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## **A review of the El Melik Group (Dongola Reach, Sudan)**

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The construction of the Aswan High Dam in the early 1960s called for the international Nubian Campaign to promote and carry out salvage excavations and surveys of threatened archaeological sites (Wendorf 1965; 1968). The prehistoric research has become an important part of the Campaign and was later extended further south to the Dongola Reach, along the bend of the river Nile (Fig. 1). The first survey and preliminary investigations in the Dongola Reach were carried out under a National Science Foundation (NSF) grant given to Dr. Joel Shiner of the Southern Methodist University in the 1960s. As a result, over 200 habitation sites were identified and attributed to different cultural groups (Marks et al. 1967/68; Marks et al. 1968; Shiner et al. 1971). Among them, 13 sites were included in the so-called El Melik Group that represented the local Late Neolithic. They are located south-west of the Nile, between the villages of Debba and Ganetti (Fig. 1; Shiner 1971).

The El Melik Group can be compared to the Late Neolithic sites found recently on the opposite bank of the Nile, around the area of El Kurru, within the archaeological concession of the University of Cassino (Garcea and Sebastiani 1998; Garcea 2000; in press a; in press b), on the basis of similar technological features. For this reason, in 1998, I reviewed the El Melik material which was then still kept at the Southern Methodist University in Dallas and has been recently moved to the British Museum in London. I was able to study a sample of the material during a stay at the Southern Methodist University, thanks to a kind invitation by Professor Anthony E. Marks. A total of 7246 chipped lithics, 51 fragments of polished stone tools, 861 potsherds and 1 bone tool were studied.

### **Site distribution**

The El Melik sites appear to be concentrated in two distinct environmental areas. One is on the outwash Girra pediment near the Nile, the other is about 10



Fig. 1. Map of the surveyed area.

km from the Nile, on small gravel hills overlooking the left bank of the Wadi El Melik (Marks et al. 1967/68; Marks et al. 1968; Shiner et al. 1971).

All sites were located near water resources. The presence of groundwater was identified along the central and southern course of the Wadi El Melik and between Debba and Korti, along the Nile Valley (Urbka and Thorweihe 1993). Furthermore, an earlier course of the Nile located to the west of the present one, was identified just north of Debba (Marcolongo and Surian 1997).

Six sites were located on the Girra pediment and seven other were identified on the gravel hills, 10 km from the Nile (de Heinzelin 1971). Three sites

from the Girra pediment were re-studied by me (N8, N32 and N89). The sites in this area were smaller than those on the hills. They included lower quantities of chipped lithics, but had more numerous polished stone tools and potsherds. Very few animal bone fragments were preserved and they could be attributed to domestic cattle (Luis Chaix, pers. comm.).

Furthermore, three sites on the gravel hills were re-studied (N 25, N27 and N50). The sampled sites from this area were bigger and comprised larger amounts of chipped lithics. On the other hand, grindstones and pottery were rarer. Only one site (N50) had a preserved deposit. However, it was extremely thin as test pits yielded artefacts only in the top 5 cm of the subsurface (the material from N50-17 subsurface could be possibly referred to an earlier occupation than the El Melik Group).

### The material culture

Stone knapping was a widespread technology in the Late Neolithic habitation sites, even though it was no longer well mastered. The sites on the Girra pediment show a more homogeneous composition of lithic raw materials, with a prevalence of Hudi and brown cherts and a fair quantity (16-21%) of quartz. Greenstone was only used at the Girra sites. Agate was well represented there, too (Table 1).

Table 1. Frequencies of raw materials.

SITES	Girra pediment			Gravel hills		
	N8	N32	N89	N25	N27	N50
Quartz	21,8	16,5	16,3	67,8	26,1	6,5
Hudi chert	40,5	43,4	47,1	14,6	41,9	39,8
Brown chert	20,1	29,3	13,1	8,4	11,3	22,3
Quartzite	9,6	4,1	12,0	6,4	10,9	21,6
Agate	6,0	1,3	4,2	0,5	0,0	0,3
Flint	0,0	2,8	2,0	0,3	0,0	4,6
Fossil wood	0,7	0,9	0,6	1,0	1,4	2,1
Sandstone	1,3	1,6	4,2	1,0	8,5	2,7
Greenstone	0,1	0,2	0,4	0,0	0,0	0,0
TOTAL %	100,0	100,0	100,0	100,0	100,0	100,0
TOTAL No.	855	1270	830	2732	284	1275

On the other hand, raw materials exploitation considerably varied among the sites on the hills. One (N25) exhibited a predominance of quartz, another (N50) showed a considerable amount of quartzite, compared to the other sites.

