Einige Libyan-Desert-Glass-Artefakte des Aterien aus der Glass Area in Südwest-Ägypten

Abstract

The author describes some Aterian artifacts made of Libyan Desert Glass in South-west Egypt, discussing the possibilities of a connection with early *Homo sapiens sapiens* thus showing routes of expansion during the last interglacial or in the earliest phases of the last glacial.

Keywords: Aterian, desert glass, Egypt, *Homo sapiens sapiens*.

Peter Breunig and Katharina Neumann

Continuity or Discontinuity? The 1<sup>st</sup> Millennium BC-Crisis in West African Prehistory

Abstract

In this paper, a model is presented of the transition from hunter-gatherers to full farming societies in semi-arid West Africa. Based on archaeological field work in Burkina Faso and northeast Nigeria and in accordance with evidence from other West African regions, we postulate that the transition was discontinuous and took place in two stages. Stage one comprises the Final Stone Age, from around 2000 calBC to the early first millennium calBC, with villages and temporary camps, pastoralism and initial agriculture. Stage two is the fully developed Iron Age

from the middle of the 1<sup>st</sup> millennium calBC onwards, with larger villages and towns, iron technology and diversified agricultural systems. In both areas, the two stages are separated by a gap in occupation, correlated with increasing aridity after 1000 calBC. In Burkina Faso, archaeological evidence is almost absent for the 1<sup>st</sup> millennium BC, most probably due to high mobility. In northeast Nigeria, the arid crisis was less severe, as the water resources of Lake Chad acted as a buffer, and the transition shows more regional variation.

Keywords: early food production, Late Stone Age, Iron Age, West Africa, climatic change.

Isabella Caneva

Second Millennium BC Pastoral Cultures in the Nile Valley: The Ghosts of the Khartoum Province?

Abstract

Within the framework of the Sudanese programme of the Italian Mission field research concentrated on the eastern bank of the Nile between Wadi el Kenger and Wadi es-Saggai. Focusing on territorial notion and behaviour of different segments of Neolithic groups settlements as well as cemeteries were excavated. Main results concern the Late Neolithic period from which only little archaeological traces are known so far. Occupation remains indicate an increasing mobility of pastoral groups as well as an increasing use of desert resources from the Khartoum Neolithic onwards. The most characteristic feature of the Late Neolithic are large cemeteries with huge tumuli. These are interpreted as signs of strong economic and political networks between groups living along the Nile and in its hinterland which probably were caused or at least favoured by climatic and superregional political pressures.

Keywords: Sudanese Nile Valley, Neolithic, Late Neolithic, cemetery, tumuli.

J. Desmond Clark †

A Note of Appreciation of Rudolph Kuper's Research in the Western Desert of Egypt and on Holocene and Earlier Localities and Problems needing Investigation

[ohne Abstracts und ohne Keywords]

Angela A. Close

Sinai, Sahara, Sahel: The Introduction of Domestic Caprines to Africa

Abstract

Historically, archaeologists have emphasised Sinai's rôle as the only land-bridge between Asia and Africa, and exploration has focused on the northern part of the peninsula. However, crossing the Gulf of Suez from southwestern Sinai involves only a short and easy trip. Recent fieldwork suggests that the area played a rôle in exchanges between the continents during the early Holocene, particularly in the movement of domestic sheep/goat into Upper Egypt in the eighth millennium BP. Elaborate stone tombs dating to the same period indicate that southwestern Sinai also took part in the regional development of social complexity.

Keywords: domestic Caprines, Holocene, pastoralists, Sinai, Sahara, Sahel.

Manfred K.H. Eggert

Southern Cameroun and the Settlement of the Equatorial Rainforest: Early Ceramics from Fieldwork in 1997 and 1998-99

#### Abstract

This paper presents a consideration of early ceramic evidence from Southern Cameroun which was obtained during archaeological fieldwork in 1997 and 1998-99. The pottery in question has to be situated within the wider framework of the initial settlement of the Central African rainforest by pottery-producing people, currently dated to about the middle of first millennium BC. This pottery appears rather heterogeneous in both formal and ornamental outlook as well as chronological position, the latter being indicated by associated radiocarbon dates. If the current situation suffers from an almost complete absence of continuous archaeological fieldwork in the southern part of Cameroun and beyond, interregional comparison is, for the same reason, about to be impossible at this stage. The current state of research is all the more deplorable since it seems to be quite evident that we are dealing with a variety of early ceramic traditions on the regional level.

Keywords: settlement archaeology, early ceramics, Bantu expansion, Southern Cameroun, rainforest, Central Africa.

Lutz Fiedler

Artefakte, Denken und Kultur

#### Abstract

Archaeologists talk a great deal about culture, but what do they actually mean when they apply this term. If we are to understand it is essential that we are aware of the difference between the behaviour of early man and that of wild animals.

Tool-use, the instrumentation of objects found in the environment in order to achieve conceptualized goals, is a fundamental part of any cultural system. However, many recent animals use tools in a more systematic manner. Here the distinction between nature and culture is not as defined. In other words there doesn't exist a dividing line between the two, they are much better described as overlapping spheres.

