GHANA

Report on an Excavation Conducted in January, 2013 at Bonoso, Ghana

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Introduction

From January 5-16, 2013 a field school directed by the author and involving 25 undergraduate students of the Department of Archaeology and Heritage Studies, Mr. Idrissu Abass, an Assistant Lecturer, and a doctoral candidate of the Department of Nuclear Sciences and Applications, Mr. Amos Forson, all of the University of Ghana, was organized at Bonoso (N7°37'22" W2°5'38.7"; Figure 1), the ancestral home of the Wenchi people of the Brong-Ahafo Region of Ghana. It was at Bonoso that oral traditions claim that the ancestors of the indigenous Akan people of Wenchi emerged out of a hole in the ground with their Queen Mother and sub-chiefs (see Boachie-Ansah 1976: 27-31, 1985: 41-72, 1986a, 1986b: 53-70, 2000: 27-49, 2013a, b). The traditions also claim that it was from Bonoso that the Wenchi people moved to settle at Ahwene Koko, which became the capital of the Wenchi state. Previous research indicates a wide gap between the dates of the two sites (Boachie-Ansah 1976, 1985, 1986a,b, 2000, 2013a,b). The similarity of the pottery from the two sites (despite the wide gap between their dates) is a possible indication of continuity in the pottery tradition from Bonoso to Ahwene Koko, and as tradition claims, of a common origin of the occupants of the two sites. If this is accepted, then the "missing link" is yet to be found in unexcavated areas of Bonoso, Ahwene Koko or some other sites.

It was partly to find the "missing link" and to find more dates to throw light on the chronology of the site that the excavation was conducted at Bonoso. A trench, measuring 2x3m, was opened on a mound located about 350m to the south-east of the hole from which the Wenchi people trace their ancestry. The mound was littered with small sherds and fragments of iron slag, probably broken into pieces by farming activities.

The levels with cultural materials attained a depth of 118cm at its deepest, and at an average depth of 102cm. The stratigraphy of the trench (Figure 2) was rather simple and consisted of two levels with cultural materials. The first level, consisting of dark brown humus soil with rootlets reached down to a depth of 25cm. Finds from this level consisted of potsherds, a fragment of daub and pieces of iron slag. The first level was succeeded at an average depth of 25cm by the second level, which consisted of a light brown loamy soil of about 75cm thick. Finds from the second level consisted of potsherds, iron slag, fragments of daub and grindstones. The second level was succeeded by a sterile reddish brown lateritic soil at a depth of 100cm. As many as 74 charcoal samples were collected from various levels for C14 dating.

Finds

A total of 1460 potsherds, 591 pieces of iron slag, 18 fragments of daub and 4 grindstones were recovered from the excavation. These constitute 70.4%, 28.5%, 0.9% and 0.2% respectively of the total finds.

The pottery consists of four wares. The first ware, labelled Bonoso Ware I (see Boachie-Ansah 1985: 43-49, 1986a: 94-116, 2000: 31-32, 2013a: 136), consists of sherds with glittering specks of

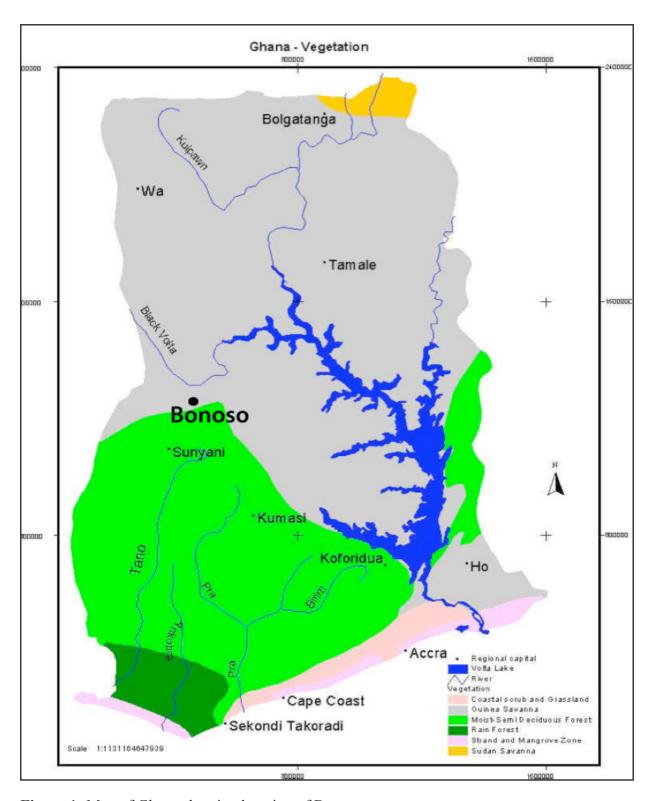


Figure 1: Map of Ghana showing location of Bonoso.