The so-called "slicing technique" (Kobusiewicz 1998) was the most common core reduction strategy. However, the presence of scaled pieces indicates that bipolar technique was also practised. Single platform cores prevailed in all sites on the hills, whereas radial cores are more common on the pediment sites (Table 2). Core types could be related to specific raw materials: single platform cores are made mainly on quartz and radial cores are frequently made on cherts.

Table 2. Frequencies of cores.

SITES	Girra pediment			Gravel hills		
	N8	N32	N89	N25	N27	N50
Single	28.6	35.0	25.6	41.1	42.0	34.1
Opposed	34.3	25.2	16.3	20.1	26.1	18.8
90°	8.6	16.3	8.1	20.1	17.4	17.6
Radial	11.4	11.4	31.4	10.5	10.1	10.6
Multiple	5.7	12.1	12.8	6.7	4.3	17.6
Fragments	11.4	0.0	5.8	1.4	0.0	1.2
TOTAL %	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL No.	35	306	86	209	69	85

Flakes are usually struck from unprepared platforms. Décortilage is not a part of the core preparation techniques. Each pebble was only partially exploited by striking a few flakes. Even good quality rocks were not extensively exploited. Such a practise is also noted at sites situated on the other bank of the Nile, near El Kurru (Garcea 2000; in press a).

Quartz debitage include the highest frequencies of pieces with considerable amounts of cortex (>50% and segments). A large quantity of Hudi and brown chert pebbles show about 1/3 of cortex (segments). The same could be noticed among flint and agate pebbles. Quartzite is the raw material with the smallest portions of cortex.

Refitting cores with flakes could be observed in four cases. Three of them came from the sites on the hills (N25, N25-2, N27-4) (Fig. 2:1), and one from the pediment (N32).

The tool-kit at all sites, both on the Girra pediment and on hills, includes a large variety of types (Figs. 2-3). Apart from very rare exceptions, their manufacture was rough and careless.

Endscrapers are more frequent at the Girra pediment sites (Table 3 and Fig. 2.2). Perforators are widely distributed in all sites (Table 3). They include a



Fig. 2. 1: Refitting core with flakes (Site N25); 2: Endscraper on a retouched flake (Site N8); 3. Groover (Site N8); 4. Borer (Site N8); 5. Double backed perforator (Site N8).

Table 3. Frequencies of retouched tools.

TOOLS	Girra pediment			Gravel hills		
	N8	N32	N89	N25	N27	N50
Endscrapers	13.6	13.5	14.1	3.6	8.8	6.9
Perforators	40.9	21.2	12.7	33.7	38.2	20.4
Burins	0.0	1.9	1.4	1.6	0.0	0.7
Backed tools	4.5	2.9	5.6	3.2	0.0	6.9
Notches/denticulates	36.4	40.4	40.8	41.3	44.1	45.0
Truncations	0.0	1.0	0.0	2.0	0.0	2.2
Geometric tools	0.0	3.8	7.0	3.2	0.0	1.6
Sidescrapers	4.5	3.8	2.8	3.6	2.9	3.8
Scaled pieces	0.0	2.9	1.4	0.4	0.0	1.1
Continuously retouched pieces	0.0	8.7	9.9	7.5	5.9	10.4
Bifacially retouched pieces	0.0	0.0	0.0	0.0	0.0	1.1
Fragments	0.0	0.0	4.2	0.0	0.0	0.0
TOTAL %	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL No.	22	104	71	252	34	451

large variety of types (Fig. 2.3-5). They are the second most represented tool class at Uad Shami, as well as on the opposite bank of the Nile, near El Kurru (Garcea 2000; in press b). Burins are extremely rare in the entire El Melik Group (Table 3).

Apart from straight backed (Fig. 3.1) and arch-backed bladelets, which are rare, backed tools are quite atypical (Table 3). Notches and denticulates (Fig. 3.2-3) are the most represented type-class in the El Melik Group (Table 3). This tool class is most frequent at Uad Shami and also, on the other bank of the Nile (Garcea 2000; in press b). Truncations (Fig. 3.4) are only represented at two sites, one on the pediment (N32) and another one on the hills (N50) (Table 3). Geometric tools are more common on the pediment sites which are closer to the Nile (Table 3). Lunates are the most frequent type, but triangles and trapezes are also found. One lunate comes from the excavated subsurface of Site N50; it is the smallest in size (Fig. 3.5). Sidescrapers (Fig. 3.6) could be found at all sites (Table 3). Scaled pieces (Fig. 3.7) are slightly more common at the pediment sites (Table 3). Continuously retouched pieces are a frequent type in the entire El Melik Group (Table 3). Few small bifacially retouched pieces were found at one site on the hills (N50). Like all other tools, they were roughly made. They also occurred at Uad Shami (Garcea, in press a).

