

# SUDAN & NUBIA

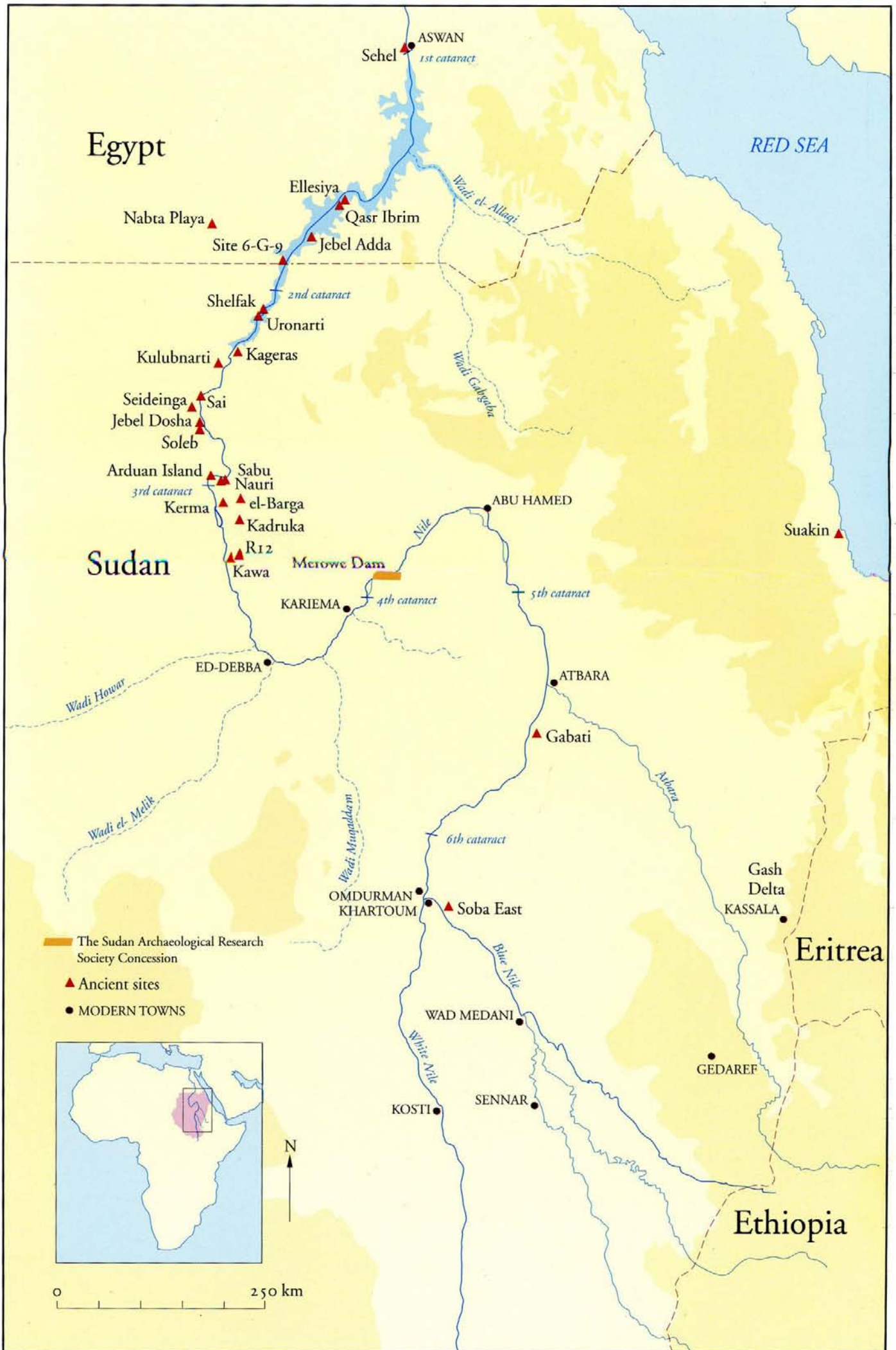
The Sudan Archaeological Research Society



*Bulletin No. 8*

2004





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*Front Cover:* Uronarti: view along 'Middle Street' towards the southern defences in March 2004 (photo Derek A. Welsby)

