

## More Corridors to Africa

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After the end of the early and mid-Holocene wet phase, which had turned the Eastern Sahara into a savannah-like environment until about 5 000 BC,<sup>2</sup> the region has been regarded as deserted as it is today. This situation, which Ralph Bagnold accurately described as “By Egyptian standards there was no water west of the oases and the world ended”,<sup>3</sup> applies to Egypt’s attitude towards her “Western Desert” since ancient times. It also highlights the little attention that Egyptology has paid to the region until recently and James Breasted’s notion calling Old Kingdom

governors of Aswan such as Harkhuf “the first Africa explorers”.<sup>4</sup>

Only during the last six years new archaeological evidence from desert sites has allowed to sketch a new picture of Ancient Egypt’s relation to the vast western regions. In contrast to the Eastern Desert, the role of which is documented in many records of the Nile valley as well as from the spot, the Western Desert can hardly be traced in hieroglyphic texts. Except for the expeditions by Harkhuf who during the 6<sup>th</sup> dynasty took the “oases way” to reach “Yam”, most likely through Kharga and Dakhla oases, the only proof of Egypt’s presence in the deeper desert was the pottery dump of Abu Ballas.<sup>5</sup> Discovered by John Ball as early as 1918,<sup>6</sup> it has been acknowledged by Egyptologists not more than marginally. Reasoning about its function and a possible connection with the Old Kingdom town of Ain

1. S. K. acknowledges the company of Abdel Rahman El Sheikh of the Geological Research Authority of Sudan (GRAS), Bernd and Antje Meissner and Markus Richter (Remote Sensing Department, Technische Fachhochschule Berlin), geographer Sven Oehm (SFB 389 / ACACIA), geologist Robert Bussert and botanist Reinhard Bornkamm (Technical University of Berlin) on the rewarding journey through northern, southern and western Sudan in March 2006 which led to the discovery reported here. It was part of geoscientific field research within the Collaborative Research Centre 389 / ACACIA (Arid Climate, Adaptation and Cultural Innovation in Africa) at the University of Cologne.

2. R. Kuper and St. Kröpelin, “Climate-Controlled Holocene Occupation in the Sahara: Motor of Africa’s Evolution”, *Science* 313, 2006, p. 803-807.

3. R.A. Bagnold, “The last of the Zorzura legend”, *Geographical Journal* 89, 1937, p. 265-268.

4. J.H. Breasted, *Geschichte Ägyptens*, Zürich, 1954.

5. Fr. Förster and R. Kuper, “Abu Ballas (Pottery Hill): Call for Information”, *Sahara* 14, 2003, p. 167-168.

6. J. Ball, “Problems of the Libyan Desert”, *Geographical Journal* 70, 1927, p. 21-38, 105-128, 209-224; L. de Almasy, *Récents Explorations dans le Désert libyque (1932-1936)*, Le Caire, 1936.

Asil in Dakhla oasis,<sup>7</sup> as well as a recently discovered rock inscription west of Dakhla mentioning a certain official Meri “going up to meet oasis dwellers”<sup>8</sup> still hinted to nothing more than sporadic Egyptian contacts with the Far West.

The change of this view was mainly caused by three specific discoveries, two of which are due to the eagerness of the amateur explorer Carlo Bergmann: (i) the so-called Abu Ballas Trail, a series of about 30 sites with Pharaonic pottery, including Abu Ballas itself, along a c.350 km long stretch leading from Dakhla southwest to the Gilf Kebir;<sup>9</sup> (ii) an elaborately constructed campsite of King Cheops, the builder of the Great Pyramid of Giza, apparently serving the prospecting for mineral resources;<sup>10</sup> and (iii) evidence for at least episodic human presence even in the most remote parts of the desert until even later than 3,000 BC by a special pottery type, the so-called “Clayton Rings”.<sup>11</sup>

7. R. Kuper, “Les marches occidentales de l’Égypte : dernières nouvelles”, *BSFE* 158, 2003, p. 12-34.

8. G. Burkard, “Inscription in the Dakhla Region – Text, Translation and Comments”, *Sahara* 9, 1997, p. 152-153.

9. R. Kuper, “The Abu Ballas Trail: Pharaonic Advances into the Libyan Desert”, in Z. Hawass and L. Pinch Brock (ed.), *Egypt at the Dawn of the Twenty-first Century, Proceedings of the Eighth International Congress of Egyptologists, Cairo 2000*, vol. 2, Cairo, 2003, p. 272-276; Fr. Forster, *With Donkeys, jars and water bags into the Libyan Desert: the Abu Ballas Trail in the Late Old Kingdom/First Intermediate Period*, British Museum Studies in Ancient Egypt and Sudan, in prep.

