

## ■ GHANA

### **An investigation of the Kintampo "Neolithic" complex site at Nkukua Buoho near Kumasi, Ghana**

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## **Introduction**

Between January 14 and March 28th, 2000, the author conducted a survey and test excavations at the Kintampo complex site of Nkukua Buoho in the Ashanti region of Ghana. It is the site that was described by Anquandah (1995) as probably the most impressive of the Kintampo complex sites located in the Kumasi district.

The Kintampo 'Neolithic' complex, which got its name from a type-site at Kintampo in the Brong-Ahafo region of Ghana, provides the first 'reliable' evidence for village-based life in West Africa, with an economy probably based on farming. Today, the Kintampo complex is regarded as an original 'Neolithic' tradition in Ghana and the Côte d'Ivoire. According to Anquandah, for a site to be recognized as Kintampo, it ought to be characterized by evidence of sedentism and building technology, mixed subsistence economy (hunting, fishing, agriculture, etc.), cottage industries and crafts (potting, ground and flaked stone implements, beads, etc.) and terracotta figurine art (Anquandah n. d.). Based on this definition, about 27 Kintampo sites have so far been identified in Ghana, and two in Côte d'Ivoire (Anquandah 1982; Chenorkian 1983), radiocarbon dated between c.2000 BC and 500 BC.

The site of Nkukua Buoho is a granite hill that rises to 384 m and extends about 150 m in diameter. Sutton (1978-1979) indicates that, there are granite hills close to Kumasi with thin soils bearing grass, and sometimes borassus palms. One of such granite hills he indicated, was the Nkukua Buoho site (on the Kumasi-Techiman trunk road) about 12 km north of Kumasi (6°47'N, 1°39'W). L. E. Newton, a botanist at the University of Science

and Technology, Kumasi discovered it and the Boyasi hill site. He undertook a surface collection in 1979 and recovered three *nyame akumahs*, a 'cigar' fragment and a grooved stone. He also located other fragments of potsherds and grinding grooves (Sutton 1978-1979).

After Newton and Woodell, it took a long time before an archaeologist set foot on the Nkukua Buoho site. Anquandah (n.d.: 18) indicates that during his 1982 fieldwork at Boyasi hill, he visited the site and collected a few artifacts. He records in his unpublished manuscript of the Boyasi site that the Nkukua Buoho hill is littered with a lot of remains of daub, comb stamped pottery, polished stone axes, rasps, bead polishers, microliths and microcores. Anquandah recommended that the whole area be scored in detail, after which a large-scale excavation exercise could proceed. It was with this information that I decided to undertake work at this site.

