



Lucia Mori

## Between the Sahara and the Mediterranean Coast: the Archaeological Research in the Oasis of Fewet (Fazzan, Libyan Sahara) and the Rediscovery of the Garamantes

### Introduction

From a Saharan perspective, the Garamantian kingdom has been the first proto-historical state formation detectable both from the archaeological evidence and from the epigraphic sources, mostly written by 'foreigners' – from Herodotus<sup>1</sup> to authors dating to the Late Roman times<sup>2</sup> – developed from the beginning of the first millennium BC to the 5<sup>th</sup> century AD approximately, in the heart of the African desert.

In this considerable span of time, the Garamantes succeeded in developing a rich agricultural exploitation of the oasis environment, introducing large scale irrigation technologies such as the *foggaras*<sup>3</sup>. Moreover, they were able to organize and control a complex trade network between the Mediterranean coast and the sub-Saharan countries through the building of checkpoints spread along the main commercial axis (fig. 1) and experienced the emergence of a complex state formation in the middle of the desert<sup>4</sup>, possibly, as it has been underlined by Mario Liverani «influenced (at least in part) by Mediterranean models, and rather extraneous to the socio-political and cultural traditions of such an extreme environment»<sup>5</sup>.

Although the existence of such a polity was known from antiquity, a proper archaeological investigation – beside the work undertaken in the oasis of Ghat during the Colonial period by Pace and Caputo<sup>6</sup>, and the excavations in the ancient capital Garama first by the Italians, and subsequently by Daniels<sup>7</sup> and Ayoub<sup>8</sup> in the 60s of the 19th century – little work had been done in the field since 1997. And the stereotyped image of the Garamantes as uncivilised, nomad people, devoted to looting, depicted in some of the Classical sources was somehow reflected in the colonialist approach which underlined the importance of the Roman influence, bearing proper civilisation to the uncultivated desert areas<sup>9</sup>.

<sup>1</sup> Herodotus IV 181–185 tells the famous account of the trans-Saharan caravan route covered by the Nasamones, travelling from the oasis of Awjila to the Middle Niger bend, which crosses the Fazzan.

<sup>2</sup> For a list of all mentions of the Garamantes in the Classical sources see MATTINGLY 2003, 76–79.

<sup>3</sup> For an up-to-date report on the spread of this important technology in the Fazzan region see the article by DE ANGELI, FINOCCHI in this volume.

<sup>4</sup> For an analysis of the structure and nature of the Garamantian kingdom and the relation between the core of the state, around the capital Jarma, and the peripheral areas, such as the region of the wadi Tanezzuft see LIVERANI 2005, 442–444.

<sup>5</sup> LIVERANI in CASTELLI ET AL. 2005, 70.

<sup>6</sup> PACE 1937; CAPUTO 1937 and PACE, SERGI, CAPUTO 1951.

<sup>7</sup> DANIELS 1970 and 1989.

<sup>8</sup> AYOUB 1967 and 1968.

<sup>9</sup> MUNZI 2001.