10. C. Bergmann and Kl. P. Kuhlmann, “Die Expedition des Cheops”, *GEO Special* 5, 2001, p. 120-127; Kl. P. Kuhlmann, “The ‘Oasis Bypath’ or The Issue of Desert Trade in Pharaonic Times”, in T. Lenssen-Erz, U. Tegtmeier, St. Kröpelin *et al.* (eds.), *Tides of the Desert. Contributions to the Archaeology and Environmental History of Africa in Honour of Rudolf Kuper*, Köln, 2002, p. 133-138; *id.*, “Der ‘Wasserberg des Djeddefre’ (Chufu 01/1). Ein Lagerplatz mit Expeditions Inschriften der 4. Dynastie im Raum der Oase Dachla”, *MDAIK* 61, 2005, p. 125-290; R. Kuper and Fr. Forster, “Khufu’s ‘mefat’ expeditions into the Libyan Desert”, *Egyptian Archaeology* 23, 2003, p. 25-28.

11. H. Riemer and R. Kuper, “Clayton rings: enigmatic ancient pottery in the Eastern Sahara”, *Sahara* 12, 2000, p. 91-100.

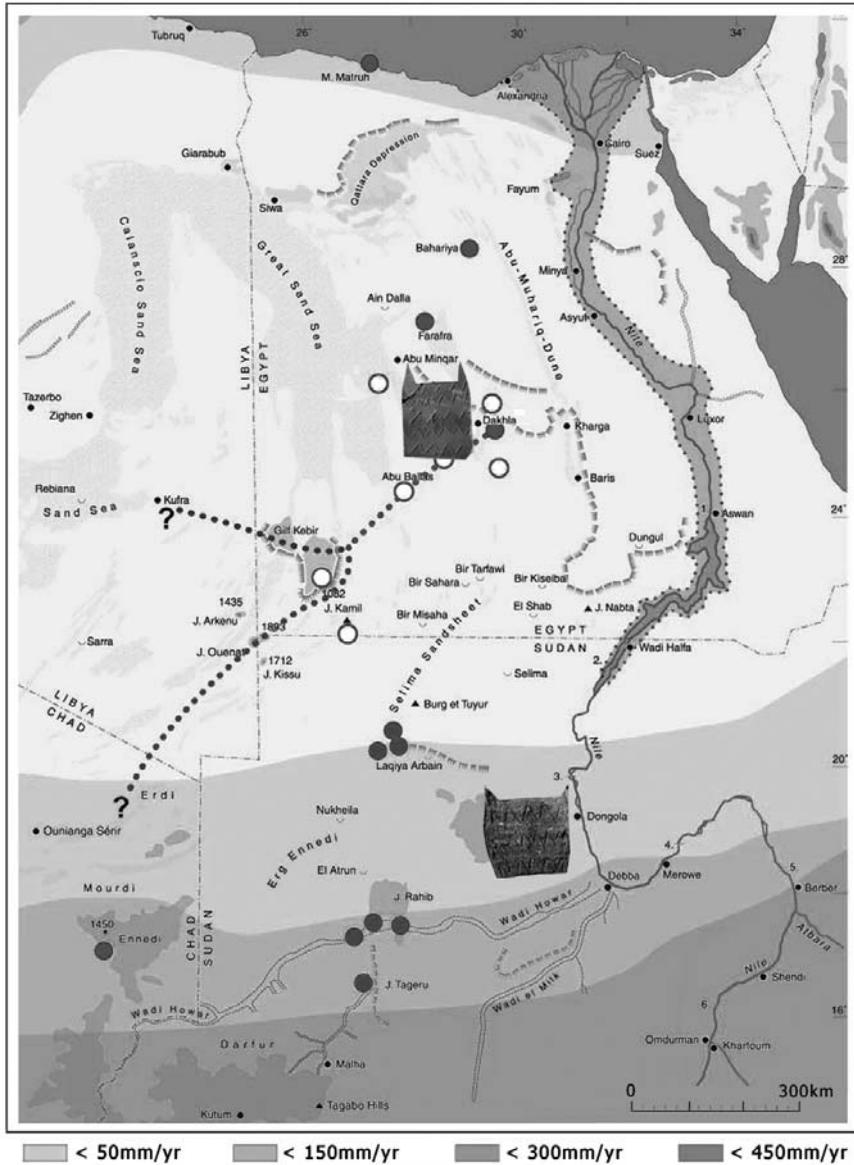
The vast distribution of these ceramic devices from the western Great Sand Sea to the Nile, and from the Abu Muhariq Plateau to Northern Sudan, demonstrates that these areas have been frequently crossed, or even inhabited, by people for whatever reasons. Disregarding the question whether the Clayton Rings served a specific purpose that drove their users into the desert, or if they were a technical equipment that facilitated the crossing of the desert: they are proof that the pervasive contacts all over the Eastern Sahara during the early and middle Holocene savannah conditions had not yet been fully cut off at about 3,000 BC, but only reduced to distinct lines of communication.