## Two different pottery productions in Northern Sudan

Elena A. A. Garcea

### Ethnographic introduction

Kareima and Tangasi are two towns located downstream of the Fourth Cataract of the Nile, in the Northern State of the Sudan, between the first and the second bend of the river, in the reach where the Nile flows from north east to south west (Figure 1). Kareima is often indicated on the maps with the name of Kareema. It is situated on the western bank about 30km south of the Fourth Cataract. On the edge of the modern city is Jebel Barkal, which is the holy mountain where there are temples and palaces of the Kushite pharaohs who founded the 25<sup>th</sup> Dynasty in Egypt, in the middle of the 8<sup>th</sup> century BC. Tangasi is located on the eastern bank of the Nile, about 12km south west of Kareima. Its full name is Tangasi-Samareit.

The Map of Sudan (Sheet 45-F, Merowe, 1:250,000) presently classifies Kareima as a town of fourth importance and Tangasi as a town of fifth importance. The former is also indicated for the presence of the post and telegraph offices, the latter for the presence of the *suq* (market).

The two towns followed different historical and economic developments. Kareima is now more populated than Tangasi. Its development is a result of the recent economic growth due to industrial constructions (canning factory, telephone system, electrical power plant, railway station), also supported by the recent international cooperation and the construction of the Merowe Dam. Based on data from 1979 (Ibrahim 1979), the canning factory, for example, is a state owned factory established in 1963 employing 350 people. Thanks to the recent economic investments, Kareima has become the major administrative and financial centre of the region. According to the latest census carried out in the early 1990s, Kareima has 45,757 inhabitants in the rural district and 12,226 inhabitants in the urban district (Osman 1994). Data on the population of Tangasi are not available.

The history of Tangasi goes back to earlier traditions, which are connected to the rural economy of the region. From a logistic point of view, Tangasi could be more easily reached through the tracks across the Bayuda Desert, which is the shortest route from Khartoum, at a distance of 325km. In this town there is a traditional market which represents a meeting point not only for trading, but also for religious purposes (Ibrahim 1979). The market gathers craftsmen from the villages on the left bank of the Nile and the neighbouring areas. In particular, the livestock market with camels, cattle, donkeys, sheep and goats is an important opportunity not only for local people to meet.

Kareima and Tangasi are included in the province of

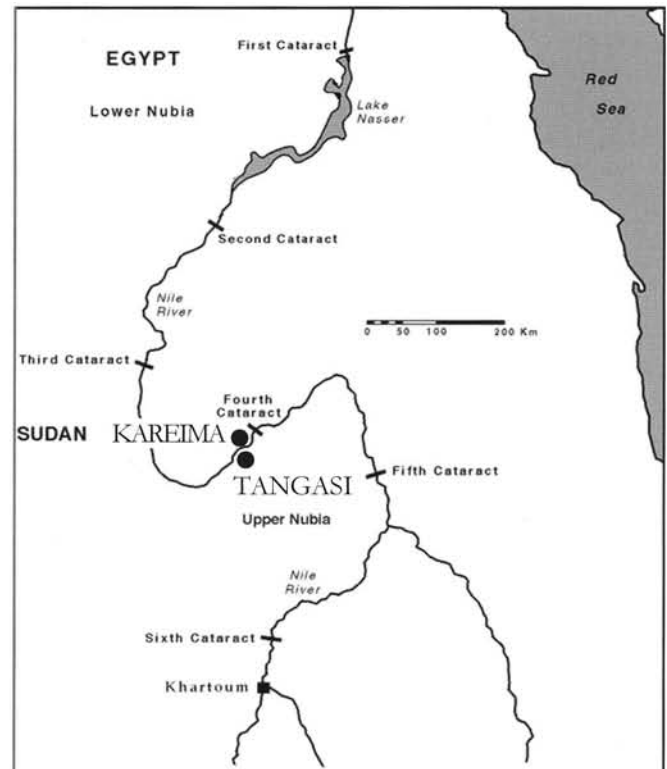


Figure 1. Map of Northern Sudan

Marawe [Merowe] (Marawee Mohafaza). The latest census provides information regarding the economically active population in the province (Table 1). Agriculture, hunting, forestry and fishing (44.6%) are the most practised activities in the entire province, whereas manufacturing is only practised by 4.5% of the population, of which 89.8% are males and 10.2% females (Osman 1994). Therefore, it is not surprising if also the pottery production observed in

Table 1. Economically active population in the Marawe Mohafaza.