Therefore, the use of tools is itself a basic element of culture but not its distinguishing feature.

The definition of culture is less complicated when we look back on the Late Oldowan and Early Acheulian artifacts from between 1.6 and 2 million years ago. There are different types of functional types of tools, e.g. choppers, cutting-tools and awls. These make up a traditional assemblage capable of fulfilling a range of requirements. Within the assemblage we can indeed recognize a conceptualized technological system. Tools, function and objects are defined/classified. The tools belonging to the assemblage from the Late Oldowan and Early Acheulian do however bear witness to a low standardised and poorly refined formal arrangement. Cognition was therefore not particularly differentiated. This can mean that the symbolic background of types and functions was at that time of a rather simple and linear nature. Nevertheless, it cannot be ignored that the communication of symbols and their tradition during the Lower Paleolithic is a clear evidence of culture.

Keywords: culture, language, tools.

Baldur Gabriel

Neolithic Camp Sites in the Sahara – Anticipation of Future Research

#### Abstract

Neolithic camp sites are most frequent in the great plains of the central and eastern Sahara. They are indicated by peculiar accumulations of pebbles and debris ("Steinplätze") which are the relics of ancient nomadic campfires. The procedure of heating and preparing their meals (without pots) is not clear. There are still a lot of unresolved questions together with the Steinplätze. But they provide outstanding potentials for the investigation of the cultural

and ecologic development during 10,000 and 3800 bp in Northern Africa and the adjacent Old World history, especially for the role of the cattle pastoralists whose startling traces are elsewhere to be seen in the impressive rock art. The author points out to future research and argues for an international exploration program with possibilities for easily gained valuable data on landscape, climate and cultural history.

Keywords: Neolithic, Sahara, camp sites, fireplaces (Steinplätze), cattle pastoralism, palaeoecology.

Achilles Gautier, Veerle Linseele and Wim Van Neer

The Fauna of the Early Khartoum Occupation on Jebel Umm Marrahi (Khartoum Province, Sudan)

Abstract

The fauna of the Early Khartoum site on Jebel Umm Marrahi, situated on the westbank of the Nile north of Khartoum, compares well with those from similar sites on the eastbank. Differences in the catchment territory with respect to the eastbank sites, related to the location of the main Nile channel during the Early Khartoum period, might explain the greater importance of fish, especially fish taken from the alluvial plain, in the diet of the Umm Marrahi people. The low ratio kob : oribi in the hunted game suggests the site dates from the later Early Khartoum period.

Keywords: archaeofauna, Early Khartoum, catchment territory, fishing techniques.

Birgit Gehlen, Karin Kindermann, Jörg Linstädter and Heiko Riemer

The Holocene Occupation of the Eastern Sahara: Regional Chronologies and Supra-regional Developments in four Areas of the Absolute Desert

Abstract

The following paper examines the climatic and cultural changes that occurred in the Eastern Sahara during the Holocene. The evidence is given from different areas of the absolute desert located on the Abu Muhariq Plateau (Djara), in the Abu Ballas scarp-land (Eastpans) in the Great Sand Sea (Regenfeld) and in the Gilf Kebir (Wadi el Bakht, Wadi el Akhdar). Each area has also yielded an independent sequence of occupation patterns during the Holocene wet phase based on numerous <sup>14</sup>C-dates from archaeological sites. Although the wider frame of climatic and environmental settings as well as the predominant cultural innovations was similar in all studied regions, the archaeological phenomena and thereby identified cultural processes were often quite different. Pottery played an important role during the entire period of occupation in the Gilf Kebir and is therefore the most important cultural marker in this area. The Regenfeld area yielded only a small amount of ceramic finds from the later occupation phase, whereas the Djara region showed 'aceramic' settlement units. Plant utilisation apparently increased in all areas during the mid-Holocene period. Up to now, we have not observed the introduction of livestock before the 6<sup>th</sup> millennium BC<sup>1</sup> (calibrated), while at the inner Great Sand Sea remains of domesticated animals are lacking.

Keywords: Holocene, Eastern Sahara, climate, prehistory, chronology, <sup>14</sup>C, domestication, stone tools, pottery.

Brigitte Gratién

La fin du royaume de Kerma - la situation dans l'arrière-pays

Abstract

The majority of Kerma sites, both upstream and downstream of the Third Cataract, and the settlements as well as the cemeteries, were abandoned during a phase transitional with the New Kingdom known as the Late Kerma period. Two sites are representative of this period: the cemetery SAC4 at Saï and the rural settlements at Gism el-Arba. Phenomena of acculturation are visible principally in their architecture and ceramics.

Keywords: Late Kerma, settlement, Saï, Gism el-Arba, pottery.