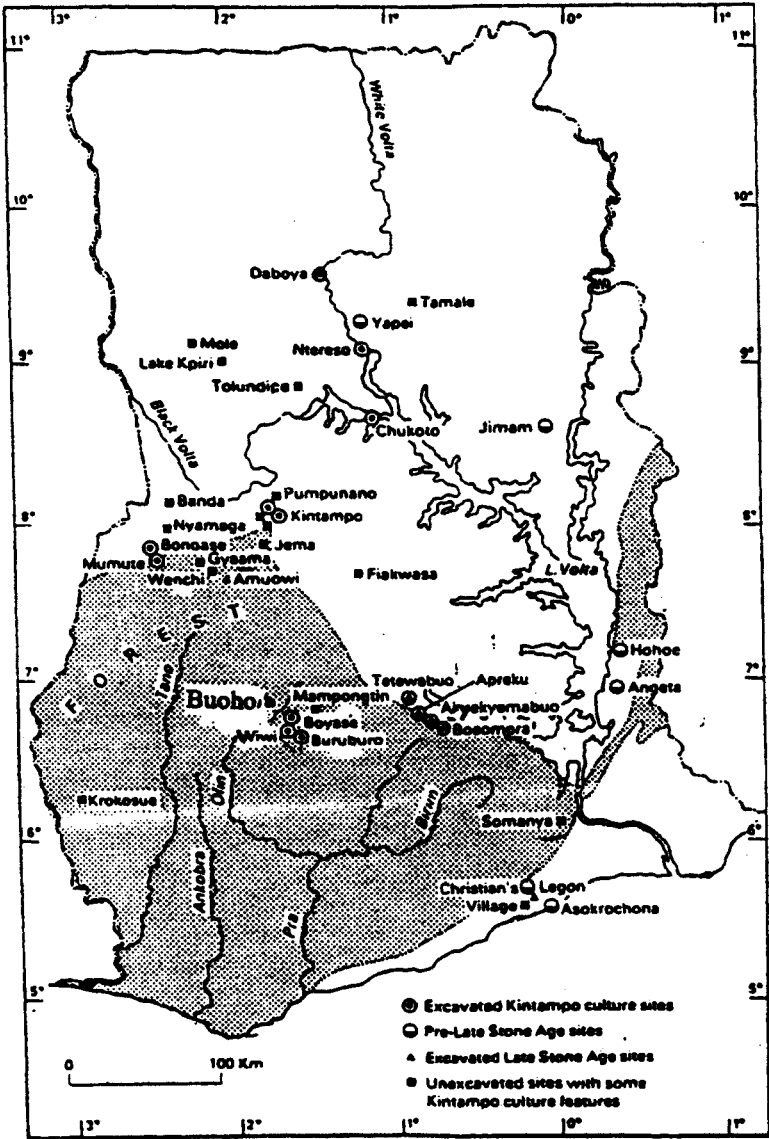
## **Aims of the research**

The site of Nkukua Buoho is located near the present day town of Buoho, which is at the foot of a granite inselberg hill, 384 m high with a sharp gradient (Figure 1). Surface collections in 1982 revealed the presence of Kintampo artifacts on the site. Objectives of this research were (1) to delimit the extent of the Kintampo settlement through excavation, (2) to determine how the forest Kintampo differs from the savannah form, using ceramics (3) to find evidence for subsistence practices and sedentism, and (4) to get a radiocarbon age estimates for the forest Kintampo complex.

## **Surveying and mapping**

The first season of fieldwork was in February 2000. Since the grotto rock that has been built on top of the hill is a permanent feature on the site, we used it as the datum point. This enabled us to divide the whole site into four quadrants. A team of 6 archaeologists, under the direction of the author, undertook a thorough surface collection and inspection using the coiling method. Artifacts were collected from the four quadrants, and areas with clusters of artifacts were noted. Several potsherds, most of them with surface decorations of grooving and stamping, were found during the survey. Other

Figure 1: Map of Ghana with Buoho at the southwest.



artifacts collected include *nyame akumah* (polished stone axes), baked clay cigars and daub material with wooden impressions on them. Many grooved granite rock outcrops were found closer to the summit of the hill, which were likely used for sharpening polished stone axes.

The local priest of the Buoho Catholic Church, Fr. Baffuor Awuah, provided us with the site plan of the Buoho hill. A map of the area was produced (Figure 2), with the location of (1) the rock outcrops with grooves on them, used by for the manufacture of various stone implements, (2) *Borasius etiopium* (locally called ‘Oman Kube’ or

popular coconut), (3) the footpaths used by the pilgrims to climb up the hill, and (4) the exact location of excavated trenches.