Professional activities	Population	%
Agriculture, hunting, forestry and fishing	53713	44.6
Community, social and personal services	25902	21.5
Construction	11665	9.7
Wholesale and retail trade	8650	7.2
Transport, storage and communication	6851	5.7
Manufacturing	5457	4.5
Electricity, gas and water	1633	1.4
Financing, insurance, real estate and business	1265	1.1
Mining and quarrying	162	0.1
Activities not adequately defined	520	0.4
Not stated	4553	3.8
<b>TOTAL</b>	<b>120371</b>	<b>100.0</b>



Table 1. Population by major ethnic group according to type of residence in the Northern State.

Ethnic group	Rural	Urban	% Rural	% Urban	Total	% Total
<b>ARAB</b>						
Baggara	846	422	66.7	33.3	1268	0.2
Dar Hamid	502	212	70.3	29.7	714	0.1
Bederiya	647	623	50.9	49.1	1270	0.2
<b>Ja'aliyyn</b>	<b>140581</b>	<b>16581</b>	<b>89.4</b>	<b>10.6</b>	<b>157162</b>	<b>30.7</b>
Guhaina	22619	4245	84.2	15.8	26864	5.2
Other Arab Tribes, Central	6142	649	90.4	9.6	6791	1.3
Other Arab Tribes, Northern	25737	869	96.7	3.3	26606	5.2
Other Arab Tribes, Eastern	6547	28	99.6	0.4	6575	1.3
Other Arab Tribes	0	24	0	100.0	24	0.005
Miscellaneous Arab	339	165	67.3	32.7	504	0.1
<b>NUBA</b>						
Nuba, North-East	88	189	31.8	68.2	277	0.1
Nuba, North-West	234	160	59.4	40.6	394	0.1
Nuba, South-West	3051	1159	72.5	27.5	4210	0.8
Nuba, South-East	331	846	28.1	71.9	1177	0.2
Other Nuba	13721	3094	81.6	18.4	16815	3.3
<b>BEJA</b>						
Amarar	1	130	0.8	99.2	131	0.0
Bisharin	268	90	74.9	25.1	358	0.1
Hadendowa	25	67	27.2	72.8	92	0.02
Bani Amer	54	65	45.4	54.6	119	0.02
Other Beja	3026	1225	71.2	28.8	4251	0.8%
<b>NILOTIC</b>						
<b>Nubiyyn</b>	<b>205402</b>	<b>30834</b>	<b>86.9</b>	<b>13.1</b>	<b>236236</b>	<b>46.2</b>
Dinka	7996	928	89.6	10.4	8924	1.7
Funj	36	49	42.4	57.6	85	0.02
Nuer	2348	496	82.6	17.4	2844	0.6
Other Nilotic	266	152	63.6	36.4	418	0.1
<b>EASTERN SOUTHERNERS</b>						
Bari Speaking	0	50	0	100.0	50	0.01
Latuka Speaking	21	10	67.7	32.3	31	0.01
Dindiga Speaking	0	4	0	100.0	4	0.001
Other Eastern Southerners	0	6	0	100.0	6	0.001
<b>WESTERN SOUTHERNERS</b>						
Moru - Madi	0	3	0	100.0	3	0.001
Bonko Baka	84	5	94.4	5.6	89	0.02
Nologo - Sere	0	3	0	100.0	3	0.001
Zande	86	34	71.7	28.3	120	0.02
Other Western Southerners	22	17	56.4	43.6	39	0.01

Kareima and Tangasi is practised by men.

One-hundred-forty-two languages are officially listed in the Sudan, of which 132 are living and 10 are extinct. The most common is Arabic. According to the results of the last census of the population of the Northern State (Osman 1994), the main ethnic groups are the Nubiyyn and the Ja'aliyyn, respectively representing 46.2% and 30.7% of the population (Table 2). However, many of them have lost their original linguistic affiliation. In fact, 76.8% of the total population of the State speaks Sudanese Arabic, whereas the Nubiyyn, which is the second most important language, is presently only spoken by 17.7% of the population.