Horst Hagedorn  
Auf den Spuren Gustav Nachtigals im Borku-Bergland (Tschad)

Abstract

As the first European Nachtigal arrived in 1871 in Borku. On his journey he proved that the Chad has a runoff to the NE during times with high-water level. Findings of fish skeletons and limnic sediments were the first indications of a larger Paleochad in former times. Migrating dunes and wind carving point to a persistent and strong NE trade wind. The following article shows the importance of the observations, which were made by Nachtigal, for later investigations in this area.

Keywords: Paleochad, eolian relief, yardangs, migrating dunes.

Joachim Hahn †  
Ein Klingendepot am Djebel Kamil (Ägypten)

Abstract

A survey of the B.O.S. mission in 1985 in a deflated depression south of Djebel Kamil (Southeastern Egypt) has produced several Holocene sites. Among them, a depot of 25 blades was discovered and excavated, named site 85/65. The blades show a simple knapping technique without preparation. Modification has not been observed. As the major result, the blade depot indicates a new kind of archaeological sites, different from camp sites and workshops.

Moreover, it suggests that blanks were transported as well as nodules or preformed cores.

Keywords: Egypt, Holocene, knapping technique, blades, depot.

Winfried Henke, Erik Becker und Michael Stang  
Menschliche Skelettreste aus dem Wadi Howar (Sudan) – vorläufige anthropologische Befunde

Abstract

Even though the skeletal remains from Wadi Howar, with which this contribution is concerned, displayed a rather poor state of preservation, some interesting conclusions could be drawn from their preliminary study. The material seemed to be divided into two morphologically distinct groups. The first of these two groups consisted of the individuals S 95/4 and S 95/2-3. Both skeletons displayed certain characteristics also found among palaeolithic human remains from Nubia. The second of these groups was formed by the archaeologically associated individuals S 96/1-1, S 96/1-2, and S 96/4 on the one hand, and the likewise associated individuals S 96/120-3, S 96/120-4, and S 96/120-5 on the other. The members of this second group were considerably less robust than S 95/4 and S 95/2-3 and exhibited traits normally associated with negroid populations. Regrettably, the question whether the former of the two groups (which contains the older and more robust skeletal remains) could be considered ancestral to the latter (which is younger and gracile) could not be answered conclusively on the basis of this osteological analysis.

Keywords: Wadi Howar, Sudan, human skeletal remains, Holocene, human osteology, population biology.

Keywords: Wadi Howar, Sudan, human skeletal remains, Holocene, human osteology, population biology.

Philipp Hoelzmann

Lacustrine Sediments as Key Indicators of Climate Change during the Late Quaternary in Western Nubia (Eastern Sahara)

Abstract

Palaeolake sediments and palaeoenvironmental evidence confirm for Western Nubia (ca. 15°-22° N / 24°-30° E) a dramatic climatic change that passed, in less than 7000 years during the earliest to mid-Holocene (ca. 11,500 to 5000 calBP), from hyperaridity to semi-aridity and back to its present hyperarid state. Geochemical, sedimentological, palaeoecological and stable isotope analyses were used for the palaeolimnological characterization of different lake stages which vary through time and space (e.g. non-existence, sebkha conditions, freshwater lakes). Calibrated radiocarbon dates, mainly from lacustrine sediments, provide the base for stratigraphical correlation along a N-S transect through Western Nubia and into the present Sahel (22°-13° N). The onset of lacustrine sedimentation is dated in the lowlands at most localities to ca. 11,500 to 10,000 calBP, whereas mountaineous sites show an earlier onset of lacustrine sedimentation. Generally, stable lacustrine conditions were established soon after the regional rise in groundwater, although individual sites show fluctuating groundwater levels over more than 1000 years. By 8000 calBP, optimum conditions prevailed throughout Western Nubia as documented by lacustrine sediments which prove the existence of stable freshwater lakes. Latitudinal differences in the geochemistry of these lacustrine sediments are interpreted to reflect different rainfall regimes and gradients of decreasing rainfall that were developed in a northerly direction between 16°-22° N. The decline of the wet phase started earlier in the North (ca. 7500 calBP at 21.5° N) and later in the South (ca. 6000 calBP at 18° N). Due to the discontinuous character of the palaeolake sequences, the end of lacustrine sedimentation in Western Nubia can only be placed tentatively around 5000 calBP. Records covering the latest Holocene (<4000 calBP) are extremely scarce due to intensive deflation.

Keywords: lacustrine sediments; geochemistry; palaeoenvironment; climate change; radiocarbon dating; late Quaternary.

Friederike Jesse and Birgit Keding

Death in the Desert – Burials in the Wadi Howar Region (Eastern Sahara)

Abstract

The Wadi Howar, the most important tributary from the Sahara to the Nile during the early and middle Holocene, has been the object of intensive archaeological and geological research by two research projects – B.O.S. and ACACIA – of the University of Cologne for about twenty years. According to the data collected on the more than 1700 sites known so far, the Wadi Howar region was permanently occupied at least from the 6<sup>th</sup> to the 2<sup>nd</sup> millennium BC. The establishment of the cultural sequence was mainly based on the analysis of the pottery. Most of the known sites consist however of settlements, burials are infrequent. Informations about the “world of the dead” are thus rather limited. On 99 sites in the Wadi Howar region, burials have been observed, but only 14 burials have been excavated so far.