The best example for their prolonged use is the Abu Ballas Trail (*Fig. 1*). Its stations are marked by pottery assemblages dating from the late Old Kingdom or early First Intermediate Period to Roman times, even if it remains unclear if the track has been in continuous use. Apparently starting at the residence of the 6<sup>th</sup> dynasty governors at Ain Asil in Dakhla oasis, its final destination beyond the Gilf Kebir is still unknown.<sup>12</sup> The nearest localities with permanent groundwater lie at distances of 600 respectively 500 km in the Libyan oasis of Kufra or in the Jebel Ouenat, from where the trail might have continued to the ecologically superlative Ennedi plateau or the outstanding lake region of Ounianga in Northeast Chad. Such distances had to be accomplished with donkeys that need to drink at least every third day.<sup>13</sup> Most likely, the purpose of the trail was manifold and has changed through time, possibly from trade (perhaps tribal from the interior continent and governmental from the Egyptian side) to exploration and prospecting for minerals, and to military activities or police desert patrolling. Evidence

12. R. Kuper, *op. cit.*, *BSFE* 158, fig. 5.

13. R. Kuper, “By donkey train to Kufra? – How Mr Meri went west”, *Antiquity* 75, 2001, p. 801-802.

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**Fig. 1 :** Estimated rainfall c. 3500 - 1,500 B.C. when human activities in Egypt outside the Nile valley and the oases were restricted to desert crossings, temporary outposts and locations with near-surface groundwater. Water emblems indicate site at Chufu and newly discovered site 700 km further south in the Sudanese Sahara west of Dongola; Abu Ballas Trail with possible continuation (dotted line); Pharaonic state in the Nile valley (shaded); major occupation areas (dots); isolated settlements in ecological refuges and episodic transhumance (rings).

from the stations that have been excavated so far indicates habitations of a number of people for a limited period of time. They may have served to maintain or protect rest and watering places for donkey caravans, or to prevent smuggling along trails evading the well established route along the Nubian Nile that was the main import gate for African luxury goods such as ebony, ivory, gold or ostrich feathers into Egypt.

Besides the mentioned possible destinations Kufra, Ennedi or Ounianga, that are suggested by the trail's southwest direction, some findings indicate other branches. One runs strictly southward from Dakhla, possibly leading to the Laqiya area in Northern Sudan where a specific type of pottery, a so called Meidum bowl, was found that is abundant at the Old Kingdom sites in the Dakhla oasis.<sup>14</sup>

Given that this communication network still existed in the Western Desert despite the increasing aridity, the outpost of Pharaoh Cheops that was established already at the middle of the third millennium BC does not appear too surprising. Possibly, there were still descendants of the late prehistoric population roaming in the area – as suggested, *e.g.*, by the Clayton Rings – among which Cheops' officers may have recruited scouts to guide them to places with the sought-after "mefat".<sup>15</sup> Besides the thrilling question which kind of material this was and worth the effort of missions of up to 400 men to locations more than 500 km away from Memphis, this scenario raises the problem of the relation between the foreign intruders from the Nile valley and the remaining late Neolithic desert dwellers who possibly have been part of the Sheikh Muftah Cultural Unit.<sup>16</sup>

14. R. Kuper, "Prehistoric Research in the Southern Libyan Desert. A brief account and some conclusions of the B.O.S. project", *CRIPPEL* 17/1, 1995, p. 123-140 and fig. 7.

