

PREHISTORIC COLONIZATION OF THE CENTRAL SAHARA: HUNTERS VERSUS HERDERS AND THE EVIDENCE FROM THE ROCK ART

Jitka Soukopova

PhD, Honorary research associate at the University of Bristol (UK); teacher, Brno (Czech Republic)

Introduction

The humid Early Holocene period of the Central Sahara is archeologically quite well documented. A human presence is abundantly attested from around 10,000 BP with fishing, hunting and gathering being practiced in the whole Sahara (figs. 1, 2, 3). Excavations undertaken in the Tassili mountains in Algeria and in the Acacus mountains in Libya document groups of hunter-gatherers with exploitation of wild mammals and the use of pottery as early as 10,000 BP (Aumasip 1980-81; Barich 1987; Cremaschi *et al.* 1998).

After a short arid phase around 7,000 BP, stratigraphical evidence demonstrates a change in the subsistence pattern, which becomes dominated by domestic cattle. Pastoralism spread in the Middle Holocene throughout the whole territory of the Central Sahara. Faunal remains from securely dated contexts indicate that domesticated animals were present in the Central

Sahara from the early 8th millennium BP and also direct chemical evidence for early dairying dates from around 7,000 BP (Dunne *et al.* 2012). Who were these early pastoralists? Were they local hunters who adopted domestication or were they new groups of people who moved into the Central Sahara? Although in some cases there seems to be a continuity of settlement between the hunters and the first herders, pastoral ceramics and lithic tools are stylistically different from previous hunting material (Di Lernia 1999; Smith 2005).

The question of where and when people first started domesticating cattle in Africa is still unresolved. Neolithic sites along the Nile river in Nubia have yielded remains of domestic cattle with an associated date of c. 9,000 BP and secure dates for domestic Bos in the Nabta Playa-Bir Kiseiba area in Egypt are c. 7,750 BP, which suggests that domestic cattle may have ap-



Fig. 1. Map of the Sahara evidencing locations mentioned in the text (Google maps).



Fig. 2. Extended white crust on the sandy floor indicates a large ancient water body. Lakes and rivers were present in the Sahara from about 10,000 years BP (Algerian Tadrart).

peared first in the grassy hinterlands of the Nile region and spread from there toward the western Sahara (Gifford-Gonzalez *et al.* 2011).

Ancient colonization

The hypothesis that new populations arrived into the Central Sahara is supported by the finding of a large cemetery in the Gobero plain near the Chad basin in Niger (Serenio *et al.* 2008). Here there are approximately 200 human burials; the oldest date to around 10,000 BP and belonged to sedentary hunter-fisher-gatherers who abandoned the area for 1,000 years during the arid climatic event at around 8,500 BP. After this hiatus other human groups arrived to live and to bury their dead in the same place until around 4,500 BP.

The examination of the Gobero skeletons revealed significant differences between the two chronological groups. The first group occupying the site in the Early Holocene until 8,500 BP were tall and robust, whilst the later group, which arrived after the arid phase, were smaller and tiny. This second group who inhabited the site in the Middle Holocene between 7,200 BP and 4,500 BP utilized domesticated cattle, even though hunting and fishing were still largely used. The

Gobero site revealed the arrival of a new population and the same pattern is attested in the Tassili and Acacus, a pastoral population appeared at around 7,500 BP, replacing an earlier hunting-gatherer occupation. The two different typologies of skeletons, namely a robust and a tiny one, were also identified in the Central Saharan mountains (Aumassip 2004; Mori 2000). What happened to the hunters living in the Central Sahara when new groups of people with their domesticated cattle arrived? Did they fight? Did they mix or interact? The introduction of new groups and herds to the territory occupied by local hunter-gatherers may have caused a variety of reactions or relationships. Certainly, not all the hunters became pastoralists, which is confirmed by the ancient literature: Herodotus describes how Garamantes slaughtered hunters whom they found living in the Libyan desert. The Garamantes were powerful Saharan people of Berber origin who lived in Fezzan near the Acacus between 2,500 BP and 1,500 BP (Hachid 2000). Hunter-gatherers thus still lived in the Central Sahara after the pastoral phase, namely during the successive Caballine period when the region was already very arid and the population was concentrated in the oasis.