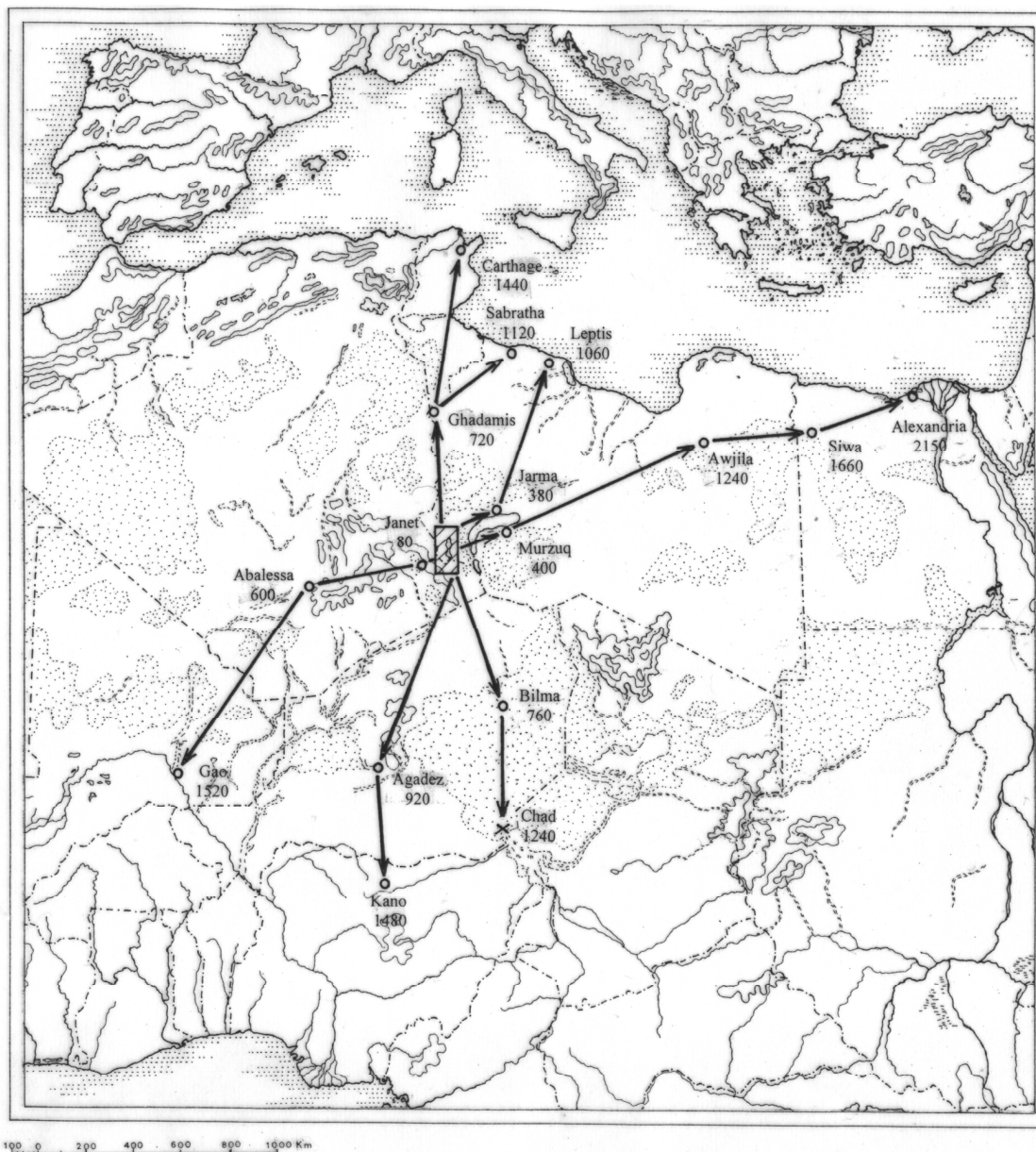


Fig. 1 – Wadi Tanezzuft and its distance from the main outposts of the trans-Saharan trade (after LIVERANI 2005, 451, fig. 37.2).

In the last ten years, the archaeological investigation has dramatically improved our knowledge of the Fazzan, also for the Garamantian period, and it is possible to have a different approach on the reconstruction of the role of this important Saharan civilisation<sup>10</sup>.

From 1997 the Italian-Libyan Mission in the Acacus and Messak of the University 'La Sapienza', of Rome, concentrated part of its efforts in the rediscovery of the proto-historical remains in the region of the wadi Tanezzuft and Acacus mountain, which are located in the SW border of Libya. The Mission was directed by Mario Liverani, who opened this field of research in the region, and it is led, at present, by Savino Di Lernia. In the same year, a British mission directed by David Mattingly has reopened the

<sup>10</sup> For a detailed review of the archaeological work undertaken in the Fazzan region in the last decade see LIVERANI 2006, 1013–1018 and MATTINGLY 2003, 16–36. For a more general historical view of the investigation carried out by the Italian-Libyan mission in Acacus and Messak see DI LERNIA 2006. The previous researches in the Ghat-Barkat area, before 1997, have been summarised in GATTO in LIVERANI 2005, 21–24.

excavation in old Jarma, providing a fresh reconstruction on the region where the capital of the kingdom was located.

The area which will be dealt with in the following, is located approximately 400 kms south of Jarma, that means quite far from the heart of the Garamantian kingdom, but still in a region with strong cultural and commercial links and deep contacts with the wadi el-Ajal, which, especially during the Classical Garamantian phase, played a key role in the development of the trans-Saharan trade and certainly 'interacted' with the Mediterranean coast and 'met' the richer northern colonies. And if it is true that from a Mediterranean perspective, Fazzan was a rather peripheral area, it must also be considered that, from a Saharan point of view, the region was the centre of a wider regional system, connecting - which meant creating links and exchanges, not merely commercial but also socio-cultural and technological - between a northern interface (the Mediterranean emporia) and a southern one (the early Sahelian states)<sup>11</sup>. Thus, even if the archaeological remains of the Garamantes, at least in the southern frontier of their kingdom - which is the area under analyses - were certainly not comparable to the monumental evidence of the contemporary Mediterranean sites, their role and significance in the African history must be given a proper meaning and appreciation in the light of the new information provided by archaeology.

### ***The archaeological work***

The archaeological investigation carried out by the Italian-Libyan mission in the course of the previous years, resulted in an extensive excavation of two Garamantian sites, Aghram Nadharif (fig. 2), a fortified citadel in the fringes of the oasis of Barkat – whose final results have been published in a recent volume<sup>12</sup> – and a rural village in the oasis of Fewet (fig. 3), together with a deep investigation of a large necropolis related to this last site<sup>13</sup>. Moreover, three well preserved castles, were identified, two along the wadi Awiss, and the third in the southern border of the Wadi Tanezzuft. All three were contemporary to Aghram Nadharif and formed a network of caravan check-points which flourished



Fig. 2 – View of Aghram Nadharif, a Garamantian castle located in the oasis of Barkat (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università "La Sapienza", Roma).



Fig. 3 – The oasis of Fewet (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università "La Sapienza", Roma).

<sup>11</sup> LIVERANI 2005, 446–448.

<sup>12</sup> LIVERANI 2005.

<sup>13</sup> For a preliminary report on the work in Fewet see CASTELLI *ET AL.* 2005.