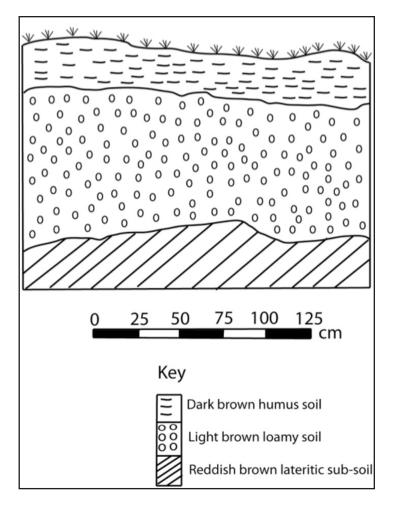


Figure 2: Section of north wall.

mica in the fabric and outer surface. Sherds of the ware are fragmentary with 563 (86.3%) out of a total of 652 sherds falling within the range of 0-5cm when measured on their longest axes. The remaining 89 (13.7%) fall within the range of 5-10cm. The ware constitutes 44.6% of the total sherds from the excavation. Lateritic concretions and quartz fragments also occur in the fabric. Surface colour ranges from grey to brown or black. A total of 99.8% of the sherds are unburnished and 85.0% are undecorated. None of the sherds is red-slipped. Only 98 (15.0%) of the sherds are decorated. Decoration on Bonoso Ware I sherds consists of single horizontal grooves on body and neck sherds (17.3%); multiple horizontal grooves on rim, body and neck sherds (18.3%); single incision on neck sherds (14.3%); multiple incisions on body sherds (4.1%); triangular stamps on body and neck sherds (16.3%); short linear stabs probably achieved by impressing a short broom-like stick, usually at the neck of vessels (5.1%); comb stamps on neck sherds (5.1%), and a combination of triangular stamps and incisions on neck and body sherds (19.4%).

Vessels of Bonoso Ware 1 are characterized by flowing profiles. This is supported by the fact that not a single carinated sherd or sherds with angular profiles were found among the pottery. Among the vessel forms are jars with everted rims which curve gently at the exterior and interior to join the shoulder (Figure 3a). The vessel form, which constitutes 66.7% of the total vessel forms of the ware, is represented by 14 sherds, four from Level 1, and ten from Level 2. Rim lips are rounded, and rim diameter ranges from 12 to 22cm. All the sherds representing the vessel form are unburnished. Two of the sherds are decorated with multiple circumferential grooves at the neck, and one sherd is decorated at the neck with a single circumferential groove. The next jar

form, with a rim diameter of 14cm, has an everted rim which curves gently at the exterior and sharply at the interior to join the shoulder (Figure 3b). The vessel form, represented by 2 unburnished sherds from Level 1, constitutes 9.5% of the total vessel forms of the ware. One sherd is decorated with a single circumferential groove at the neck.

The third vessel form is a jar whose everted rim curves sharply both at the exterior and interior to join the shoulder (Figure 3c). Rim lips are rounded and rim diameter ranges from 13 to 22cm. All the sherds are unburnished, and decoration consists of a single horizontal groove, or a combination of multiple horizontal grooves and triangular stamps at the neck. The vessel form is represented by three unburnished sherds from Level I and constitutes 14.3% of the vessel forms of Bonoso Ware 1. The last vessel form is a hemispherical bowl with an incurved rim and a rounded rim lip (Figure 3d). The bowl form is represented by two unburnished sherds from Level 2, all of which are decorated with a pair of circumferential grooves between which are short linear stabs. The bowl has a rim diameter of 18cm and constitutes 9.5% of the total vessel forms of Bonoso Ware 1

The second ware, labelled Bonoso Ware 2 (Boachie-Ansah 2000: 32, 2013a: 136), is similar in all respects to Bonoso Ware 1 except that sherds of the ware do not have conspicuous mica on the outer surface. The majority of the sherds are fragmentary. A total of 547 (94.0%) out of a total of 582 sherds fall within the range of 0-5cm when measured on their longest axes, and the remaining 35 (6.0%) fall within the range of 5-10cm. The ware constitutes 39.9% of the pottery from the excavation. Many of the sherds are heavily weathered and reveal mica, lateritic nodules and quartz fragments in their inner fabric when broken. Only seven (1.0%) out of a total of 582 sherds belonging to the ware are red-slipped. Burnishing was unpopular and only 16 (3.0%) of the sherds are burnished. A total of 54 sherds (9.0%) are decorated. Decoration consists of single grooves (9.3%) mainly aligned horizontally on rim, body and neck sherds; multiple grooves (26.0%), mainly horizontal, and found on rim, body and neck sherds; single incision (1.9%) on the neck; multiple incisions (13.0%) on neck and body sherds; comb stamps (3.7%) on body and neck sherds; triangular stamps (9.3%) on body and neck sherds; perforation (1.9%) on a body sherd; short linear stabs (7.4%) on body and neck sherds; a combination of triangular stamps and grooves (17.0%) on neck and body sherds; triangular stamps and incisions (3.7%) on neck and body sherds; short linear stabs and multiple incisions (1.9%) on a neck sherd; multiple grooves and comb stamps (3.7%) on neck sherds, and wavy grooves and incisions (1.9%) on a neck sherd.