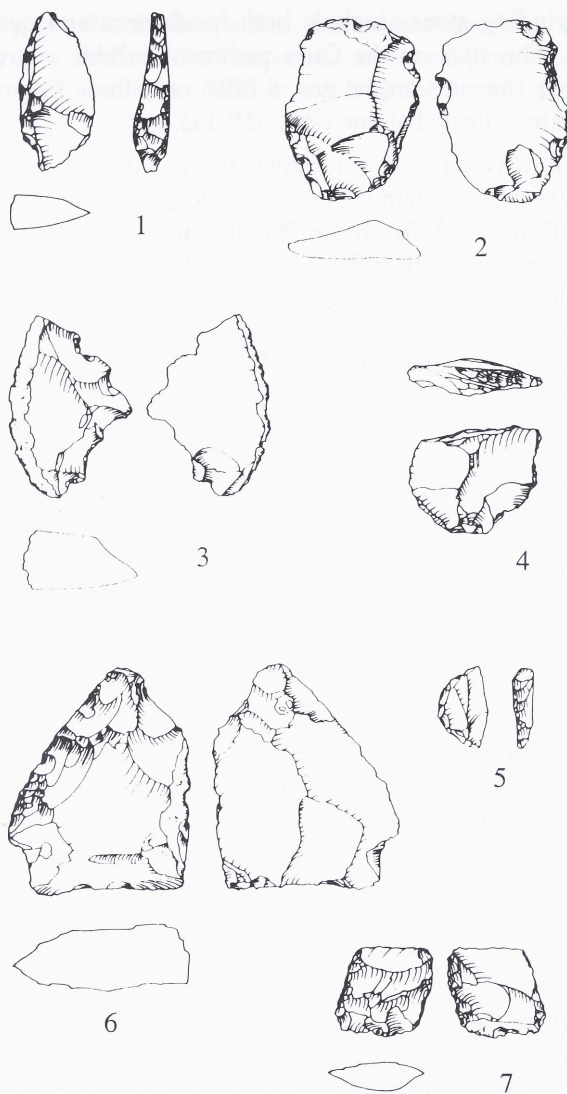


Fig. 3. 1: Straight backed bladelet (Site N8); 2: Denticulated flake (Site N50); 3: Denticulated flake (Site N32); 4: Truncation (Site N50); 5: Lunate (Site N50); 6: Simple straight sidescraper (Site N27); 7: Scaled piece (Site N89).

Polished grinding stones include both handstones and querns. No entire quern was found. The sites on the Girra pediment exhibit a larger quantity of grindstones. Among the sites on the gravel hills, only three fragments of granite grinding stones were collected at one site (N50-11).

Late Neolithic pottery is well-known from Sudanese cemeteries. On the contrary, information on ceramics used for domestic purposes is extremely limited (cf., e.g., Caneva 1988). In the Dongola Reach, the pottery from the El Melik Group has a majority of undecorated sherds and they are in a rather poor state of preservation. Their fragile conditions are due to poor firing and erosion. Pastes are coarse, with mineral and plant tempers. The potsherds show corrugated red, often slipped external surfaces. Inner surfaces could also be red. Like grindstones, pottery was more frequent at the sites on the Girra pediment. On the gravel hills, only one site (N50) yielded a few sherds.

Ostrich eggshell was found at two sites on the Girra pediment. Two pieces of zeolite were also collected from them.

### Site organisation

The distribution of cores within the sites, where collections were made in separate squares, shows higher concentrations in certain areas. At Site N8, cores prevailed in N8-1 with 20 examples out of a total of 35 at the whole site.

The sites on the pediment indicated a more defined diversity in the distribution of debitage categories. At N32-4, cores were 70 examples out of a total of 81 chipped pieces present in the square. On the other hand, tools were clustered in N32-1 and N32-2. In contrast to this pattern, the sites on the hills showed a more undifferentiated distribution of lithic categories. N25-2 included 128 cores out of a total of 209 cores at Site N25, but also 140 tools out of a total of 252. Site N50 was probably too much eroded horizontally to preserve recognisable core preparation areas.