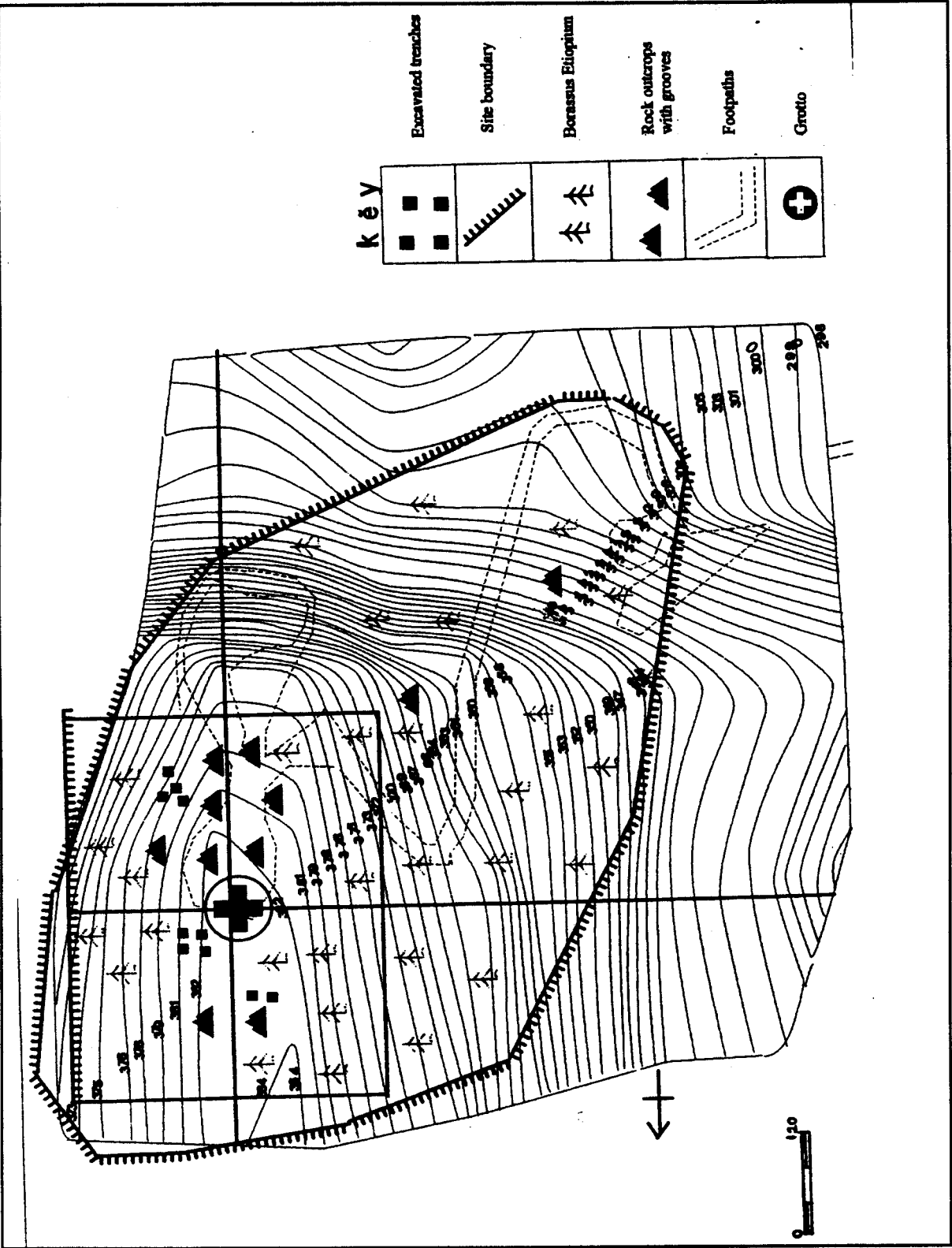
Excavations

Ten trenches were sunk during the February 2000 field season. Two additional pits were later opened in quadrants 2 and 3 respectively. By the end of the first session, six test pits had been opened within the three quadrants.

Trench 1A. This is a 3 x 2 m trench in the northwest quadrant. It was excavated to the depth of 40 cm. From 0-20 cm, we saw a stratigraphic horizon of dark brown humus soil with specks of roots. There was no significant color change, as we proceeded from the 20-40 cm level. The dark brown soil with rootlets still continued but had little humus content. At 40 cm from the datum line, slabs of rocks were encountered covering about half of the trench. Small fragments of pottery, many of which had no decorations were uncovered from the levels.

Trench 2A. This is a 2 x 3 m trench that falls within the north-eastern quadrant. It was excavated to a depth of 40 cm and displayed two stratigraphic levels. From 0 to 20 cm, we encountered a horizon of dark brown clayey humus soil with root hairs. Heavy rock boulders were also uncovered. The cultural materials recovered include a few pieces of pottery and chipped stones. The sediments were very dry, reflecting severe hamattan conditions. From 20-40 cm, we encountered a dark brownish clayey horizon with gravel and root hairs. At exactly 40 cm from the datum line, slabs of rock boulders with deep corrugations were encountered. They covered about three-quarters of the trench. Artifacts included some decorated potsherds and a single bead, which was found at the 35 cm level in between the rocks.

Figure 2: Map of Nkukua Buoho indicating the excavation pits.



Trench 3B. This is a 2 x 3 m trench located in the southeastern quadrant. As usual, the soil is very compact, so was excavated using pickaxes, shovels and trowels. The dig proceeded by 20 cm spits. At 0-20 cm, several potsherds were recovered. There were also granite stone features. The horizon at this level was a dark brown clayey humus horizon with inclusions of root hairs. This gives way to a dark brown clayey horizon with gravel as one moves to the 20-40 cm level. Again the main cultural materials recovered were pottery. At 40-60 cm, the dark brownish clayey horizon with gravel and root hairs continued. Some granite cobbles were also uncovered. Many potsherds were associated with this level. When we move to the 60-80 cm level, we see a light brownish sandy horizon with several cobbles and root hairs. Many fragments of potsherds were recovered. Two cigars were recovered from the 70 cm level. The upper terrace of the trench hits the sterile at 80 cm, but the lower terrace continues to 100 cm. The horizon was that of a light brown sandy nature, with mixtures of cobbles and gravel. Table 1 describes the soil horizons as represented in trench 3A. With few exceptions, the horizons of the other pits follow the same pattern. But due to the sloping nature of the terrain at Buoho, and the numerous rock outcrops in-between the soil, the horizons are not very clear.