Fig. 3. Even today the Sahara is not completely dry. In some wadis there is permanent vegetation due to the underground water (Wadi Imirhou, Tassili).

Evidence from the rock art

The hunter-gatherers living in the Central Sahara from about 10,000 BP produced a corpus of rock paintings (and rarely also petroglyphs) called Round Head (Sansoni 1994; Soleilhavoup 2007; Soukopova 2012). Their images represent mostly human figures, sometimes with bows and often with body decorations and masks, and wild animals such as mouflons, antelopes, elephants or giraffes (figs. 6, 7, 8). The newly arrived pastoral populations also produced rock art. However, their art is diametrically different from the older Round Head art, both in the themes and the technique (figs. 9, 10, 11). They depicted mainly herds of domesticated cattle and everyday life scenes, unknown in the imagery of the hunters, which testifies that we are dealing with two distinct cultural groups (Jelínek 2004; Muzzolini 1995).

Does the rock art also reveal different ethnicity? From the recognizable images, two main groups of facial shapes are evident: one with rounded nose, big lips and dominant mandible typical for negroid anatomy, the other with pointed nose and thin lips typical for europoid anatomy. The rock art thus corresponds with the study of the skeletons but who was who? The paintings of the Round Head style present facial features only in the final phase showing clearly negroid traits (figs. 12, 13), whereas europoid traits in this style are absent. As for the images representing the pastoralists, both features – negroid and europoid – are present, which indicates that herders were a mix of different ethnic groups (figs. 14, 15, 16).

Regarding evidence for any relationship between the hunters and the herders, there is no scene of violence or fighting between individuals or groups visible in



Fig. 4. Uan Bender shelters are hidden inside rocks on a high hill (Tassili mountains).

the Round Head rock art, which may indicate that the hunters tolerated newly arrived populations in their territory. The relationship of the herders toward the hunters is also perceptible from their art. Pastoral paintings are found in a much larger geographical area, exceeding the borders of the Round Head territory, due to their transhumance settlement pattern and the seasonal search for fresh pastures. In the territory originally occupied only by hunters, the pastoralists painted in empty shelters, but they also painted in shelters which were already adorned with the Round Head images. However, only in rare cases were the images of domestic animals placed over the Round Head figures. Pastoral paintings were usually placed around, on the borders, filling the empty spaces on the wall (figs. 17, 18). Round Head figures never appear dam-

aged by later paintings or intentionally destroyed; on the contrary, a considerable respect for the previous art is evident.

The fact that the pastoralists used the walls with existing Round Head paintings shows how important these sites were. The consideration and attention of herders toward previous paintings may also indicate that these walls were still actively used by hunters. Indeed, in some cases there is clear evidence of the shared use of the same site by both cultural groups.

Coexistence and identity

In the Tassili mountains where most of the Round Head images are concentrated, there are some panels showing shared activity of hunters and herders. In the sites of Uan Bender and Uan Mata paintings of



Fig. 5. With the onset of an arid climate at around 3,500 BP, Saharan mountains became a pole of attraction for people and animals (Algerian Tadrart).

horned animals in the Round Head style were painted over images of domesticated cows in the pastoral style (figs. 19, 20). In another shelter at the Uan Bender site the central part of a long wall is covered with Round Head figures, whereas the lateral parts present numerous cattle (fig. 21). The position of the two different styles indicates that the Round Heads were painted first and the pastoral figures were consequently located in remaining free spaces. However, some pastoral paintings were also placed in the central part of the wall. Round Head human figures with masks and body decoration were later painted over these pastoral figures (figs. 22, 23). These examples not only confirm the presence of hunters during the pastoral phase, but they also indicate that during the “colonization” of the Central Sahara by new populations hunters maintained and manifested their cultural identity. Furthermore, these sites show that places which were considered sacred for the hunters were considered sacred also by the herders. The Uan Bender shelter is hidden inside rocks on a high hill (fig. 4), so that

pastoralists could have only come here without their animals, and they would have only done so if they considered the place important. Newly arrived herders adopted some of the shelters used long before by hunters because they acknowledged the spiritual power of such places.