The distribution of polished stone tools at Site N8 showed that a part of the site (N8-2) was preferred for the activities involving the use of grindstone. Moreover, the polished artefacts in this area represented a variety of rocks that were not present elsewhere, like quartz and quartzite, in addition to sandstone. At Site N32, the distribution of grinding stones was restricted to two areas (N32-1 and N32-2) which exhibited the highest numbers of all polished types, including the highest frequencies of querns.

The sites on the Girra pediment indicated that activities connected with the use of pottery were also taking place in selected areas. At Site N8, pottery was mostly concentrated in two areas (N8-4 and N8-5) which were away from the areas with a prevalence of cores and grindstones.



Site N32 showed a similar pattern. Cores were restricted here to a separate area (N32-4). Other artefacts, like retouched tools and grindstones, were mainly concentrated in other two areas (N32-1 and N32-2). Pottery was mostly present in one of these two areas (N32-2).

### Technological comparisons

Several small specialised sites could be also found outside the Dongola Reach, throughout the Upper Nubia. Late Neolithic sites are now known from different areas in northern Sudan, such as the Letti basin (Grzyski 1997; Usai 1998; Kabacinski, this volume), the Dongola basin (Welsby 1996; 1997; 2000), between el Khandag and Debba (Reinold 1993), around Kerma (Caneva 1990; Honegger 1995; 1997; 1999; this volume), and at Sai Island (Geus 1998; 2000).

Technological features similar to the Girra pediment sites have been noticed at the Uan Shami and Jebel Rufa'a sites, on the opposite bank of the Nile, near El Kurru (cf. Garcea 2000; in press a; in press b). On both sides of the Nile, core reduction strategies were extremely simple even on pebbles of fairly good flaking quality such as flint or agate. Usually, cores were never fully exploited. A real *décortilage* was not practised and the presence of cortex did not seem to matter even in finished products, which often showed more than half dorsal face covered with cortex. Pieces without any cortex were extremely rare.

Several cases of refitting of flakes and cores were recorded both at Jebel Rufa'a and Uad Shami, in the Kurru area, and in the El Melik sites. It has been suggested that the occurrence of core refitting indicates that stone working took place on the spot. It also shows that stone knapping and activities requiring the use of finished tools were practised in the same place. Even though all the artefacts come from surface collections, and the archaeological deposits were very badly preserved due to their erosion and deflation it seems certain that a minimal horizontal displacement must have taken place during post-depositional processes on these sites.

The production of retouched tools was intensive at the late Neolithic sites, but not at all standardised. Endscrapers were always common. Perforators, including a large variety of types, are widely distributed at all sites, on both banks of the Nile. They are the second most represented tool class at Uad Shami and on the opposite bank of the Nile, near El Kurru. Burins are rare as also are the backed pieces, which are quite atypical. Notches and denticulates are the predominant types and they may be considered one of the main features of this cultural complex. Sidescrapers could be of different types. Several tools are often made on a core, suggesting that cores were reused and resharpened to modify them into retouched tools.

Pottery was present in the El Melik Group sites, but potsherds are too eroded to be diagnostic or comparable to other cultural contexts in Nubia. On the other hand, no pottery was preserved at the sites surveyed around the El Kurru area.