Fig. 4 – The Garamantian castle of Imassaragien, in the wadi Awiss (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

in the Classical Garamantian period<sup>14</sup> (fig. 4). A palaeo-environmental study of the entire region has been carried out by prof. Mauro Cremaschi, who reconstructed also the climatic conditions of the area, identifying several dry phases, during the late Holocene. One of the major of them occurred around 1300 BC and caused the shaping of the typical desert landscape, characterised by the presence of scattered oasis, where the water supply was mainly based on wells and ponds and no longer on seasonal

rivers and lakes, used by the pastoral communities of the previous phases<sup>15</sup>. It was the environment which the Garamantes were able to shape, forming their cultural landscape, introducing irrigation techniques, cultivated plants (among which date palm and barley were the most important for the subsistence)<sup>16</sup>, and developing through the use of dromedary<sup>17</sup> a network of long distance trade, stimulated first probably by the Punic sites of the Mediterranean coast and, more consistently, by the Roman *emporìa* of the first centuries AD.

#### *The archaeological investigation in the oasis of Fewet*

The main phases of the Garamantian civilisation in the wadi Tanezzuft region were differentiated by Liverani as a ‘Formative period’ roughly developing between 850 and 400 BC, followed by a Mature phase from 400 to 50 BC, a Classical period from 50 BC to 200 AD and a Late phase from 200 to 500 AD approximately<sup>18</sup>. Not all periods are well documented in our area, and this is specially true for the formative

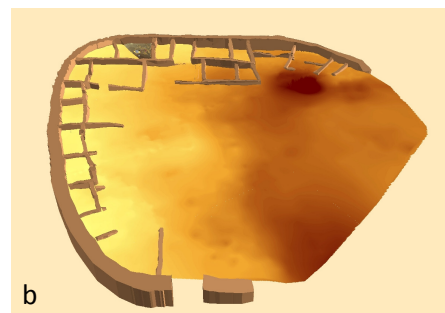


Fig. 5 – a) The excavated compound in the oasis of Fewet (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma). b) Graphic reconstruction of the compound (by Cristiano Putzolu).

<sup>14</sup> BIAGETTI, DI LERNIA 2008.

<sup>15</sup> CREMASCHI 2003 and 2005.

<sup>16</sup> For an analysis of the archaeobotanical remains from Aghram Nadharif see MERCURI *ET AL.* in LIVERANI 2005, 335–348. For the Jarma region see VAN DER VEEN 1992 and 1993.

<sup>17</sup> The date of introduction of the dromedary to the Sahara is still a controversial topic. For a reassessment of the question, proposing a diffusion in the Sahara from the 5<sup>th</sup>-4<sup>th</sup> century BC, or at least the 3<sup>rd</sup>, see LIVERANI 2006, 1035–1039.

<sup>18</sup> LIVERANI 2007a. See also the slightly different chronology proposed by Mattingly for the wadi el-Ajal region: Early Garamantian phase (ca. 1000-500 BC); Garamantian proto-urban phase (500-1 BC); Classical Garamantian phase (1-400 AD) and Late Garamantian phase (400-700 AD) (MATTINGLY 2003, 348–349).

Fig. 6 – The SE corner of the compound sealed by the collapse of the burnt wooden roof (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).



phase, nevertheless the possibility of relating information from settlements, scattered encampments and cemeteries allowed a preliminary overall comprehension of the development of the Garamantian society through this wide chronological span of time, based on a composite archaeological frame.

The present article will deal with the archaeological work carried out in the course of the last six years in the oasis of Fewet (fig. 5), because under the houses of a modern small village at the border between Libya and Algeria, the best preserved rural village dating to the Garamantian period, in our study area, was identified, excavated and restored<sup>19</sup>. An extensive survey has also clarified its relation to a huge necropolis related to the site and to the Garamantian occupation of the Fewet oasis<sup>20</sup>.

The excavated settlement is located at the fringes of the modern village, and it developed roughly between the 3rd century BC and the 1st century AD, when was partly destroyed by a fire which completely burnt its SE corner and subsequently caused the abandonment of the remaining dwelling units (fig. 6).

It is the most ancient example of a rural village inside an oasis in the southern Fezzan region up to now, and it is a good example of the ‘common life’ of local communities in the Mature Garamantian phase<sup>21</sup>. Moreover, the excavation of more than thirty tumuli provided information on the burial practices and on the ancient population. While the chronological span of the compound is only few centuries long, the necropolis has been in use continuously, all through the Garamantian period, from its Formative phase to the Late Garamantian one, and the typology and funerary goods retrieved show differences which shed light on the influences due also to the development of the trans-Saharan trade<sup>22</sup>.

Fewet, as it is today, was certainly not the main centre of the area, even in Garamantian times, the local rulers being settled most probably in the area of Ghat and to the south – in Barkat and Tin Alkum, which nowadays is in Algeria<sup>23</sup>. But in Old Ghat the medieval medina covered the ancient layers and a proper archaeological investigation of the ancient settlement proved to be very difficult<sup>24</sup>. The main cemetery adjacent to the old town, on the Kokaman hill, had already been excavated by Caputo during the Colonial period<sup>25</sup>, with the retrieval of luxury artefacts imported from the coast in the funerary goods of some of the excavated tombs - possible evidence of the presence of a local elite centered in that oasis during the Classical Garamantian phase. The remaining cairns were damaged and badly disturbed when we first visited the town, while in Fewet, its peripheral location and the smaller dimension of the inhabited areas allowed a better preservation of the ancient remains and thus the archaeological investigation was concentrated there.