15. Kl. P. Kuhlmann, *op. cit.*, *MDAIK* 61.

16. C. Hope, "Early and Mid-Holocene Ceramics from the Dakhleh Oasis: Traditions and Influences", in R. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, 2002, p. 39-61.

The archaeological evidence from the Pharaonic outpost Chufu 01/01 provides several clues for this discussion including most remarkable rock engravings. These very specific ideograms occur in different designs on the rock wall of the terrace-like campsite and are associated with hieroglyphic inscriptions and various presumably prehistoric rock art.<sup>17</sup> They show a pack of horizontal zigzag lines framed by a sharply incised and slightly rounded rectangle, the upper corners of which ending in two small humps (*Fig. 2*) or in short lines (*Fig. 3-4*). Until most recently, these very specific signs were not known from any other region in the Sahara except at the Chufu site and about ten other hills in its immediate surroundings (*Fig. 5*).

The correspondence of the zigzag lines to the Egyptian hieroglyph for "water" (𐀜) and a similarity of the upper part of the frame with the hieroglyph for "mountain" (𐀓) gave reason for the reading as "Water Mountain".<sup>18</sup> This would imply the knowledge of writing and indicate an early-Dynastic origin of the ideograms. There are, however, contradicting arguments: (i) The emblems are designed in a variety of shapes. The outline often does not correspond to the mountain hieroglyph and the interior shows different patterns, *e.g.* crenelated lines; (ii) inside of one of the most prominent emblems, the "water lines" have been erased and replaced by the cartouche of Chufu's son Djedefre (*Fig. 6*), and rock fragments bearing the emblem have been built into the dry masonry wall that encloses the terrace; (iii) only at this site are the ideograms associated with hieroglyphic inscriptions while at none of the other sites any traces of pharaonic presence have been found. This evidence supports a hypothesis that attributes the engravings to local groups. Whether their creation has been influenced by

17. Kl. P. Kuhlmann, *op. cit.*, *Tides of the Desert*, p. 133-138; *id.*, *MDAIK* 61.

18. Kl. Kuhlmann, *op. cit.*, *Tides of the Desert*, p. 135; *MDAIK* 61, p. 270 sq.



Fig. 2 : Typical "water emblem" at site Chufu 01/01.



Fig. 3 : Variant of the "water emblem" at site Chufu 01/01.



Fig. 4 : "Water emblem" in different shape at site Chufu 01/01.

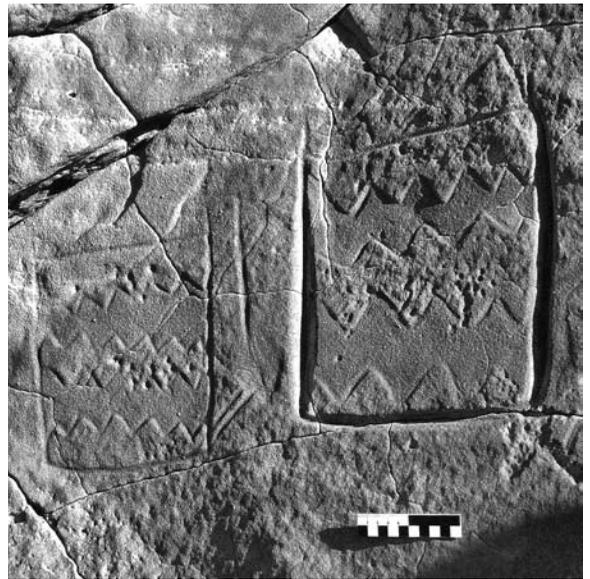


Fig. 5 : "Water emblem" at site Chufu 01/03.

hieroglyphic writing remains a matter of discussion and further research.