Even though several social anthropological studies exist on northern Sudan (e.g. Barclay 1964; Hurreiz 1977; Kjerland 1982; Delmet 1987; Boddy 1989), systematic research on craftwork productions in the area does not seem to exist. Manufacturing has become quite a rare profession, being practised by only 4.5% of the active population (Table 1). Even though this paper does not pretend to carry out a systematic survey on present-day pottery production, it is hoped that it can be of some use in presenting the information collected in December 1998, when two pottery productions were observed in Kareima and Tangasi. Winter is the driest season in the Sudan, which is favourable to pottery making. Nevertheless, the production of pottery does not seem to be limited to this season.

It should be noted that the production of pottery reflects the different economic organisation of the two towns. In Kareima, it was possible to observe an itinerant potter, of non-local origin, who installed in 1998 his activity in the suburbs of the town. In Tangasi, on the other hand, it was possible to visit a kiln that has been working for several generations and represents the typical local tradition.

The main production of both potters consists of large elongated jars (*zîr*) that are normally used to keep water in the courtyards of houses, schools, work places, and stations. These containers keep the water cool and allow it to clear of the silt which sinks to the bottom of the jar.

## Kareima

### *Organisation of the work*

The potter works by himself and takes care of the entire manufacturing sequence. He has two occasional assistants with a cart and a donkey who help him to carry the dung needed as temper for the clay and as fuel for the bonfire, and carry the vessels to the market when they are ready to be sold. Once they also helped him to cover the open bonfire for firing the pots, but it was not a required engagement. The working space is in the outskirts of the town. It seems to have been randomly chosen, in an open space, at a distance from the urban area, between Jebel Barkal and the cultivation, not far from the Nile.

The various phases of manufacture are carried out without an apparent internal organisation of the working space.

The raw materials, the paste, and the vessels to be fired and those already fired seem to be randomly placed near each other on the ground. Such a positioning is not planned to last for a long time. The potter learnt the job from his father, who practised the same activity in their home land, south of Khartoum. He comes from the town of Sennar, around 200km south of Khartoum on the Blue Nile, and belongs to the Ja'aliyyn ethnic group. He usually travels and looks for an appropriate location to establish his pottery, which he carries out for a while before moving to another location. He is perceived by the locals as a stranger from the south.

### Raw materials

The paste is composed by 1/3 of sandy-silty clay and 2/3 of donkey dung (*zîbala*). The clay, locally called *tin*, is collected on the spot from a rectangular pit measuring about 3 x 1.5m. It is mixed with water and kept for several days under jute sacks to be used when needed. A vegetal temper, obtained by sieving donkey dung, is added to the clay. Only the finest fragments are used, while larger ones are thrown away.

### Roughing out and shaping techniques

This repertoire of this potter consists of only two types of containers: water jars (*zîr*) and smaller jars. The former have a rounded base and straight walls with a slightly sinuous neck. The rim is thickened. These jars are different from the traditional ones made in Kareima and Tangasi. They are bigger and more open. The paste is coarser and more porous. The other containers are cylindrical, with a rounded base. Their production is more limited than water jars and, for this reason, it has been possible to follow only the manufacturing of water jars.

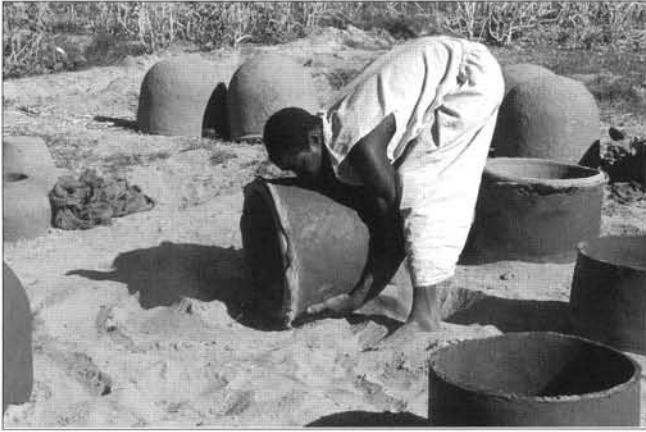
The potter starts with the production of the containers by kneading the paste and moulding the lower 2/3 of the pot on a convex mould, which is about 50cm high (Plate 1). He prepares a thick layer of paste and presses it against the external surface of another usually broken, upside down, vessel that functions as a mould. When this part is finished,



Plate 1. Kareima – Moulding technique.



he lets it dry for about 30-45 minutes. Then, he turns upwards the incomplete vessel with the clay layer of the future new jar (Plate 2), sprinkles some water on the surface, and inserts the bottom in the sandy ground to keep it upright. At this point, he slowly takes out the moulding vessel (Plate 3). The bottom of the new jar is left to dry for another half hour.



