

A BRIEF SUMMARY OF THE EARLIEST NEOLITHIC SETTLEMENTS IN THE EASTERN SAHARA

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Recent work near Bir Kiseiba, in southwestern Egypt, have provided additional information on the earliest settlement of the Eastern Sahara in the early Holocene. As a result of these new data, the terminology used to describe these early occupations have been revised. Preliminary, the early occupations were called "Terminal Paleolithic". They were regarded as the final expression of the paleolithic way of life in the Eastern Sahara simple hunters and gatherers. The recent finds, however, have disclosed the presence in even the earliest of these Holocene sites of both well-made pottery and of cattle, believed to be domestic. For this reason these sites are now called "Early Neolithic" to reflect the implied control over the production of food indicated by the domestic cattle. The cattle are intermediate in size between typical wild *Bos primigenius* and fully domestic *Bos*; however, the major argument in favor of a domestic status for the cattle is ecological. There are no other large mammals present, such as one would expect in a natural community which would include wild *Bos*, but only small gazelle and hare. Cattle require water every two or three days and this was not available in much of the Eastern Sahara, except at the wells dug by man.

It is thought that these earliest Holocene occupants of the Eastern Sahara entered the area seasonally as cattle pastoralists from the Nile Valley, where wild cattle occur and were frequently hunted by man. We have no sure evidence for domestic cattle in the Nile Valley at this time, but they may well have existed since the few bones of cattle kept for milk and blood would not be readily distinguished among the overwhelming number of bones of the cattle hunted for meat.

It is also thought that the pottery, because it is always very rare in the Eastern Saharan sites (and the Nilotic sites), must have been made elsewhere, presumably somewhere in sub-saharan Africa, because it seems to occur in several places in the Southern

Sahara at about this same time. In design and technique the Saharan pottery is radically different from the roughly contemporary ceramic tradition evolving in the Near East. A separate African center for the development of pottery is suggested.

The early Holocene settlements are the first known occupations in the area after the Aterian, which is believed to be more than 45,000 years old. A prolonged period of hyper-aridity separated the Aterian wet interval from the onset of monsoonal rain which marks the beginning of the early Holocene. When these rains began is not well dated, but they clearly began before 10,000 B.P., and perhaps before 11,000 B.P. There are at least two brief, sharp episodes of hyper-aridity within a long interval of relative moisture which continued until sometime after 5,000 B.P. Even in the wettest intervals, there was a marked seasonality to the precipitations, with a wet period, presumably during the summer, when the basins contained water and typical playa sediments accumulated, and a dry season when the basins were dry.

Three intervals of relative moisture have been defined, separated by episodes of hyper-aridity. The moist period have been named: Playa I, from before 10,000 to 8,200 B.P. (with at least two brief arid events, around 8,300 B.P.); Playa II, from 8,100 to 7,900 B.P.; and Playa III, from 7,800 to after 5,000 B.P. (with an arid phase just before 6,000 B.P.). The Early Neolithic has been divided into four types, each of which is distinguished by a specific complex of lithic artefacts and seem to occupy a particular interval of time. The earliest known Holocene settlements occur with both cattle and pottery. This occupation, the El Adam type of Early Neolithic, have been dated (with 10 radiocarbon dates) at three sites between 9,800 and 8,900 B.P. These sites all contain lithic assemblages dominated by straight backed or slightly arch backed pointed bladelets. Only a few sherds of pottery have been recovered,

but they are from well made deep bowls decorated over the exterior with comb-impressed designs characteristic of the Saharan Neolithic or "Early Khartoum" style. These early sites are all small settlements located in the lower parts of seasonally flooded basins and in each instance there are several meters of playa sediments below the earliest occupations, indicating that a significant interval of increased rainfall preceded the earliest known settlements.

The next series of Early Neolithic sites, known as the El Kortein type, is dated between 8,800 and 8,600 B.P. They are distinguished by the presence of numerous stemmed points, similar to the Harif Points in the Negev Desert and to the Ounan Points of the Central and Western Sahara. Cattle remains have been found in two of these sites (the only two with preserved fauna), but the presence of pottery has not been conclusively established. All of the known El Kortein sites are also small and are located in the lowest part of seasonally flooded basin or playas.

The El Ghorab type of Early Neolithic, with several dates between 8,500 and 8,200 B.P., is characterized by numerous elongated scalene triangles with small short sides. Some of these sites have houses, but all of the occupations are small and they are also located in the lower parts of seasonally flooded basins. Several of them have yielded cattle bones, and two of them have produced pottery, in both instances only a few small sherds, and these are decorated with comb-impressed designs of the Sahara Neolithic tradition.

A major episode of aridity, recorded by a lower water table, the accumulation of aeolian dunes and the erosion of the preceding sediments of Playa I, separates the El Ghorab type from the succeeding and final variety of Early Neolithic in the Eastern Sahara, the El Nabta type, which makes its appearance at the onset of the next interval of moisture, known as Playa II. The lithic industry still retains a paleolithic character with numerous well-made burins, elaborate matches and retouched pieces, and perforations, but there is a dramatic change in social structure. The sites now consist of organized villages with ten or more houses arranged in lines,

and each house has one or more deep bell-shaped storage pit. There are also large, deep "walk-in" wells. The pottery, while similar to that in the earlier horizons, now has the characteristic "dotted wavy-line" impressed decoration first described by Arkell from Early Khartoum, and also widely known elsewhere in Saharan Neolithic sites. Cattle bones are present, but still rare. Domestic, six row barley is present. Numerous radiocarbon dates place the El Nabta type between 8,100 and 7,900 B.P. The source of the El Nabta type of Early Neolithic is not known. Unlike the earlier types which have numerous parallels among the known contemporary settlements along the Nile between the First and Second Cataracts, the El Nabta type is not recorded anywhere else and for the moment its appearance must be viewed as an enigma.

Playa II and the El Nabta type settlements terminate with yet another intense, brief interval of aridity, dating between 7,900 and 7,800 B.P. Reoccupation of the area begins almost immediately after 7,800 B.P. by groups assigned to the Middle Neolithic. The lithic industries in these sites are radically different from those of the Early Neolithic. There was much greater use of lower quality raw materials, particularly quartz and sandstone; many of the tools are unstandardized notched, denticulated, and retouched pieces, and the characteristic forms are new types, such as segments, and a variety of presumed projectile points, including triangular, lozangic and hollow-based forms, often with some bifacial retouch. The pottery is still within the Saharan Neolithic tradition, but "woven mat" designs are dominant. Both domestic wheat and barley are known, and caprovids may have been present, as well as cattle. A complex settlement system has been reconstructed for this period, with the desert being occupied throughout the year.

The Late Neolithic, distinguished by burnished and painted pottery, succeeds the Middle Neolithic around 6,000 B.P. under conditions of increasing aridity. Occupation continued until about 5,000 B.P. when the area was abandoned, except for brief incursions for specific tasks, such as the exploitation of the Chephren diorite quarry.