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Mennat-Allah El Dorry

Food & Drink in Egypt & Sudan

Selected Studies in Archaeology, Culture, and History

INSTITUT FRANÇAIS D'ARCHÉOLOGIE ORIENTALE
المعهد العلمي الفرنسي للآثار الشرقية

POLISH CENTRE OF MEDITERRANEAN ARCHAEOLOGY
UNIVERSITY OF WARSAW
Research Centre in Cairo

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Mennat-Allah El Dorry (ed.)

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BIBLIOTHÈQUE D'ÉTUDE 184 – 2023

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ISBN 978-2-7247-0954-4 ISSN 0259-3823

Mise en page : Hani Magdi
Couverture : Ismaïl Seddiq

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Andrea Manzo*

Banquet at Mahal Teglinos

Local Recipes and Imported Delicatessen in Pre- and Proto-historic Eastern Sudan

Abstract

The research project conducted by the Italian Archaeological Expedition to the Eastern Sudan of the University of Naples "L'Orientale" and Associazione Internazionale di Studi sul Mediterraneo e l'Oriente (ISMEO), not only provided crucial evidence for the study of the adoption of the Near Eastern package of crops and domestic animals in the region in the 4th millennium BC, but also for the reconstruction of the process of sorghum domestication in the Sahelian belt, and the spread and adoption of this crop up to India in the 3rd–2nd millennia BC. Investigations also revealed intriguing aspects in the way food was processed and consumed in the region. Recent excavations conducted at the site of Mahal Teglinos (K1) led to the discovery of a food preparation and perhaps consumption area dating to the end of the 3rd millennium BC. These investigations also provided insights into the possible origins of the griddles used to cook sorghum and teff bread respectively in some regions of Sudan and on the Ethio-Eritrean highlands. Moreover, the evidence of the possible consumption of delicatessen imported from Egypt during the First Intermediate Period–early Middle Kingdom was collected in the same assemblage, suggesting that the menu included both local and exotic foodstuff. Archaeological excavations showed that not only food preparation and consumption took place very intensively at Mahal Teglinos (K1), but also that true feasts may have taken place there. Finally, some remarks on the cultural context and the possible social meanings of all this are proposed.

Keywords: Sudan, Archaeology, Near Eastern Package, Sahelian Crops, Feasts, Sorghum, Food Preparation, Subsistence Strategies

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الملخص

مأدبة في محل تجلينوس: وصفات محلية ومأكولات مستوردة في شرق السودان في عصر ما قبل التاريخ

لم يوفر المشروع البحثي الذي اضطلعت به كل من البعثة الأثرية الإيطالية لشرق السودان من جامعة نابولي «لورينتاليه» والجمعية الدولية لدراسات البحر المتوسط والشرق ISMEO أدلة جوهرية لدراسة تبني مجموعة الشرق الأدنى من محاصيل وحيوانات مستأنسة في المنطقة في الألفية الرابعة ق.م. وحسب، وإنما أيضًا كشف عن أدلة تصلح لإعادة بناء عملية استزراع الذُرة الرفيعة في الحزام الساحلي، وانتشار هذا المحصول وتبنيه حتى الهند في الألفيتين الثالثة – الثانية ق.م. كما كشفت الدراسات أيضًا عن جوانب مثيرة في الطريقة التي كانت تتم بها معالجة الطعام واستهلاكه في المنطقة. أدت الحفائر الحديثة في موقع محل تجلينوس (K1) إلى اكتشاف منطقة تحضير للطعام وربما تناوله أيضًا تعود إلى نهاية الألفية الثالثة ق.م. كما وفرت هذه الاستكشافات لمحات عن الأصول المحتملة للصاج المستخدم اليوم (والمعروفة بالدوكة) لطهي الذرة الرفيعة وخبز الطاف بالترتيب في بعض مناطق السودان وعلى المرتفعات الإثيوبية الإريترية. وبالإضافة إلى ذلك، فقد جمعت أدلة على الاستهلاك المحتمل للمأكولات المستوردة من مصر في عصر الانتقال الأول – أوائل الدولة الوسطى في نفس المجموعة، مما يشير إلى أن قائمة الطعام قد تضمنت مواد غذائية محلية وأيضًا أجنبية. لم يكتف القائمون على أعمال الحفائر بالكشف عن تحضير الطعام وتناوله بشكل كثيف للغاية في محل تجلينوس (K1)، ولكنهم كشفوا أيضًا عن احتمالية إقامة مآدب هناك. أخيرًا، تُقترح بعض الملاحظات بشأن السياق الثقافي والمعاني الاجتماعية المحتملة لكل ما سبق.

الكلمات الدالة: السودان، حزمة محاصيل الشرق الأدنى، المحاصيل الساحلية، المآدب، الذرة الرفيعة، الأكل، إستراتيجيات التغذية

The archaeology of Eastern Sudan was first systematically explored by a research project conducted starting in 1980 by the Italian Archaeological Mission to the Eastern Sudan of the Istituto Universitario Orientale and by the American-Sudanese joint Expedition of the Southern Methodist University of Dallas and the University of Khartoum.[1] More recently, the Italian Archaeological Expedition to the Eastern Sudan of the University of Naples "L'Orientale" and ISMEO resumed investigations in the area after a gap of 15 years (fig. 1).[2] These research activities have already provided data on the cultural history of the region and on its crucial contribution to general processes involving the whole of Northeast Africa.[3] It has been possible to follow changes in the subsistence economy of the region and the related emergence of a local diet from the 6th millennium BC to the mid-2nd millennium AD. It has also been possible to outline the role played by the region in more general processes like the Neolithisation of the Ethio-Eritrean highlands and the diffusion of the Sahelian crops from Africa to India via the Indian Ocean. Moreover, thanks to the excavations conducted in recent years at the site of Mahal Teglinos (labelled K1 in the 1980s), at least for a specific

1. Fattovich, Marks, Mohammed Ali 1984; Manzo 2017a, pp. 4–7.
2. Manzo 2017a, p. 7.
3. Manzo 2017a.

phase of Gash Group culture, dating to the end of the 3rd-early 2nd millennia BC, it has been possible to provide some insights into how food was prepared and the way its consumption could have taken place. In addition, it is also possible to propose some remarks on the meaning communitarian food consumption may have had in that phase. These different issues will be discussed in detail in the following paragraphs.