This small number of interments probably span the whole Holocene occupation sequence of the Wadi Howar and can thus provide only a very tenuous and preliminary picture of the funerary traditions. Nevertheless, differences in the treatment of the dead can be seen proving of a considerable variety of mortuary practices and probably social differentiation.

Keywords: Wadi Howar, Eastern Sahara, burials, Holocene, chronology, cultural development.



Eberhard Klitzsch

Das Wasser der Wüste – ein kurzer Bezug zur Besiedlungsgeschichte einer Wüste und zu deren Zukunft

#### Abstract

The Sahara desert underwent several drastic climatic changes during Pleistocene and Holocene times. During moist periods most of the present day Sahara was green, the available aquifers of the large geological basins were filled up by local rainfalls with groundwater up to the formation of large lakes some reaching the size of present day Caspian Sea. During arid periods – normally lasting several to many thousand years – life adapted to this changing situation and remaining vegetation, animals and men retreated to mountain areas or to natural oases in favourable geological and morphological positions where groundwater still was at or near surface. Modern times have interrupted this natural adaptation to changing climates. Since the middle of last century intensive use of groundwater lowers the watertable of this fossil groundwater and many natural oases now depend on irrigation, which is limited by the amount of groundwater stored in the aquifers. The large quantities proven guarantee in most areas groundwater use for the near future. With greater depth however, this groundwater mining will become more expensive and it will use up resources of future generations.

Keywords: Sahara, groundwater history, climate change, present situation.

Stefan Kröpelin

Damage to Natural and Cultural Heritage by Petroleum Exploration and Desert Tourism in the Messak Settafet (Central Sahara, Southwest Libya)

#### Abstract

Recent petroleum exploration in the central Sahara on the Messak Settafet (Fezzan/Southwest Libya) has led to the discovery of the giant “Elephant Field”, but caused unparalleled and mostly irreversible damage to the natural desert environment and to the cultural heritage, which includes some of the world's most important rock engravings and probably the largest Palaeolithic surface site of Northern Africa. Against this background, the impact of recent off-road tourism still appears negligible.

It is imperative to prevent any avoidable damage in the future. Hydrocarbon exploration in the Murzuq Basin and the imminent oil production on the Messak must take into account the unique richness of the region by applying a systematic damage-prevention strategy. Environmental and archaeological surveys, including rescue excavations and ecological impact studies, should precede any further industrial activities.

In this context, it is proposed to set up a scheme that combines the creation of a protected areas programme, a strategy for sustainable desert tourism, and the foundation of a Desert Survey and Saharan Research Centre, which should conduct systematic surveys of southern Libya's natural and cultural heritage, aid in the damage-prevention of industrial projects and tourism, and be in charge of awareness building and training.

If only a tiny amount of the enormous petroleum revenues will be assigned to the proposed measures as a kind of compensation for the damage to the Saharan heritage, Messak Settafet – instead of being stigmatised as an example to be avoided at all costs – could become the heart of a pilot project with national and international reach.

Keywords: Sahara, petroleum exploration, cultural heritage, desert tourism, preservation.

Lech Krzyzaniak  
Early Khartoum Pottery from Kadero

[ohne Abstract und ohne Keywords]

Klaus Peter Kuhlmann  
The "Oasis Bypass" or The Issue of Desert Trade in Pharaonic Times

Abstract

With the discovery of the Abu Ballas Trail (ABT) leading from Dakhla in the direction of the Gilf al-Kabir the unresolved issue as to why Egypt occupied the eastward crescent of oases in the Western Desert merits renewed attention. Reviewing the source material, a case is made for the oases connecting Egyptians to Nubia rather than Libya figuring as way stations along a "road" bypassing the Nile valley. Unlike a typical trade route, the ABT saw only sporadic use diachronically. It is discussed who will have "frequented" it and why, taking into account a 4<sup>th</sup> dyn. "mining" camp recently discovered rather far off the trail. The latter site, however, adds to the general picture that at the heart of Pharaonic desert exploration lay the quest for raw materials. Dakhla, originally, would have served as a "base camp" in exploring the mineral potential of the environs, maybe aiming for a locally known landmark along the ABT, i.e. the "mountain" and oasis-like valleys of Gilf al-Kabir. The latter probably marks the direction from where Neolithic cattle-herders and their descendants in Pharaonic times migrated towards the oases.

Keywords: Abu Balla, Abu Zal'a, Alam(at), Cambyses, Cheops, Desert Glass, Gold, Graffiti, Harkhuf, Kufra, Mery, Oases, Pottery, Prospecting, Radjedef, Samians, Siwa, Smuggling, Water depot, Yam.

Tilman Lenssen-Erz  
Art for Art's Sake in Rock Art Research – On the Ethics of Archaeological Documentation

Abstract

This paper reviews the rock art documentation of the late Harald Pager – a generation after his epochal rock art publication "Ndedema", and 17 years after his untimely death – and the role, which Rudolph Kuper played in the documentation and publication of the Brandberg art.