## Cultural material

Several kinds of artifacts were recovered from the excavations. They include potsherds, daub or daga with wooden pole impressions, polished stone-axes, terracotta cigars or 'rasps', stone bracelets, bead polishers, *Elaeis guineensis* seeds, a single bead and flaked stones (Figure 3). A detailed study of the artifacts is being undertaken; the following are preliminary results.

The February 2000 excavations yielded some 2920 potsherds whose provenance is indicated below. They are similar to the 1322 potsherds recovered during the surface collection. Vessels are categorized into two groups, jars and bowls (Figures 4 and 5). Jars are vessels with at least two points of inflection. An outward curve or angle forming a shoulder, and an inward curve or angle forming a neck. Bowls are vessels with a single point of inflection in its profiles. This is an outward curve that forms the shoulder area of the vessel.

Jar type A (long rimmed jar) has a well everted rim passing smoothly into the body. In many cases high, fairly narrow, concave necks exist. The eversion of the rims here limit the orifice of the vessels and does not allow the contents to be stirred. It is difficult to use vessels with such high necks for cooking or other kinds of food preparation, but possible functions include storage and serving of liquids. Jar type B (short rimmed jars) is another form of type A vessel. Unlike type A however, they have simple everted rims passing smoothly into the body and in many cases have short, concave necks. The everted rim on type B vessels does not limit the orifice of the vessel, thus allowing the contents to be stirred, but make it possible to pour liquids. Possible functions therefore include cooking and other kinds of food processing, serving/eating. Another possibility is storage, since the vessel is easily sealed by fastening a cloth or hide over the mouth using a string tied under the rim. Jar type C (long rimmed jars with angular necks) is distinguished from type A by the angled joint between a straight everted rim or rim/neck and a convex body. The inside of this angled connection prevents spilling of liquids. This makes type C vessels more suitable for carrying water.

Bowl type A (bowls with exaggerated carinations) have a strong, convex profile and heavily inverted rims. With the exception of pouring liquids and storage, there are no limitations to their use. Bowl type B (bowls with gentle carinations) are just a slight variation of type A. The variation is at the shoulder and base of the vessels. The carinations at the shoulder of these vessels are not as exaggerated as those of type A. This gives them a straight profile that joins their flat bottoms at a sharp angle. The small surface area of their bases makes them unsuitable for cooking, since there will be little contact between the contents of such vessels and the fire. Like type A, they will also not be suitable for pouring liquids and for storage because of the inverted rims.

Bowl type C (bowls with internal thickening of the rim) would have unlimited functions. They lack the convex profile and the heavily inverted rims of the previous vessels, so would not be suitable for holding liquids. The only limitation is that they will be unsuitable for storage because they lack an everted lip to which a string may be tied. Bowl type D (shallow bowls or plates): Considering

**Table 1:** Summary of archaeological sequence.

level	Depth	Soil horizons	Cultural levels
1	0-20 cm	Hardpan of dark brown clayey horizon with much humus	Kintampo pottery, daub, polished stone axes, baked clay cigars
2	20-60 cm	Relatively loose dark brown clayey horizon with little humus	Kintampo pottery, daub, polished stone axes, baked clay cigars, bone
3	60-100 cm	Hard light brown sandy horizon with cobbles	Quartz flakes, cigars, pottery and daub, stone bracelets
4	100-120 cm	Corrugated basal rock	

the short heights of these bowls, which makes them too shallow, I refer to them as plates. This name sums up the function of such vessels are plates for the distribution and serving of food.

Decorations do not cover the entire surface of the vessel. They appear in zones separated often with grooved lines or undecorated surfaces (Figure 6). Three major decorative techniques are recognizable in the ceramics. These are surface displacement technique, surface cutting technique and surface finishing technique. In a few cases, these techniques occur in combination. All the types of decoration produced by displacement technique involve moving clay by applying pressure. The various types present in the displacement technique include impressing, rouletting and springing. At Nkukua-Buoho however, it is only impressed decorations that are present. Comb stamping is one of the techniques of impression. It is the second most frequently encountered decorative type at Buoho. Stamping can be distinguished from other types of impression by the method of decoration. In this type of decoration, whatever tool is being used in applied to the leather-hard paste in a stamp-and-lift motion over the vessel. Although horizontal and vertical comb stamping was occasionally encountered, the orientation of the comb was generally oblique with respect to the vertical profile of the vessels. Spatulate impression is less common than

combstamping, and is normally applied to the neck area of jars. Here a blunt spatulate object is use to execute the impressions in an oblique fashion.