SUBSISTENCE STRATEGIES FROM THE 6TH MILLENNIUM BC TO THE MID-2ND MILLENNIUM AD

Archaeozoological[4] and paleobotanical studies[5] have allowed the identification of a broad range of animal and vegetal species which were exploited in Eastern Sudan from the 6th millennium BC to the 2nd millennium AD (table 1). Of course, the limits in the archaeological exploration of the region make the available lists of plants and animal species whose remains were collected in the assemblages from Eastern Sudan provisional. Nevertheless, some elements of continuity as well as some crucial changes can already be perceived. While wild millets (*Panicum* sp.) occur in all phases and thus represent a strong element of continuity, at a certain point in the 4th millennium BC the introduction of domesticated crops such as wheat (*Triticum* sp.) and barley (*Hordeum* sp.) can be noted. Barley, which was already domesticated in the Near East, was certainly adopted via the Nile Valley.[6] This was also the case for wheat, as the proposed identification of the Ethio-Eritrean highlands as a centre of domestication for wheat cannot be accepted any more.[7] The fact that at that time these cereals could have been cultivated in Eastern Sudan is certainly supported by the present cultivation of wheat and barley on the Ethio-Eritrean highlands, in a similar regime of summer rains.[8] Moreover, in 4th millennium BC Eastern Sudan, the adoption and cultivation of these species was possibly favoured by the more humid conditions characterizing the region at that time. Actually, it seems that the trend towards more arid conditions progressively affecting the whole of Northeast Africa from the 6th millennium BC, did not heavily affect Eastern Sudan until the 2nd millennium BC.[9]

In the meantime, the cultivation of the Near Eastern crops may have been associated with the pre-domestication of already intensively exploited local species, a model supported by the recently identified evidence of sorghum cultivation in the Butana Group assemblages of Eastern Sudan, dating to the 4th–early 3rd millennium BC.[10] The local sorghum and the Near Eastern crops were still cultivated in Gash Group times, i.e., from the early 3rd

4. Gautier, Van Neer 2006; Geraads 1983.
5. Beldados 2015, pp. 31–41.
6. Beldados 2015, pp. 42–44, 47–48.
7. D'Andrea, Haile 2002, pp. 183–184.
8. D'Andrea, Haile 2002, p. 183; Doorenbos, Pruitt 1996, p. 42.
9. For a summary of the elements emerging from the ongoing investigations see Manzo 2017a, pp. 11–13. The study on these specific aspects is in progress under the coordination of M. Cremaschi and S. Costanzo, University of Milan, Italy.
10. Winchell et al. 2017.

to the early 2nd millennium BC. But already at the end of the Gash Group period, the increasingly arid environment may have favoured the successful cultivation of sorghum, which is the only cereal recorded in assemblages of the Jebel Mokram Group, which follows the Gash Group in the regional cultural sequence, dating from 1800 BC onwards.[11]

As far as the animal species exploited in the region are concerned, species certainly related to higher humidity conditions such as land snails and big mammals like the hippopotamus, characterise the archaeological assemblages of the region up to the 4th millennium BC. The exploitation of some of these animal species, like land snails, as food resources is confirmed by the recent investigations conducted at sites of the region dating from the late 6th to the 4th millennium BC (fig. 2*).[12] The persistence of humid conditions up to the early 2nd millennium BC may be confirmed by the continuous occurrence of land snails in the Gash Group assemblages. Nevertheless, the fact that aridity was already increasing at that time may be suggested by the disappearance of bigger mammals, and the appearance of animals typical of the savannah environment, like several species of gazelle, in the archaeological record from the 3rd millennium BC.

At that time, the subsistence strategy in the region was already deeply modified because of the adoption of domesticated bovines and caprovines in the 4th millennium BC. Like in the case of wheat and barley, caprovines, and—as suggested by the most current proposed models—domesticated bovines were ultimately of Asiatic origin, and likely to have been adopted in Eastern Sudan via the Nile Valley.[13] Interestingly, the process of their progressive diffusion through Northeast Africa can now be traced, also thanks to the C14 dates available for the different sites where remains of domesticated bovines have been found.[14] As far as Eastern Sudan is concerned, the Middle Nile Valley-central Sudan-Butana route is highly probable for their introduction; nevertheless, the possibility that livestock could have reached Eastern Sudan via the Eastern Desert cannot be entirely ruled out also, given the limited archaeological activities conducted there. This is somehow supported by the scattered available evidence, like in the case of the very precocious occurrence of caprovines at Sodmenin cave.[15] Since the 4th millennium BC, the zoological assemblages of Eastern Sudan have always yielded a mix of domestic and wild species, most of them likely to have been exploited as food resources, except perhaps for the donkeys, the only African domesticated species occurring in the assemblages since Gash Group times, possibly to be interpreted as beasts of burden.

If we consider not only the qualitative but also the quantitative composition of the archaeozoological assemblages, it should be noted that already by the 4th millennium BC livestock represents the larger part of the collections, showing the economic importance it

11. Manzo 2017c, Manzo 2018b.
12. Manzo et al. 2012, p. 8, fig. 8, p. 15, fig. 16; Manzo 2017a, p. 19, fig. 12, p. 25, fig. 18; Manzo 2017b, pp. 147–148.
13. Larson, Fuller 2014, p. 125.
14. Lesur et al. 2013, pp. 149–150.
15. Vermeersch et al. 2015, pp. 483–489.

assumed very quickly after its adoption in the region.[16] In addition to that, if the quantitative composition of the livestock is considered, it should be remarked that the frequency of bovines is constantly increasing. This fact, together with the progressive shift of the settlement sites from areas suitable for agriculture towards grazing areas, coupled with the fact that most of the 2nd and 1st millennia BC sites should be interpreted as temporary camps because of their limited dimensions and thin stratified deposit, suggests that the inhabitants of the region were adopting an increasingly mobile pastoral style of life at least from the 2nd millennium BC onwards.[17] Nevertheless, also at that time, as previously remarked, sorghum continued to be exploited. Moreover, sorghum chaff may have been used as temper to make Hagiz Group pottery (1st millennium BC–1st millennium AD), suggesting that at that time, this species continued to be locally cultivated in the region and not obtained through exchanges. Therefore, although eminently pastoral and mobile, the Hagiz Group was also characterised by agricultural practices,[18] as seen in other pastoral groups of Northeast Africa.[19]