<sup>19</sup> For a preliminary report on the excavation see MORI in CASTELLI *ET AL.* 2005.

<sup>20</sup> CASTELLI, LIVERANI in CASTELLI *ET AL.* 2005.

<sup>21</sup> For an overall analysis on the social structure of the Garamantes see LIVERANI 2007b.

<sup>22</sup> See CASTELLI, LIVERANI and GATTO in CASTELLI *ET AL.* 2005.

<sup>23</sup> See LIVERANI 2005, 382–383 and fig. 32.1.

<sup>24</sup> For a report on a sounding carried out in the medina of the old Ghat see LIVERANI 2000b, 38–39.

<sup>25</sup> CAPUTO 1949. For a recent study of the Roman artefacts found in the funerary goods see FONTANA 1995.

## *The Garamantian compound*

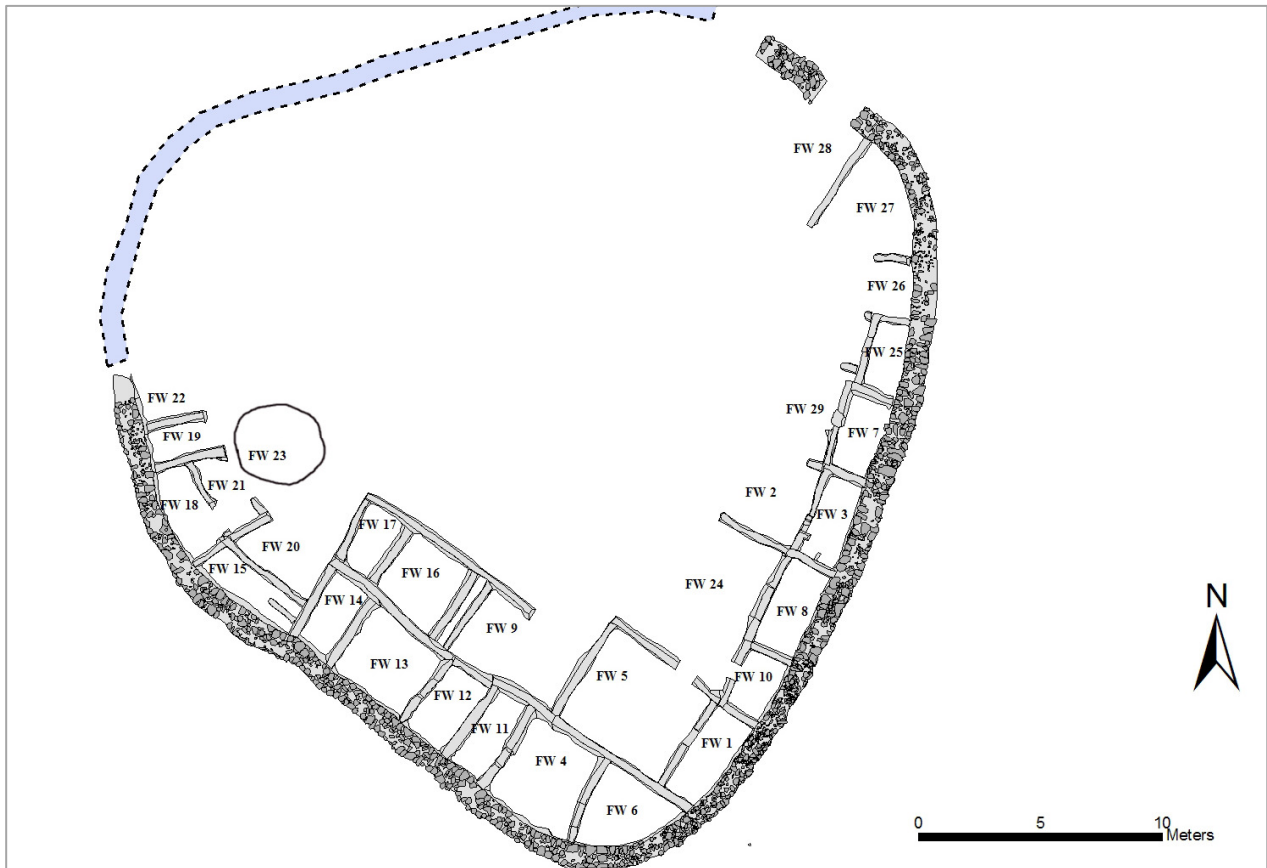


Fig. 7 – Plan of the excavated compound in Fewet (drawing by Cristiano Putzolu).

The oasis of Fewet lies about 10 km west of the Ghat oasis. It is a small oasis with two adjacent settlements, the smaller of which, Tan Ataram, is located northwest of the larger, Tan Afella. The modern village lies in a dip immediately east of the first slopes of the Tassili, along a northeast-southwest route which runs from Ghat across the Tassili to Djanet, and thence to the slopes of the Hoggar. The oasis is located in a valley formed by the confluence of the wadis Ouariret and Taharamat, converging to the Tanezzuft from the west<sup>26</sup>.