In the surface cutting technique, a narrow-ended tool is applied to the surface with sufficient pressure to cut it. In combing, a comb with parallel spokes is inserted into the leather-hard clay and dragged along a horizontal plane. The result is parallel lines separated from each other with thin strips of undecorated zones. Out of a total of 112 sherds decorated with various techniques, only three could be attributed to surface combing. With incision and or grooving, vertical, horizontal or oblique lines are drawn with the help of a tool. When sharp tools are utilized, the resultant decoration is incision, but blunt tools results in grooves. It is however very difficult to differentiate between incised and grooved decorations because they grade into one another. The resultant furrow created in the clay depends not only on the type of tool used, but also on the plasticity of the clay. Clay with high plasticity can cause an incised decoration to expand and result in a groove. Grooving and incision can also be executed in wavy lines. The following are the main groups of incised and grooved decorations occurring on the sherds: vertical incision or grooving, horizontal incision or grooving, cross-hatched incision or grooving, wavy horizontal incision or grooving.

**Figure 3:** Selected artifacts. Top left: stone bracelets, top right, polished stone axes, center, cigars or rasps, bottom, bead polishers.

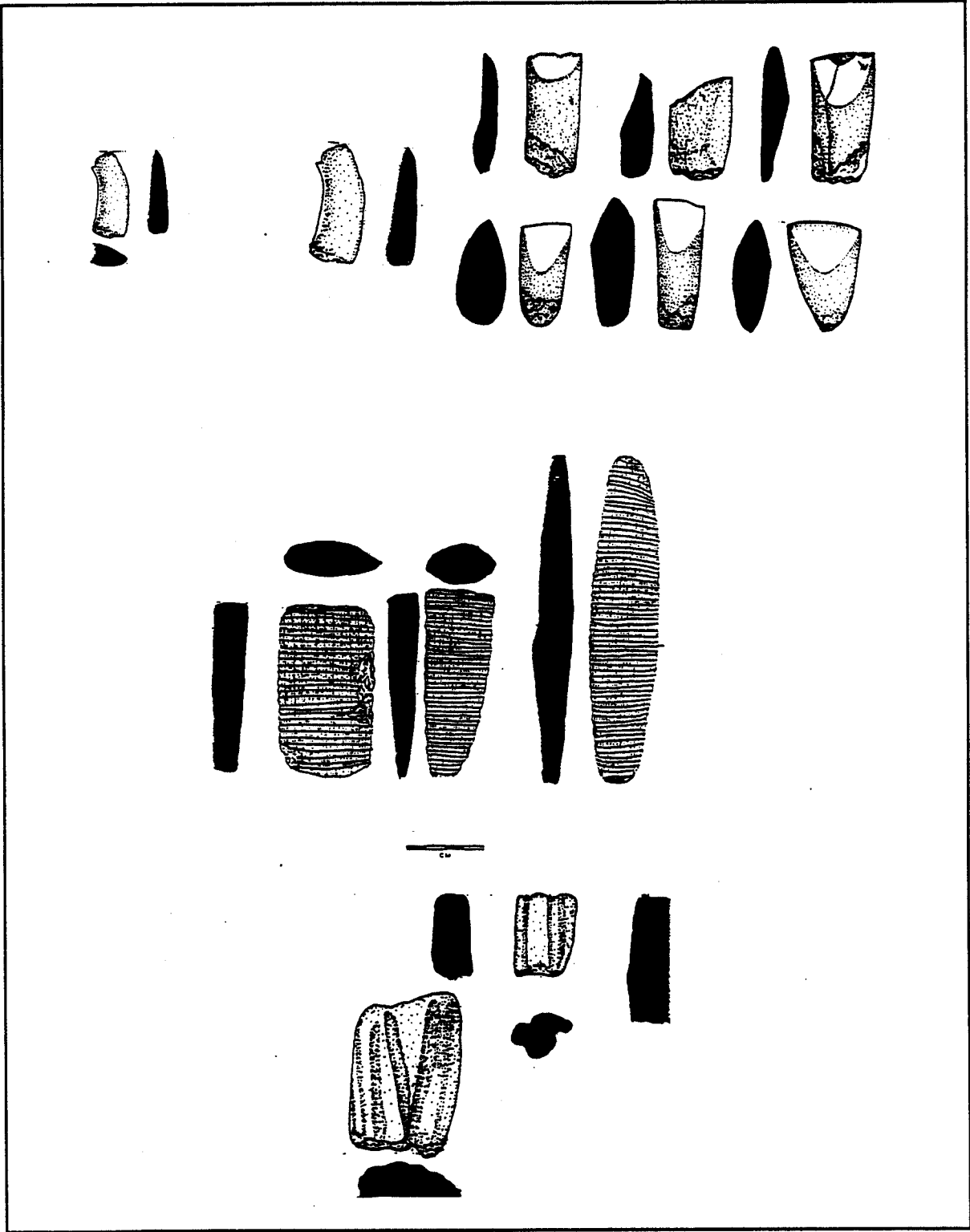


Figure 4: Jar types from Nkukua-Buoho.