A GLOBAL CULINARY CROSSROAD

In addition to being affected by the diffusion of the Near Eastern package of crops and animal species, Eastern Sudan may have also been crucial in the process leading to the emergence of agriculture and animal breeding in the Ethio-Eritrean highlands. As shown above, the presently available data suggest a progressive spread of domesticated cattle from north to south-southeast, i.e., from the Western Desert to the Middle Nile Valley, and from there to central Sudan and Butana in the 5th millennium BC, continuing to the Eastern Sudan in the 4th millennium, and finally to the Ethio-Eritrean highlands, where domesticated cattle occur at least since the 2nd millennium BC. It is likely that the caprovines too followed the same channels roughly at the same time. Most likely, the diffusion of the livestock to the highlands was favoured by the seasonal mobility of the herders of the western lowlands since the 4th millennium BC. Indeed, they may have interacted with the groups of the highlands during their seasonal movements, even if it cannot be ruled out that the above outlined emergence of more arid conditions in the late 3rd–early 2nd millennium BC, too, may have favoured more permanent movements of some groups from the lowlands to the highlands, bringing with them their animals and possibly crops.[20] As far as domesticated crops are concerned, the process is less clear; nevertheless, it should be stressed that at least in the 1st millennium BC, the Near Eastern crop package was present, associated with local crops, on the Ethio-Eritrean highlands.[21] Therefore, it can be suggested that wheat and barley too, may have been brought following the same pattern and routes of the domesticated animals to the Ethio-Eritrean highlands, where,

16. Manzo 2017a, p. 48.
17. Sadr 1991, pp. 53, 61–63.
18. Manzo 2017a, p. 58.
19. Sadr 1991, pp. 3–4.
20. Lesur et al. 2013, p. 154.
21. Boardman 2013.

like it may have happened in Eastern Sudan for sorghum, their cultivation may have been associated with the one of the local crops more fit to the local environmental conditions in the long run.

As previously stressed, Eastern Sudan may have played a crucial role in the domestication of sorghum, as shown by what is presently the earliest evidence of the process leading to the domestication of this cereal. The role of the region may also have been crucial in the diffusion of domesticated sorghum towards India via the Red Sea and the Indian Ocean. Actually, it is well known that in the 3rd and 2nd millennia BC Eastern Sudan was involved in networks of exchange extending to the Red Sea and South Arabia.[22] This may explain how African sorghum spread out of the continent, and in particular the occurrence of domesticated sorghum in Arabian and Indian assemblages dating to the 2nd millennium BC.[23] This process should certainly be put in a broader context characterised by the recently outlined diffusion and adoption of crops between Asia and Africa, as also shown by the occurrence of a domesticated crop originally from China, *Panicum miliaceum*, at Ukma, a Kerma site south of the second cataract a few centuries later than sorghum reached India.[24] We may have there the trace of an attempt of acclimatisation of an exotic, ultimately East Asiatic crop in the Middle Nile Valley, like in the case of African sorghum in India. However, it should be stressed that in the case of sorghum the process was fully successful, and its consequences are still felt today, as sorghum is currently a staple cereal in India.

SOME INSIGHTS INTO FOOD PREPARATION AND CONSUMPTION

Although several data sets related to the animal and vegetal species which may have been exploited for alimentary use in Eastern Sudan are available, allowing turning points of the economic history of the region to be outlined, the way these ingredients were processed, and the resulting foods still remain largely unexplored. Nevertheless, some insights can now be given on these aspects. The studies presently in progress on the animal bones from the assemblages investigated from 2010 onwards promise to add details on the butchering techniques,[25] and residue analysis on the vessels and grinding stones may also enlarge our knowledge on the way food was processed and consumed. Moreover, some assemblages may provide information on specific ways of preparing and consuming food.

As far as the earliest phases of the cultural history of the region are concerned, the shell middens brought to light at UA50 and UA53 (fig. 2*), two recently investigated archaeological sites in the area between the Gash and Atbara rivers, most likely to be interpreted as seasonal camps

22. Manzo 2017a, p. 72.
23. Cleuziou, Costantini 1980, pp. 249–250; Fuller et al. 2015, p. 2.
24. Fuller, Boivin 2009; Fuller et al. 2015, pp. 2–5.
25. These analyses are being conducted by H. Solomon Woldekiros, George Washington University, St. Louis (USA).

and dating to the end of the 6th–early 5th millennia BC and to the early 4th millennium BC respectively, may show intensive exploitation of *Achatina fulica* and *Pila ovata* land snails as food.[26] These are certainly a highly nutritious resource, but also a potentially very dangerous carrier of pathogens.[27] As both UA50 and UA53 were characterised by huge concentrations of shells of these land snails, it is highly probable that snails were processed and may have been consumed at the two sites. The ceramic bowls with restricted orifices occurring at both sites[28] may have been used for storage after de-shelling, and alternatively, for the long stewing required to eliminate the pathogens from the snails. In particular, the almost exclusive occurrence at UA53 of bowls with restricted orifice, contrasting with the variety of shapes and inclination of the rims of bowls from the other Butana Group sites,[29] can be interpreted as related to the specialised function of the site (fig. 3*). Indeed, the vessels with restricted orifice increase heating effectiveness and therefore are well suited for cooking—and in our case to stew the snails. It is also noteworthy that at UA53 the forms do not include shouldered vessels to enable stopping and easier carrying; moreover, the fabrics of the bowls are mineral tempered, which makes the vessels heavy and less suitable for transportation.[30] These characteristics of the ceramic assemblage may support the hypothesis that the stewing and perhaps the consumption of the snails was taking place at UA53, but unfortunately, so far the site has not yielded any trace of fire pits where the cooking could have taken place.

A further assemblage which may be directly informative for reconstructing the way food was processed and consumed is represented by excavation unit K1 X–XI, in the central sector of the site of Mahal Teglinos (K1) (fig. 4*). In this sector of the site, an amazing concentration of fire pits and pits was recorded.[31] They date to the last centuries of the 3rd millennium BC, as suggested by C14 analysis,[32] and by the Egyptian ceramic materials of the First Intermediate Period–early Middle Kingdom collected in these assemblages.[33] In some cases, the broken vessels were found still lying near the fire pits, but complete, though fragmented, vessels, as well as botanical and zoological remains, suggesting a very intense phase of use of the spot as a food preparation and perhaps consumption area, were mostly contained in the pits themselves (fig. 4a–d*). Archaeozoological evidence shows that cow (*Bos primigenius f. taurus*) and goat (*Capra hircus*)[34] meat could have been consumed there, perhaps stewed, as also suggested by a big animal bone found inside a large cooking vessel (fig. 4a*). So far, no remains