"Art for art's sake" is a concept which is futile for understanding prehistoric rock art – but it describes very well the dedication of Harald Pager in documenting southern African rock paintings. In view of prevailing theory one may ask, what is the point of such comprehensive documentation. This question directly touches upon the problem of empirical research which all too often quickly becomes denounced as empiricist bias. But comprehensive documentation reaches far beyond antiquarianism. This point of view has been referred to by others as the "Cologne School" and some arguments of this "school", which is inseparably linked to the name of Rudolph Kuper, are expounded here.

Keywords: rock art, documentation, empirical research, Cologne School, Brandberg/Namibia.

Ä3 ruft Ä1 – Ganz persönliche Eindrücke bei einer Ägyptenreise mit Rudolph Kuper vom Weggefährten Jens Lünig

[ohne Abstract und ohne Keywords]

Bernd Meissner

mit einem Beitrag von Ulla Ripke

Kartierung entlegener Regionen – Chancen und Risiken der Weiterentwicklung von Kartiermethoden durch Fernerkundung und navigationsgestütztes GIS-Management

#### Abstract

The daily use of maps is increasing. Nowadays “classic” map users have to be able to combine digital attribute data with the spatial information contained in maps.

The historical development of the map as a tool for orientation will be illustrated using examples of colonial cartography in Africa. The maps reflect results of various mapping processes and applications starting from plane table mapping to a GPS-based navigation using satellite image maps. The collection of information within Geographic Information System (GIS) can become highly specialized and contains the risk that certain people become more knowledgeable than others which could lead to social classes within the field of GIS. The possibility to obtain sophisticated and updated maps, especially for the administrations within developing countries, could decrease.

The availability of cartographic results for daily use has to be observed critically as an example of desert tourism shows. The future of maps as a tool for monitoring or controlling will be discussed using the example of truck drivers and their field of work.

In addition it has to be remarked that in many cases there is a lack of transparency concerning quality and documentation of data sources. The past years have been characterized by a very fast technical development in the field of GIS technology and applications. Decisions concerning the use and availability of spatial information have to consider the frame conditions of potential users.

Keywords: thematic mapping, cartographic application of RS, RS based monitoring.

Jöris Peters, Nadja Pöllath and Angela von den Driesch

Ichthyological Diversity in the Holocene Palaeodrainage Systems of Western Nubia

#### Abstract

The analysis of fish bones collected from sites in West Nubia indicates that the early and middle Holocene palaeodrainage systems were inhabited by a rich ichthyofauna. Based upon the habitat requirements of the taxa identified, the water bodies were characterised by a mixture of biotas. Compared to the contemporaneous Central Sudanese Nile, however, species richness and diversity appears to have been decidedly lower in West Nubia.

Keywords: Ichthyofauna, Holocene, Northwestern Sudan, palaeoecology, species diversity.

Nicole Petit-Maire

Large Interglacial Lakes in the Saharo-Arab Desert Belt

#### Abstract

During the last Pleistocene interglacial (isotopic stage 5) the activity and the northward range of the monsoon, as well as the southward penetration of the Atlantic cyclones, widely increased (YAN & PETIT-MAIRE 1994. PETIT-MAIRE et al. 1995) palaeolakes existed in Northern Mali, in Tunisia, in Libya, in Southern Egypt and at the northern border of Saudi Arabia. Their invertebrate fauna imply permanent water with changing salinities.

The ages relate mainly two substages 5e and 5a, however, some dates relate two stages 6a, stage 7 and stage 9. Is the validity of U/Th analyses of lacustrine mollusc shells to be questioned or are the results valid?

Keywords: Sahara, Arabia, Interglacial, isotopic Stage 5, monsoon.

Jacques Reinold

Néolithique du Soudan central et de Haute Nubie – données sur le matériel en céramique

Abstract

In this article, we present a typology of vessels based on only three easily measurable elements (height, diameter of opening and maximum diameter), also applicable to sherd material, which allows us to define five main groups according to whether they are open or restricted forms. Other criteria according to dimensions or module allow the definition of 15 subgroups. This typology is particularly suitable for classifying Neolithic forms which are rather simple, and importantly it remains an open classification. In certain cases it is enough to add new criteria (elements for gripping, presence of spouts, shape of base etc.) to best encompass the material under consideration. Already in its simplified version, this typology allows us to differentiate vessels according to periods and geographical areas and also allows us, within the same group, to recognise different cultural phases.

Secondly, the decoration of vases is considered according to a morphological approach without reference to technology. The types of decoration are presented according to two broad categories, linear and stippled. Pots with rippled-ware surface are treated separately.

Lastly the Neolithic terra-cotta figurines are mentioned, more numerous than expected, but the significance of which is still unknown.

Keywords: Sudan, Neolithic, ceramic, typology, figurines.