*Plate 2. Kareima – Turning the moulded bottom of the vessel.*

The second phase consists of the preparation of the central part of the jar, which is about 20cm high. He prepares a thick ring of clay, with a thickness of 10cm and a length equivalent to the circumference of the rim of the lower part of the jar. He puts the ring on the rim and gradually pinches it to flatten it (Plate 4) and continues with a drawing motion to make the walls and the shoulders of the jar (Plate 5). There is not a sequence of coils.

During the two previous phases, the potter smooths the external surface with a spatula made from a gourd (Plate 6) and then uses a wooden paddle. When he works with the spatula and the paddle, he turns around the jar, so that he can directly see the entire surface of the jar.

The third and last shaping phase is very similar to the second one. It consists in the preparation of the neck and the rim, which reach a height of about 20cm. The potter adds another ring of clay in the same way as the previous



*Plate 3. Kareima – Removing the mould.*



*Plate 4. Kareima – Pinching the central ring.*

one. The only difference is that the external surface is treated differently from before. The potter uses a wet jute cloth to smooth the surface and to shape the neck, the rim, and the lip (Plate 7). Occasionally, when the paste becomes too dry from the heat of the sun, he sprinkles some water on the pot.



*Plate 5. Kareima – Flattening the walls of the vessel.*

As a whole, the jars have quite a regular shape. The upper part of the jar, which has been smoothed with the cloth, shows marks that are similar to those left by a wheel,



*Plate 6. Kareima – Smoothing with a spatula.*



Plate 7. Kareima – Finishing with a wet cloth.

although he does not use one. This is due to the fact that he turns his hand very quickly around the inner jar. As a finishing he puts an impressed mark on the pots. During the time of manufacturing, in the early afternoon, the temperature was 36°C and the relative humidity 21%. When shaping is finished, the jars are left to dry in the sand for a few days, from a minimum of two to four-five days.

### Firing techniques

The basic technique consists of open firing in a bonfire. The bonfire is located in a large rectangular depression, measuring about 6 x 5m. The area can contain up to about 150 vessels and is usually filled up before starting the firing (Colour plate XLVII).

The bottom of the bonfire is not deeply dug in the sand so that it seems to lie on the surface of the ground. The vessels are placed in the bonfire in a vertical position, very close to each other. Only those in the outer perimeter are tilted towards the centre of the bonfire. On the bottom of the bonfire, it is possible to see the ashes left from previous firing. The vessels are laid on a layer of manure and straw. The same material is used to make an enclosure around the bonfire. This material is specially bought by the potter for this purpose. The pots are then covered with a layer of sheet-metal, which is obtained from any kind of old objects (food cans, coachwork, barrels, enamelled metal containers, etc.). The potter carefully flattens every piece with his naked feet and places them on the firing pots in order to cover them completely and to put a fire-proof material between the vessels and the fuel (Plate 8).

When this job is done, he prepares a composition with dung, straw, soil, and grass which he lays on a cloth so he can more easily transport and spreads it on top of the sheet-metal. He first covers the perimeter of the bonfire and then the inside. Around the perimeter, he shovels some of the excess ash left from previous firing (Plate 9). At the end, on top of everything, he places a layer of fresh straw which is finally set on fire (Colour plate XLVIII).

An enormous fire flares up, with high flames that quickly



Plate 8. Kareima – The sheet-metal cover of the bonfire.

burn the straw. The fire does not last for long and goes out as soon as the straw is completely burnt. The smoke continues. Unlike the straw, the manure burns without catching fire and continues to burn slowly. The bonfire is allowed to burn for at least 24 hours, but can continue even up to 48 or more hours, before the sheet metal and the vessels are removed.



