



New Perspectives on Meroitic subsistence and settlement patterns: an ethnoarchaeological study of contemporary Naqa society

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This study attempts to use an ethnoarchaeological approach in order to fill a knowledge gap concerning Meroitic subsistence and settlement patterns in the Butana region. The contemporary population of the eastern Naqa and western Naqa villages, located near the archaeological site of Naqa in central Sudan,¹ were observed and recorded in order to understand their daily life and activity patterns, which might provide clues to assist with the interpretation of archaeological features at the site of Naqa. With this aim, two research questions were focused upon: What were the means of Meroitic subsistence? And, what were the patterns of Meroitic settlement in the Butana region?

Naqa was chosen because it is an example of a Kushite settlement situated away from the Nile. It is the major site in the Butana where remains of permanent settlement have been identified thus far, which differentiates it from the other sites in the region (Welsby 1996, 150).

Why use an ethnoarchaeological approach?

It is difficult to observe nomads in the archaeological record, so an ethnoarchaeological approach was used in order to gain a better understanding of the processes by which material remains were distributed in the archaeological record, and the elements that controlled this distribution. An ethnoarchaeological approach helps one to consider, in some detail, the organisation of specific nomadic pastoral systems in time and space (Cribb 1991, 83). In particular, a lack of evidence for nomadism in the archaeological record may not be the result of an absence of material remains alone, but the result of the distribution of their remains over a much wider range and in greatly reduced densities (Cribb 1991, 133). A better understanding of the nomadic archaeological record might be gained through observing contemporary nomadic groups that live in similar locations. Nomadic pastoralists take advantage of the seasonal appearance of vegetation by shifting animals from one set of pastures to another. While the migration from one pasture to another is the most easily recognisable facet of nomadic life, the number of moves

¹ Ethnographic informants were Al Amin Jumaa Abdel Alateif and Omar Ahmed Abdalla from Naqa village, June 2010.

pastoralists make is dependent of the types of animals in their herds, the quality of pasture available, the severity of the climate, and the availability of water (Barfield 1993, 11-12). Seasonal farmers also consider seasonal rainfall, seasonal valleys and fertile land as the main considerations in their movements from place to another.

Naqa

The site of Naqa (16°16'10"N 33°16'30"E) is located *c.* 220km north east of Khartoum, 30km from the Nile and *c.* 20km south of Musawwarat es-Sufra. The Naqa area was known as *Tolke* during the Kushite period (Eide *et al.* 1996, 582). The archaeological remains are located on the eastern side of Jebel Naqa and cover an area of *c.* 3km by 1km. Naqa is one of the major Kushite urban settlements: the site contains temples, two large *hafirs*, wells, two cemeteries, a stone quarry, administrative buildings, palaces, and a domestic area. Contemporary populations are found in the area surrounded by Jebel Naqa, Jebel Hardan, and Jebel el-Nasb el-Samih. They occupy two small villages near the archaeological site, to the east and west of Naqa.

Archaeological work in Naqa

The first mention of Naqa was by Cailliaud (1826, Text iii, 124-138; pl. I). He drew plans of the remains and made copies of the inscriptions he found there. Lepsius also visited the site and recorded it (1849-1859, pl. I, 143; Whitehead, 1926, 62-64). Hintze (1959, 183-187) later described the archaeological features of the site as consisting of a town and two cemeteries. Ahmed (1984, 34-35) and Bradley (1992, 191-193) recorded the site of Naqa and its features during their archaeological survey carried out in the western Butana. Between 1995-2013, the State Museums of Berlin ran a mission at the Naqa site, and from 2013, the State Museum of Egyptian Art, Munich, has worked in the area (See further Kroeper this volume and <http://naqa-project.com/en/the-excavation-project/about-this-project/>).

