Introduction

In the last decade the Italian-Libyan joint Mission in the SW Fazzan of the University of Rome “La Sapienza”, concentrated its efforts on the study of the Garamantian culture, which is partially contemporary to the Roman Imperial age. Strategically located in central Sahara, the Garamantes created a cultural interface between the sub-Saharan groups and the Roman Empire. As involved in the trans-Saharan trade circuit they were exchanging a variety of items with the surrounding cultures. Although many influences from the Roman world are clearly recorded in the local socio-cultural framework, many others are those coming from outside the Empire.

The imported and local pottery from the excavation of the fortified citadel of Aghram Nadharif and the village and necropolis of Fewet, will be here presented (fig. 1). Their location at the southern fringe of the Garamantian territory makes them particularly interesting in detecting Roman or other foreign influences in such a distant area. Roman imports represent a low percentage of the Garamantian ceramic assemblage and are present only in specific chronological and cultural circumstances. On the contrary, the majority of the repertoire is represented by local productions. In spite of the Roman influence in the Garamantian society, particularly clear in the archaeological evidence from the capital Jarma, the local pottery

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1 See Mori in this volume.
shows more connections with the African ceramic traditions. This peculiarity may imply a more articulated socio-cultural background.

The Roman imports

The fortified citadel of Aghram Nadharif is mainly dated to the first centuries AD\(^2\), contemporary to the Roman presence in north Africa, thus the occurrence of Roman ceramic imports was expected. Of course, due to the location of the site far from the capital, the percentage of Roman ceramics is less, accounting for only 7% of the total pottery assemblage, while in Jarma it reaches 13.7% of the total amount\(^3\) (Jarma G1).

Quoting Felici\(^4\): «The identifiable pottery fragments cover a broad chronological time span, from the end of the 3\(^{rd}\)-2\(^{nd}\) century BC to the 6\(^{th}\)-7\(^{th}\) century AD. Most of the finds, however, date to between the 1\(^{st}\) and 4\(^{th}\) century AD, in line with what is already known from the region. Above all, it is worth noting the presence of materials from the Hellenistic period, which can be added to the very few examples already known from the region, thus complementing a picture hitherto linked essentially to data from the necropolises. Also worth noting is the absence from the Tripolitanian pre-desert of pottery dating with certainty to before the 1\(^{st}\) century AD. Secondly, it is interesting to observe the scarcity with which fine wares and lamps are attested, in comparison to the prevalence of amphorae and coarse ware. As such, the context under examination differs notably from what is known of other discoveries of Roman pottery in this region in funerary contexts. In the cemeteries at Jarma, fine wares and lamps are well-attested, but this fact may have been influenced by funerary ritual. A small number of fragments may also be referred to a medieval frequentation of the settlement, attested by excavation data. The absence of exact points of comparison, however, makes it impossible to suggest a precise chronological attribution for the fragments under discussion, at least for the time being».

The most represented Roman pottery classes at Aghram Nadharif are amphorae and coarse ware, while fine ware and lamps are definitely rare, being documented by two and one fragments respectively\(^5\). Most material seems to come from the Tripolitania region, with the sporadic presence of imported pottery from Byzacene and the Carthage area\(^6\).

African Red Slip ware A\(^{1/2}\) is represented by one fragment, as well as is Tripolititan Red Slip ware\(^7\). Within the Coarse ware, fragments of pans, deep casseroles, jugs and bottles, flagons, and unidentified closed forms, were recorded\(^8\). Amphorae include examples of Wan der Werff 3 and 1-3\(^9\), Tripolitana I, II, I-II\(^{10}\), medium-sized and small Tripolitian amphorae\(^11\), unidentified African amphorae\(^12\), and unidentified African amphorae. Only an example of a lamp is recorded\(^13\).