We know from Herodotus that the hunters continued to live in the Central Sahara long after the arrival of the pastoralists and examples from the rock art confirm that hunters preserved their cultural identity during their coexistence with herders in the same region. However, this coexistence lasted several generations and it is therefore plausible to suppose that at least some of the hunters also adopted the productive economy based on domesticated cattle and later goats. Can an adoption of domesticates be observed in the Round Head art? Although there are no clear scenes of domestication in this artistic complex, some indicators may suggest a possible change.

At the Uan Mata site there is a painting of a single domesticated cow (fig. 24). Its horns are large and



Fig. 6a, b. Whole panel and detail. Round Head paintings representing human figures with body decorations and wild animals, mainly mouflons (Tan Zoumaitak, Tassili).



Fig. 7. A Round Head painting of a male figure holding a bow and an arrow. He is adorned with other body attributes such as horns, bracelet and a kind of a belt (Tin Tazarift site, Tassili). Photo enhanced with DStretch.



Fig. 8. Round Head paintings of antelopes. The biggest animal in the centre has only one horn and inclined head, an unusual position which may indicate a non-ordinary animal (Tin Mzghigaouin, Tassili). Photo enhanced with DStretch.

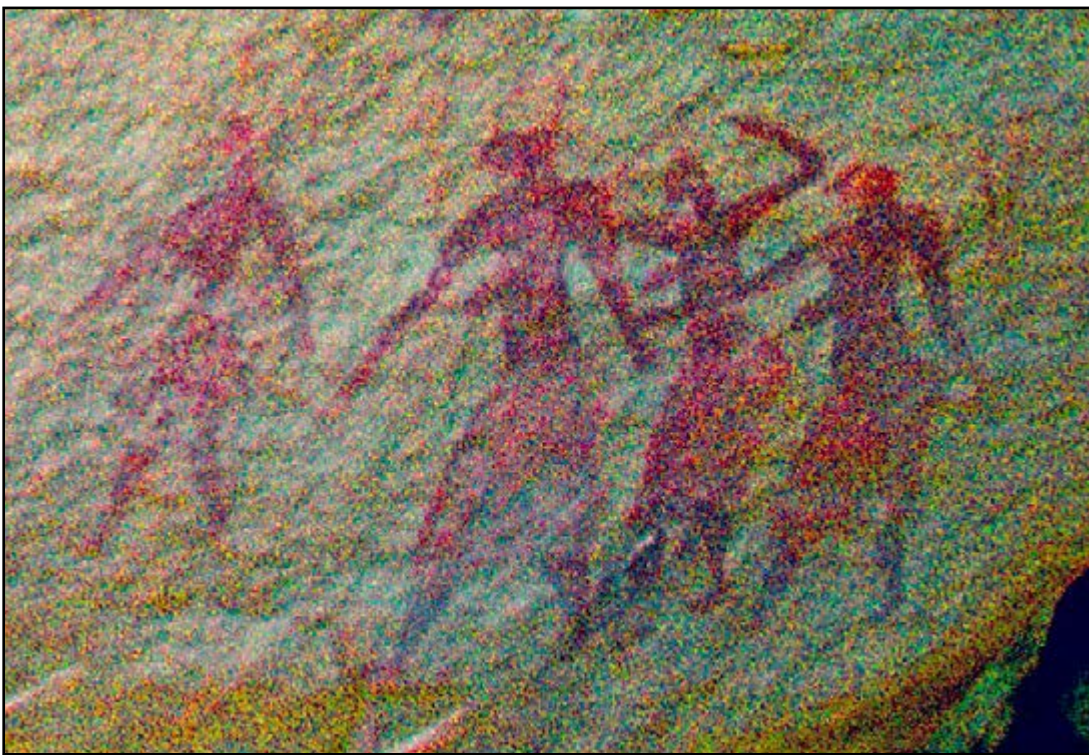
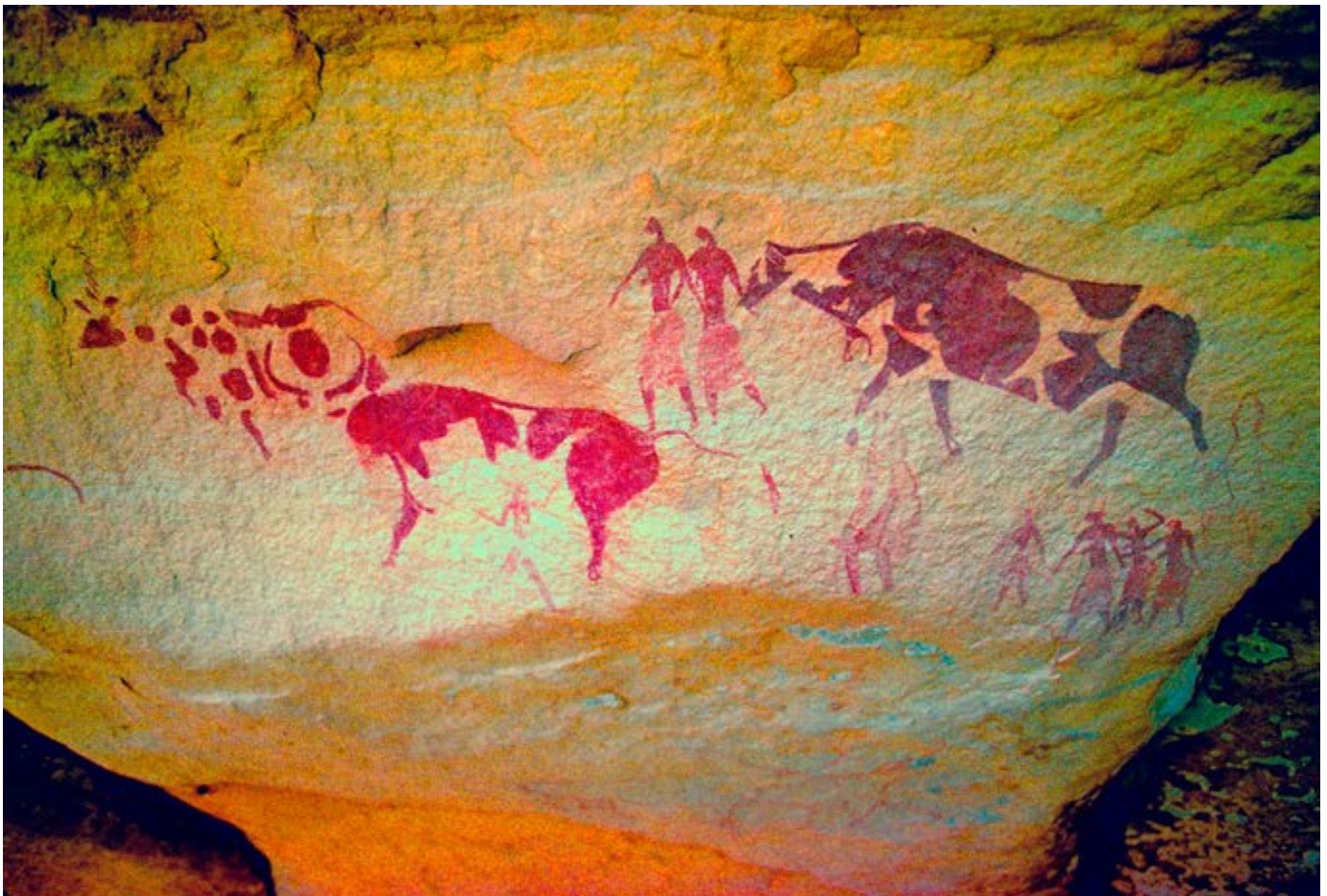


Fig. 9a, b. Whole panel and detail. Pastoral paintings representing women with domesticated cattle (Jabbaren, Tassili). Photo enhanced with DStretch.