The only vessel form of Bonoso Ware 2 is a jar with an everted rim which curves smoothly at both exterior and interior to join the shoulder (Figure 3e). The vessel form, represented by six unburnished and undecorated sherds with rounded rim lips, has a rim diameter of 14cm. Four of the sherds were recovered from Level 1 and the remaining two came from Level 2.

The third ware, labelled Bonoso Ware 3 (see Boachie-Ansah 2000: 32), but formerly named as Bonoso Ware 2 (Boachie-Ansah 1985: 49, 1986a: 116-121), consists of 179 sherds which constitute 12.3% of the pottery from the excavation. The ware has a poorly fired fabric and consists of finely-textured clay which occasionally contains minute grains of quartz and laterite. The sherds are buff or grey in colour and are easily breakable due to their extreme lightness which distinguishes it from the other wares. A total of 160 sherds (89.0%) fall within the 0-5cm range and the remaining 19 sherds (11.0%) fall into the 5-10cm range. Only three of the sherds (2.0%) are burnished and only one sherd (0.5%) is red-slipped. Only 12 (7.0%) of the sherds are decorated. Decoration consists of single groove on a neck and a body sherd (16.6%); multiple grooves on body sherds (16.6%); single incision on a body sherd (8.3%); multiple incisions on body sherds (16.6%), and comb stamps on neck and body sherds (41.6%). No diagnostic rims were found among the sherds for which reason no vessel form was identified.

The fourth ware, named Bonoso Ware 4, (see Boachie-Ansah 2013a: 136-137) is the best fired ware and has the hardest fabric among the Bonoso

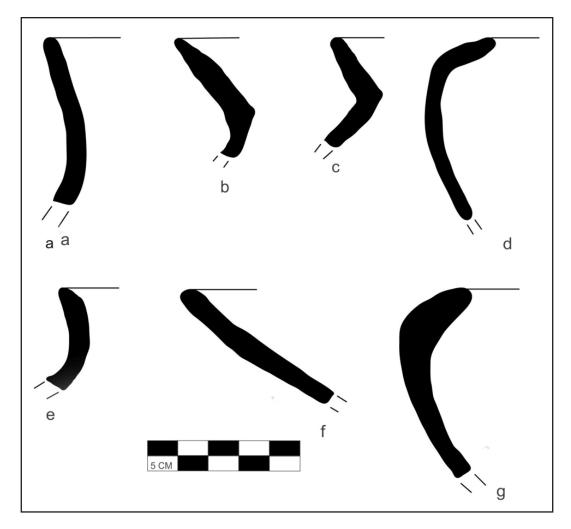


Figure 3: Vessel forms of Bonoso pottery.

wares. The ware constitutes 3.2% of the pottery from the excavation. The fabric is concrete-like and identical to Effah-Gyamfi's (1978: 282-299) Concrete-textured Ware from Bono Manso and Boachie-Ansah's (2005: 66-68) Ware 3 from Ohene Ameyaw Anim near the Techiman Secondary School. Dark lateritic concretions and quartz grains are found in the fabric. Thirteen (27.7%) out of the total of 47 sherds of the ware fall within the range of 0-5cm when measured on their longest axes, and 32 (68.1%) and two (4.2%) sherds respectively fall within the ranges of 5-10cm and 10-15cm. Only 11 sherds (23.4%) are burnished and only three sherds (6.0%) are red-slipped. A total of 12 sherds (25.0%) are decorated. Decoration consists of multiple grooves, mainly horizontal, and on neck sherds (25.0%); single incision on a neck sherd (8.3%); comb stamps on neck sherds (16.7%); cord roulette on a rim sherd (8.3%); short linear stabs

on the body (8.3%); a combination of comb stamps and incision on the rim (8.3%); multiple grooves and comb stamps on the rim (8.3%); single groove and short linear stabs on the rim (8.3%), and multiple incisions and short linear stabs on the rim (8.3%).