An unexpected discovery made in March 2006 during a geological survey in the Sudanese desert west of Dongola sheds new light on this problem. The site is close to a previously unmentioned major fortification on a flat-topped hill which towers about 30 m above the surrounding depression.<sup>19</sup> It was named “Gala El Sheikh“ to avoid a geographical designation in an attempt to protect the site from the increasing damage by off-road tourism, until it may be annexed to the “Wadi Howar National Park” that has been officially declared in 2001 but still needs implementation.<sup>20</sup> The enclosure has an overall length of 260 m and was built in dry masonry technique along the upper edge of the hill’s steep slopes (Fig. 7).

A quick survey on the denuded surface of the walled-in platform provided some grinding troughs and an array of small picked cavities in the sandstone, but no archaeological finds of pottery or bone remains. Apparently, all artefacts and materials left have been removed in later times, or eroded by the wind. On the much worn surface of the hilltop, however, a large number of petroglyphs were found. Besides numerous sharpening marks, they include various symbols such as open squares and rectangles, but also count marks and enigmatic engravings. Other depictions comprise a stylised human figure with seven oversized fingers. Most notably, there are ancient

writings probably including Demotic associated with groups of count marks. Demotic is dated from c.650 BC onwards and in use up to the Roman Period (5<sup>th</sup> century BC). While ancient and more recent Arabic writings and numbers are also present, Latin inscriptions have not been observed, as little as hints at modern visitors.

At first glance, there are no clues to the age of the main fortress except its elaborate main gate, or to its relation with annexed enclosures and installations. Even if the Demotic script in Gala El Sheikh could be a case for its Napatan origin, a later time of construction and occupation, *i.e.* Meroitic or after, cannot be ruled out.

While the fortifications have to await further research, there is surprising other evidence from the same location that is startling enough to provoke immediate academic discussion. It comes from a small rock shelter in the upper part of the blunt windward side of a small sphinx-like hill close to the fortification (Fig. 8). Walls and floors of the abri are covered by hundreds of petroglyphs most of which appear to be considerably older than the fortification even if Arabic writings of different age are also present. With the exception of one name (“YASER”) there are no other modern graffiti. Of the manifold engravings which are difficult to interpret, some attract straight attention. Perfectly matching the ideograms in the Chufu area west of Dakhla in character, shape and size, they undoubtedly reveal an identical origin. In total four emblems are presented in two different varieties: piles of “water lines” in a frame corresponding to the “mountain” sign (Fig. 9); and a variant with short strokes at the upper corners of the frame (Fig. 10), the interior of which is damaged by a hole apparently drilled or enlarged in a later period. Within two other ideograms, the inside features rows of crenelated lines corresponding to the ones also known from site Chufu 01/01 (Fig. 11; cf. Fig. 4). At one of these signs, the lower part is completely broken off. Remarkably among the many other engra-

19. St. Kröpelin, “Discovery of an ancient fortification in Northern Sudan”, *Sahara* 17, 2006, p. 186-190.

20. St. Kröpelin, “Zur Rekonstruktion der spätquartären Umwelt am Unteren Wadi Howar (Südöstliche Sahara/NW-Sudan)”, *Berliner Geographische Abhandlungen* 54, 1993, p. 1-293; “Environmental change in the southeastern Sahara and the proposal of a Geo-Biosphere Reserve in the Wadi Howar area (NW Sudan)”, in U. Thornweihe and H. Schandelmeier (eds.), *Geoscientific Research in Northeast Africa*, Rotterdam, 1993, p. 561-568; R. Kuper and St. Kröpelin, “Uncovering Sudan’s Past in its Desert”, in *Common Aims – Sudanese-German Cooperation in archaeology*, *Catalogue of the National Museum*, Khartoum, 2003, p. 6-13.



**Fig. 6 :** Frame of a “water emblem” with the cartouche of Pharaon Djedefre.

vings (*Fig. 12*) are several smaller emblems that appear in pairs. Each of them comprises a set of vertical lines and a very distinctive pair of dots inside a more or less rectangular frame (*Fig. 13*). Equivalents are not known so far from any other location.

