

## ■ NIGERIA

### **New evidence of proto-urban settlements in the Lake Chad area**

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In the last three decades subjects related to the development of socio-economic complexity in sub-Saharan Africa have become a major focus for African archaeology. Concerning the factors which started this process, there has been a general consensus that agricultural surplus, functional specialisation and finally trade definitely promoted the growth of complex communities and contributed to the rise of precolonial urban centres and states. Furthermore, scholars are now of the opinion that local and regional trade networks are much older than long-distance ones and that they played a fundamental and pioneering role in the development of complex social systems of African societies (Connah 1987; McIntosh 1995; McIntosh 1998). Recent archaeological research and on-going studies in the sahel-savanna belt of West Africa have been partly responsible for the understanding of the transformation processes experienced by those communities.

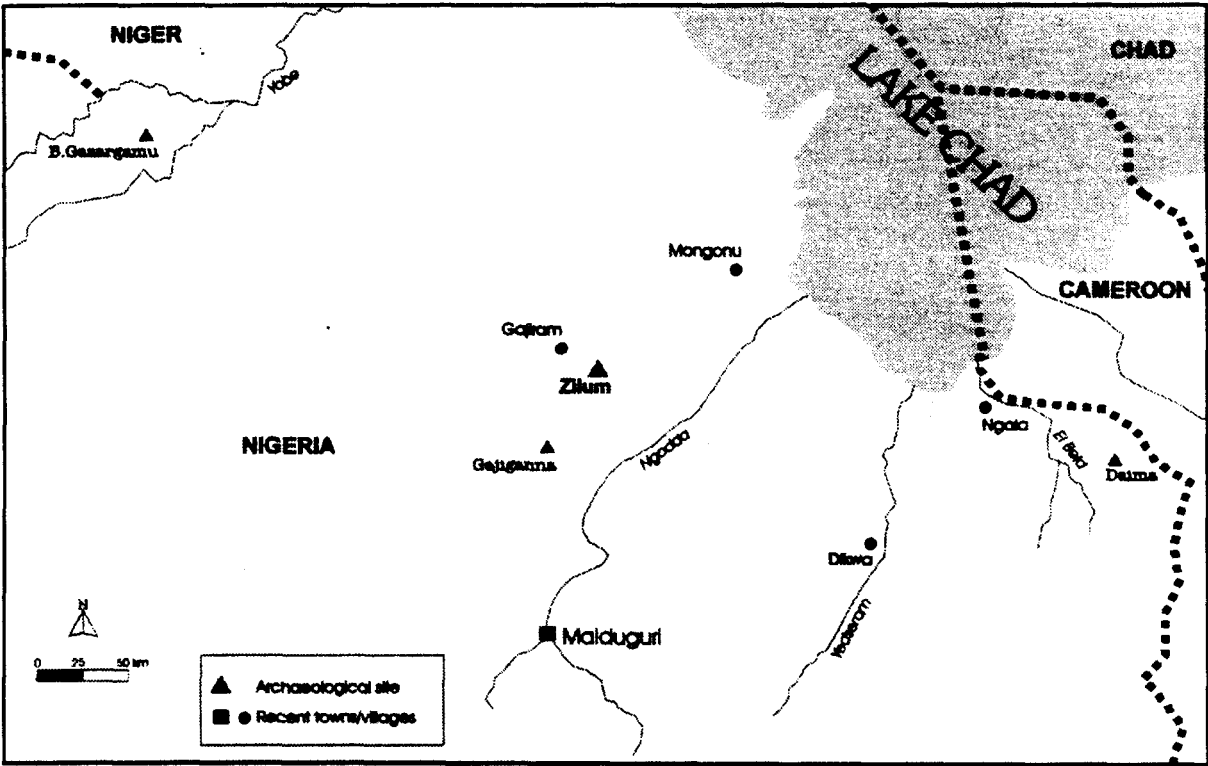
Among other regions, the Inland Niger Delta and its environs rank as one of the best studied cultural landscapes in sub-Saharan Africa. Concerning the beginning of urbanisation, here one comes across the earliest known example for the indigenous development of what is thought to have been a town. Excavations of the settlement mound of JennÉ-Jeno in Mali and the investigation of its surroundings convincingly show a continuous growth of the site and nearby villages from the 3rd century BC onwards. During the first centuries AD, the village of JennÉ-Jeno gradually but steadily increased into an area of more or less 6-7 ha and by 300 AD its size had exceeded 25 hectares (McIntosh and McIntosh 1980; McIntosh 1995). Until recently,