Jürgen Richter

The Giraffe People: Namibia's Prehistoric Artists

Abstract

For almost four decades, the University of Cologne has been intensively involved with rock art research in southwestern Africa. Thousands of engravings and paintings have been documented, particularly from Namibia. Excavations were carried out which yielded a chronological framework for Namibia's rock art. In Central Namibia, most of the prehistoric rock paintings are between 2,000 and 4,000 years old. The practice of painting stopped during the first millennium AD when domestic sheep were introduced.

Keywords: Later Stone Age, LSA, rock art, chronology, dating, Namibia, southwestern Africa, Holocene.

Karim Sadr

Ancient Pastoralists in the Sudan and in South Africa

Abstract

In the central Sudan and on the West Coast of South Africa herding is generally regarded as an ancient and common way of life. The archaeology suggests otherwise: in both regions pastoralism was an episodic adaptation limited in space and time. In the "Neolithic" of central Sudan and on the West Coast of South Africa many continued to forage even after livestock were first introduced. In both areas an early episode of pastoralism ended with the rise of more complex, sedentary, food producing societies in neighbouring regions. In a later episode, historical records suggest that pastoralism was closely associated with state level, complex societies. Far from a common way of life, pastoralism seems to have been an occasional, tactical response to shifting opportunities. Climatic factors undoubtedly encouraged the occasional pastoral response, but cultural factors were also important.

Keywords: pastoralism, Neolithic, Central Sudan, Later Stone Age, West Coast of South Africa.

Romuald Schild, Michal Kobusiewicz, Fred Wendorf, Joel D. Irish, Jacek Kabacinski and Halina Królik  
Gebel Ramlah Playa (Egypt)

#### Abstract

In the season of 2000, the Combined Prehistoric Expedition conducted a field school in prehistory for a group of Egyptian Antiquity inspectors and the geologists from the Geological Survey of Egypt<sup>1</sup>. The program of the training included prospecting of the desert surfaces for archaeological sites. During one of the surveys, the group lead by Drs Kimball M. Banks and Michal Kobusiewicz found a group of sites along shores of a fossil playa at the foot of a prominent, unnamed mountain. In the 2001 field season, the Combined Prehistoric Expedition began excavating these localities<sup>2</sup>. Two sites, E-01-1 and E-01-2, were tested. The former is a multi-component settlement containing elements of late Early Neolithic and Late Neolithic; the latter includes a small, but rich, Late Neolithic burial area and a stratified living site. The mountain stands alone some 25 km to the north-west of Gebel Nabta [Fig. 1]. The top of the gebel, slightly east of the center, is at 22° 42'37" N, and 30° 30'17" E, at about 278 m (GPS elevation) in elevation. Falling seif dunes, which gave us a reason to assign it an informal name of Gebel Ramlah, cover its southern face.

Keywords: Egypt, Western Desert, Gebel Ramlah, Neolithic settlements and graveyard.

Werner Schön

Survey before GPS – Some Remarks on Archaeological Sites on the Northern Bank of the Middle Wadi Howar (Sudan)

#### Abstract

Since 1980 the Institute of Pre- and Protohistory, Forschungsstelle Afrika/Heinrich-Barth-Institut, has conducted several expeditions to the Western Libyan Desert in Egypt and Northern Sudan (B.O.S.), headed by Rudolph Kuper. Since 1995 the research continued within a multidisciplinary research centre at the University of Cologne (SFB 389 – ACACIA).

In 1984 a survey on the northern banks of Wadi Howar covered an area of 2 x 1 km; 36 sites of different extent as well as some single objects were found, dating between 4000-1500 calBC. Specific tools and grinders of different shape were discovered. By detailed examination of the collected artefacts it seems possible to interpret the chronological and/or functional position of the sampled sites.

Keywords: Eastern Sahara, Sudan, Wadi Howar, later prehistory, cattle-keepers, survey, transverse arrowheads, thumbnail scrapers, grinding implements.

Werner Schuck

Steinzeitliche Gräber im Wadi Shaw (Nordsudan)

#### Abstract

Since 1980 the Institute of Pre- and Protohistory, Forschungsstelle Afrika/Heinrich-Barth-Institut, has conducted several expeditions to the Western Libyan Desert in Egypt and Northern Sudan (B.O.S.). Since 1995 the research was carried out within a multidisciplinary research centre at the University of Cologne (SFB 389 – ACACIA).

In 1983 large scale surveys and excavations in Wadi Shaw, a depression northwest of the Oasis Laqiya Arbain, took place. Several stone-heaps were excavated, leather-wrapped corpses with grave-goods were documented. <sup>14</sup>C-dates are covering a period of 5000 years, corresponding to the settlement-period in Wadi Shaw, provable by archaeological material from different periods connected with different climatic events.

Keywords: B.O.S., ACACIA, Sudan, Laqiya Arbain, Wadi Shaw, Steinhügel, Gräber, Beigaben.