Two vessel forms were identified among Bonoso Ware 4 sherds. The first is an open, saucerlike, hemispherical bowl with rounded rim lips and with rim diameter ranging from 21 to 32cm (Figure 3f). The bowl form is represented by four unburnished sherds from Level 2. Two of the sherds are red-slipped. Decoration consists of comb stamps 1cm below the rim lip. The second vessel form is a hemispherical bowl with an incurved rim, rounded rim lip, and a rim diameter of 18cm (Figure 3g). The bowl form is represented by a single unburnished sherd from Level 2. Decoration, located 2cm below

the rim lip, consists of a single hemispherical groove below which are short linear stabs.

Other finds from the excavation consist of 591 pieces of iron slag, 273 (46.2%) from Level 1 and 318 (53.8%) from Level 2; 18 fragments of daub, one (5.6%) from Level 1 and 17 (94.4%) from Level 2, and four upper grindstones, all from Level 2. One of the grindstones is made of granite, two are of quartzite and one is of quartz.

Dating of the Site

A total of 34 out of the 74 carbon samples were selected for AMS radiocarbon dating at CE-DAD (Centre for Dating and Diagnostics), University of Salento, Lecce-Italy, where Dr. Amos Forson, then a student under my supervision from the Department of Nuclear Sciences and Applications, Graduate School of Nuclear and Allied Sciences, University of Ghana, processed the samples for his PhD thesis. The samples produced the following dates (see Table 1).

A few of the dates are inverted in terms of their stratigraphic positions. For example, LTL13249A has produced a later date than LTL13233A which was stratified 7cm above LTL13249A. However, these anomalies are alleviated by the fact that many of the dates which are anomalous partly overlap. Added to this is the fact that the three last dates (LTL13198A, LTL13246A and LTL13247A) obtained from the bottommost part of the excavated trench are, as is to be expected, the earliest dates obtained for the trench. It is also worth noting that the first two dates (LTL13229A and LTL13228A) from the uppermost part of the trench are also (as to be expected) the latest dates. Earlier excavations have produced dates of AD 710 \pm 95, AD 980 \pm 85 (Boachie-Ansah 1976: 27-31, 1985: 41-72, 1986a, 1986b: 53-70), AD 680-776, AD 663-774 and AD 633-774; 2013a: 138). These dates, together with the majority of the dates from the 2013 excavation suggest that the site dates from the first millennium AD.

Discussion

As was the case with the 2010 excavation (Boachie-Ansah 2013a: 137), the 2013 excavation has produced similar pottery as that found in previous excavations. The pottery from Bonoso also bears close resemblance to some of the pottery from Begho, Bono Manso, Ohene Ameyaw Anim near the Techiman Secondary School, Tanoboasi, a few kilometres to Techiman on the Techiman-Manso road, and Ahwene Koko (Boachie-Ansah 2013a: 137). The several similarities in the pottery of several sites in north-west Brong-Ahafo may be due to the virtual uniformity of the geology of the area as well as to intensive interaction of the inhabitants of the area over several centuries. The similarity of the pottery from Bonoso and Ahwene Koko supports the oral traditional claim that the ancestors of the Wenchi people first settled at Bonoso and later moved to Ahwene Koko which became the capital of the Wenchi state. The archaeological evidence supports the claim that the inhabitants of the two sites had a common origin.

As already indicated, the mica in the pottery from Bonoso was not intentionally applied as a decorative material but was rather derived from the clay from which the vessels were made. The clays in and around Bonoso abound in mica. The micaceous ware from the site was therefore probably produced locally. This suggests that there were specialists who produced pottery just as there were people who probably specialized in iron smelting. Wenchi traditions claim that there was a sub-chief, the *Awerempehene*, specifically in charge of iron smelting. Pottery was probably used for fetching and storing water, and for cooking as evidenced by the soot deposits on several of the potsherds.

The numerous pieces of iron slag in all the levels of the excavated trench (as well as in all levels of previous excavations) suggest iron smelting and the early dates obtained in the 1975, 2010 and 2013 excavations indicate that Bonoso dates to the Early Iron Age, and that, as suggested by the oral traditions, the Akan-speaking natives of Wenchi are autochthonous to the Wenchi area and have lived there for a very long time. While it is likely that the site