Fig. 10. The main theme of pastoral paintings is domesticated cattle. Human figures and smaller animals on the left side of the panel are of the later Caballine period (Teshuinat, Acacus). Photo enhanced with DStretch.

curved in the shape of a lyre and between its back legs a probable udder is depicted. The typical thick red border of the painting and rounded shapes of the animal indicate the Round Head style. As this cow is isolated, it may represent the starting phase of domesticates entering into the economy of the hunters. This example is rather exceptional, so why are there not more cases of domesticated animals in the Round Head style? The answer may be in a complete change of lifestyle. If some groups of hunters became pastoralists, they would socialize with other pastoral groups, mix with them, entering into their culture and possibly adopting their habits and rituals.

The hypothesis of a fusion of Central Saharan hunters with the herders is plausible especially in the later phases of the pastoral period at around 4,000 BP (Barich 2002). In this phase the Saharan lowlands were progressively abandoned because of the increasing

aridity and life became concentrated in the mountains (fig. 5). Hunters and pastoralists must have shared a restricted territory and this was likely to have had a definitive impact on the disintegration of most of the hunting society.

Conclusion

Whereas some hunters merged with the herders and other hunters may have remained and survived in the Saharan mountains, other groups of hunters abandoned the Central Sahara in the arid period altogether. The most probable route of this migration was to the south toward the Chad basin, following rivers which still had some water even during increasing aridity (Maley 2010). Their culture continued in sub-Saharan Africa where we find impressive similarities in masks that are still used today and those represented in the Round Head art.