26. Manzo 2017a, pp. 19, 25, figs. 12, 18; Manzo 2017b, pp. 147–148, fig. 9; Manzo 2016, p. 194, fig. 7; Manzo et al. 2012, pp. 8, 15, 95, figs. 8, 16, 123.
27. Nyoagbe et al. 2016.
28. Cesaro 2017, p. 96, fig. 7; Manzo et al. 2012, pp. 52–56, figs. 72, 77, 78.
29. Winchell 2013, pp. 204–205.
30. Skibo 2013, pp. 32–36.
31. Manzo 2015, pp. 232–233; Manzo 2016, p. 192, fig. 3; Manzo 2017a, p. 38, fig. 32.
32. Beta – 404210: 3770 +/- 30 BP (2 σ calibration: 2285-2130 and 2080–2060 BC), Beta – 437215: 3740 +/- 30 BP (2 σ calibration: 2270–2260, 2205–2115, and 2100–2035 BC), and Beta –437217: 3750 +/- 30 BP (2 σ calibration: 2275–2250, 2225–2220, 2210–2120, and 2090–2040 BC). All calibrations according to Reimer et al. 2013.
33. Manzo 2018a, p. 17.
34. Helina Solomon Woldekiros, personal communication, October 2016.

of sheep or of wild animals except fish were collected in this area, a fact that contrasts with the assemblages from other sectors of the site roughly dating to the same phases. In addition to that, this specific area yielded seeds of *Ziziphus* sp.,[35] a fruit rich in sugar and therefore a very energy-intensive snack.

Another highly relevant find in this area, possibly throwing light on part of the food preparation process, is represented by the discovery of large and almost flat circular ceramic trays collapsed in some fire pits, which suggests that they were originally placed on top of the fire pits (fig. 4c*). These trays, whose diameters range from 40 cm to over 50 cm, are characterised by a smoother top while the lower surface is rough (fig. 5f*). Their position on the fire pits, dimensions and general characteristics are reminiscent of the large griddles named *doka* (sing.; *dokat*, pl.) and *moqoqo* in Sudan and Ethiopia-Eritrea, respectively. These griddles are widely used in the preparation of flat fermented bread, the *kisra*, made in Sudan from sorghum flour, and the *injira*, made in Ethiopia and Eritrea from teff flour.[36] As cultivated sorghum occurred widely at Mahal Teglinos (K1) during Gash Group times, it could be suggested that a fermented bread, was prepared here, perhaps to be served with stewed meat. Of course, this does not exclude that sorghum could also have been used to prepare porridge, perhaps something similar to what is today called *kisra ʿasīda*, as it was sometimes suggested for the sites in the Middle Nile Valley.[37] However, the lack of grains of sorghum in this specific area of the site is not surprising, as it can be assumed that, like it was remarked also in ethnographic food preparation areas,[38] if grains were not purposely roasted, there may have been few opportunities for grain charring in the kitchens, and thus for their preservation in archaeological contexts. Therefore, in the specific case of Mahal Teglinos (K1), perhaps only flour and/or batter were used in the area investigated in unit K1 X–XI, while the grinding process could have taken place elsewhere, and consequently there were no chances for the sorghum grains to be charred in the fire pits and survive up to the present.

A further interesting remark rises from the comparison between the quantitative composition of the ceramic assemblage from K1 X–XI and other domestic assemblages from the same site. Actually, it should be stressed that not only do several griddles occur at K1 X–XI, but also dishes, which may have been used for food consumption (fig. 5*-6*). Indeed, the dishes from K1 X–XI may have been used in the consumption of meals including a *kisra*-like bread, as suggested by their diameter which sometimes reaches 40 cm (fig. 5a*).

Finally, it should be remarked that some imported foodstuffs, perhaps delicatessen considering the fact that they may have travelled over long distances, may have enriched the menu served at Mahal Teglinos at the end of the 3rd millennium BC, as fragments of at least eight different Marl A3 large and middle-sized Egyptian jars were collected in the same excavation unit (fig. 5h*).[39] These vessels are usually interpreted as mid- and long-term storage containers, as suggested

35. Alemseged Beldados, personal communication, February 2015.
36. Lyons, D'Andrea 2003, pp. 522–523.
37. Edwards 1996, pp. 67–68; Håland 2007, p. 174.
38. Lyons, D'Andrea 2003, p. 519.
39. Manzo 2018a.

by finds from Egyptian and Lower Nubian sites.[40] Therefore, they may well have contained foodstuffs exported to the regions south of Egypt and perhaps consumed at Mahal Teglinos (K1) together with typically local dishes, in an intercultural meal. It is also possible to suggest, like it has been done also for Middle Nile cultural contexts,[41] that the use of imported foodstuff was not generalised, and the access to it could have been limited to the people of higher rank, to which some of the tombs with grave goods investigated in the western cemetery at Mahal Teglinos (K1) can be ascribed.[42]

Additionally, fragments of griddles similar to the ones from K1 X–XI were also collected in later Jebel Mokram Group assemblages in excavation unit K1 VI. Together with the paleobotanical evidence of persisting exploitation of sorghum, this suggests that sorghum continued to be processed in the same way at that time. Moreover, in Jebel Mokram Group assemblages, large trays too, *ca.* 60 cm in diameter, and characterised by a high conical base, were collected (fig. 7).[43] Their shape may remind us of the clay *mesob* still used in some regions of Ethiopia and Eritrea for serving *injira*.[44] Accordingly, the question can be posed whether the footed trays from K1 VI may have been used for the same purpose for a *kisra*-like sorghum bread. If so, and if the hypothesis is accepted that the footless dishes from K1 X–XI too were truly used in the consumption of meals including a *kisra*-like bread, then the issue of a possible difference in the way food was consumed in Gash Group and Jebel Mokram Group times could at least be raised. Of course, it is hoped that fieldwork will provide further insights on all these specific aspects, which still remain largely hypothetical.

FROM FOOD TO SOCIAL NETWORKS

A further aspect of the food preparation and consumption area brought to light at K1 X–XI should be stressed. Evidence from this excavation unit is not only limited to fire pits, local and imported pottery, animal bones, and some paleobotanical remains. Other finds provide additional information on the activities that took place in that area. Among them, some administrative devices, sealings, and possible tokens were found in and around the same pits where the above described ceramic assemblage was also collected.[45] Moreover, the area also yielded some so far unique clay animal figurines of lions.[46] All this suggests that food processing and consumption were associated with administrative activities in that specific spot, that sealed, and therefore somehow administered, commodities were used, and that perhaps also ritual activities took place there. The ritual centrality of the activities taking place in this sector of the site of Mahal Teglinos (K1)

40. Rzeuska 2011, p. 492.
41. Håland 2012, pp. 335–336.
42. Manzo 2017a, p. 42.
43. Manzo 2017a, p. 47, fig. 42.
44. Beldados 2015, p. 15, fig. 2.2.
45. Manzo 2015, p. 233, fig. 4b–c; Manzo 2017a, p. 38, fig. 27a.
46. Manzo 2015, p. 233; Manzo 2017a, p. 38.