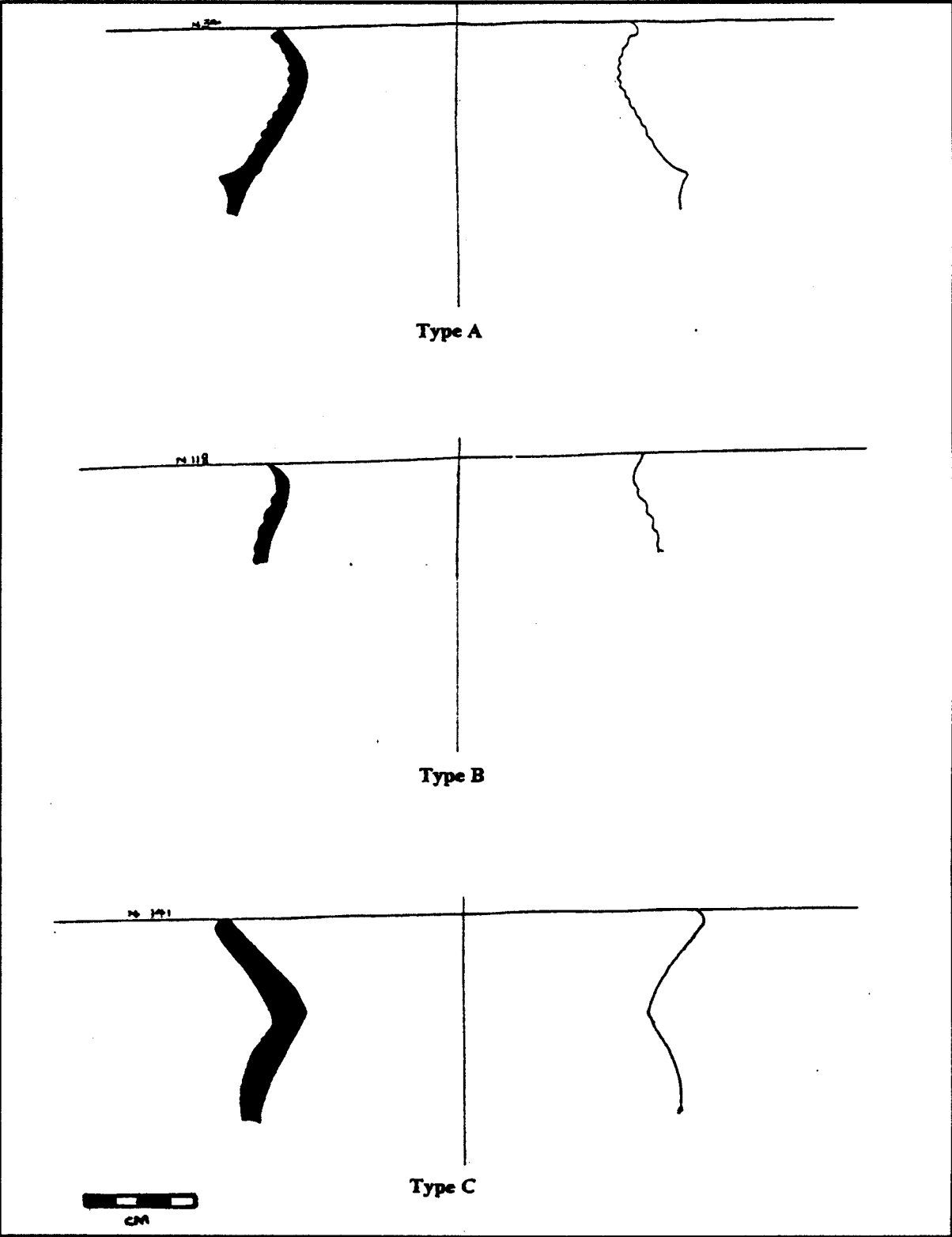


Figure 5: Bowl types from Nkukua-Buoho.