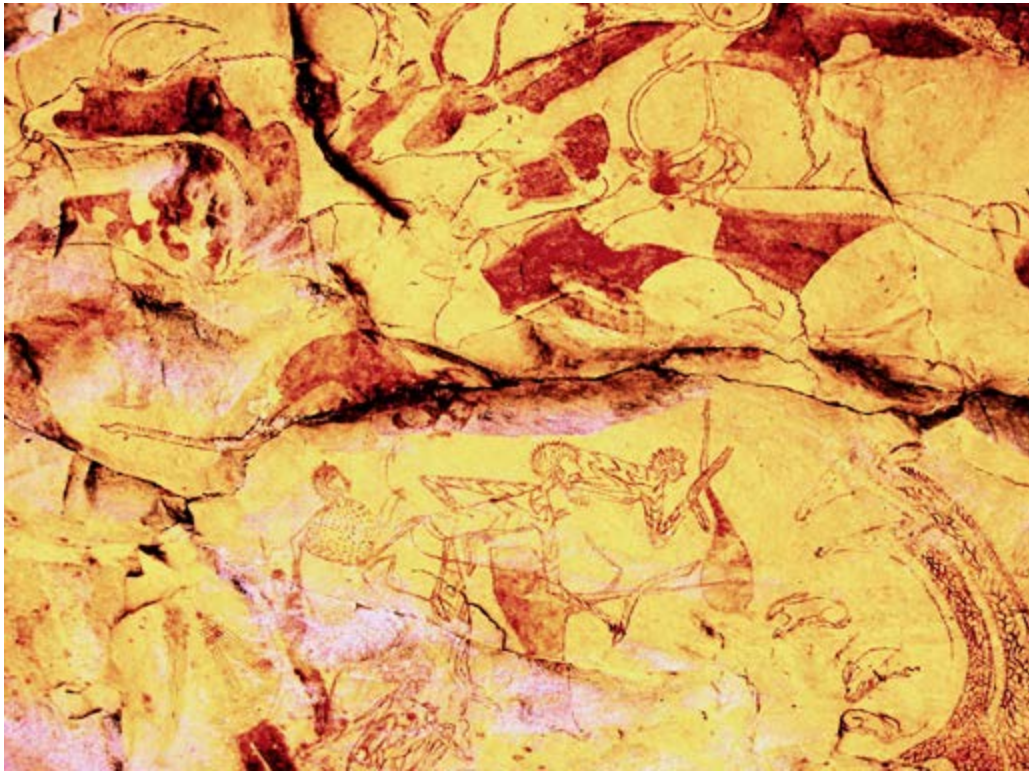


Fig. 11a, b. Whole panel and detail. A pastoral scene representing a herd of cows and a group of men cutting a killed antelope in pieces (Tikadiouine, Tassili). Photo enhanced with DStretch.



Fig. 12. A masked man of the Round Head style with a rounded nose, big lips and a dominant mandible typical for negroid anatomy. The upper part of the man's mask is superimposed by an image of a dromedary from the Camelline period (Techakelaouen, Tassili). Photo enhanced with DStretch.



Fig. 13. A masked male figure showing facial traits typical for a negroid population. Round Head style (Uan Mata, Tassili). Photo enhanced with DStretch.



Fig. 14. A pastoral painting of a man showing facial traits typical for a negroid population (Tin Aboteka, Tassili). Photo enhanced with DStretch.



Fig. 15. A pastoral painting of a man showing facial traits typical for a europoid population (Jabbaren, Tassili). Photo enhanced with DStretch.

Fig. 16. A pastoral painting of a domestic goat tied to a man showing tiny facial traits such as a pointed nose and chin (In Ferdan, Acacus). Photo enhanced with DStretch.

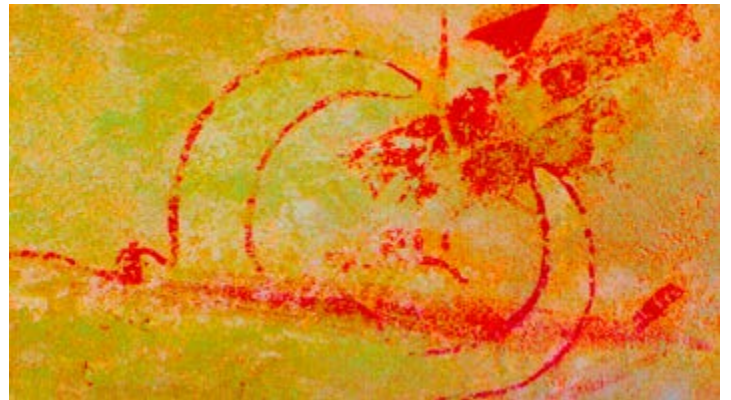


Fig. 17. Large Round Head paintings of an antelope and a wild bovid occupy the central part of the wall. Later images of domesticated cattle and dromedary were painted mainly around them, filling the empty spaces of the rock wall (Adjefou, Tassili). Photo enhanced with DStretch.

Fig. 18. A male figure of the Round Head style occupies the central part of the wall. The pastoral images were painted around this figure without affecting it (Ozaneharé, Tassili). Photo enhanced with DStretch.

Fig. 19. A detail of a horned animal in Round Head style covering partly domestic cows of pastoral style. This demonstrates that the hunter-gatherers did not stop producing paintings after the arrival of the herders (Uan Bender, Tassili). Photo enhanced with DStretch.