can be supported to a certain extent by its location, right in between two huge cemeteries, both used for the whole Gash Group period, from *ca.* 2700–1800 BC,[47] and most likely counting more than 10,000 tombs on the whole (fig. 8*).[48]

The fact that no other Gash Group cemeteries were so far recorded in the region, may suggest that in that phase several groups in the region buried their dead there. This can be indirectly supported by the variety of the funerary customs recorded in both cemeteries:[49] in the eastern one, both tombs characterised by skeletons in extended position on their back, as well as others in contracted and semi-contracted positions were recorded,[50] while in the western cemetery, the extended position on the back is almost exclusive with the only notable exception of some contracted and semi-contracted bodies.[51] Moreover, in both cemeteries, other differences among the burials can be remarked as far as the position of the arms is concerned (arms along the body, on the pelvis, an arm straight, and the other flexed forming a ninety degrees angle to cross the belly, flexed arms, etc.). The orientation of the burials is also extremely varied.[52] Also noticeable is the variety in the shape of the associated stone stelae (pointed, pillar-like, and flat slabs),[53] while more complex funeral monuments consisting of several granite slabs forming curvilinear arrangements, perhaps to be regarded as a kind of chapel, also occur at least in the earliest phase of the use of the western cemetery dating to *ca.* 2700 BC.[54]

CONCLUSION

All this seems to support the hypothesis that in Gash Group times Mahal Teglinos (K1) was a kind of federal cemetery, perhaps located there for some specific ideological meaning of the Jebel Taka, the granite jebel whose boulders completely embrace the site, and which certainly represented a very evident, distinctive, and perhaps sacred land marker in the region. Certainly, in Gash Group times, food consumption in the graveyard and perhaps funeral meals may have had some specific ritual meanings, as suggested by the discovery of concentrations of animal bones and sherds clustering in specific offering places, sometimes delimited by circles of stones, near the funerary markers (fig. 8b*).[55]

47. Manzo 2017a, p. 37, fig. 30.
48. This estimate is based on the density of tombs recorded in the investigated sectors of the two cemeteries.
49. See also Fattovich 1995, p. 198.
50. Fattovich 1995, pp. 194–196; Manzo 2017a, p. 41, fig. 33.
51. Manzo 2016, p. 193, fig. 5; Manzo 2017a, p. 42, fig, 35; Manzo 2017b, pp. 146–147, figs. 5, 8.
52. Manzo 2016, p. 193; Manzo 2017a, pp. 41–42; Manzo 2017b, p. 146.
53. Fattovich 1995, pp. 194–196; Manzo 2017a, p. 41, fig. 34.
54. Manzo 2017a, p. 42; Manzo 2017b, p. 147.
55. Fattovich 1995, p. 196; Manzo 2016, p. 193, fig. 6; Manzo 2017a, pp. 41–42; Manzo 2017b, p. 147, fig. 6.

Indeed, we may wonder if the intense activity of food preparation and consumption dating to the end of the 3rd millennium BC recorded in excavation unit K1 X–XI was somehow related to the funerary rituals and to the cemeteries bordering to the east and to the west of this sector of the site. Moreover, the archaeological finds pointing to the association of food preparation and consumption with ritual and administrative functions in a remote, mostly funerary, site suggest that activities which can be labelled as feasts, according to the signatures usually pointed out for such a kind of events in the archaeological and anthropological literature,[56] may have taken place there on specific occasions. Similar to what is found in other cultural contexts all around the world,[57] if Mahal Teglinos (K1) was indeed a federal cemetery, these feasts may have generated networks and consolidated social relations among the groups inhabiting this region of Eastern Sudan and could have been crucial also in the dynamics of even broader networks, as suggested by the occurrence of Egyptian imports in this specific spot of the site.[58]

56. See Hayden 2001, pp. 40-41.
57. Hayden 2001, pp. 29–35.
58. Manzo 2017a, p. 51.

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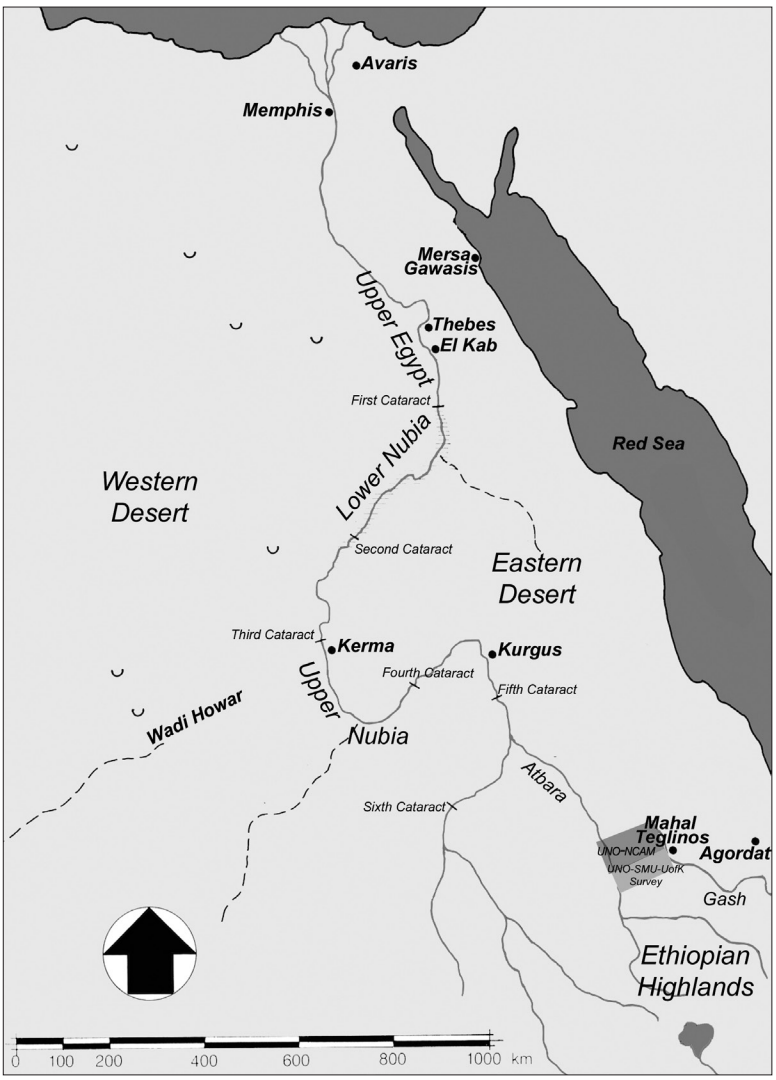

Fig. 1. Map showing the location of Eastern Sudan and the areas investigated in the 1980s and 1990s and from 2010 onwards.