The Ethnographic data (Plates 1-9)

The area of the case study

The area of the ethnographic study is the Naqa region, which lies at the confluence of Wadi Awateib and Wadi Abu Rayhan. It is divided into two areas: eastern Naqa and western Naqa. Its population is of the Shaygiya tribe. Their pasture and agricultural lands are between Awateib and Abu Rayhan, and the area is known by the name Gezeira (Island), which extends from Naqa to the borders of the Wad Hissuna area.

Economic Patterns in the Naqa area

The inhabitants of the Naqa region practice a mixed economic pattern of grazing and agriculture (Table 1). They practice seasonal cultivation of the wadis in addition to rearing sheep, goats, cattle and camels. Their agricultural operations begin between May and June when the cultivation



Plate 1. Exterior of a house in the Naqa region.

area, which lies at the confluence of the Awateib and Abu Rayhan wadis that surround the archaeological site, is cleaned. The implements used at this stage include the hoe, plough and axe. Oxen were used to pull the plough in the past, but now tractors are used.

In the period between July and December, the sowing of seeds takes place. The basic crop is sorghum (*durra*), along with a number of subsidiary crops such as okra (*weika*), cucumbers, watermelon, hibiscus (*karkadey*), and millet. The tools used in this stage include the *salluka* (a tool for sowing), *raqqa'a* (a tool used for recultivating land where crops did not grow), *najjama* (a small weeding hoe usually with two prongs) and *maluda* (a large weeding hoe for cutting grass). Areas are also re-cleaned and re-sown where the first attempts proved unsuccessful. The cultivation area is irrigated by wadi waters and rains.

The crop is reaped after December and the reaping operation is carried out by the male members of the family accompanied by a work party of volunteers (*nafiir*). This is a call for the whole community to participate in the collection and harvesting of the crop. The tools used in this stage are the sickle (*bashshaasha*), the reaping axe for canes (*sakkaba*), flail for threshing (*daggag*) and threshing floor (*taga*). The *daggag* is known as the double-headed *daggag*, and the threshing of the sorghum with this tool, which involves separating the sorghum from its stems, is done

by youngsters while reciting:

Ub Rasein narak Hamra Dag Al-Eish bel Gamra

اب راسين نارك حمراء دق العيش بالقمرة

'Oh double-headed, the effort in using you is like fire while we thresh sorghum by the moon!'

After the sorghum is separated from the canes, it is cleaned and packaged in sacks of jute and placed in nearby stores or houses. Previously, the crop was stored in a granary (*matmuura*). The *matmuura* was built by digging a hole, the inside of which was plastered with a mixture of hay and mud; a task known as *jaleit* (mud adobe plaster). The *matmuura* were dug near the cultivation areas and a guard appointed to watch it. All cultivation operations are carried out by male family members; with the possibility of some young girls participating in the operation by carrying food to and from the field and running simple errands.

Once the harvest is finished, the men engage in animal rearing or work for wages in the cultivated areas close to the Nile, such as the Hajar Al-Asal, Banagga and Awateib. These agricultural areas are measured in *jada'a*, which is equal to five feddans (1 feddan equals 0.42ha). The produce from the *jada'a* varies according to the amount of rainfall.

The cane stalks remaining from the sorghum-cleaning operations are collected in bundles, known as *kuleiga*, which



Plate 2. Interior of beit al-arab/beit el-birish.



Family	Economic pattern	Movement	Type of cultivation	Type of animals	Storage	Zariba	Cultivation labor	Grazing labor	Water source
Husband + wife + four sons	Grazing + cultivation + his work as a guard at the archaeological site	Family residence at Naqa, shepherds and cultivators only move to the Gezira	Durra and weika, water melon, cucumbers and millet (valleys)	Sheep, goats, some cows	House	They have no zariba only kod for young animals and donkey stables	Sons + hiring	Sons + hiring	Wells at Naqa (hafirs) + wadis in nishug period; wells in Damar period

Table 1. Naqa family model.

are stored in a special enclosure located near the house. The remains are used as fodder for cattle and in case of excess the surplus may be sold. When there is only meagre or scarce rainfall, canes are purchased from areas near the Nile or from Abu Hasheim and Wad Al-Haj. In rainy periods, sorghum and okra surpluses are sold at Basabeir village located south of Wad Ban Naqa market and Ban Naqa.