In Garamantian times, at least in its Mature phase, the settlement was organised in several small compounds, encircled by a perimeter wall exploiting the rich underground water supply, one of which extensively excavated (fig. 7), and other two, just located through small scale soundings, being almost completely covered by the modern houses (fig. 8).

The outer wall delimited an inner area of approximately 300m<sup>2</sup>, was built with a lower base composed of roughly hewn sandstone slabs, bonded with a layer of mortar composed mainly of sand and silt-sandy sediments mixed with water. Above this stone base, a wall of mud bricks, whose total height must have reached an average of about 4.5 metres, according to the preserved collapse, was built.

A single gate provided access to the settlement, leading into a large central courtyard with entrances to the residential modules. The structure of the settlement with its unitary and compact layout suggests that its inhabitants were a group with strong family ties, providing protection of the compound by the building of a common outer wall enclosing all dwelling units and excavating a cistern inside the compound to provide

<sup>26</sup> CREMASCHI in CASTELLI *ET AL.* 2005, 72.



Fig. 8 – Structures pertaining to the Mature Garamantian phase under the modern houses in the oasis of Fewet (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

water supply<sup>27</sup>. The impression of an egalitarian society is mirrored in the necropolis, by the substantial similarity of the thousand of cairns present, for dimension and typology, briefly discussed in the following paragraph (fig. 9).

The dwelling units generally consist of two adjacent rooms with a single entrance, and a communicating door which is aligned with the entrance. The arrangement and orientation of these rooms follows the internal line of the perimeter wall, indicating a topographical layout developed in a unitary fashion rather than through an accumulation of domestic units (fig. 10).

Of the two rooms making up each module, the first outer room is generally square, and roughly twice the size of the rectangular inner room. The dimensions

of the rooms range from a minimum of about 4.5 m<sup>2</sup> for the rectangular rooms, to a maximum of 20 m<sup>2</sup> for the square rooms; the average area of individual modules is thus about 25 m<sup>2</sup>. This dwelling unit is maintained through the following phase, and it is the typical module brought to light in the ‘fortified castles’, as far as we can tell from the excavation in Aghram Nadharif and also uncovered in Saniat Gebril in the same chronological phase<sup>28</sup>. According to ethnographic parallels, this type of house was generally used by an average of three-four individuals (two adults and one or two children)<sup>29</sup> and given that this compound contained about 13 residential units, we obtain a figure of about 40 individuals which probably represents the maximum plausible population density for the village excavated<sup>30</sup>.



Figg. 9-10 – Upper: The cemetery of Fewet; Lower: One of the dwelling modules of the Fewet compound (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

<sup>27</sup> MORI in CASTELLI ET AL. 2005, 82–84. LIVERANI 2007b, 183 and 191.

<sup>28</sup> LIVERANI 2007b, 165–168; DANIELS 1971, 6–7.

<sup>29</sup> LIVERANI 2007b, 177–178.

<sup>30</sup> For parallels of similar two-rooms houses in use during the Colonial period see SCARIN 1937, 550 and tav. IV fig. C and DESPOIS 1946, 70–75 and fig. 8a.



Inside the dwelling modules, the larger rooms were probably used for all main domestic activities. There is often a fireplace in the centre of the room, which must have served not only to cook food – more specific structures such as ovens are not documented – but also for heating. In traditional architecture, the presence of a fireplace in the centre of the room is fairly frequent in living and sleeping quarters; a simple hole in the ceiling above the fireplace allows smoke to escape.

The smaller rectangular rooms, on the other hand, are frequently characterized by the presence of small stores in mud bricks and, in better preserved modules, by a higher concentration of pottery; these rooms were mainly used to store food and utensils.

The roof consisted of a framework of medium-size wooden joists, covered with small branches and palm leaves, and plastered with a layer of mud, identical to that still used for roofs in traditional architecture. On the best preserved of the floors, a charred mat made of palm leaves, several baskets containing charred dates and fruits, storage jars and a saddle-shaped quern with its upper grinding stone, formed a complete domestic equipment of a room evidently used to store and prepare food (fig. 11). If we take into consideration the cultural material, both ceramics and grinding equipments, all finds from the living floors of the compound are locally produced and no signs of external imports is found. But the compound was not the only archaeological evidence dating to the Garamantian times, and it is interesting to observe that till the end of the I century BC, imports in this area seem to be very rare.

The irrigation system was a small-scale network of superficial channels and no traces of underground canals were found in the all region of the Wadi Tanezzuft, for geomorphological reasons.

If during the Mature Garamantian phase evidences of foreign imports seem to be absent in the



Fig. 11 – Remains of charred mats (a) and grinding tools (b) on the floor of the Fewet compound (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

excavated settlement, the situation changes during the Classical phase, when exchanges with the Roman *emporia* were certainly stimulating the local Saharan elites in developing a closer control on the trade routes.