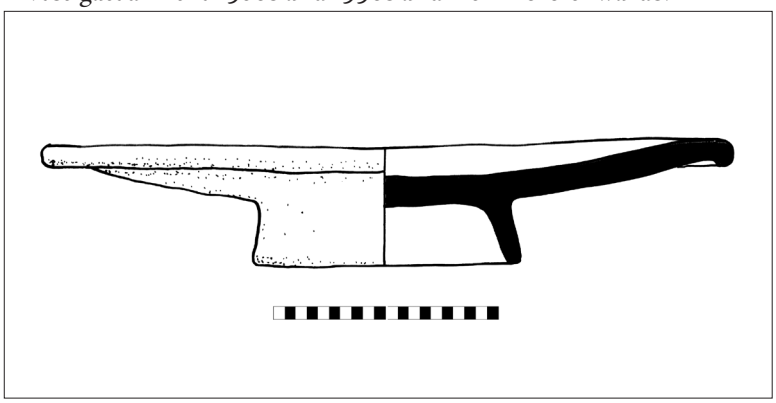

Fig. 7. Reconstructive drawing of a ceramic tray with conical base from a Jebel Mokram Group assemblage (B2 SU2) of excavation unit K1 VI at Mahal Teglinos (K1) (scale in cm).

Group/Phase	Chronology	Vegetal Species	Animal Species
Amm Adam Group	6th mill. BC	Unspecified millet	*Syncerus cafer, Hippopotamus amphibius, Achatina fulica, Pila ovata,* unspecified antilopes
Malawiya Group	5th mill. BC	No data	Unspecified antelopes, land snails
Butana Group	4th–early 3rd mill. BC	*Panicum* sp., *Setaria* sp., *Echinochloa* sp., *Sorghum* sp., *Hordeum* sp., *Triticum* sp.	*Achatina fulica, Pila ovata, Pila wernei, Lanistes carinatus, Limicolaria cailliaudi, Hippopotamus amphibius, Phacocerus aethiopicus, Bos primigenius f. taurus,* unspecified caprovines
Gash Group	Early 3rd–early 2nd mill. BC	*Hordeum* sp., *Triticum* sp., *Sorghum bicolor bicolor, Sorghum verticilliflorum, Panicum* sp., *Eleusine* sp., *Phalaris* sp., *Ziziphus spina-christi, Celtis integrifolia, Vigna unguiculata, Grewia bicolor Juss, Echinochloa* sp., *Setaria* sp., *Adansonia digitata*	*Pila wernei, Lanistes carinatus, Limicolaria cailliaudi, Spathopsis wahlbergi/rubens, Clarias* sp., *Synodontis* sp., *Tilapiini, Protopterus aethiopicus, Polypterus* sp., *Cercopithecus guereza, Felix caracal, Canidae* sp., *Redunca redunca, Kobus kob, Tragelaphus strepsiceros, Varanus niloticus, Python sebae, Strutio camelus, Numida meleagris, Lepus capensis, Canis aureus, Vulpes ruppellii, Orycteropus afer, Procavia capensis, Phacocerus aethiopicus, Syncerus cafer, Gazella rufifrons/dorcas, Madoqua saltiana, Canis familiaris, Equus africanus, Bos primigenius f. taurus, Rodentia,* unspecified caprovines, birds, and antelopes
Jebel Mokram Group	Early 2nd mill. BC–early 1st mill BC	*Sorghum bicolor bicolor, Panicum* sp., *Pennisetum* sp., *Eleusine* sp., *Setaria* sp., *Vigna unguiculata, Ziziphus* sp., *Lolium* sp., *Eleusine* sp.	*Mutela dubia, Spathopsis wahlbergi/rubens, Clarias* sp., *Synodontis* sp., *Tilapiini, Chelonia, Numida meleagris, Syncerus cafer, Gazella rufifrons/dorcas, Madoqua saltiana, Equus africanus, Bos primigenius f. taurus,* unspecified birds, antelopes, and caprovines
Hagiz Group	Early 1st mill. BC–1st mill. AD	*Panicum sp., Eleusine sp., Sorghum bicolor bicolor*	*Bos primigenius f. taurus,* unspecified caprovines
Gergaf Group	AD 15th–18th cent.	*Sorghum* sp., *Panicum* sp., unspecified millet	No data

Table 1. Table summarising the archaeozoological and palaeobotanical evidence from Eastern Sudan.

Fig. 2. Late 6th-millennium BC shell midden originating from the exploitation of land snails at site UA50.