Depth	CEDAD Code	Cal 68.2%	Cal 95.4%
27cm	LTL13229A	AD1015-1150	AD995-1160
27cm	LTL13228A	AD900-1020	AD890-1025
32cm	LTL13191A	AD830-970	AD780-980
36cm	LTL13230A	AD650-700	AD640-780
39cm	LTL13231A	AD990-1030	AD900-1150
40cm	LTL13192A	AD1010-1150	AD980-1160
40cm	LTL13232A	AD980-1030	AD890-1150
42cm	LTL13233A	AD661-770	AD640-860
49cm	LTL13249A	AD980-1040	AD890-1160
50cm	LTL13193A	AD780-890	AD720-950
56cm	LTL13235A	AD780-950	AD720-990
58cm	LTL13234A	AD890-1000	AD890-1020
65cm	LTL13194A	AD820-980	AD770-990
66cm	LTL13237A	AD870-980	AD780-980
67cm	LTL13240A	AD780-970	AD730-990
67cm	LTL13236A	AD890-990	AD780-1030
69cm	LTL13252A	AD780-940	AD770-980
72cm	LTL13238A	AD880-980	AD780-990
74cm	LTL13195A	AD780-890	AD770-940
74cm	LTL13250A	AD780-940	AD770-98
81cm	LTL13248A	AD890-980	AD810-1000
83cm	LTL13253A	AD770-940	AD720-980
85cm	LTL13242A	AD770-940	AD710-980
93cm	LTL13197A	AD770-870	AD710-890
96cm	LTL13241A	AD780-890	AD770-940
96cm	LTL13243A	AD680-780	AD660-870
98cm	LTL13196A	AD780-890	AD720-950
98cm	LTL13244A	AD680-770	AD660-780
104cm	LTL13245A	AD670-770	AD660-780
107cm	LTL13251A	AD670-770	AD650-810
108cm	LTL13199A	AD890-980	AD780-1000
109cm	LTL13198A	AD630-680	AD600-770
111cm	LTL13246A	AD640-670	AD610-680
114cm	LTL13247A	AD640-669	AD610-676

 Table 1: Radiocarbon dates from excavations at Bonoso, Ghana.

was re-occupied in the 19th century (Boachie-Ansah 2000, 2013a), the main period of the site's occupation seems to have been in the pre-Atlantic contact period. The absence of European imported goods in many of the excavations seems to support this view. The 2013 excavation carbon dates also suggest that the site was occupied for a long time, perhaps for a period of over four centuries. The overlapping of some of the dates (at both one and two sigma) gives an indication that the dates "do actually date the occupation of the site for about [over] 400-year-long (four centuries) sequence of almost continuous occupation" (Forson 2014: 137) from the 7th to the 12th centuries AD.

Boahen (1966: 9) has claimed that it was in the "forest region, in the region of the Pra and the Ofin confluence that the Akan as we know them today did finally emerge...". The matrilineal clans of the Akan are said to have evolved in the Pra-Ofin basin "especially in the heartland of the Adanse state...the cradle of the Akan culture and civilization" (Boahen 1974: 76-77). Traditions collected in Adanse claim that it was in Adanse that "the creator created these matrilineal clans at the beginning of time" (Daaku 1969: 2, 17). Since rulers of several Akan states belong to these clans, and the clans are said to have evolved in Adanse, it has often been claimed that it was from Adanse that clansmen moved out to found other Akan states.

These claims are not supported by traditions of Wenchi. As pointed out by Rattray (1929: 64-65) and the writer (Boachie-Ansah 1978: 48-53, 1986a: 30-33, 1986b: 64), the clans of Wenchi (and Techiman) are based on a different model from the Akan of Ashanti (including Adanse) and southern Ghana. Unlike the clans of Ashanti and southern Ghana, which are named after their totems, the clans of Wenchi (and Techiman) derive their names from the quarters in which their ancestors resided. The quarters were named after the trees under which the ancestors settled. It is relevant here to mention that the form of government, known to other Akan groups, and in which the various chiefs are also leaders of the wings of the traditional army, was unknown to the Wenchi people until the 1930s when it was introduced into the traditional area (Boachie-Ansah 1978: 48-53, 1986a: 30-33, 1986b: 64). These facts would seem to suggest that the Wenchi people have been separated from the Akan of southern Ghana for a long time, and that it was after this separation that the clan system and the semi-military system of government evolved among the Akan of southern Ghana. The early dates for Bonoso seem to support the claim of the Wenchi people to autochthonous status. It is also unlikely that members of the clans which developed in southern Ghana between the 15th and 17th century founded the Wenchi state, which as indicated by the Dutch map of 1629 (Daaku and van Dantzig 1966: 14-15), was well established by the early 17th century.