African Red Slip ware A\(^{1/2}\) is dated to mid-2\(^{nd}\) century AD and vessels of this ware are well attested in the Jarma necropolis\(^14\). The Tripolitanian Red Slip ware is dated between the late 3\(^{rd}\)/early 4\(^{th}\) century AD and the first half of the 6\(^{th}\) century AD\(^15\). Its circulation in Fazzan was recognized by Hayes, who noted the

\(^2\) See MO in this volume.
\(^3\) LEONE 2001.
\(^4\) FELICI 2005, 243.
\(^5\) FELICI 2005, 241–246, figs. 1-5.
\(^6\) FELICI 2005.
\(^7\) FELICI 2005, 242, fig. 1a.
\(^8\) FELICI 2005, 242–244, figs. 1b-d, 2a-d, 3a-b.
\(^9\) FELICI 2005, 244, fig. 3c-d.
\(^10\) FELICI 2005, 244–245, figs. 3e, 4a-d.
\(^11\) FELICI 2005, 246, fig. 5a-b.
\(^12\) FELICI 2005, 246, fig. 5c-e.
\(^13\) FELICI 2005, 246, fig. f.
\(^14\) FONTANA 1995.
presence of his types 1, 2, 3 and 4C in the necropolises of Jarma. The class is also well represented among the materials from the recently discovered settlement\textsuperscript{16}.

The coarse ware, mainly from Tripolitania but also from the Carthage area, can be mostly dated to the first centuries AD, however two fragments seem to be comparable to Hellenistic materials from Sabratha\textsuperscript{17}.

Within the amphorae, the Tripolitana types are definitely the most common. However, diagnostic sherds are rare compared to the body sherds, which are virtually undistinguishable except for provenance. In one case, a Tripolitana I partially preserved in various fragments is made of a peculiar fabric typical of the area around Tripoli. As a whole, fragments of at least three Tripolitana I oil amphorae were recorded. They were produced between the 3\textsuperscript{rd} quarter of the 1\textsuperscript{st} century and the mid-2\textsuperscript{nd} century AD. Tripolitana II oil amphorae are attested by two examples and dated between the 1\textsuperscript{st} and the 4\textsuperscript{th} century AD. The example of the neo-Punic type Wan der Werff 3 can be dated between the late 3\textsuperscript{rd} century BC and the 1\textsuperscript{st} century AD. Two samples of medium or small size amphorae from Tripolitania are recorded and dated to the Late Imperial period. Finally, three fragments of amphora-type vessels of African production appear to be extraneous to the typological repertoire of the Roman period and so difficult to date. Their morphological and technical characteristics may suggest that these belong to medieval amphorae.

The single lamp sample is an African production of type Howland 32, dated between the late 3\textsuperscript{rd} to 2\textsuperscript{nd} century BC and attested in abundance at Sabratha and Berenice\textsuperscript{18}.

In the small village of Fewet, whose main phase of occupation is dated to the 1\textsuperscript{st} centuries BC, very few Roman sherds of Tripolitana amphorae were recorded and they all come from upper layers\textsuperscript{19}.

Examples of Tripolitana amphorae are recorded also in Fewet cemeteries, with the addition in this case of few samples of Red Slip and coarse wares. Again, they account for a very low number, also because the amount of pottery in funerary contexts is generally limited.

The Roman ceramic repertoire recorded in the south-western part of the Fazzan, contrary to that from the capital Jarma, is clearly to be linked to trading activities in connection with caravan routes. This is particularly true for a site such as Aghram Nadharif, that was one of the fortified citadel along one of those routes. It seems that some of the Roman items were reused in funerary context, while others were probably still in use as storing containers in domestic/trading contexts.

\textbf{The local ceramics}

The local pottery from the aforementioned sites accounts for thousands of sherds. Due to the different chronological attribution of the sites and the use of local raw materials, some variability between the two assemblages was noted\textsuperscript{20}.

Generally speaking, the Garamantian pottery is hand-made using moulding-pincbing and coiling shaping techniques and poorly fired (around 600-800\degree C), thus often in a poor state of preservation.

At Aghram Nadharif sand, gypsum, grog and straw are the most common inclusions in the paste\textsuperscript{21}, while sand, crushed quartz and grog are those commonly found in Fewet\textsuperscript{22}. Regularly inclusions are mixed together, and in the case of Aghram Nadharif, sometimes they are naturally present in the clay and cannot be interpreted as added tempering agents.