The isolated, but identical presentation of the “water-ideograms” more than 700 km south of the Dakhla area calls for a review of the evidence in Southwest Egypt and bears implications for the question of early Egyptian relations with Sudanese Nubia. It suggests a line or a network of communication across the Eastern Sahara as late as the early third millennium BC, though their logistic and environmental setting still is hard to define. If the emblems represent a population still roaming the desert at that period, one would expect them elsewhere, too. Albeit the archaeological evidence from the Libyan Desert is far from being sufficient for answering such questions, other occurrences should have been noticed at least in areas where intensive surveys

have been carried out such as Selima, Wadi Shaw, Wadi Hariq or Wadi Howar.<sup>21</sup>

At this point, the field for speculation is wide and no conclusive answers are in sight. At Chufu 01/01, a connection between the emblems and possible temporary water sources has been proposed. Corresponding to observations at the hill adjacent to Cheops’ desert camp,<sup>22</sup> the large flat-topped hill of Gala El Sheikh might also have served as a natural “hafir” which provided water even during the arid period following the early and mid-Holocene humid phase. Leaving aside the open question if the emblems served a practical or an ideological function, there are arguments critical of Kuhlmann’s hypothesis, especially concerning the crenelated lines and how these can be linked to water.

The new evidence supports the scenario that even after 3,000 BC the Libyan Desert was not completely void of human activity. In its southern part, cattle keepers could survive as late as the second millennium BC,<sup>23</sup> and the Wadi Howar, once the Nile’s largest tributary from the Sahara, still consisted of a intermittent chain of temporary lakes.<sup>24</sup> Apparently, the Egyptian Nile valley and oases were connected with these regions and farther African destinations beyond by a network of donkey caravan routes crossing southern

21. St. Kröpelin, “New petroglyphs sites in the Southern Libyan Desert (Sudan-Chad)”, *Sahara* 15, 2004, p. 111-117; R. Kuper, *op. cit.*, *CRIPEL* 17/1; Fr. Jesse *et al.*, “On the periphery of Kerma – The Handessi Horizon in Wadi Hariq, Northwestern Sudan”, *Journal of African Archaeology* 2, 2004, p. 123-165; St. Kröpelin, “Wadi Howar: Climate change and human occupation in the Sudanese desert during the past 11,000 years”, in P. Gwynvay Hopkins (ed.), *Kenana Handbook of the Sudan*, London, 2006.

22. St. Kröpelin, in Kl. P. Kuhlmann, *op. cit.*, *MDAIK* 61, 2005, p. 269.

23. R. Kuper, *op. cit.*, *CRIPEL* 17/1, 1995; Fr. Jesse *et al.*, *op. cit.*, *Journal of African Archaeology*, 2, 2004.

24. St. Kröpelin, “Terrestrische Paläoklimatologie heute arider Gebiete: Resultate aus dem Wadi Howar (Südöstliche Sahara/Nordwest Sudan)”, in E. Klitzsch and U. Thorweihle (eds.), *Nordost-Afrika: Strukturen und Ressourcen*, Wiley-VCH, Weinheim, 1999, p. 448-508.

Egypt. Even if activities from the Egyptian side were probably limited to occasional ventures such as the expeditions during Cheops' reign or Harkhuf's journeys, the "First World" along the Nile must have been a constant lure to the people at its peripheries. Middle Kingdom records, for example, mention the arrival of starving desert refugees in the Nile valley who then were pushed back brutally.<sup>25</sup> Mostly, the trade with African goods must have implied manifold contacts. These exchanges almost certainly provoked reaction from governmental authorities. Some stations along the Abu Ballas Trail seem to have been part of a controlling system based in the governors' residence at Ain Azil in Dakhla oasis<sup>26</sup> and perhaps served to prevent smuggling of African goods or surprise attacks out of nowhere. Such watch posts also have been described from the immediate surroundings of Dakhla.<sup>27</sup> Bases for desert patrolling like at Dakhla most likely also existed at other places such as Aswan. The remote strongholds of Gala Abu Ahmed which probably dates to Napatan times,<sup>28</sup> and Gala El Sheikh<sup>29</sup> might also have their origins in earlier desert outposts. The crew of such posts may have been recruited from desert people like the police and patrolmen known from later Egyptian reports as "Medjoy" or "Nu".<sup>30</sup> These desert patrols probably acted in long range. If the emblems were part of their symbolic inventory, possibly taken along

on portable kit and transferred from there on to rock surfaces, the occurrence of identical designs at far distant locations could find an explanation. In any case, more evidence is needed to narrow down speculation. It took eighty years until Abu Ballas lost its status of a "Mystery of the Libyan Desert". In view of the growing research in the area, a solution for the problem of the "water ideograms" will hopefully not last as long.