In Fewet this is testified by the retrieval of a large surface site, on the north-eastern edge of Tan Afella, with substantial amounts of imported pottery and tiny fragments of bronze tools from the coast, alongside Classical and Late Garamantian pottery. In this area, the imported material is present on the surface with no apparent connection to wall structures. Some archaeological soundings carried out confirmed the absence of mud brick structures, but brought to light the remains of a possible well. The area could be thus, a stopping point for passing caravans, which may have camped on the edge of the village to exchange goods with the locals and obtain provisions, given that, Fehwet, still nowadays, is the ‘gateway’ to Djanet and Algeria, before crossing the Tassili.

On the other hand, in Aghram Nadharif, Roman pottery was retrieved in the archaeological layers filling the rooms of the citadel and dating to the same period (the Classical Garamantian phase). Inside the fortified castle imported goods, mostly olive oil, were stored and used inside the settlement, as a matter of fact, the amount of fragments of oil amphorae constitutes the majority of the imported pottery and the prevalence of those kind of containers to other less frequent ceramic types<sup>31</sup> is probably related to its commercial function. And, of course, imported pottery, which was conceived as a luxury item, was also found in relation to burials. Red Roman pottery has been found in the Jarma and Ghat (Kokaman) cemeteries<sup>32</sup>, and a few fragments are also scattered on the ground in the Aghram Nadharif and Fewet cemeteries, together again with fragments of amphorae<sup>33</sup>.

### *The necropolis of Ferwet*

Five hundred meters far from the Fewet compound a large necropolis lies over a sandstone terrace to the SE of the oasis (fig. 12). A number of approximately 1350 tumuli were surveyed, located, photographed and classified. They were subdivided into three main types, each of which with a subtype: type 1 a simple heap of small pebbles; type 2 a dome-shaped tumulus resting on a sort of platform; type 3 is a well-formed drum-shaped tumulus. Some chronological distinctions among the different types have been noticed, since Late Pastoral and Early Garamantian pottery is generally associated to type 1 tumuli, while Classic Garamantian and Roman imported pottery are associated to type 3 tumuli, type 2 belonging to an intermediate (and less represented) phase<sup>34</sup>.

Unfortunately, only 48 of them were unlooted, and thirty of them have been excavated in the course of the last campaigns: burials were usually single depositions, with annexes in case of assumed familiar relation (i.e. mother and son) (fig. 13). As far as we can tell from the excavated sample, males were E-W orient-



Fig. 12 – A drum-shaped tumulus in the necropolis of Fewet (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).



Fig. 13 – A tumulus with small annex, before and after excavation: in the larger structure an adult female was uncovered, while in the smaller annex an infant was found (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

<sup>31</sup> For a study of the imported pottery found in Aghram Nadharif see FELICI 2005.

<sup>32</sup> FONTANA 1995.

<sup>33</sup> GATTO in CASTELLI *ET AL.* 2005, 99–100 and in this volume.

<sup>34</sup> CASTELLI and LIVERANI in CASTELLI *ET AL.* 2005, 85–88 and figs. 11 and 12.



Fig. 14 – Drum-shaped tumulus with standing stones and small ‘altar’, in the Fewet necropolis (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

ed females W-E. And for the drum-shaped tumuli dating to the Classical and Late Garamantian period, the main structure is often articulated with alignments of big stones or heaps of stones, flat slabs (standing stones or ‘stelae’) resting against the perimeter wall (or fallen down to the ground), and very simple kind of ‘offering tables’ (three stones sustaining a horizontal flat slab), all of them always to the east or to the west of the tumulus

(fig. 14). The excavation proved that they were located in relation to the gender of the buried individual. These kind of structures resemble the much finer stelae and offering tables well-known from the cemeteries in the wadi el-Ajal region, and should be related to similar funerary practices which are typical of the Classical Garamantian period<sup>35</sup>.

Another feature which appears to be very frequent in the Garamantian time proper is the presence of a leather shroud wrapping both the complete body or its lower part (fig. 15), which is often tightly contracted and was probably tied before the deposition, a common feature of the Garamantian burials in the region testified also in the necropoleis of Aghram Nadharif, Tin Alkum and in Jarma, too<sup>36</sup>.

Grave goods in Fewet, were located outside the tomb: pottery sherds were found in the adjacency of the outer perimeter of each structure and most frequently located in proximity to the standing stones and ‘offering tables’, suggesting the performance of some sort of funerary practices<sup>37</sup>. Together with pots, vesicular basalt lamps, which have been found also inside the dwelling units of the Garamantian settlements excavated, were laid as grave goods outside or on top of the tumuli (fig. 16).



Fig. 15 – A female deposition, with clear remains of a leather cloth wrapping its legs (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).



Fig. 16 – Vesicular basalt lamps and pottery found outside or over the cairns in the necropolis of Fewet (photo by the Italian-Libyan Archaeological Mission in the Acacus and Messak, Università “La Sapienza”, Roma).

<sup>35</sup> MATTINGLY 2003, 187–213.

<sup>36</sup> LESCHI 1945, 83–86.

<sup>37</sup> LIVERANI 2007b, 171–172.

As it has been stated by Liverani, the necropolis has been in use during ca. one millennium (ca. 650 BC to 350 AD), with an average building of 1.35 tumuli per year, which would fit with a village of a few dozens people<sup>38</sup>.