Outer surfaces are mostly smoothed; however, where the fabric is coarse, a wash of clay is commonly added to even the outside. Most of the inner surfaces are left rough, with all the pinching

\textsuperscript{16} LEONE 1998.
\textsuperscript{17} FELICI 2005.
\textsuperscript{18} Sabratha: BAILEY 1994, nn. 24-6; Berenice: BAILEY 1985, C 71-82.
\textsuperscript{19} CASTELLI ET AL. 2005; GATTO 2005.
\textsuperscript{20} GATTO 2005.
\textsuperscript{21} GATTO 2005.
\textsuperscript{22} CASTELLI ET AL. 2005.
impressions clearly visible. Surface colours range from blackish-brown, to brown, to red. Patches of colour on the surface, due to non-uniform firing, are frequent.

The majority of the decorated potsherds from Aghram Nadharif display patterns obtained with the impressed technique (fig. 2a), which almost exclusively seems to use a twisted cord (string) roulette as a tool. Incisions (fig. 2b), mostly confined to the rim band, are less common and are frequently combined with impressions and paintings. Applications (fig. 2c), such as knobs and buttons, are also present, the former mainly applied to the vessel shoulder as the only decoration, the latter always as part of composite patterns. Painting (fig. 2d) and modelling, the latter again never applied alone, are rare. By contrast, there are many examples of composite patterns (fig. 2e) obtained by using different techniques simultaneously. As a rule, the body is decorated with roulette impressions, while the other decorations are applied to the rim band and shoulders.

The typical decoration at Fewet is obtained impressing a twisted cord roulette on the surface forming a spaced, unpatterned motif, usually covering only the body (fig. 2a). In a few cases, incised paired wavy lines, forming open triangles, are applied on the join between the rim band and the shoulders. Pyramidal knobs, applied only to the shoulders of the vessel, are sometimes associated with roulette impressions as well (fig. 2a).

Simple impressed roulette herring-bone pattern and spaced-unpatterned motifs can be dated to the Formative and Mature Garamantian phases, and even to the Final Pastoral phase for the former. This
chronological attribution derives from the material found in Fewet compound and cemetery\textsuperscript{27}, the Messak and Tanezzuft funerary evidence\textsuperscript{28}, and site G4-324a close to the old town of Ghat\textsuperscript{29}.

More complex packed patterned roulette and all the composite technique decorations are typical of the Classical and Late Garamantian phases, attested at Aghram Nadharif, Zinkekr\textsuperscript{30} and Fewet cemetery\textsuperscript{31}. Painted vessels are also dated to the Classical and Late phases. This is confirmed by cross-dating with Zinkekr cemetery\textsuperscript{32}, Fewet cemetery\textsuperscript{33} and Jarma\textsuperscript{34}.

Applications are present in both the Mature and Classical phases, as the evidences from Aghram Nadharif and Fewet village confirm\textsuperscript{35}. A shift in the post-Garamantian phase towards the use of the incised technique instead of the roulette is attested at Aghram Nadharif and confirmed by the evidence from Fewet necropolis\textsuperscript{36}.

Shapes recorded at Aghram Nadharif are bowls with restricted or unrestricted simple contours\textsuperscript{37}, probably in use to cook bread, handled pots\textsuperscript{38}, very similar to the Tuareg cooking pot, and neckless or necked jars\textsuperscript{42}. Two lids were recorded as well\textsuperscript{43}. Within the jars, the most common shapes at both Aghram Nadharif and Fewet are globular, wide-mouthed, everted rim jars, with a restricted, necked, inflected contour. Some were used as cooking pots\textsuperscript{44}. At Fewet, bowls and platters are extremely rare or almost absent, and no handled pots were found. This is probably to relate not only to a different function of the site but more likely to its chronology, particularly true for the handled pots, which probably belong to a very late, post-Garamantian, phase of the citadel life\textsuperscript{45}.

