# NIGER

# New studies on Marandet, central Niger

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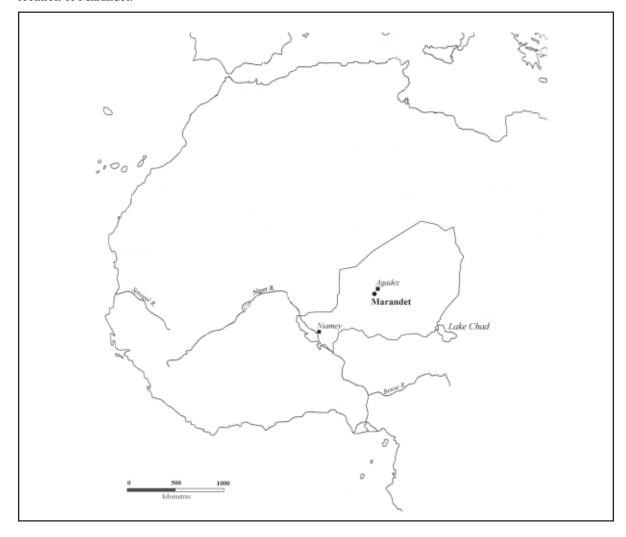
## **Background**

Some of the first written accounts on the lands of the Sudan, like those of the Arabic authors Al-Yaqubi (late 9th century AD) and Ibn Al-Faqih (early 10<sup>th</sup> century AD), mention among the most important towns, kingdoms and nations Maranda (MDYDH), situated between Marawa and Kawkaw (Gao) (Levtzion and Hopkins 1981: 21, 27). Ibn Al-Faqih and Ibn Hawqal (mid-10th century AD) place Maranda on the itinerary of an old, in Ibn Hawgal's times already abandoned trans-Saharan trade route leading from Egypt via "the Oases" to the kingdom of Ghana (Levtzion 1968: 231). The Arabic geographers' Maranda was tentatively identified by Mauny (1953: 33 and 1961: 139) with Marandet (16.3779°N, 7.4356°E), a water-point at the immediate proximities of the escarpment of Tigidit. Situated about 90 km southwest of Agadez (Figure 1), this location lies today in the northern Sahelian zone, in an area with only ca. 100-300 mm annual rainfall.

Marandet's possible relation with the historical locality *Maranda* and so linkage into an early

trans-Saharan trade network makes it appealing for historians and archaeologists. Its most remarkable archaeological feature concerns the large amount of clay crucibles linked to the working of copper, a highly demanded commodity in the 1st to 2nd millennium AD trade centers of West Africa. The site was previously examined by some researchers (Mauny 1961; Lhote 1972; Grébénart 1985) and its importance has being acknowledged in various publications (McIntosh and McIntosh 1988:116; Bernus and Cressier 1991:271-272; Grébénart 1983:116, 1988:165-168 and 1993; Gado et al. 2000:50; Haour 2003:31; Kea 2004:789; Willet and Sayre 2006:61-62). The most comprehensive study on Marandet was presented by D. Grébénart (1985), who also summarized previous investigations. Amongst other things, his own research included a functional and chronological differentiation of the site's sectors (Marandet I to IV) and a series of four radiocarbon dates which, combined with three assays submitted by H. Lhote, range from  $1700 \pm 100$  to  $530 \pm 80$  bp (Grébénart 1985:167, 1988:356, 361-362, 370, 378). From an archaeological viewpoint, Marandet I is not only the most interesting but also the most endangered area of the site: erosion caused by the Kori Marandet, a seasonal stream arising at the nearby escarpment, has been destroying the archaeological deposits for decades (Figure 2).

In the scope of a post-doctoral scholarship of the German Archaeological Institute (DAI) and of a collaborative research program involving Thomas Fenn and Dr. David Killick (University of Arizona) as well as the Institut de Recherches en Sciences Humaines (IRSH) in Niamey, preliminary surveys and excavations were carried out by the authors at Marandet. The fieldwork was conducted over a period of four weeks between February and March 2007. A previous survey by T. Fenn (2006) primarily aimed at collecting dating and metallurgical samples for archaeometric analysis in order to assess the origin of the ore used and the importance of Marandet as a supplier of copper in the West African Sahel. Main objectives of our own campaign were to make a general reconnaissance of the site as described by Grébénart, to gain a first impression of the extent of the copper working area (Marandet I) and to seek for evidence of traded items and their dating. A more detailed and better illustrated report on the fieldwork will appear on the German Archaeological Institute's periodical Zeitschrift für die Archäologie Außereuropäischer Kulturen (ZAAK).



**Figure 1.** Map of the northwestern part of Africa showing the boundaries of the Republic of Niger and the location of Marandet.