Contrary to Meyerowitz's (1949: 23-24) claim that Bonoso was founded by refugees from what she erroneously calls the Banda Kingdom of Begho after its (Begho's) presumed defeat in 1630, the site has produced dates that are far earlier than the postulated date for the founding of the settlement. As claimed by Wenchi traditions, Bonoso also predates Ahwene Koko which has produced one acceptable carbon date of AD 1585 ± 80 (N-2345) (Boachie-Ansah 1976: 27-31, 1985: 41-72, 1986a, 1986b: 53-70) and two doubtful dates of AD 771-887 (KIA42822) and AD 1411-1461 (KIA42823). The last two dates for Ahwene Koko, obtained from samples recovered in an excavation conducted in 2010, have been rejected by the author on the grounds that smoking pipes, found at the very bottom of the site date to the 17th century or after. Besides, a Venetian bead dating from the 16th to the 19th century was found 19cm below the carbon samples which produced the two dates. In addition, a fragment of a forowa, a container made from European imported brass sheet and used for storing valuables such as gold dust, and produced from around AD 1780 until about 1930 (Ross 1983: 54), was found in the excavation. The site was therefore occupied beyond the 17th century. Added to this is the fact that there is a discrepancy between the two dates despite the fact that the samples from which they were processed were recovered from the same depth of 41cm below the surface of the site.

Until the 2013 excavation, there was a chron-

ological gap of about 605 years between the latest date for Bonoso (AD 980) and that of Ahwene Koko (AD 1585). There is now a gap of about 425 years between the latest 2-sigma date of Bonoso (AD 1160) and the single acceptable date for Ahwene Koko (AD 1585). Although the chronological gap between the two sites has been reduced by some 180 years, there is much research still to do to bridge the gap or to find the "missing link" in unexcavated areas of Bonoso, Ahwene Koko and/or in some other sites.

The fragments of daub suggest mud buildings and the grindstones suggest a diet of pulverized vegetables and/or ground grains. Apart from nondiagnostic fragments of a few bones in the 1975 and 2010 excavations, (see Boachie-Ansah 1986a: 131, 2013a: 137), no animal bones were found in any of the excavations. A few palm kernels were also found in the 2010 excavation. Although very little is known of the dietary habits of the inhabitants of the site, it is likely that they subsisted on food prepared with pulverized vegetables and/or ground grains, palm nuts, and game hunted in the bush. A popular delicacy among the Akan is palm nut soup prepared with meat and it is likely that such a diet was prepared by the inhabitants of Bonoso. The hemispherical open bowls characteristic of the pottery would have facilitated the processing of palm nuts for food.

The Wenchi Traditional Area is an important yam-growing area. Yam is a traditional food served to the ancestors during the Nsamanfogyina festival, usually in pounded or mashed form served with palm nut soup. Yams feature prominently in many cultural, social and religious practices of the Wenchi people. Sacrifices, offerings and ceremonial gifts almost invariably include yams, but exclude crops not indigenous to the area. This is "partly a reflection of the fact that vams are the traditional food crop, and these ideas and practices must have developed at a time when few alternatives were available (Coursey 1967: 202). Coursey (1967: 10) observed also that "the prohibition in certain areas on the use of iron tools for the digging of yams to be used in New Yam Festivals, strongly suggests that yam cultivation antedates the commencement of the iron age...". It here relevant to mention that until recently, a special

wooden stick known as *kube kyinkaa*, made from the branch of *borasus* palm, was the tool used in planting yams. This also suggests that yam cultivation may predate the Iron Age and that the cultivation of the tuber has been known for a long time.

Coursey (1967: 197-203) has also suggested that the New Yam Festival (also traditionally observed and celebrated in the Wenchi Traditional Area) may date to proto-agricultural times when many species of yam were poisonous. Those associated with the rituals of the yam festival had esoteric knowledge about vams and knew when vams became mature and ceased to be poisonous. People were forbidden to eat yams until after the yam festivals (scheduled by those with esoteric knowledge to take place when yams were mature and not poisonous) had been celebrated by the fetish priests, clan leaders and chiefs. This way, the esoteric knowledge of the leaders saved the people by preventing them from eating yams at a time when they were poisonous. The cultivation of yams may go back to ancient times and it is likely that it was a major food among the inhabitants of Bonoso.

Ivor Wilks (1993: 41) has claimed, in a rather controversial manner, that the forests of southern Ghana were occupied by hunter-gatherer societies until the 15th to 17th century when there was a transformation "from an economy based primarily on hunting and gathering (foraging) to one based primarily on food crop production (agriculture)". The "big bang" theory, the name given by Wilks (1982a: 234) to his theory that purports to explain the transformation of Akan society from a subsistence economy based on hunter-gathering to an agrarian society of the historic period, first outlines "the conditions under which Akan emerged in its historic form" (Wilks 1993: xiii). To Wilks, this transformation was made possible through the acquisition of enslaved Africans, purchased with gold by influential local "entrepreneurs", the abirempon, from among the enslaved Africans brought from the northern grasslands by Wangara traders and by the Portuguese to Elmina from the Benin coast, Sao Tome and Principe, the Niger Delta and Congo (Wilks 1982a, 1982b, 1982c, 1993, 1994). These local entrepreneurs used unfree