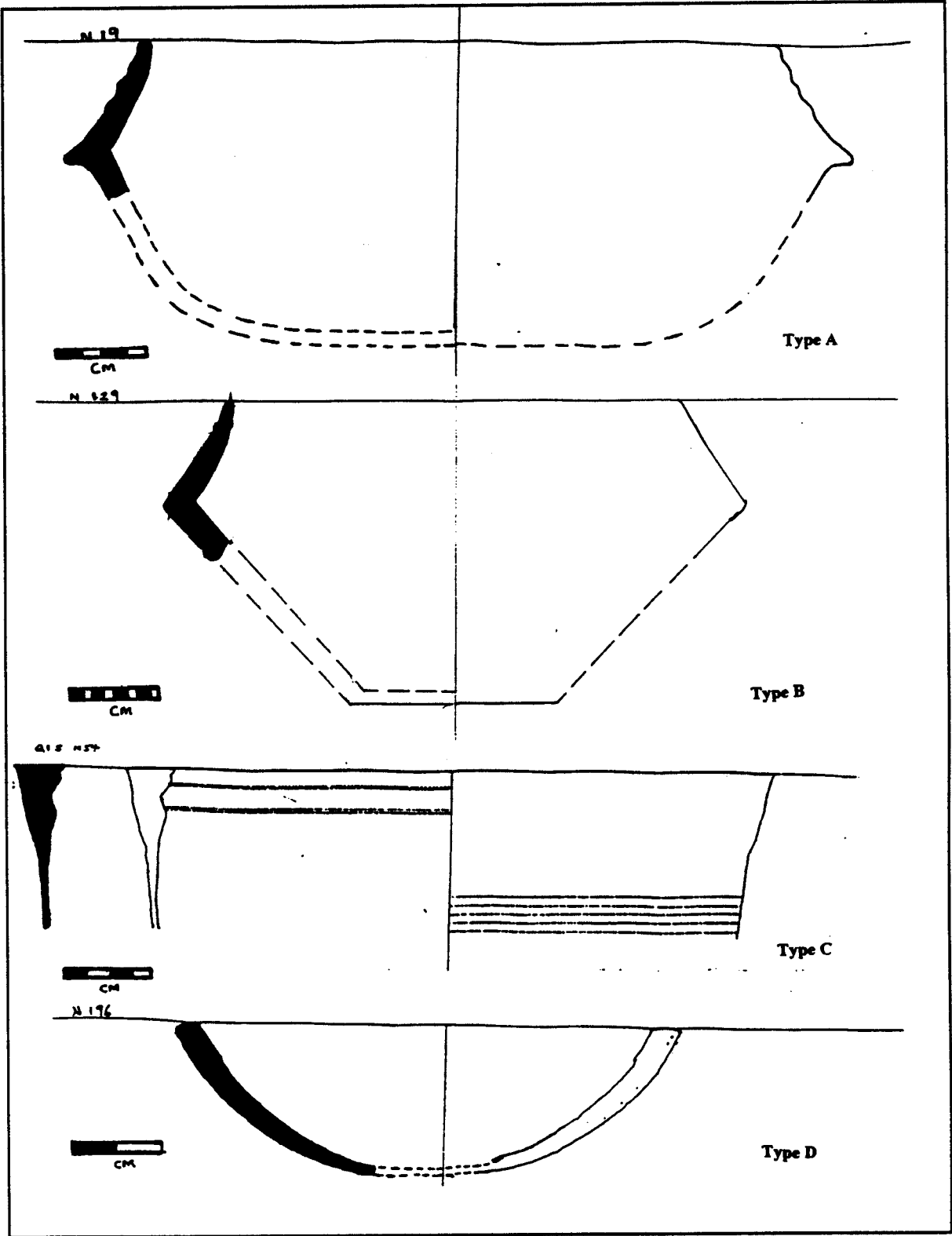
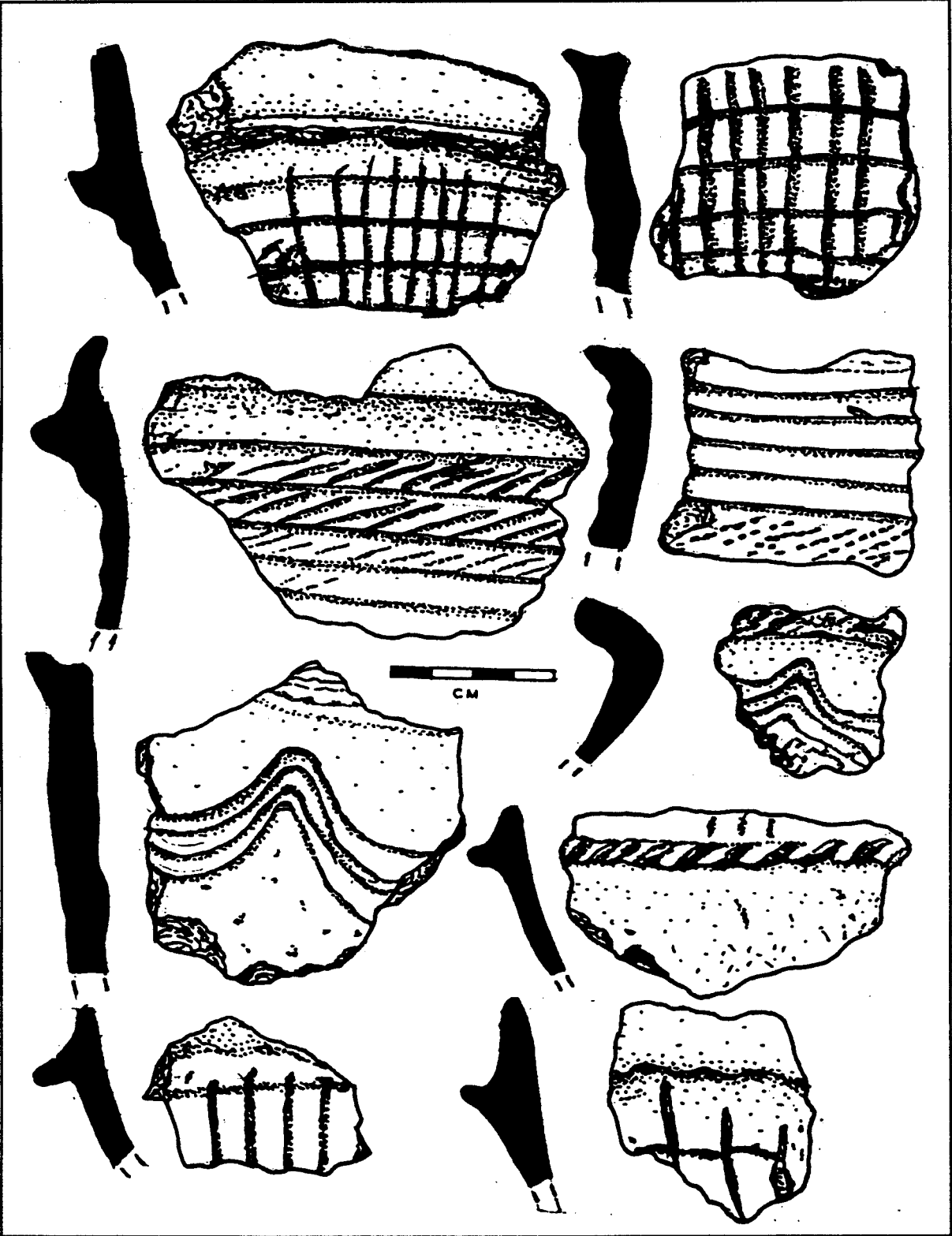