Plate 9. Kareima – The bonfire with the fuel.

The pots are taken from the bonfire and turned upside down. No treatment is applied on the external surfaces after firing. The finished pots are immediately loaded on a cart pulled by a donkey and carried to the market to be sold (Colour plate XLIX).

### Tangasi

#### *Organisation of the work*

The manufacturing of pots in Tangasi is completely different from that observed in Kareima. There is not one single potter, but a group of people including two men and some women. The latter are of non-local origin and are employed by the men who are local Nubiyyin (Shaiqiya) and own the business. The working environment appears to be more





organised and structured. Living spaces are separated from working ones. The working spaces comprise different areas for different tasks, i.e., for preparing the paste, manufacturing the pots, drying, firing, final retouching, and stocking of the finished products to sell. Such an organisation appears to result from a planning or, at least, a custom practised over generations.

The location of the workshop used to be strategic with respect to the market and to the docking place of the boats coming from the opposite bank of the Nile, as it was half way between the two. Presently, after the 1988 severe flood, the village moved inland from the bank of the Nile. Nevertheless, the pottery workshop is still located among the old houses and has not changed location.

These potters do not work on market days as they bring their products to sell them at the market.

### Raw materials

The paste is made up with three parts of silty clay and two parts of donkey dung (*zibala*). The clay used to make the paste is kept in a pit. The manure is entirely used, without selecting the vegetal components with a sieve. More water is added to the clay and, therefore, the paste is more humid and soft than that produced in Kareima.

### Roughing out and shaping techniques

The ceramic products include various types (Plate 10). The water jars are different than those made in Kareima; they represent the oldest shape in use in the region and the most intensive production of ceramic vessels. They are smaller, about 70cm high, and have an ovoid shape with a rounded bottom. A variation to this type has a little circular foot, instead of a rounded bottom, and is smaller, being about 50cm high. The paste is more vitreous and light than that made in Kareima.

Some globular jars with a flaring rim and truncated-conical pots, similar to flower pots are also produced. A further type of object are the clay pipes used to drain water after the floods of the Nile. They look like cylinders open at the two ends, with a truncated-conic shape so they can be



Plate 10. Tangasi – Various locally-made pottery types.

inserted into one another. They are inserted in the ground at a certain depth from the surface in order to avoid the formation of backwater in areas not intended for cultivations. Other objects include large, shallow bowls with straight walls and flat bottom, with a diameter of about 40cm and a height of 15cm. Another type consists of small semi-ovoid objects, with some openings. Their shape looks like a little house. They are used to let pigeons make their nests.

Here follows a description of the manufacturing techniques of water jars. Unlike in Kareima, their shaping starts from the upper part, which includes the rim, the neck, and the shoulder of the vessels (Plate 11). The shoulder has a diameter of about 35cm, the neck is narrower than the shoulder, being about 25cm of diameter. The rim is slightly flaring. These three elements together are about 30cm high. The upper part is made by flattening rings that are longer and thinner than those observed in Kareima, although they are not like typical coils. Their diameter is around 5cm. Once the upper part of the pot is finished, it is laid on the ground,



Plate 11. Tangasi – Manufacturing the upper part of the vessel.

without being turned, and left to dry. The bottom of this part is tightly wrapped in a cloth. Its bottom corresponds to the maximum diameter of the pot.

Subsequently, the potter removes the excess clay, which accumulated at the bottom of the internal walls of the upper part of the pot. When this part is dry, he turns it upside down and starts the bottom (Plate 12).

The bottom is also made with rings which are placed in concentric circles of a decreasing diameter until the bottom is completely closed. The potter closes the bottom from the outside and for this reason it has an irregular shape and thickness (Plate 13).

The surface of the jar is smoothed with a spatula made from a gourd, like in Kareima. However, here the potter uses it without turning the vessels around, but he stretches his arm to reach the part opposite to him. He employs the spatula only to smooth the clay as he adds the rings. The finishing is all done by hand.