The small ceramic sample from the cemetery of Fewet belongs to different chronological phases. A homogeneity in the fabrics with those from the compound has to be mentioned. Compared to the village, a greater variety of shapes was recorded, including bowls and large deep bowls, although globular jars are again the most common. In the necropolis the range of decorations is also wider. Roulette impressions, forming different patterns, are the most frequent, incisions are quite present as well, while only a small painted sherd has been found\textsuperscript{46}.

At the current state of knowledge grog, roulette decoration, and less specifically wide-mouthed necked jar, do not belong to the local tradition. If this will be confirmed by future studies, their origin must be found elsewhere. All these attributes can be easily recorded in pottery from around 2000 BC in regions south-west of the Sahara, from Mauritania to the Chad basin\textsuperscript{47}.

The earliest roulette decoration may come from Mauritania (\textit{Draïna Culture}) and is dated to about 2000 BC\textsuperscript{48}. Its appearance in the Chad basin from about 1500 BC onwards\textsuperscript{49} shows an eastward shift of this

\textsuperscript{27} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{28} CREMASCHI, DI LERNIA 2000; DI LERNIA \textit{et al.} \textsc{2002.}
\textsuperscript{29} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{30} DANIELS \textsc{1968.}
\textsuperscript{31} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{32} DANIELS \textsc{1968.}
\textsuperscript{33} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{34} LEONE \textsc{1998; 2001.}
\textsuperscript{35} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{36} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{37} CATTO \textsc{2005, 213, fig. 4.}
\textsuperscript{38} CATTO \textsc{2005, 215–8, figs. 5–8.}
\textsuperscript{39} CATTO \textsc{2005, 219, fig. 9.}
\textsuperscript{40} CATTO \textsc{2005, 222, fig. 11.}
\textsuperscript{41} CATTO \textsc{2005, 226, fig. 12.}
\textsuperscript{42} CATTO \textsc{2005, 227–34, figs. 13–21.}
\textsuperscript{43} CATTO \textsc{2005.}
\textsuperscript{44} CATTO \textsc{2005; CASTELLI \textit{et al.} \textsc{2005.}}
\textsuperscript{45} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{46} CASTELLI \textit{et al.} \textsc{2005.}
\textsuperscript{47} VERNET; McDoNALD; VON CZERNIEWICZ; GALLIN, pers. comm.
\textsuperscript{48} HOLL \textsc{1985; 1986.}
\textsuperscript{49} WIESMÜLLER \textsc{2001.}
decoration through time. Besides, the south-east of Mauritania (Tchitt Culture) was left out of the main cultural dynamics of the Sahel from the second half of the first millennium BC\textsuperscript{50}. Conversely, roulette decoration seems to be absent in East Africa\textsuperscript{51} where the mat-impression is used instead from the third-second millennium BC in Nubia\textsuperscript{52}. It must be pointed out that if decorative techniques differ between west Africa and the central Sahara on one hand, and north-eastern Africa on the other, the resulting decorative pattern is almost identical.

As far as the medium to wide-mouthed necked jar and other decorations are concerned, these are common features of all north African productions, even later in date. As such, it is interesting to note that the incised open triangle pattern (IN1b) of the Classical Garamantian phase closely resembles a decoration applied to the shoulder of a jar from site BT5 in the Egyptian Western Desert, dated to the Islamic period\textsuperscript{53}, also common in the Berber pottery tradition.

At present, no clear direct connections have been found between Garamantian pottery and that of surrounding regions. This is particularly true for the Tassili area. In fact, although it is more likely that the region was somehow part of Garamantian territory, at least during the Classical and Late phases, current archaeological knowledge, as well as the political situation in Algeria, do not help in finding good records. Comparable pottery, although to judge decoration from rough drawings is almost impossible, is present in the Neolithic and Post-Neolithic material culture of the Adrar Ahnet and the central Téfedest\textsuperscript{54}.

Similarities in terms of the aforementioned attributes of shape, decoration and fabric inclusions have been noted also with Neolithic materials from Mali including globular jars and roulette decorations\textsuperscript{55}. Unfortunately, only drawings are available for comparison and no radiocarbon dates are mentioned.