Figure 6: Decorated potsherds.



The surface finishing technique includes all non-plastic decorations. That is, all decorations whose apparent purpose were not to corrugate the surface of the vessel, but to make it smoother and shinier. All types (smoothing, burnishing, and polishing), involve rubbing a tool against the leather-hard clay to modify the texture and light-reflecting qualities of the surface. Variation is only in terms of the extent of rubbing, which results in either smoothing, burnishing or polishing. All the three types are present.

### Discussion

A number of general conclusions can be made. From the materials recovered, this site belongs to the Kintampo complex. Two pieces of iron slag that were recovered, implying that the Iron Age is also present, but typical Iron Age ceramics were absent. Various artifacts are present at the site. (pottery, cigars, stone bracelets, polished stone axes, etc). No floral or faunal remains have been recovered, but the few grinding stones, pottery and grinding grooves, may point to a mixed subsistence economy based on farming and gathering. The large number of potsherds and building material recovered points to a sedentary lifestyle. Efforts to collect samples of charcoal for chronometric dating have so far yielded very little. However, by comparing pottery styles with those from other Kintampo sites, we estimate the prehistoric settlement of Nkukua Buoho to date between 1800 BC and 500 BC. In conclusion, the excavated materials from Nkukua Buoho proves the assertion made by J. Anquandah that the site is important. For definitive conclusions to be made, however, more work needs to be done in the field. The next excavation season will be in 2001, and it is hoped that more data would be generated to answer other pertinent questions.

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