Naqa's population also rear sheep, goats and camels, and their pastures extend into the area known as the Gezeira, between the Awateib and Abu Rayhan wadis mentioned above. During the rainy season, the animals are kept away from the cultivated areas in the wadis. Young sons of livestock owners aged between 15 and 20 supervise the grazing, while older sons aged between 20 and 30 work in the cultivation. When an animal owner has no sons, or has sons in education, he may hire help to carry out the grazing and watering of the animals. The work of the older men, who are usually fathers, is restricted to the supervision of both grazing and cultivation.

The population of Naqa rear some cows, but use them for agricultural work only, while sheep, goats and camels are driven to the markets of Khartoum, Wad Hissuna and Shendi to be sold. Pastoralism is considered the main economic activity for accumulation of capital, while crop cultivation is a

subsistence activity, with the inedible vegetal remains from the harvest used as cattle fodder. Dairy products are only used for domestic purposes, and so nothing is marketed from them, except in very rare cases. The main seasonal marketing of cattle is during the Qurban Bairam, and the post-pilgrimage (*Haj*) season. During the remainder of the year, animals are sold to satisfy the family's need for money.

Currently, during the pastoral period the whole family does not move with the herds, in contrast to the situation in the 1970s. The shepherds move with the herds in search of pastures. The animals and shepherds drink from wadis during the rainy season. Once these dry up, they drink from *hafirs*; and finally, when these are dry in the summer, they drink from wells. One of the most famous wells in the area is the *Turuk* (Turkish) well, which lies within the archaeological site of Naqa. In the rainy season, the *Turuk* well is closed with an iron cover to protect it from floodwater, which covers the area in which it has been dug. The largest *hafir* is the Abu Hareig *hafir*, which holds water for up to five months. Some *hafirs* are restricted for human drinking only and these are surrounded by fences to protect them from contamination by animals.

The method of watering animals from the wells is as follows: four or five individuals dig a trough for the purpose



Plate 3. Ladayat and sag-doka, a fire stove and flat griddle.



Plate 4. Al-birish, a woven mat usually used by women for dukhaan (a smoke-bath)



Plate 5. Kut, a rack used for storing water.



Plate 6. Murhaka and mishan, grindstones and sack of sorghum.



Plate 7. A small wall built to protect the fire from the wind.

of watering their animals in turn. Sheep and goats are watered every four days; thus, they graze in the pastures for a period of two days, and on the third day they return to the well, in order to spend the night not far from it. On the morning of the fourth day they are driven to the well to be watered under the supervision of their owner while their shepherd goes to get his provisions. He may also visit his family to spend the night with them, particularly if he is married. Camels are watered on the fifth day.

Shepherds carry supplies of sorghum flour, tea, sugar, coffee, dried okra and some spices with them. Historically implements carried included a *gerba* (water skin), *kabaras* (wooden milk jug), some pottery utensils for cooking, and some gourd pieces for drinking milk and water. They also carried a prayer rug of sheepskin to lie on. Nowadays, metal utensils, a teapot, and a piece of tarpaulin for protection from rain and sun are carried. A shepherd erects a simple shade of tree branches and tarpaulin or jute sacks, for the midday period, which is known as the *al-Daraeia*. He may erect another for young animals much affected by the sun's heat. In cases of severe drought, shepherds take the herds to pastures outside the area of the Gezeira, and may reach the western Nile and cross the Wad Hissuna.

Shepherds eat *'asiida* (sorghum porridge) with milk, with *gasheit*, which is a mixture of sorghum flour and water cooked over a fire until it reaches a certain thickness which allows it to be drunk, and *tirbeiga*, which is made from okra, milk, pepper and salt.