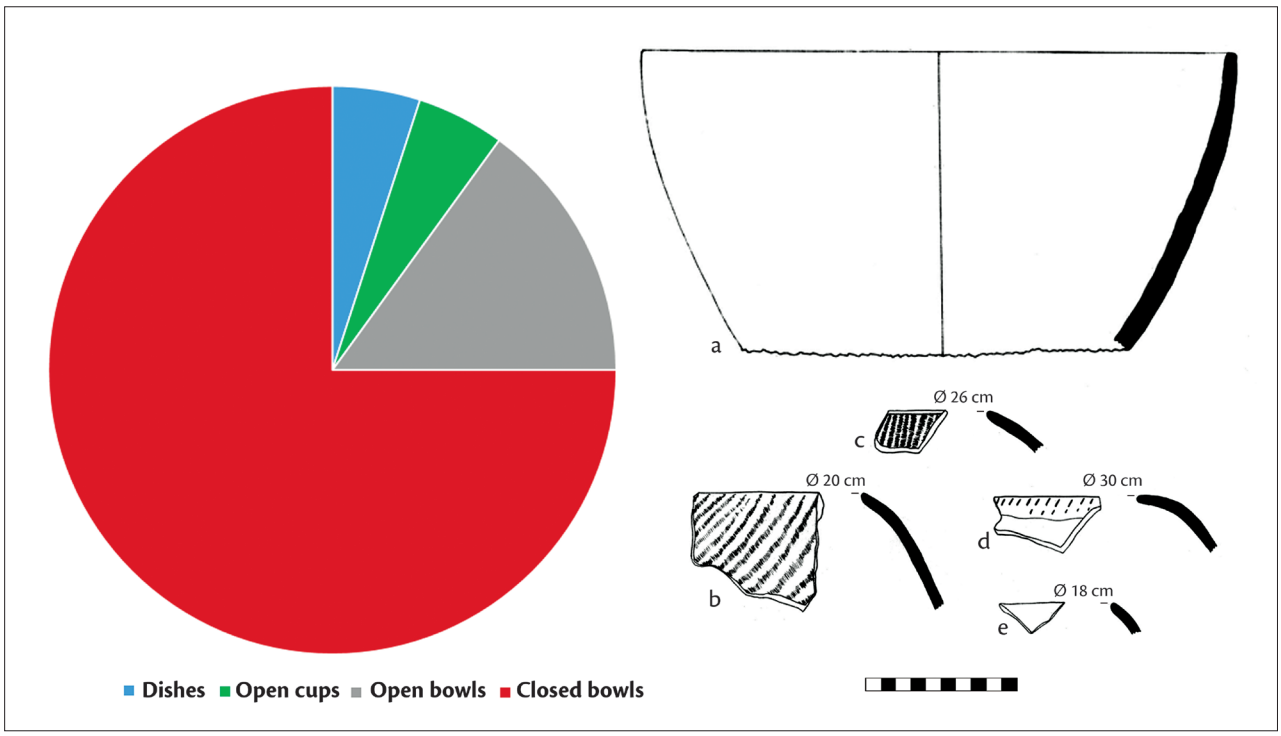

Fig. 3. Fragments of open (**a**) and closed (**b-e**) bowls characterizing a Butana Group assemblage (SU2) from a shell midden at site UA53 (scale in cm), excavation unit UA53 IV, and chart showing the frequencies of different vessel shapes associated with the Butana Group shell middens.

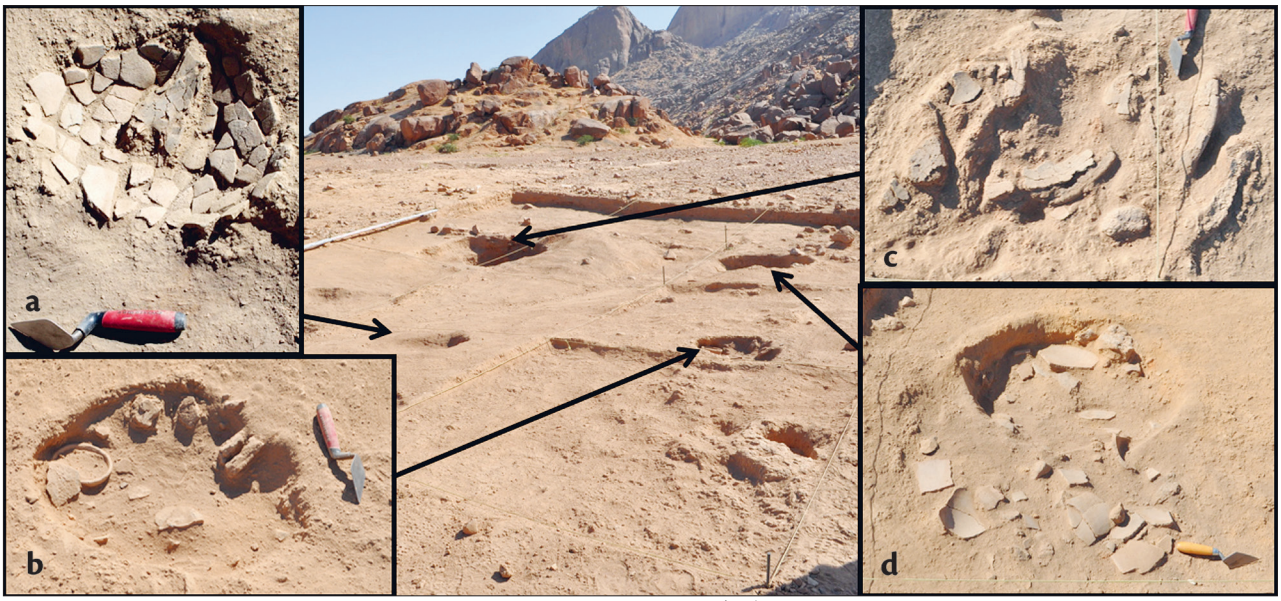

Fig. 4. General view of excavation unit K1 X–XI at Mahal Teglinos (K1) after the 2014 field season showing some details of the excavated features. Notable in this image are the animal bones still occurring in some vessels, the broken jars purposely wasted in some pits, and the collapsed ceramic trays in others.

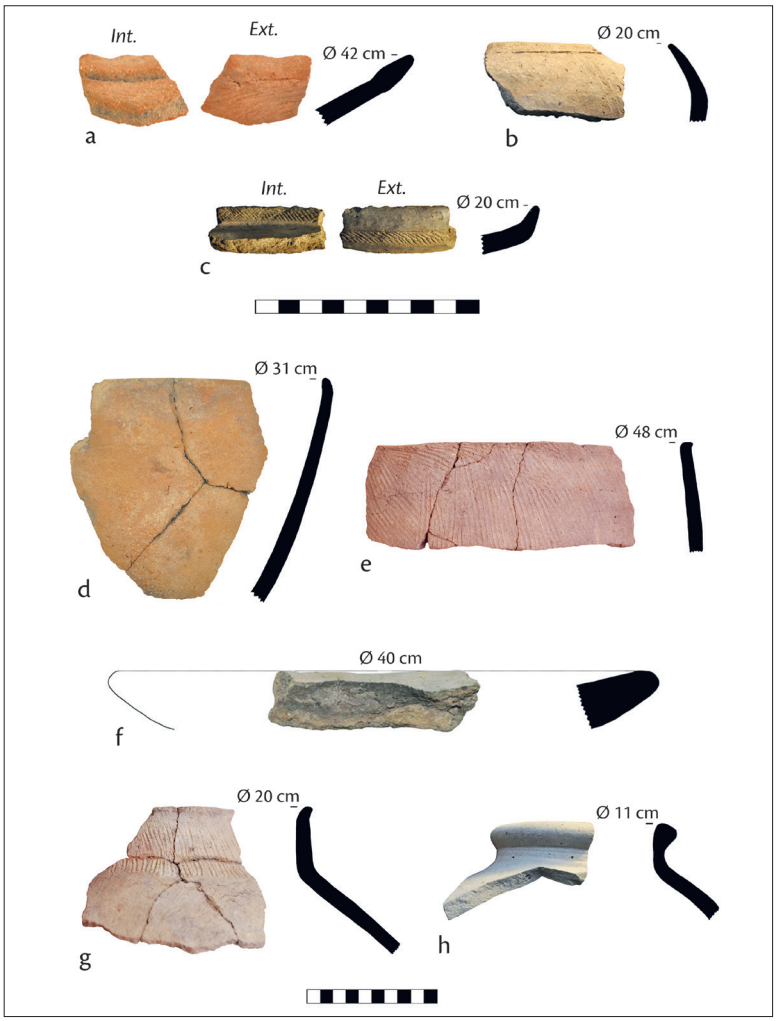

Fig. 5. Fragments of ceramic vessels from excavation unit K1 X–XI representative of the main classes of vessels associated with the food preparation and consumption area: **a.** large dish (assemblage D3 SU33); **b.** cup (D2 SU12); **c.** small dish (D3 SU24); **d.** medium bowl (D1 SU9); **e.** large bowl (B2 SU2); **f.** griddle (D3 SU12); **g.** jar (B2 SU2); **h.** Egyptian jar (B2 SU2) (different scales for a–c and d–h, scales in cm).