labour to till the land and to dig gold. The acquisition of labour over and above family labour, according to Wilks, was essential to the development of agriculture. This acquisition of land was facilitated by a strong demand for gold in the 15th and 16th centuries, first in the Wangara trading posts north of the forest, and later in those of the European traders to the south. To sustain the gold trade, the Wangara and the Portuguese had to maintain a constant supply of unfree labour to the Akan (Wilks 1993: 78). Those who controlled the production of gold, in the words of Wilks (1993: 96), "were those able to procure a supply of unfree labor", and "those who procured unfree labor were those able to create arable" farms within the forest

The enslaved were involved in gold mining, forest clearing and food production, and masters of the enslaved, the *abirempon*, appropriated the surplus produced by the enslaved, and became the founders of the early Akan states or chiefdoms, the *Aman* (Wilks 1993: 94).

According to Wilks (1982a: 234-235), the transformation of the economy based on hunting and gathering to that based on food-crop production also entailed the adjustment in social structures, a transformation from "bands" or "companies" appropriate to foraging to matri-lineages and matriclans appropriate to a food-producing economy. The matriclans were important as they allowed the integration of the enslaved among commoners and the distribution of people "in order to facilitate the organization of labor" (Wilks 1993: 42, 82). The matrilineal descent groups were organized to recruit members by other means additional to direct lineal descent and therefore allowed for the enslaved to be integrated into Akan societies. In the words of Wilks (1993: 71), "this socioeconomic revolution...reached its...zenith...in...the sixteenth century".

In other words, the forest states of the Akan did not exist until the coming of Europeans, and the forests of southern Ghana were inhabited by huntergatherers until the 16th century when, according to Wilks, agriculture was adopted as a way of life in the forest! This rather controversial theory does not

take into account the fact that there were permanent settlements in the forests of Ashanti at Asantemanso (which has provided evidence of occupation by probable ancestors of the Asante by the 10th century AD) and Adansemanso (Shinnie 1987; Shinnie and Shinnie 1995; Vivian 1990) (one of the largest towns in central Ghana in its time with evidence of continuous occupation from the 9th to the mid-17th century).

The earthworks of the forests of southern Ghana suggest a degree of social and political organization and complexity over and above the organization associated with hunter-gatherers. In the words of Kiyaga-Mulindwa (1978: 196), they were "the product of a number of season's intensive labour of a considerable proportion of the population". They were certainly permanent settlements as opposed to seasonal settlements of hunter-gatherers. They were most probably constructed with iron tools. In the words of Gérard Chouin (2009b), the amount of work involved in their construction "reveals a social organization characterized by the capacity to mobilize, control and coordinate workers and their tools and, probably, by the will to remain well-entrenched in a particular territory over long periods of time". All the documented earthworks are characterized by tuyeres, and/or iron slag. The presence of several permanent settlements in the form of entrenched sites in the forests of southern Ghana has been cited by Chouin (2009a, 2009b) as evidence that clearly contradicts Wilks' (1993: 41) claim that the forests of southern Ghana were occupied by hunter-gatherer societies until the 15th to the 17th centuries when there was a transformation "from an economy based primarily on hunting and gathering (foraging) to one based primarily on food crop production (agriculture)". His excavations of the Akrokrowa earthworks near Abrem Berase in the Komenda-Eguafo-Edina-Abrem District of the Central Region of Ghana have produced four 2-sigma first millennium AD dates of 717-743 AD, 669-899 AD, 779-794 AD and 662-828AD (Chouin 2009a, 2009b: 554-551).

Chouin's first millennium AD dates have been confirmed by dates of excavations conducted in 2009 in the eastern portion of the area enclosed by an earthwork at Asaman near Brakwa in the Asiku-

ma-Brakwa-Odobin District of the Central Region of Ghana. The pottery from the excavations is identical to the pottery associated with earthworks in Ghana and probably belonged to the people who built the earthworks. The Asaman site has produced 2-sigma first millennium dates of 430-595 AD, 543-647 AD, 780-983 AD and 601-763 AD for excavations conducted by the author and Fritz Biveridge in 2009 within the area enclosed by the earthworks (Boachie-Ansah 2014: 35). In 2010, the South-West Embankment, the North-East Embankment and the Ditch of the earthwork were also excavated. The South-West Embankment has produced 2-sigma dates of 1440-1640 AD and 410-600 AD (Boachie-Ansah 2014: 36). The North-East Embankment has produced 2-sigma dates of 380-550 AD, 540-670 AD, and 20-250 AD (Boachie-Ansah 2014: 37). The 2-sigma dates for the Ditch are 770-990 AD, 400-600 AD, 680-940 AD, 710-980 AD, 770-990 AD, 250-540 AD, 1020-1220 AD, 420-600 AD and 430-650 AD (Boachie-Ansah 2014: 37).