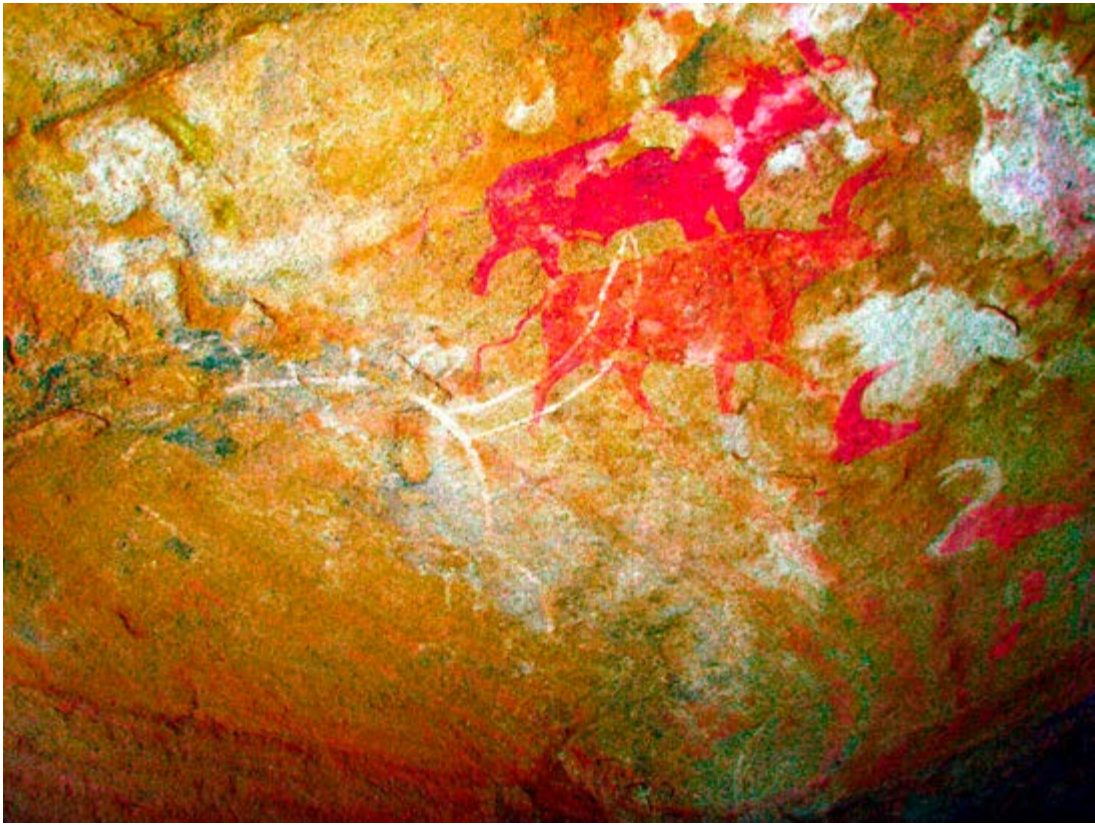


Fig. 20. A large horned animal of the Round Head style painted over pastoral cattle (Uan Mata, Tassili). Photo enhanced with DStretch.



Fig. 21. Pastoral cattle painted on lateral parts of a large shelter. Round Head figures are visible in the lower right corner of the photo (Uan Bender, Tassili). Photo enhanced with DStretch.



Fig. 22. Round Head figures with masks and body decorations painted over pastoral cattle. This example demonstrates that hunter-gatherers continued to produce paintings after the arrival of the herders in their territory (Uan Bender, Tassili). Photo enhanced with DStretch.



Fig. 23. A detail of the previous image. The Round Head figure painted over the pastoral cow testifies a shared use of this shelter by two different cultures (Uan Bender, Tassili). Photo enhanced with DStretch.



Fig. 24. Domesticated cow painted in the Round Head style may indicate that some of the hunter-gatherers adopted domestication (Uan Mata, Tassili). Photo enhanced with DStretch.

And what happened with the pastoral populations from around 3,500 BP, when the Sahara slowly turned into desert? Like the hunters, some groups with their cattle abandoned the territory toward sub-Saharan Africa, with the Sahelian biome being most suitable for their herds. Others decided to stay in the Sahara, but they had to adopt different economic strategies based on the husbandry of goats which are better adapted to dry conditions (Tafari *et al.* 2006). It is during this phase that we start to see a shift toward an oasis-based lifestyle and a more sedentary way of life.