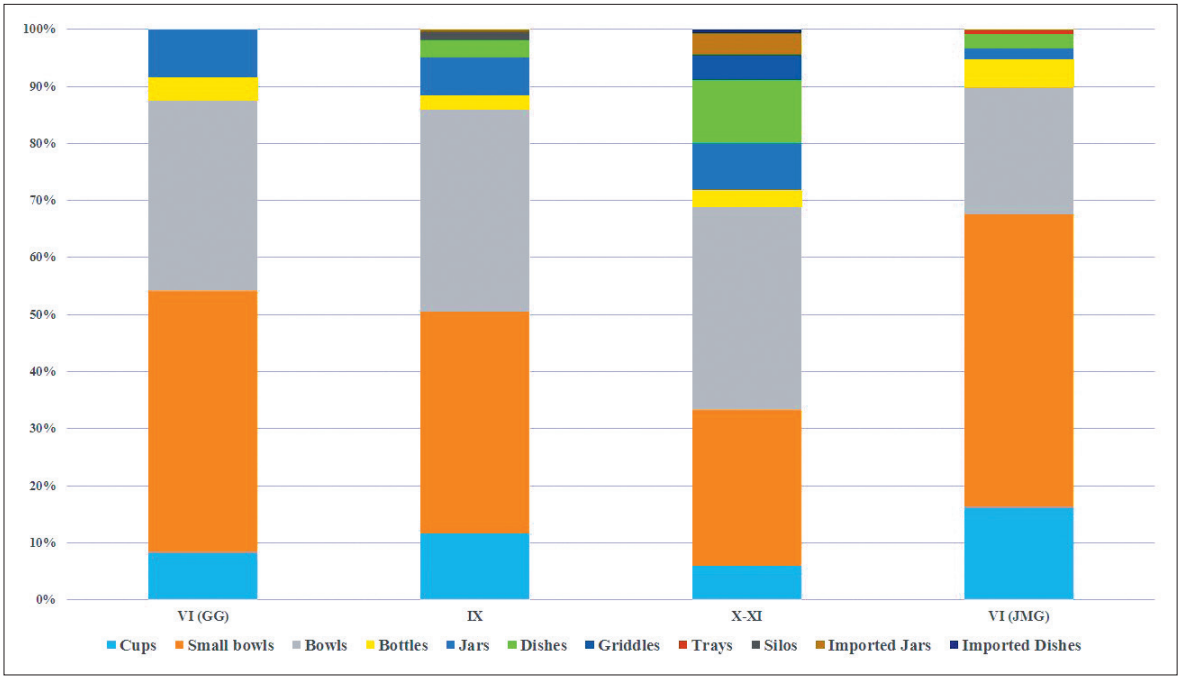

Fig. 6. Chart showing the frequencies of the different classes of vessel shapes in different Gash Group (K1 IX, X–XI and lower levels of VI) and Jebel Mokram Group (upper levels of K1 VI) domestic assemblages at Mahal Teglinos (K1).

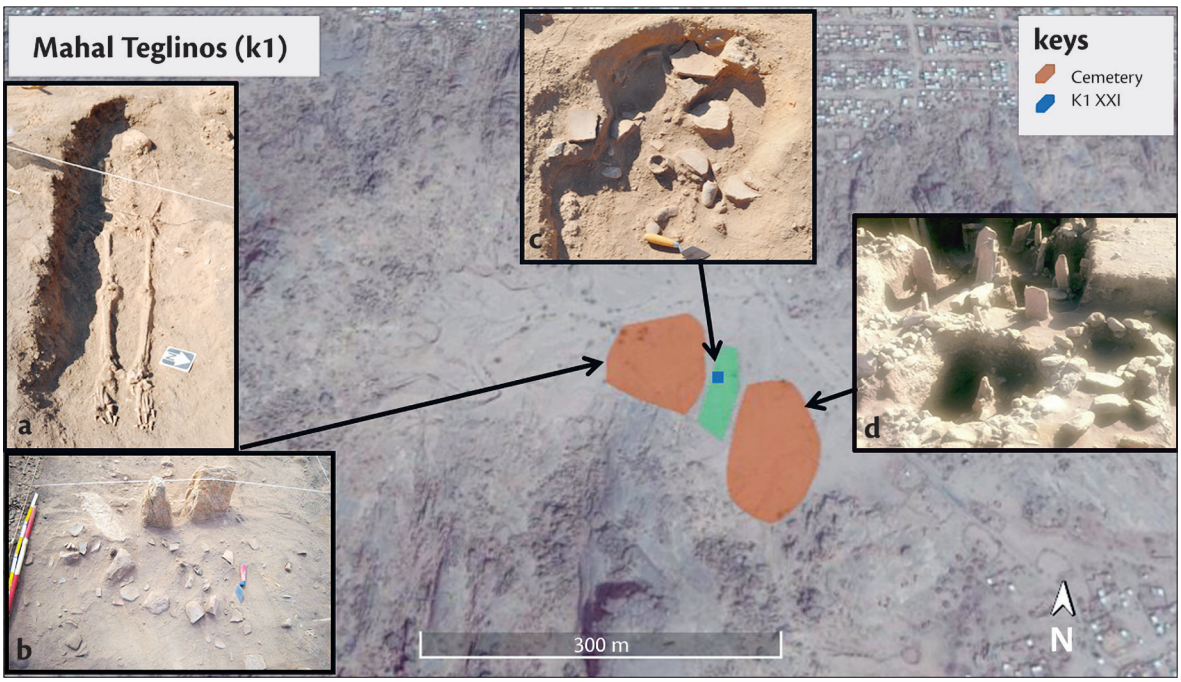

Fig. 8. Map showing the location of the food preparation and perhaps consumption area brought to light in excavation unit K1 X–XI and of the Eastern and Western Gash Group cemeteries at Mahal Teglinos (K1) with some views of the features brought to light in those sectors of the site.