Our reflections about the new site made us once more aware of the gap Francis Geus has left in Nubian Archaeology. How would we have wished to discuss its implications with Francis at one of his and Carla's unforgettable dinner invitations in their Khartoum mansion, or while watching the sunset on Say Island with a glass of karkadeh in our hands!

#### ABSTRACT

Recent discoveries in remote parts of the Libyan Desert of Egypt and Sudan have basically changed our knowledge about the past of the regions far west of the Nile and the role they have played for the Pharaonic Empire. Unexpected evidence from the West Nubian Desert adds essentially to this new picture, posing at the same time an array of new questions.

25. P.C. Smither, "The Semna Despatches", *JEA* 31, 1945, p. 9.

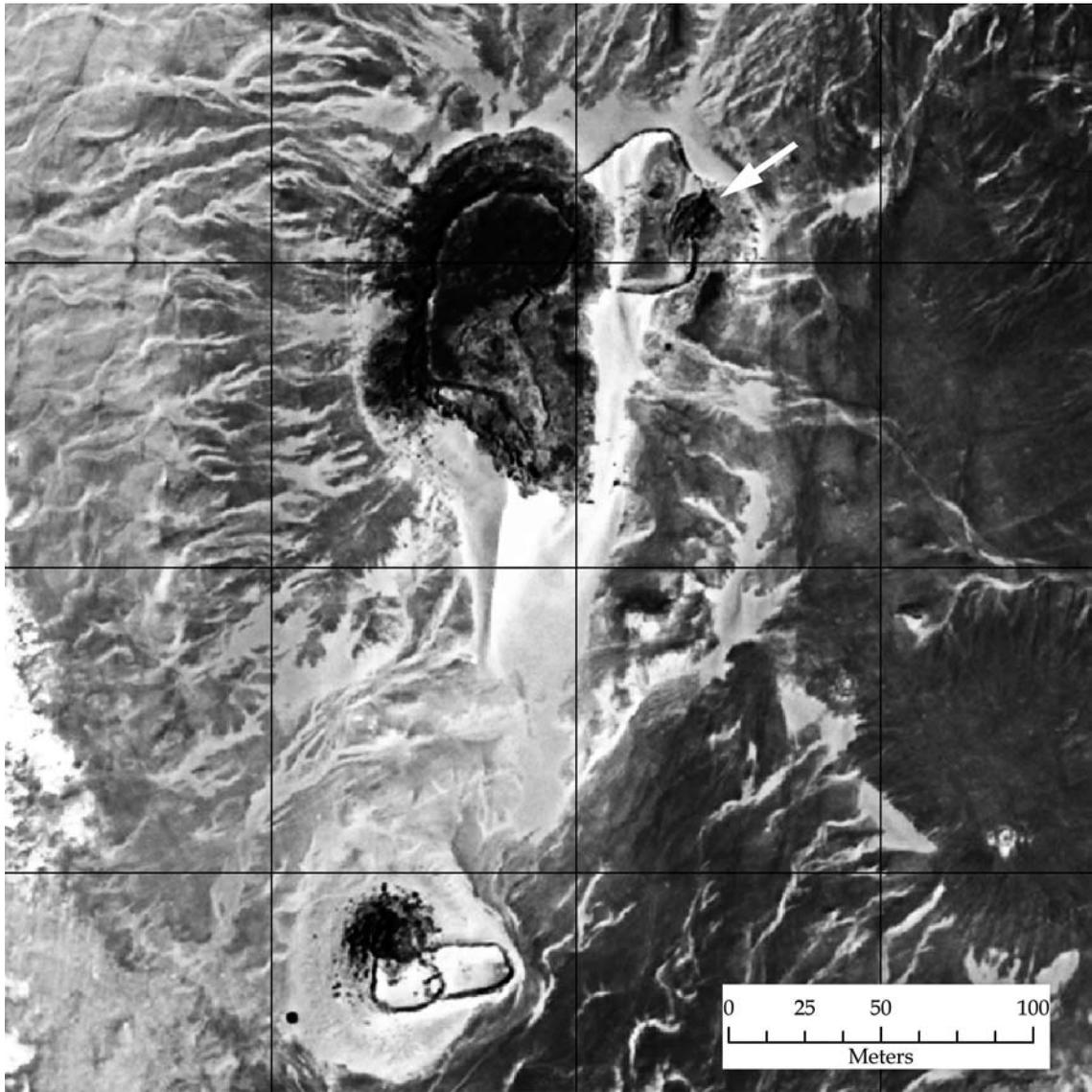
26. G. Soukiassian, M. Wuttmann, L. Pantalacci, *Balat VI. Le palais des gouverneurs de l'époque de Pépy II : les sanctuaires de ka et leurs dépendances*, *FIFAO* 46, 2002.