indication for the emergence of early urban settlement systems based on the appearance and expansion of local and regional trade lattices remained restricted to the evidence found in Mali. However, recent archaeological research carried out by the Frankfurt Project in the Lake Chad area of Nigeria probably makes necessary a revision of this position.

After the investigations on the LSA cultural development of the Gajiganna Complex as well as research on the settlement history in the firki clay plains reached their final stages (Breunig et al. 2001, Breunig and Neumann in press; Gronenborn 1998), the focus of the Frankfurt Project was set on the period of transition between Stone Age and Iron Age (Magnavita 1999). In the course of works conducted on the Gajiganna Complex in the last five years or so, a drastic change in settlement pattern and material culture within its supposed last phase was noted, and questions concerning the end of this Stone Age complex, above all its dating, were raised (ibid). Up to 1999 the available C14 data suggested that the Stone Age Gajiganna Culture probably came to an end around 800 cal BC. Since no known site of the region with a clear LSA component had an age older than the '800 BC Barrier', it was proposed that LSA populations either abandoned their former dispersal area or that their material culture left no recognizable 'Stone Age attributes' (Breunig et al. 2001). Although a causal relation between the disappearance of LSA complexes and the onset of Iron Age cultures does not necessarily need to exist, in neighboring regions the Iron Age seems to have started just some centuries after the supposed end of Gajiganna times (McEachern 1996; Gronenborn 1998). Thus, it was thought that research on the Iron Age of the former Gajiganna settlement area could resolve the question of the fate of LSA populations. Since our activities on the subject began in 1999, the assembled evidence has revealed very surprising findings on the archaeology of the Lake Chad area.

Without going into detail on the chronology and cultural processes of the period after 800 BC, which will be discussed in forthcoming publications, the first results of our research permit a number of deductions based on old and new data: e.g. that the Gajiganna Complex was apparently still flourishing for at least a couple of centuries after 800 BC. Hence, our first assumptions about the

Figure 1. Location of Zilum and other known archaeological sites in NE Nigeria.



possible end of the Complex turned out to be a problem of archaeological visibility, resulting from extreme changes in the settlement pattern and material culture found in the latest Gajiganna sites. The reason for such a transformation is still poorly understood, however there could exist a connection between these changes and the type of settlement found in the subsequent period.

Based on the ceramic sequence established for the Iron Age of the former Gajiganna settlement area in the first months of field research in 1999, only two of about 400 known sites could be ascribed to transitional or Early Iron Age times. This led us to believe that the sand plains were virtually depopulated after recognizable LSA-Gajiganna settlements were abandoned. Indeed, in course of the last year we were able to locate some other sites of the same age, however by far not the amount of settlements known from earlier and later periods. Although the number of transitional or Early Iron Age sites in the area seems to be very restricted, those few examples exhibit unique characteristics compared to the remaining prehistoric settlements of the region: their physical attributes as

density of features and size (area/population) exceed several times those of LSA Gajiganna villages.