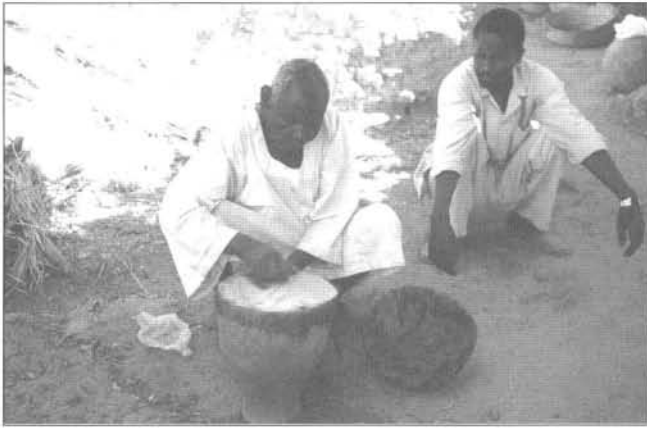


Plate 12. Tangasi – Manufacturing the lower part of the vessel.

### Firing techniques

These potters use both a kiln and a bonfire. The kiln is a circular pit, about 2.5m of diameter and 1.5m deep, excavated into the ground and closed with a metal door (Plate 14). There is no kiln superstructure and the smoke comes out from the door of the kiln. At the bottom end of the kiln, there is another opening for the fuel. The pots to be fired are placed in the kiln, in a horizontal position, and are covered with lots of potsherds of large dimensions and a few pieces of sheet-metal. This procedure provides a more homogeneous temperature during firing.

After firing, a powder obtained from pounded bricks is occasionally applied dry, without a binding, on the blackened spots that often appear on the external surface. The purpose of such a procedure is exclusively aesthetic and is used to give a more uniform colour to the external surface of the pots. As a matter of fact, these water jars often leak and are cracked. The potters seem to worry more about the uniformity of the colour, rather than the technical quality of their pots.

An open bonfire is also visible in the workshop, although it was not in use at the time of our visit. It is smaller than the one in Kareima, measuring about 2 x 1.5m. It is a shallow,

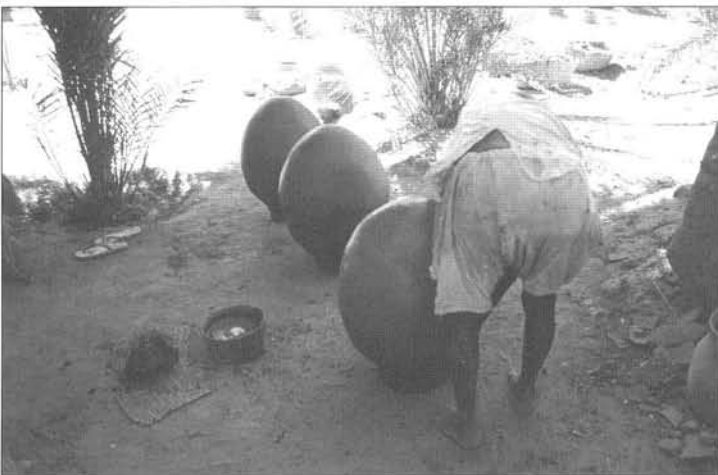


Plate 13. Tangasi – Manufacturing the bottom of the vessel.

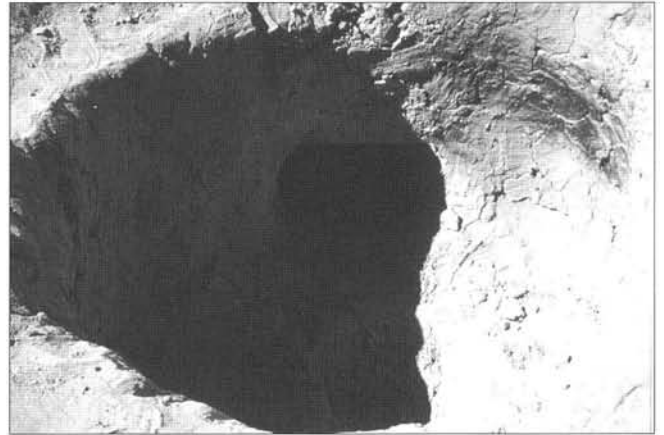


Plate 14. Tangasi – The kiln.

low, rectangular depression, located near the kiln. The kiln and the bonfire are located across the track that leads from the market to the potters' workshop. They are the most distant structures from the area where the pots are manufactured.