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## References

- CANEVA, I. 1988. A Prospection of the IV Cataract. *Nubian Letters* 10: 1-9.
- CANEVA, I. 1990. L'outillage en pierre. In: Bonnet, Ch. (ed.), *Kerma, royaume de Nubie*. Genève, Roto-Sadag: 136-139.
- DE HEINZELIN, J. 1971. Geology: Ed Debba to Korti. In: J. L. Shiner, A. E. Marks, J. de Heinzelin, W. Chmielewski, and T. R. Hays (eds), *The Prehistory and Geology of Northern Sudan*. Report for the National Science Foundation, GS 1192: 19-35. Washington.
- GARCEA, E.A.A. 2000. A Late Neolithic site near El-Kurru. In: L. Krzyzaniak, K. Kroeper and M. Kobusiewicz (eds), *Recent Research Into the Stone Age of Northeastern Africa*: 137-147. Poznan: Poznań Archaeological Museum.
- ..... In press a. Beyond Napata: The Late Prehistoric Evidence in the Napatan Region. In: T. Kendall (ed.), *Proceedings of the Ninth International Conference of Nubian Studies*. Boston, 1998. Boston.
- ..... In press b. Traditional lithotechniques in the innovative 3rd Millennium BC in Upper Nubia. In: E. A. A. Garcea and I. Vincentelli (eds), *Research of the University of Cassino in the Napatan Region*. Cassino.
- GARCEA, E. A. A. and R. SEBASTIANI 1998. Advantages and limitations of surveys. The case of the Napatan region. *Archéologie du Nil Moyen* 8: 55-83.
- GEUS, F. 1998. Pre-Kerma storage pits on Sai Island. *Ninth International Conference of Nubian Studies. Abstract of Papers*: 17. Boston: Museum of Fine Arts.
- ..... 2000. Geomorphology and prehistory of Sai Island (Nubia): report on a current research project. In: L. Krzyzaniak, K. Kroeper and M. Kobusiewicz (eds), *Recent Research Into the Stone Age of Northeastern Africa*: 119-128. Poznan: Archaeological Museum Poznań.
- GRZYMSKI, K. 1997. Canadian Expedition to Nubia: the 1994 Season at Hambukol and in the Letti Basin. *Kush* 17: 236-243.
- HONEGGER, M. 1995. Kerma: note sur la reprise des fouilles de l'agglomération pré-Kerma. *Genava n.s.* 43: 58-59.
- ..... 1997. Kerma: l'agglomération pré-Kerma. *Genava n.s.* 45: 113-118.
- ..... 1999. Kerma: les occupations néolithiques et pré-Kerma de la nécropole orientale, *Genava n.s.* 47: 77-82.
- ..... 2003. Neolithic and Pre-Kerma occupation at Kerma. In: L. Krzyzaniak, K. Kroeper and M. Kobusiewicz (eds).
- KABACINSKI, J. 2003. Stone Age lithic industries in the Letti Basin. In: L. Krzyzaniak, K. Kroeper and M. Kobusiewicz (eds).
- KOBUSIEWICZ, M. 1998. Trend in stone-knapping technology in Late Prehistory of Sudanese Nubia. Actes de la VIIIe Conférence Internationale des Etudes Nubiennes. III: Etudes. *Cahier de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 17(3): 121-125.
- MARCOLONGO, B. and N. SURIAN 1997. Kerma: les sites archéologiques de Kerma et de Kadruka dans leur contexte géomorphologique. *Genava n.s.* 45: 119-123.

- MARKS, A.E., T. R. HAYS and J. DE HEINZELIN. 1967/68. Preliminary Report of the Southern Methodist University Expedition in the Dongola Reach. *Kush* 15: 165-192.
- MARKS, A. E., J. L. SHINER and T. R. HAYS. 1968. Survey and Excavations in the Dongola Reach, Sudan. *Current Anthropology* 9(4): 319-323.
- REINOLD, J. 1993. S.F.D.A.S. rapport préliminaire de la campagne 1991-1992 dans la Province du Nord. *Kush* 16: 142-168.
- SHINER, J. L. 1971. El Melik Group. In: J. L. Shiner, A. E. Marks, J. de Heinzelin, W. Chmielewski and T. R. Hays. (eds), *The Prehistory and Geology of Northern Sudan. Report for the National Science Foundation*, GS 1192: 276-289. Washington.
- SHINER, J. L., A. E. MARKS, J. DE HEINZELIN, W. CHMIELEWSKI, T. R. HAYS. 1971. *The Prehistory and Geology of Northern Sudan. Report for the National Science Foundation*, GS 1192. Washington.
- URBKA, P. and U. THORWEIHE. 1993. Hydrogeology of the Wadi El Milk - Wadi Muqaddam area, northern Sudan. In: U. Thorweihe and H. Schandemeier (eds), *Geoscientific research in Northeast Africa*: 693-698. Rotterdam Balkema.
- USAI, D. 1998. Prehistoric Evidence from the Letti Basin Area. *Archéologie du Nil Moyen* 8: 145-156.
- WELSBY, D.A. 1996. The Northern Dongola Reach Survey: The 1995/6 Season. *SARS Newsletter* 10: 2-9.
- ..... 1997. The SARS Survey in the Northern Dongola Reach: Preliminary Report on the Third Season, 1994/95. *Kush* 17: 85-94.
- ..... 2000. South from Kadruka: the Neolithic in the Northern Dongola Reach, Sudan. In: L. Krzyzaniak, K. Kroeper and M. Kobusiewicz (eds), *Recent Research Into the Stone Age of Northeastern Africa*: 129-136. Poznan: Poznań Archaeological Museum.
- WENDORF, F. (ed.). 1965. *Contributions to the Prehistory of Nubia*. Dallas: Fort Burgwin Research Center and Southern Methodist University Press.
- WENDORF, F. (ed.). 1968. *The Prehistory of Nubia*. Dallas: Fort Burgwin Research Center and Southern Methodist University Press.