Acknowledgements

I thank Prof. Jeremy Keenan, Dr Alistair Pike and Dr George Nash for their help with my early research. The University of Bristol, the AHRC and CompuNet S.r.o. are thanked for the funding. I would like to express my deepest gratitude to Brigitte and Ulrich Hallier and to Bernard Fouilleux who shared with me their knowledge and photographic documentation.

References

- Aumassip, G.
1980-1 Ti-n-Hanakaten, Tassili n'Ajjer, Algérie. Bilan de 6 campagnes de fouilles, *Libyca* 28-9, 115-27.
- 2004 *Préhistoire du Sahara et de ses abords* (Paris: Maisonneuve and Larose).
- Barich, B. E., 1987. *Archaeology and Environment in the Libyan Sahara – Excavations of Tadrart Acacus 1978–83* (Oxford: BAR. Series 368).
- Barich, B. E.
2002 Cultural responses to climatic changes in North Africa. In F. A. Hassan (ed.), *Droughts, Food and Culture. Ecological change and food security in Africa's Later prehistory* (New York/ Boston/ Dordrecht/London/Moscow, Kluwer Academic/Plenum Publishers), 200-23.
- Cremaschi, M., and Di Lernia, S.
1998 The geoarchaeological survey in central Tadrart Acacus and surroundings (Libyan Sahara). Environment and Cultures. In M. Cremaschi and S. Di Lernia (eds), *Wadi Teshuinat. Palaeoenvironment and Prehistory in South-Western Fezzan (Libyan Sahara)* (Milano: All'Insegna del Giglio/CNR), 243-95.
- Di Lernia, S.
1999 *The Uan Afuda Cave. Hunter-Gatherer Societies of Central Sahara* (Milano: All'Insegna del Giglio).
- Dunne, J., *et al.*
2012 First dairying in 'green' Saharan Africa in the 5th millennium BC. *Nature* 486, 390–94.
- Gifford-Gonzalez, D., *et al.*
2011 Domesticating Animals in Africa: Implications of Genetic and Archaeological Findings, *Journal of World Prehistory* 24, 1–23.
- Hachid, M.
2000 *Les Premiers Berbères. Entre Méditerranée, Tassili et Nil* (Alger/Aix-en-Provence: Ina-Yas,Edisud).
- Jelínek, J.
2004 *Sahara. Histoire de l'art rupestre libyen* (Grenoble: Editions Jérôme Millon).
- Maley, J.
2010 Climate and palaeoenvironment evolution in north tropical Africa from the end of the tertiary to the upper quaternary, *Palaeoecology of Africa* 30, 227-78.
- Mori, F.
2000 *Le grandi civiltà del Sahara antico* (Torino: Bollati Boringhieri editore).
- Muzzolini, A.
1995 *Les images rupestres du Sahara* (Toulouse: author's edition).
- Sansoni, U.
1994 *Le più antiche pitture del Sahara. L'arte delle Teste Rotonde* (Milano: Jaca Book).
- Soukopova, J.
2012 *Round Heads: The Earliest Rock Paintings in the Sahara* (Newcastle upon Tyne: Cambridge Scholars Publishing).
- Soleilhavoup, F.
2007 *L'Art mystérieux des Têtes Rondes au Sahara* (Dijon: Editions Faton).
- Serenó, P. C., Garcea E. A. A., Jousse, H., Stojanowski, C. M., Saliege, J. F. *et al.*
2008 Lakeside Cemeteries in the Sahara: 5000 Years of Holocene Population and Environmental Change. *PLoS ONE* 3(8): e2995. doi 10.1371/journal.pone.0002995.
- Smith, A. B.
2005 *Creating a Landscape for Saharan Pastoral Archaeology* (Oxford: BAR International Series).
- Tafari M. A. *et al.*
2006 Mobility and kinship in the prehistoric Sahara: Strontium isotope analysis of Holocene human skeletons from the Acacus Mts. (southwestern Libya), *Journal of Anthropological Archaeology* 25, 390-402.