Certainly, there were complex societies in the forests of Ghana in the first millennium AD as the dates for the earthworks testify. As Gérard Chouin (2009b: 63) has rightly commented, the forest region of Ghana "remains a largely unexplored archaeological frontier" with probably large permanent settlements (as opposed to seasonal settlements of hunter-gatherers) and monumental earthworks yet to be discovered. Reconnaissance survey conducted by the author, Fritz Biveridge and B.M. Murey in the Brakwa area in 2009 (Boachie-Ansah 2014) located four earthworks not mentioned in previous literature at Abutia (N5°43'8" W0°58'7"), Baako (N5°43'3" W0°57'6"), Ndwoaso (N5°41'5" W0°59'4"), and Heman (N5°41'4" W0°58'5"). Mr. Kwasi Adu, an informant from Brakwa claims that there are several other earthworks in the Brakwa area. These earthworks, together with the numerous unexcavated ones in the Birim Valley may also date to the first millennium AD.

Bonoso may have been more of a forest than the savanna it is today. As late as 1975 when the first excavations were conducted there, the site was a thick forest. The presence of relict forest species such as *Blighia sapidia*, *Alstonia boonei*, *Ceiba pedentra*, *Bombax* sp., *Chlorophera* sp., *Cola nitida*, *Cola gingantea*, *Antiaris* sp., and *Spanthodia* sp. at the site gives the impression that the area was a forest in the past. However, it is unlikely to have been occupied by hunter-gatherers as Wilks has depicted the forest areas of Ghana.

The fragments of daub suggest that the inhabitants of Bonoso lived in permanent mud houses. A society that smelted iron as was the case with Bonoso must have had an organization far more complex that of hunter-gatherers. Iron smelting suggests some kind of specialization. Iron objects including what appears to be a razor blade locally called *yiwan* and a tanged instrument, probably an arrowhead and pieces of what appears to be iron blades were found in the 1975 excavations (see Boachie-Ansah 1986a: 131). These objects suggest the existence of blacksmiths within the community. It is also possible that, as claimed by oral traditions, iron smelters and blacksmiths were under the control of the sub-chief known as the Awerempehene who was also the chief blacksmith of the state (Boachie-Ansah 1986a: 42-43). Specialists such as priests, medicine men, iron smelters, blacksmiths, hunters and potters may have played important roles in the community, and their social status may have been enhanced by the special roles they played.

The quarter of the chief blacksmith was known as Atoomfooso, meaning the "place of the blacksmiths". It is said that an ancient hammer is attached to the stool of the chief blacksmith. The fact that the chief blacksmith was also a sub-chief suggests that blacksmithing was centrally controlled. Although the stool of the chief blacksmith was hereditary, blacksmithing was open to all and sundry. Blacksmiths were revered in the society, and it is said that as a sign of respect, anyone who wanted to enter a smithy had to remove his or her sandals. This same respect accorded to chiefs by their subjects may be cited to support the claim that blacksmiths were revered (Boachie-Ansah 1986a: 42-43). Hunting was an important occupation and tradition has it that women married to hunters were very proud of their husbands. Hunters were considered to be good

and courageous warriors, and were respected by the societies in which they lived. Those who killed big game were greatly revered. They were believed to have supernatural powers. Big game hunters were the only people allowed to dance to the tunes of the *abofotwene*, a special drum for hunters. The importance of hunters may have been partly due to the fact that they supplied meat, ivory and skins of wild animals to chiefs (Boachie-Ansah 1986a: 41-42). The skins of certain wild animals were an important part of a chief's regalia.

It is probable that there was a centralized administrative structure at Bonoso as claimed by Wenchi oral traditions. Organized societies that can be described as states certainly existed in what is today southern and central Ghana long before the 16th century!

Conclusion

There are now enough dates for a conclusion to be drawn that Bonoso's beginnings can be dated to the 7th century AD – a date that establishes that the Akan-speaking natives of Wenchi have lived in the area for a long time and must be regarded as autochthonous. Much needs to be known about Bonoso. For example, very little is known about the subsistence economy and when iron smelting started in the area. Although the presence of iron slag in all the levels of the excavated units suggest that iron smelting may be as old as the site, it would be more appropriate to excavate a smelting site to ascertain when exactly iron technology became established in the Bonoso area. It is hoped that future research will throw light on these aspects of archaeology in the Wenchi area.

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