The women's duties are restricted to household activities and rearing children. Women do not procure water from the wells, except in rare cases. In the past women used to make dairy products, weave basketry and make pottery, for it is considered shameful for men to make or carry pottery, or to even purchase pots from the market.

Cemeteries for both the eastern and western Naqa villages are located outside the residential area, although not far from it. If one of the herders in the pastures dies, his body is brought to these cemeteries to be buried.

The life rhythms of the two Naqa villages have been affected by the low rainfall rates, which have changed significantly since the 1970s. This has resulted in a movement away from a nomadic lifestyle towards a more settled one. Some of the Naqa inhabitants work seasonally at the Naqa archaeological sites, or as workers in the areas along the Nile, while a number of them have settled in the villages near the Nile.

Some of the *Anaj Hafirs* (ancient *bafirs*) in the Naqa area are named after the individuals responsible for their re-digging, such as the al-Bayud, the Abu Nowy, the al-Giely, the Abbas and the Wad Hamid; however, the al-Dinyawiya *bafir* is now derelict. One of the most significant Anaj wells is the Lion Banaga well, which was re-dug by Sheikh Banaga. The depth of this well is *c.* 40 to 45 *rajil* (the height of a man).

When the shepherd is the son of the herd owner, he will return to the family house during the watering cycle, whereas



Plate 8. Sareef, a straw fence to keep animals away from a nomad's house.

if the shepherd is a stranger to the area, he will remain close to the animals, carrying his provisions. During the period of grazing, he stays with the animals, sleeping where they sleep and moving with them when awake, carrying his provisions on his donkey. Sheep and goats graze during the night and sleep at midnight – this sleep is known as *hajaa'*, then graze again in the early hours of the morning before sleeping again at midday (*al-Hamariya*). At this time the shepherd spreads what he carries, whether it is a *farma* (prayer rug of sheepskin), sack or blanket and builds a shade to sleep under. Animals sleep again later under the trees, a sleep known as *tafle*, and at this point the shepherd prepares his food and eats. Sometimes several shepherds gather together; they graze their sheep and help each other if necessary, and keep each other company. In the past shepherds used to carry flutes, but they now carry portable radios.

On the *wurud* day (the day of watering the animals), the animals spend the day beside the well or *bafir*, and no *zariba* (animal enclosure) is placed or erected for them, and they are left to roam and rest. Watering of the animals is arranged



Plate 9. Al-Kud, a pen for kids.

between the shepherds and the area around the well or *bafair* is divided so that each herd does not mix with another. Shepherds carry a *fartaga* (a sound whip made of cloth and stick), with which he scatters leaves for the sheep and goats to eat.

Nomadic Housing

Women, apart from their domestic chores, are also responsible for house-building (*Beit al-Arab/ Beit al-Birish*) which is largely constructed of plaited palm fronds and tree branches. Some are constructed of mud and stones, and the construction of these are men's tasks. Women bring wood for fuel, and where there is no alternative, fetch water from the well. Women never go to the market – this is a task for men only; nor to places of work, such as pastures or fields. In Naqa's eastern and western villages, there are both buildings constructed of adobe, and of woven palm fronds and goat hair. The latter are most favoured because they are cool during periods of intense heat and are not affected by rain.