In Fewet, but that holds true also for the Garamantian cemeteries surveyed so far in the wadi Tanezzuft region, we don't find royal cemeteries comparable to the ones excavated in wadi el-Ajal, and related to the capital of the kingdom, but still, we see the passage from the simpler conical tumulus, to a more refined architectural structure, which is the drum-shaped one. This seems to happen in a precise chronological period, corresponding to the main development of the kingdom itself and of the caravan trade, and can be related to the improvement of the stone masonry in the same period, testified by the use of stone walls in the castles dating to the Classical Garamantian phase, not only for the outer defensive structure, but also for the inner partition walls.

### **Concluding remarks**

From what has been briefly described so far, where can we identify the influences and the meeting between cultures? If it is true that people living in the small oasis of Fewet, had probably few to share with the rich and flourishing cities of the Mediterranean coast, nevertheless they were surely involved and interacted somehow in the development of the Garamantian kingdom, which, in turn, was stimulated by the growing interest of the Mediterranean colonies in the resources at disposal in inner Africa.

Mario Liverani applied to the development of the Classical Garamantian horizon the model of the 'mirror empire', which emerged in response to an imperial state formation in its neighbouring regions and underlined the fact that the super-structural features of the kingdom – monumental architecture, rich burials, long-distance trade – seems to develop contemporary to the impact with the Roman empire and subsequently comes to an end with the decline of the empire itself<sup>39</sup>. According to the author, the impulse of the Mediterranean polities on the Saharan proto-state formations stimulated them to coagulate into a more complex polity, with a more direct control of an extended territory, and was thus more 'cultural' than 'technological', also for the complete diversity of the environmental conditions in which people from the coast and from the desert lived.

**Lucia Mori**

Italian-Libyan Mission in the Acacus and Messak  
Sapienza. Università di Roma  
E-mail: lucia.mori@uniroma1.it

### **Bibliography**

- AYOUB M. S., 1967. The Royal Cemetery at Germa. A Preliminary Report. *Libya Antiqua*, 3-4, 213–219.  
AYOUB M. S., 1968. *Fezzan. A Short History*. Department of Antiquities. Tripoli.

---

<sup>38</sup> LIVERANI, in CASTELLI *ET AL.* 2005, 94.

<sup>39</sup> Liverani has applied to the rise of the Garamantian kingdom a model used by Thomas Barfield for the flourishing of the central Asian nomadic empires in relation to the Chinese one, see LIVERANI 2005, 439; 462 and 2006, 1053.

- BIAGETTI S., DI LERNIA S., 2008. Combining Intensive Field Survey and Digital Technologies. New Data on the Garamantian Castles of Wadi Awiss (Acacus Mts., Libyan Sahara). *Journal of African Archaeology*, 6, 57–85.
- CAPUTO G., 1937. Archeologia. In *Il Sahara italiano, I, Fezzân e Oasi di Gat*, 303–330.
- CAPUTO G., 1949. Scavi archeologici nel Sahara libico. *Annali dell'Istituto Orientale di Napoli*, 3, 11–33.
- CASTELLI R. and LIVERANI M., 2005. The Necropolis: Typology and Chronology. *Journal of African Archaeology*, 3, 85–94.
- CASTELLI R., CREMASCHI M., GATTO M. C., LIVERANI M., MORI L., 2005. A Preliminary Report of Excavations in Fewet, Libyan Sahara. *Journal of African Archaeology*, 3, 69–102.
- CREMASCHI M., 2003. Steps and Timing of Desertification during Late Antiquity. The Case Study of the Tanezzuft Oasis (Libyan Sahara). In M. LIVERANI (ed), *Arid Lands in Roman Times. Papers of the International Conference (Rome, July 9<sup>th</sup>-10<sup>th</sup> 2001)* (AZA Monographs 4). Firenze, 1–14.
- CREMASCHI M., 2005. The Fewet Oasis in the Changing Landscape of the Wadi Tanezzuft during the Late Holocene. *Journal of African Archaeology*, 3, 72–75.
- CREMASCHI M., DI LERNIA S. (eds), 1998. *Wadi Teshuinat. Palaeoenvironment and Prehistory in South-Western Fezzan (Libyan Sahara)*. Firenze.
- CREMASCHI M., DI LERNIA S., 2001. Environment and Settlement in the Mid-Holocene Palaeo-Oasis of the Wadi Tanezzuft (Libyan Sahara). *Antiquity*, 75, 815–825.
- DANIELS C. M., 1968. Garamantian Excavations: Zinchebra 1965-1967. *Libya Antiqua*, 5, 113–194.
- DANIELS C. M., 1970. *The Garamantes of Southern Libya*. London.
- DANIELS C. M., 1971. Excavations at Saniat Gebiril, Wadi el-Agial, Fezzan. *Libyan Studies*, 2, 6–7.
- DANIELS C. M., 1989. Excavation and Fieldwork amongst the Garamantes. *Libyan Studies*, 20, 45–61.
- DESPOIS J., 1946. *Mission scientifique du Fezzân (1944-1945). III: Géographie humaine*. Institut de Recherches Sahariennes, Université d'Alger. Paris-Alger.
- DI LERNIA S., 2006. Cultural Landscape and Local Knowledge: a New Vision of Saharan Archaeology. *Libyan Studies*, 37, 5–20.
- DI LERNIA S., MANZI G., MERIGHI F., 2002. Cultural Variability and Human Trajectories in Later Prehistory of the Wadi Tanezzuft. In S. DI LERNIA, G. MANZI (eds), *Sand, Stones, and Bones. The Archaeology of Death in the Wadi Tanezzuft Valley*. Firenze, 281–302.
- DI LERNIA S., MANZI G. (eds), 2002. *Sand, Stones, and Bones. The Archaeology of Death in the Wadi Tanezzuft Valley*. Firenze.
- FONTANA S., 1995. I manufatti romani nei corredi funerari del Fezzân. Testimonianza dei commerci e della cultura dei Garamanti (I-III sec. d.C.). In P. TROUSSET (ed), *Productions et exportations africaines. Actualités archéologiques. Actes du VI<sup>e</sup> Colloque international sur l'histoire et l'archéologie de l'Afrique du Nord (Pau 1993): II*. Paris, 405–420.
- GINI C., 1937. Condizioni demografiche. In *Il Sahara italiano. I. Fezzan e oasi di Gat*, 401–449. Reale Società Geografica Italiana. Roma.
- LESCHI L., 1945. La Mission scientifique du Fezzân. Archéologie. *Travaux de l'Institut de Recherches Sahariennes*, 3, 183–186.
- LIVERANI M., 2000a. The Libyan Caravan Road in Herodotus IV.181-185. *Journal of the Economic and Social history of the Orient*, 43, 496–520.
- LIVERANI M., 2000b. The Garamantes: a Fresh Approach. *Libyan Studies*, 31, 17–28.
- LIVERANI M., 2000c. Looking for the Southern Frontier of the Garamantes. *Sahara*, 12, 31–44.
- LIVERANI M. (ed), 2003. *Arid Lands in Roman Times. Papers of the International Conference (Rome, July 9<sup>th</sup>-10<sup>th</sup> 2001)* (AZA Monographs 4). Firenze.
- LIVERANI M., 2004. Rediscovering the Garamantes: Archaeology and History. *Libyan Studies*, 35, 191–200.
- LIVERANI M. (ed), 2005. *Aghram Nadharif. The Barkat Oasis. (Sha'abiya of Ghat, Libyan Sahara) in Garamantian Times*. Firenze.