The largest of these known settlements is Zilum (Figure 1), which covers an area of 10-13 ha and thus possesses urban proportions. Although its accumulated cultural deposits have not built a visible mound, the area of the site could be easily determined because a large part of the former settlement had been heavily eroded in the course of centuries. On the other hand, some parts of the site are still topped by an up to 70 cm thick layer of sterile sand, so that the settlement's surface area could be far larger. Surprisingly, the eroded portions of the site provide us with the most information about the settlement: in several places, the absence of the upper portion of the cultural layer proved to be advantageous to understand the true nature of the settlement, since the erosive processes worked as a 'large natural area excavation' revealing numerous well-preserved features and finds in situ.

Three types of features seen on the site's surface attract attention. The first is the presence of

large potsherds and whole, but broken vessels, which rise from the soil in dense packets. Some of these features appear to be the eroded upper part of rubbish or storage pits, which still contain numerous types of finds but above all potsherds. The second type of feature seen on the surface consists of slightly elevated areas of partly burnished hard clayish sediment enclosed by softer clayish deposits. Comparatively, this type of feature is sometimes covered by greater quantities of potsherds, bones and stones than the surrounding area. It is believed that they represent the remains of buildings formerly constituted of coarse mud or wattle and daub, since countless burnt pieces of the latter material can still be seen on or close to those areas. The third and most unusual type of feature found in the site consists of a series of cauldron-like structures arranged side by side and forming a network of large 'buried clay bowls'. They only appear clustered in the central northeast part of the settlement and their importance as a close area of production within the site is conceivable. Although the kind of goods manufactured in this part of the site is yet unknown, it is at least plausible that activities like tanning or salt production were carried out in this place.

Another probable area of production can be seen in the south and southwest parts of the site. In these zones, and apparently nowhere else, a clear concentration of a particular find category, the so-called 'mushroom pestles', occurs. Such objects have been recorded by ethnoarchaeologists as instruments used in pottery production (Gallay 1981; Huysecom 1992), and the same purpose is assumed for the objects found in Zilum. Since these zones present dense clusters and larger quantities of building-like structures than other portions of the site, following ethnographically known examples (La Violette 2000), we suppose the former existence in this sector of a combined 'residential and potter workshop area'.

The presence of features and artifacts suggesting the possible division of a site of Zilum's dimensions into areas of specialized or semi-specialized production is *sui generis* for medieval and historic settlements of urban character like Jenné-Jeno, Tegdaoust or Begho (McIntosh and McIntosh 1984). As in the case of the site's dimension and density, the peculiarity concerning the occurrence of those areas of manufacture in Zilum is however

remarkable due to its early date of development. While the organisation of artisanal production in quarters at Jenné-Jeno only could be detected for the end of phase III/beginning of phase IV, i.e. 8th-9th century AD (McIntosh 1995), the evidence available up to the present seems to indicate that a similar complex craft system possibly existed in Zilum in the very beginning of the Iron Age.

Even before any radiocarbon dates were available, the established ceramic sequence pointed to a relative early date for the last settlement phase of Zilum. The composition of decoration techniques and basic vessel forms showed a closer relation to LSA than known Iron Age assemblages. Furthermore other items of material culture like bone points and harpoons found on the surface and in cultural deposits of the site clearly underlined its LSA heritage. Although evidence for iron-smelting and iron-working was not found in Zilum, there is indication that iron was not unknown among the inhabitants of the settlement. At present, two available radiocarbon dates for the site suggest an age of  $2483 \pm 41$  BP or 789-407 cal BC (2-sigma, Erl-3130) for its earliest and  $2359 \pm 42$  BP or 515-373 cal BC (2-sigma, Erl-3312) for its latest settlement phase. For some Africanist historians and archaeologists this date probably will seem to be 'too early' for the kind of evidence found in Zilum. However, it should be noted that socio-economic complexity in West Africa is possibly a more ancient phenomenon than so far believed. For instance, a certain degree of complexity in social organisation has been proposed for the Dhar Tichitt settlements (Holl 1986) and the Gourma pseudo tumuli (MacDonald 1998). A more detailed report on the archaeological works in the Lake Chad area at this supposed proto-urban centre and at its rural surroundings is in preparation.

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