Conclusions from the ethnographic study

During the ethnographic study, common features and behaviours were noted which may help to inform us when seeking to interpret subsistence and settlement patterns in the archaeological record at Naqa. These can be summarised thus:

- Naqa populations practice animal pastoralism and wadi agriculture for subsistence grazing.
- Pastoralism is considered the economic activity for accumulation of capital. Agriculture is a subsistence economic activity for crops and provides animal fodder.
- The Naqa population rear sheep, goats and camels, and their pastures extend into the area of the Gezeira, situated between the two Awateib and Abu Rayhan wadis, which extend from Naqa to the borders of the Wad Hissuna.
- When rain is scarce and pastures poor, shepherds move with their herds to the Nile looking for fodder and water.
- *Durra* (sorghum) is cultivated as the main crop, beside a number of subsidiary crops such as *weika* (okra), cucumbers, watermelon, *karkadey* (hibiscus) and millet. The latter are for household needs only.
- When a crop yield exceeds the needs of the house, it is sold at Basabeir's or Banagga's markets.
- The main cultivable land lies at the confluence of the Awateib and Abu Rayhan wadis.
- The main animal markets are at Shendi

and Wad Hissuna.

- Naqa communities and shepherds with their herds drink from different sources of water, including wadis, hafirs, and wells. Most of these were ancient or re-dug in modern times.
- Eastern and western Naqa are permanent villages with schools, clinics, and police posts. Shepherds and herds move seasonally to the rich pastures in the Gezeira. They used to move with all of their family, but more recently only shepherds and their herds have moved, and the rest of the family stays home.
- The burial ground of Naqa's population is near their villages.

Meroe in classical writing

Strabo, who was born in BC 64/63, gives us descriptions of Aithiopia and Aithiopians from the early 1st century AD. He described both Meroe the city and the island. He notes that Meroe was populated by nomads who ate millet and barley, from which they also made a drink, and that they added butter and suet to their foods. They also made use of meat, blood, milk, and cheese. These descriptions clearly reflect nomadic pastoralists, whose domestic animals are sheep, goats and cattle (see further Eide *et al.* 1998, 815, 823).

Pliny, who was born in AD 23/24, also described Meroe and the island of Meroe; stating that only around Meroe did the grass become greener. The town of Meroe itself was situated *c.* 113km (70 miles) from the place where one landed on the island. Meroe town had only a few buildings. When the Aithiopians took power, however, the island was greatly renowned (see further Eide *et al.* 1998, 885-886).

Both reports provide similar information, specifically of the existence of a town named Meroe and an island with the same name. Strabo also tells us about the population of Meroe who were nomadic, raising small animals, and hunters or farmers.

A Proposed Interpretation of the subsistence and settlement of the Naqa site

The contemporary Naqa population lives in conditions that may have been similar to those of the communities that were living in the area during the Meroitic period. They practice a nomadic lifestyle, wandering with their herds over the Butana region. They depend on ancient water resources, hafirs and wells that they have re-dug. They cultivate the fertile land close to the archaeological site, and raise their small animals in rich pastures at the confluence of the Awateib and Abu Rayhan wadis.

Naqa had a large sedentary settlement during the Meroitic period, with its own water sources (two large hafirs and wells). The settlement had access to arable land (at the confluence of the Awateib and Abu Rayhan wadis), and had associated

burial grounds (two cemeteries) (Bradley 1992, 198).

It may be possible to shed light on the relationship between Naqa and the other sites in the Butana region and near the Nile, by observing the movements, activities and relationships between the contemporary Naqa population and their neighbours in these areas. A new understanding of the Island of Meroe may be forthcoming if the description of the local population in the land between the Awateib and Abu Rayhan wadis is considered, but more investigation into the archaeological record of this region is needed.

The Naqa district was selected as a model for this ethnographical study, because it lies within the Butana archaeological zone. The traditional societies that live adjacent to archaeological sites like Naqa and Bejrawiya are affected by modern developments. Intense documentation is needed to record the ethnographic features of this important segment of Sudanese social history, and this area can form a rich resource for ethnoarchaeological research. Research in the Butana area now needs to focus more on traditional lifestyles and crafts before these are lost, especially considering that the last such studies were conducted the 1980s. Ethnoarchaeological studies of contemporary Butana nomads would be helpful, because their movement patterns and activity deposits may help to explain archaeological deposits found in Meroitic Butana sites, due to the similarities observed between contexts.

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