### Discussion

The shaping techniques observed both in Kareima and in Tangasi employ the method of ring-building, which is similar to coiling, except that rings are thicker and are long enough to go around the diameter of the vessel (cf. Gibson and Woods 1990). This technique seems to be common in the Sudan as it was in use also at the beginning of the 20<sup>th</sup> century on the Blue Nile, where ex-slave women from Darfur, in western Sudan, usually made pottery (Macmichael 1922). However, in Kareima, ring-building is combined with another technique, moulding, which is not practised in Tangasi, but seems to be known in the region. In fact, according to ethnolinguistic data, the moulding technique is associated with Afro-Asian and Nilo-Saharan language phyla (Gosselain 1999), although there was no direct evidence from the Sudan until the present report.

The shaping process observed in Tangasi is similar to a production made by a Shaiqi potter from the Dongola province who worked on the Blue Nile at the beginning of the 20<sup>th</sup> century, following the Shaiqiya's traditions of pottery making (Macmichael 1922).

Furthermore, the potter observed in Kareima represents a very peculiar case: he is not rooted to local traditions, apart from the fact that he learnt his pottery manufacturing from his father who also practised the same job, and he is from a different region and seems to have settled in Kareima by chance. Therefore, strict comparisons between the two potters may not be correct. However, at least two comments can be made. Kareima does not have any tradition for handicraft manufacturing in general and pottery making in particular, whereas Tangasi does, and it is well-known in the area for that. The second comment is that the demand for pottery containers,



particularly water jars, is so high in the area that the local production is not capable of satisfying it. For this reason, outsiders are encouraged to move there and establish their businesses.

Local informants explained that there are two different interpretations of pottery making in the area. According to one of them, the group of the Baggara, which migrated to Kareima from Abu Hamed, above the Fourth Cataract, used to be involved with the making and selling of pots since the 19<sup>th</sup> century. This group originated from the area of Umm Tina, which literally means Mother of the Clay, and was known for its traditions of pottery making. The Baggara are cattle keepers (*baggara* is the word for cow) originating from western Sudan, in Kordofan and southern Darfur. Only men practised this job. Later generations, due to changes in the social stratification and the economic situation, abandoned this job. The other interpretation places the origin of this profession in Tangasi, from where it would have spread towards Abu Hamed.

Connections between the Ja'aliyyn and the Baggara are also recorded on the eastern bank of the Nile, upstream of Tangasi, in the district of Shendi, where the Ja'aliyyn Taragma are the main ethnic group. The Ja'aliyyn are the most numerous Arabic tribe in the Sudan and are composed of different groups, one of them being the Ja'aliyyn Taragma. The latter are classified as the Baggara, who originate from Darfur and Kordofan and settled in the middle Nile valley (Delmet 1987; Boddy 1989).

According to Peacock's classification of the types of organisation of pottery production, both the potters in Kareima and Tangasi may be classified as "individual workshops" (Peacock 1977). Pottery making is the main source of subsistence for these craftsmen. Nevertheless, their organisation remains quite small. Their production is meant for local consumption. The investment in equipment is extremely low. Raw materials are their biggest investment and, considering that silt is naturally available on the banks of the Nile, the major expenses are represented by the donkey dung. Even the kiln in Tangasi does not require expensive maintenance: it is excavated into the soil and it simply needs to be reshaped from time to time. The profit the potters make basically covers the subsistence needs of the potters: the potter in Kareima has very little help, and the potters in Tangasi have non-local women as temporary workers, who are paid less than other workers. Furthermore, the potters in Tangasi are definitely sedentary. The potter in Kareima is ready to move to a different destination when his business decreases. His working tools are a spatula, a paddle, and a cloth. All the rest can be found in any place along the Nile valley.

## Acknowledgements

I wish to thank Olivier Gosselain and Alexandre Livingstone Smith for providing me with information on present pottery making in Africa and for encouraging me to publish

this paper. I am also grateful to Barbara Casciarri for her information on the Ja'aliyyn and the Shaiqiya groups.

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*Colour plate XLVII.  
Karima – The vessels in the  
bonfire before firing.*



*Colour plate XLVIII.  
Karima – The firing.*



*Colour plate XLIX.  
Karima – The finished vessels  
ready to go to the market.*