Interesting to note is the quite strong resemblance, in the use of decorative techniques and patterns, with pottery from the Inland Niger Delta sites of Jenne-Jeno, Hambarketolo and Kaniana, dated from 250 BC to 350 AD\textsuperscript{56}, presenting a cord-stick roulette decoration on the body in combination with a painted cross-hatch pattern on the rim band. Although the shape is different, this kind of decoration is very similar to a Classical-Late Garamantian example found at Aghram Nadharif cemetery (fig. 3), and to a contemporary one found at Jarma G1\textsuperscript{57}. To note, the date of the exemplars from the two regions seems to coincide.

Late Neolithic, Iron Age and Medieval pottery from the south-western Niger\textsuperscript{58} have many affinities with our collection as well. The oldest, mainly sharing globular shapes and roulette decorations, sometimes combined with incisions, are noticed in the In Gall region. The youngest

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig3.png}
\caption{Sherd from the Aghram Nadharif necropolis showing a combined painted and impressed decoration similar to examples from Jarma and Jenne-Jeno (Italian-Libyan Mission in the Acacus and Messak, Sapienza, Università di Roma).}
\end{figure}

\textsuperscript{50} MacDonald et al. 2003.  
\textsuperscript{51} Von Czerniewicz, pers. comm.  
\textsuperscript{52} Gratien 2000.  
\textsuperscript{53} Riemer and Gatto forthcoming.  
\textsuperscript{54} Monod 1932; Maitre 1971.  
\textsuperscript{55} Gausseen and Gausseen 1988.  
\textsuperscript{56} McIntosh 1995.  
\textsuperscript{57} Leone 2001.  
\textsuperscript{58} Grebenart 1985; Vernet 1996.
include globular jars with high neck and a roulette decoration confined on the shoulder and handled pots. The globular jar with roulette decoration, dated to 1560-1375 BP at site Tunté, is very similar to examples found at Agramer Nadharif and dated to the Classical and Late Garamantian phases. The date for the handled pots, of 565 BP at Tiguezefen, seems to confirm a late and even post-Garamantian chronological association for our containers. Confirmation is coming also from Azelik-Takadda, a medieval town of the Songhai Empire in the In Gall - Tegidda-n-Tesemt region in Niger, where incised handled pots have equal late dates.

However, at present the most closely related examples were found in Chad. Roulette impressed sherds, one clearly belonging to a globular necked jar, and others presenting incised lines in combination with the roulette, come from the Angamma escarpment in the Borkou region. Also noteworthy is the presence in the same area of Iron Age painted pottery which presents cross-hatch motifs, similar in some respects to the Garamantian ones. A Nubian connection was proposed for the pottery from Chad but it is hard to confirm at the current state of knowledge. The location of this Chadian evidence along the caravan road connecting central Sahara with Sudan (Meroe) reinforces the possibility that the local ceramic production was influenced from both sides.

Finally, a survey in the area between the Messak and Kufra (North Tibesti, Rebiana, Calanscio), has revealed a virtual absence of roulette decorations or of any other Garamantian-related pottery production. The same can be said for the Mediterranean area, where local pottery is produced, also during the Roman period, but seems not to share with the Garamantian one the features here analysed.

Following dates and similarities, particularly decorative patterns, the relationship between the pottery from Fazzan and the one from surrounding regions can be divided in two different phases. The first regards the appearance of the Garamantian pottery tradition in the Fazzan, during the Final Pastoral (c. 1600-900 BC), its origin and provenance. At that time the area where pottery with similar traditions was found goes from Tchitt-Néma in eastern Mauritania to the Air (to possibly include also the Ténéré) in Niger. Similarities are on a general level with shapes and decorations that resemble one another. The second phase shows an eastward geographical shift, to include also Chad. This time similarities are more straight, as proved by the evidence from Jenne-Jeno and Borku, in relation to a direct presence of Garamantes (with caravans) in such areas.

To conclude, the Garamantian ceramic tradition is in some way part of the West African tradition, which, during the Iron Age, spread eastwards to include regions as far away as Chad, and northwards to include the central Sahara. The influences from the Roman world clearly do not touch the local pottery production.

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