- LIVERANI M., 2006. Imperialismo, colonizzazione e progresso tecnico: il caso del Sahara libico in età romana. *Studi Storici*, 4, 1003–1056.
- LIVERANI M., 2007a. Cronologia e periodizzazione dei Garamanti. Acquisizioni e prospettive. *Athenaeum*, 95 (2), 633–662.
- LIVERANI M., 2007b. La struttura sociale dei Garamanti in base alle recenti scoperte archeologiche. *Rendiconti dell'Accademia dei Lincei. Classe di Scienze morali, storiche e filologiche*, 9 (18), 155–204.
- MATTINGLY D.J. (ed), 1996. *Farming the Desert. The UNESCO Libyan Valleys Archaeological Survey*, II, *Gazetteer and Pottery*, UNESCO Publishing: Paris; Department of Antiquities: Tripoli; Society for Libyan Studies. London.
- MATTINGLY D. J. (ed), 2003, *The Archaeology of Fazzān. Volume 1, Synthesis*. The Society for Libyan Studies: London, in association with the Department of Antiquities. Tripoli.
- MATTINGLY D. J. (ed), 2007. *The Archaeology of Fazzān. Volume 2, Site Gazetteer, Pottery and other Survey Finds*. The Society for Libyan Studies, London; The Department of Antiquities. Tripoli.
- MORI L. (ed), 2005. Excavation in the Oasis of Fewet. *Journal of African Archaeology*, 3, 76–84.
- MUNZI M., 2001. *L'epica del ritorno. Archeologia e politica nella Tripolitania italiana*. Roma.
- PAGE B., 1937. Storia antica. In *Il Sàhara italiano. I. Fezzan e oasi di Gat*. Reale Società Geografica Italiana. Roma, 275–299.
- PAGE B., SERGI S., CAPUTO G., 1951. Scavi sahariani. Ricerche nell'Uadi el-Agial e nell'Oasi di Gat. *Monumenti Antichi*, XLI, Accademia Nazionale dei Lincei. Roma, 150–551.
- RUPRECHTSBERGER E. M., 1997. *Die Garamanten. Geschichte und Kultur eines Libyschen Volkes in der Sahara*. Mainz.
- SCARIN E., 1937. Insediamenti e tipi di dimore. In *Il Sàhara italiano. I. Fezzan e oasi di Gat*. Reale Società Geografica Italiana. Roma, 515–560.
- VAN DER VEEN M., 1992. Garamantian Agriculture: the Plant Remains from Zinchecra, Fezzan. *Libyan Studies*, 23, 7–39.
- VAN DER VEEN M., 1993. Botanical Evidence for Garamantian Agriculture in Fezzan, Southern Libya. *Review of Palaeobotany and Palynology*, 73, 315–327.