27. O.E. Kaper and H. Willems, "Policing the Desert: Old Kingdom Activity around the Dakhleh Oasis", in R. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, 2002, p. 79-94; H. Riemer *et al.*, "Zwei pharaonische Wüstenstationen südwestlich von Dachla", *MDAIK* 61, 2005, p. 291-350.

28. Fr. Jesse and R. Kuper, "Napata in the West? – The Gala Abu Ahmed Fortress in the Lower Wadi Howar (NW Sudan)", *Archéologie du Nil Moyen* 10, 2006, p. 135-159.

29. St. Kröpelin, *op. cit.*, *Sahara* 17, 2006 and "Wadi Howar...", *Kenana Handbook of Sudan*, 2006.

30. Fr. Jesse and R. Kuper, *op. cit.*



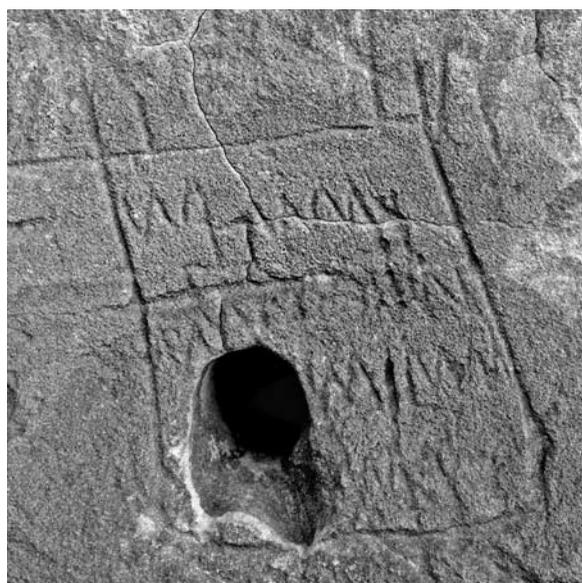
**Fig. 7 :** Quickbird satellite image of the fortification of “Gala El Sheikh”. Arrow marks the rock shelter.



**Fig. 8 :** Rock shelter with engravings at fortress "Gala El Sheikh".



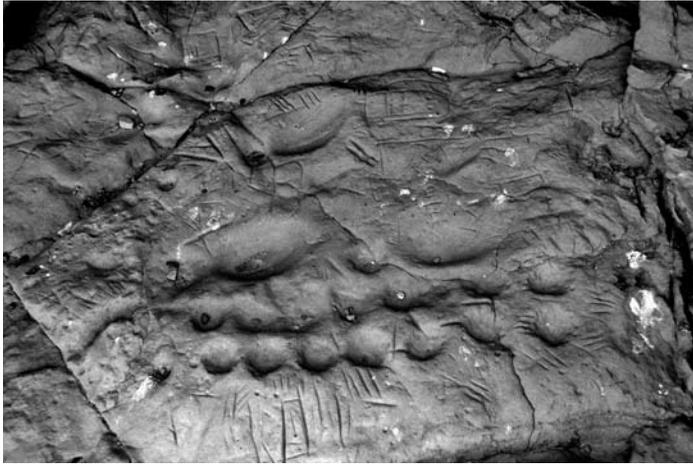
**Fig. 9 :** Gala El Sheikh shelter: "Water emblem"  
(size c. 20x20 cm).



**Fig. 10 :** Gala El Sheikh shelter: "Water emblem"  
(size c. 20x25 cm).



**Fig. 11 :** Gala El Sheikh shelter:  
Two emblems with crenelated lines (width c. 20 cm each)..



**Fig. 12 :** Gala El Sheikh shelter: Engravings at the bottom of the cavern.

**Fig. 13 :**  
Gala El Sheikh shelter: Three emblems showing similar patterns of double dots and short lines.