Christian Simon †, Roland Menk † and Christiane Kramar  
The Human Remains from Wadi Shaw (Sudan) – A Study of Physical Anthropology and Paleopathology

Abstract

This article is an anthropological and paleopathological study of six subjects from Wadi Shaw. One dates from the Mesolithic, the others from the Neolithic and protohistorical time periods. The statistical analysis, based on cranial metric data, has indicated a degree of resemblance between the Wadi Shaw individuals and the Saharan populations, as well as some Negroid characteristics. Our study also highlights dental mutilations.

Key words: Lower Nubia, principal components analysis, paleopathology, dental mutilations.

Andrew B. Smith  
The Pastoral Landscape in Saharan Prehistory

Abstract

The synergism of accumulated cultural memory within space is the result of more than just resource exploitation. People are also attached to their landscape in psychological terms from ritual and ceremony. Paths connecting ritual spaces and places construct a story that is coded through symbols in the landscape and is passed on from generation to generation to be moulded into a unified whole that reflects the living experience over time. This story may become modified as political and environmental factors change.

The central Sahara during the wetter period between 7500 and 4000 bp was replete with cultural symbols from pastoral occupation. These include rock art and funerary monuments which we can use to integrate with technological and economic residues to build up a picture of the changing landscape of pastoralism. It can be no coincidence that strong mnemonic and ritual sites, such as the later 'bovidian' rock art of the Tassili and of the cemetery at Iwelen in Niger occurred as pastoral resources came under pressure from increased aridity at the end of the wet period c. 4500 bp.

Keywords: pastoralism, Sahara, landscape, rock art, funerary monuments.

Wim Van Neer and Steven E. Sidebotham  
Animal Remains from the fourth – sixth Century AD Military Installations near Abu Sha'ar at the Red Sea Coast (Egypt)

Abstract

The article discusses the faunal remains from a fourth – late fifth/early sixth century AD military and Christian ecclesiastical installation at Abu Sha'ar and associated structures located along the Red Sea coast of Egypt. The various taxa are described and interpretation focusses on taphonomy and paleoeconomical aspects. The dietary importance of marine resources (mainly molluscs and fish), hunted and domestic animals is discussed and an attempt is made to explain temporal and spatial differences in the faunal composition. Finally, the fauna from Abu Sha'ar is compared to those of other Roman sites along the Red Sea coast and in the Eastern Desert of Egypt.

Keywords: archaeozoology, Roman, Byzantine, Egypt, military.

Pierre M. Vermeersch  
The Egyptian Nile Valley during the Early Holocene

A review of Holocene remains (deposits, soils, fossil wood, anthracology and faunal remains) in the Egyptian Nile Valley in Upper Egypt and Nubia results in a synthesis of Nile behaviour, palaeoclimate, environmental behaviour and prehistoric occupation of the area. Human occupation of the valley is badly understood because few sites have been found. We attempt to define successive human occupation phases of the Nile Valley during the early Holocene.

Keywords: Nile, Holocene, prehistory.

Ralf Vogelsang  
Rock Art in the Kaokoland?

Abstract

The lack of rock art sites in the eastern and northern parts of Namibia corresponded to what appeared to be a general absence of archaeological sites in the Kaokoland. However, current intensive surveys, within the framework of the collaborative research centre SFB 389/ACACIA at the University of Cologne, have changed the picture of site distribution in the area fundamentally. More than 100 archaeological sites have been located since 1995. Surprisingly rock art sites are still, with the exception of one site, nearly absent. The site Omungunda 99/1 is up to now the only known example of a rock shelter with paintings in the entire research area. In the following article, the paintings and the cultural sequence of the site are briefly outlined and the reasons for the scarcity of rock art sites in the north-western part of Namibia are discussed.

Keywords: Kaokoland/Namibia, rock paintings, Holocene cultural sequence, Later Stone Age.

Fred Wendorf and Romuald Schild  
The Role of Storage in the Neolithic of the Egyptian Sahara

Abstract

Around 8000 bp, following a sharp, abrupt interval of hyper-aridity when the desert was abandoned, Nabta Playa and Bir Kiseiba were reoccupied by Early Neolithic cattle herding groups. It was a very restricted environment with limited fauna, mostly small gazelle and hare. They occupied winter base camps located in the lowest part of the large basins, where water could be obtained only by digging wells, and they survived through the winter by adopting a new economic emphasis focused on the collection and storage of more than 120 species of edible plants. But why did they suddenly begin to intensively collect and store edible plants? The answer was sought among modern hunter-gatherers living in environments similar to the Egyptian Sahara. This analysis disclosed that those groups who are forced to live in restricted areas with strong seasonal variation collect and store plants for later use as food. Those societies that are free to exploit large areas or who live where there is minimal seasonal variability do not store food, but consume it immediately. This indicates that the Nabta/Kiseiba groups began collecting and storing food because their territory became restricted and circumscribed, and to survive they had to collect intensively and store the plant foods for consumption in the winter and spring.

Keywords: climate, Egyptian Neolithic, environment, residential mobility, storage.