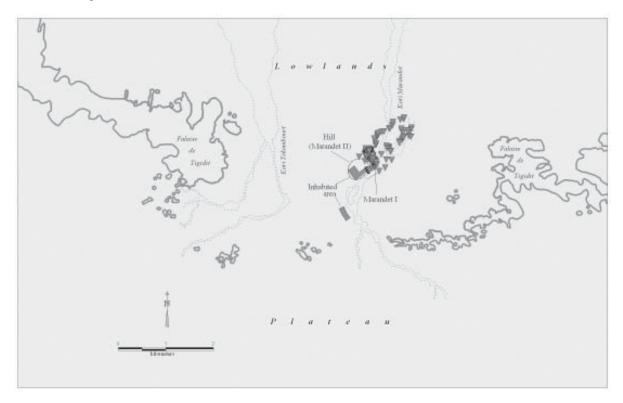
## **Field activities**

The task of locating the sectors of the site described by Grébénart (1985: 349-350) was only in part successful. The northeastern area which is associated with various pits and metallurgical remains (Marandet I) and the graves of unknown age on the hill (Marandet II) could be detected. However, we were only able to discover very sparse indications of the existence of a medieval habitation area southeast of the *dispensaire* (Marandet III). The 'neolithic' find cluster at the *école* (Marandet IV) could not be found. In the case of Marandet III, it is probable that the lack of visibility results from erosion on the slope area at the adjacencies of the hill. For Marandet IV the reason may be the active collecting of 'souvenirs' by

the modern inhabitants of the modern village, especially the school children. In fact, by our arrival at the site several artifacts as ground stone axes and stone arrowheads were repeatedly displayed and offered to us for sale.

Following the reconnaissance, the mapping of the site was initiated. Starting point was setting up two cemented datum-points which are now located on the northeastern slope of the hill. They served as reference for a total-station survey that aimed at generating a line contour map of the site, plotting visible finds and features as well as pegging out the area of Marandet I for the planned magnetic survey. The latter was carried out by means of a Foerster FEREX 4.032 three-channel fluxgate gradiometer. Amongst

**Figure 2.** Map displaying the topographic and hydrological situation of Marandet's surroundings and the location of Marandet I and II. The possible extent of Marandet I is shown by the distribution of clay crucibles (inverted triangles).



other things, the resulting magnetic plan shows a dense cluster of large (up to about 3 m wide) circular magnetic anomalies on the bed of the stream as well as on its adjacent margin. Most of the features indubitably correlate to the above mentioned pits, some of which are clearly visible at the proximities of the kori. Towards northwest, a cluster of smaller magnetic anomalies seems to indicate the prolongation of the site's deposits over a considerable distance from the kori (about 400 m).

Although excavations are needed to confirm the nature of the latter anomalies, a mapping of clay crucibles visible on the surface suggests that some of them may be pits associated with metallurgical debris. The mapping has also shown that the crucibles scatter over an area of at least 1200 by 500 m (Figure 2). Nevertheless, it remains to be examined whether the recorded distribution of crucibles corresponds to the extent of the copper working sector or just results from the transport of crucibles by the stream.

A further finding of our surveys refers to the necropolis of unknown age on the top of the hill (Marandet II). As the distribution of crucibles and interments shows, the necropolis occupies an area of the site clearly secluded from the copper working sector. It remains, however, unclear yet whether both areas are contemporaneous, i.e. whether the craftsmen of Marandet I were buried in Marandet II.

Beyond the surveys, three of the pits of Marandet I were sectioned by excavations. All three pits are nearly bowl-shaped. Their diameters range from about 1.3 m and 3.6 m and their depth between 0.3 and 1.1 m. The material recovered mainly consisted of domestic refuse in form of potsherds, animal bones, charred plant remains and ash. Unavoidably, clay crucibles, some few copper droplets and small pieces of copper were found in the pits' fillings. Iron artifacts were extremely rare finds. Through the systematic sifting of the whole sediment excavated, even the smallest finds were retrieved and a total of almost a hundred small beads, mostly glass and os-

trich egg shell examples, were discovered. The pits were also sampled for archaeobotanic remains. The preliminary analysis of pottery and food remains and the discovery of some luxury commodities point to both local/regional production of goods and trade contacts to distant regions. In this context, it seems that Marandet played a specific role in a trading network that linked the Sahel with the Sahara and beyond. Dating and thorough analysis of the recovered evidence will be the next steps for disentangling the site's regional and inter-regional connections.

# **Conclusions and prospects**

The preliminary results of the first fieldwork in Marandet are extremely encouraging and represent an excellent foundation for future archaeological research in the site. As the surveys suggest, the copper working area might be larger than formerly recognized. Although containing some few metallurgical refuse, there are no hints that the excavated pits, at least the two largest, were features used in copper working. In fact, the profusion of domestic debris rather points to their proximity to a living area and thus suggests that their primary function was, as in the modern village nearby, related to the constructions of buildings. Nevertheless, the presence of crucibles and copper droplets in the pits indicates that copper was being smelted in the immediate surroundings. The most probable scenario is therefore that copper was being worked, at least partly, in domestic areas.

The 2007-fieldwork provided new archaeological data on Marandet, but several new questions have arisen. Some of these relate to the nature of the anomalies detected by the magnetic survey, others pertain to the real extent of the entire site and its organization. Still others are of chronological character. In this respect, more surveys, but particularly more excavations are needed to understand Marandet, its role in West African trade networks and perhaps its relation to the historic *Maranda* mentioned by the medieval Arabic authors. The next field campaign will be dedicated to clarify these questions.

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