J. Desmond Clark †

A Note of Appreciation of Rudolph Kuper's Research  
in the Western Desert of Egypt and on Holocene and Earlier Localities  
and Problems needing Investigation

I have great pleasure in sending these brief notes on the occasion of Dr. Rudolph Kuper's retirement. Rudolph is a friend of long standing and I am sure that although this is an official retirement, he will continue with his research for many more years to come. It is, indeed, an honor to recall the detailed surveys and excavations that he and his team from Köln have carried out, which have thrown invaluable and significant light on the Neolithic and later cultural history of the Northern part of the Desert. Their publications provide the essential data for the reconstruction of prehistoric societies in relation to the climatic and environmental conditions of their times. In particular, do I offer my congratulations on the studies of the Gilf Kebir and adjacent regions, as well as the detailed work in the Wadi Howar. The latter in part is vital in relation to the possibilities of contact with the South-central Sahara back and forth up this highway to the Southwest at Adrar Bous. Our expedition to Adrar Bous in January 1970 recovered with the Tenerian Neolithic what appears to be strong evidence in discoid and notched knives with the pre-Dynastic of Egypt and, of course, it is particularly important for further research to be undertaken that might lead to the finding of further possible relationships with the Nile Valley. This is, of course, something that later prehistorians need to examine in relation to possible links with Iron Age Meroe and perhaps, the spread of the knowledge of Bronze casting into West Africa. I would strongly urge, if the political situation permits, further survey and excavation in this very important highway to the south and west.

One interesting problem that I think might well be further studied is the rock art of the Uweinat. Well recorded by Francis Van Noten, the engravings show a man leading animals apparently by

a rope, one or more of these being giraffe. His interpretation was that this might be a representation of attempts at taming and domestication. But I think it is much more probable that they represent the transportation of animals from the sahel and savanna to the North African Graeco-Roman cities and perhaps beyond in the Mediterranean world where they were amongst other things used in the games in the arenas. It may be possible that Classical scholars find evidence from Cyrene and other North African Mediterranean cities of this traffic in exotic animals. Also important should be attempts to date by obtaining pigment of the paintings of sheep and goats and indeed the taurine cattle at Uweinat. The sheep and goats could, I suppose, have come via Suez into the Nile Valley and beyond but it is also not at all unlikely that they came into Northeast Africa and the Horn via the straits of Bab-el-Mandeb from Southern Arabia and arrived in Ethiopia after the spread of pastoral Neolithic peoples with taurine cattle, about 1500 BC. It would be interesting to know, therefore, the date of the first appearance of sheep and goat in the Uweinat Massif.

Of great importance also is the work done by the German team on the spread of the Sahel-Savanna vegetation into the Sahara and in particular, Katharina Neumann's work on charcoals showing a spread of some 600 km north of the present limit which is indeed impressive. We now need to show whether the northward movement of the savanna belt was in or out of phase with the spread of Mediterranean vegetation southwards.

To comment on earlier times, some vital problems and questions need to be examined and answered. The middle Palaeolithic Aterian Industrial Complex is spread throughout the Sahara up to the Nile Valley and excluding probably the

Libyan and Northern Egyptian coastal areas. There are many radiocarbon dates for the Aterian from the Sahara, the Maghreb and the Fezzan but whether many of these dates on charcoal relate to the Aterian is unlikely. More reliable dates indicate an age beyond the lower limit of the radiocarbon method and it is of great interest that Aterian has been dated from sites in Libya to between 70-80,000 years. These are TL dates from two rock shelters, Uan Tabu and Uan Afuda, in the Acacus Mountains and there is every likelihood that they will be found to be reliable. The Aterian in the Sahara at Adrar Bous and in the western desert of Egypt and elsewhere has long Lanceolate points similar to those of the Lupemban Industrial Complex from the Lake Victoria Basin and equatorial regions and it is clear that these two Industrial Complexes are likely to be of the same age. If this is so, as it may well be, that the Aterian evolved in the Sahara and not in the Maghreb, then this is another problem that needs to be examined. Lastly, there is the age of Ternifine, which was thought to be of Early Acheulian age and of course associated with *Homo erectus*. A revised date, however, shows that in point of fact, Ternifine belongs in the Upper Acheulian, not the Lower. Extreme caution therefore needs to be used where single isolated dates are all that are

available and all available dating methods need to be used to obtain the most likely ages and so eliminate those that for some reason are quite out of phase.

These are a few random thoughts that help to emphasize the many problems and questions that still arise for anyone working in the Sahara and I am sure that in the course of the next two decades researchers there will solve many of these problems and produce a more precise chronology and record of temporal and regional changes in climate and culture. The Sahara has acted as a filter for the spread of hominids, including modern humans, from the savannas of sub-Saharan Africa into the north and so to Eurasia. When the climate was favourable the spread of the Ethiopian fauna and hominids was encouraged and became possible. The evidence in the Sahara with the necessary precise chronology will accurately show the times of human movement throughout the continent and beyond.

As my good friend Rudolph Kuper knows, work in the Sahara is one of the most exciting, enjoyable and rewarding that an African prehistorian can hope for. My salutations go out to him again with my very best wishes for a great and profitable retirement.

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