

# **An Archaeological Report on Material Culture from a Settlement Site at Sabule, Bono East Region of Ghana**

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# Research Report

## Rapport de Recherche

**MARGRETTA MORGAN**

### **An Archaeological Report on Material Culture from a Settlement Site at Sabule, Bono East Region of Ghana**

#### **Introduction**

The Bono East region of Ghana is an important area in anthropological research. Several area sites, including Begho (Posnansky 1976; Stahl 1994a), Kintampo (Carter and Flight 1972; Stahl 1985a), Bono Manso, (Effah-Gyamfi 1985), Bonoso and Ahwene Koko (Boachie-Ansah 1986a), Jema (Davies 1972), Asantekwa (Davies 1972), Banda (Stahl 2004), Bonoase, and Mumute (Dombrowski 1976) have been the subject of concentrated archaeological enquiry. Drawing on a number of methods, including literary sources, oral accounts, ethnography, archaeological excavations, and analyses of cultural materials, researchers have provided insights on substantive issues including the reconstruction of cultural and settlement histories, human adaptive strategies and subsistence practices, and diffusion of technological innovations. Sabule, a Dega village, is located about 28 kilometres west of Kintampo, Bono East Region and its people were well known for their potting tradition (Fig. 1). In spite of this, it has gained neither ethnographic nor archaeological attention. This report discusses the material culture recovered through archaeological exploration at an abandoned site named Gonja Dimbia. Gonja Dimbia is one of the settlement sites in Sabule. The study was undertaken as part of the author's graduate research and is an archaeological contribution to a larger project on anthropogenic dark earth for-

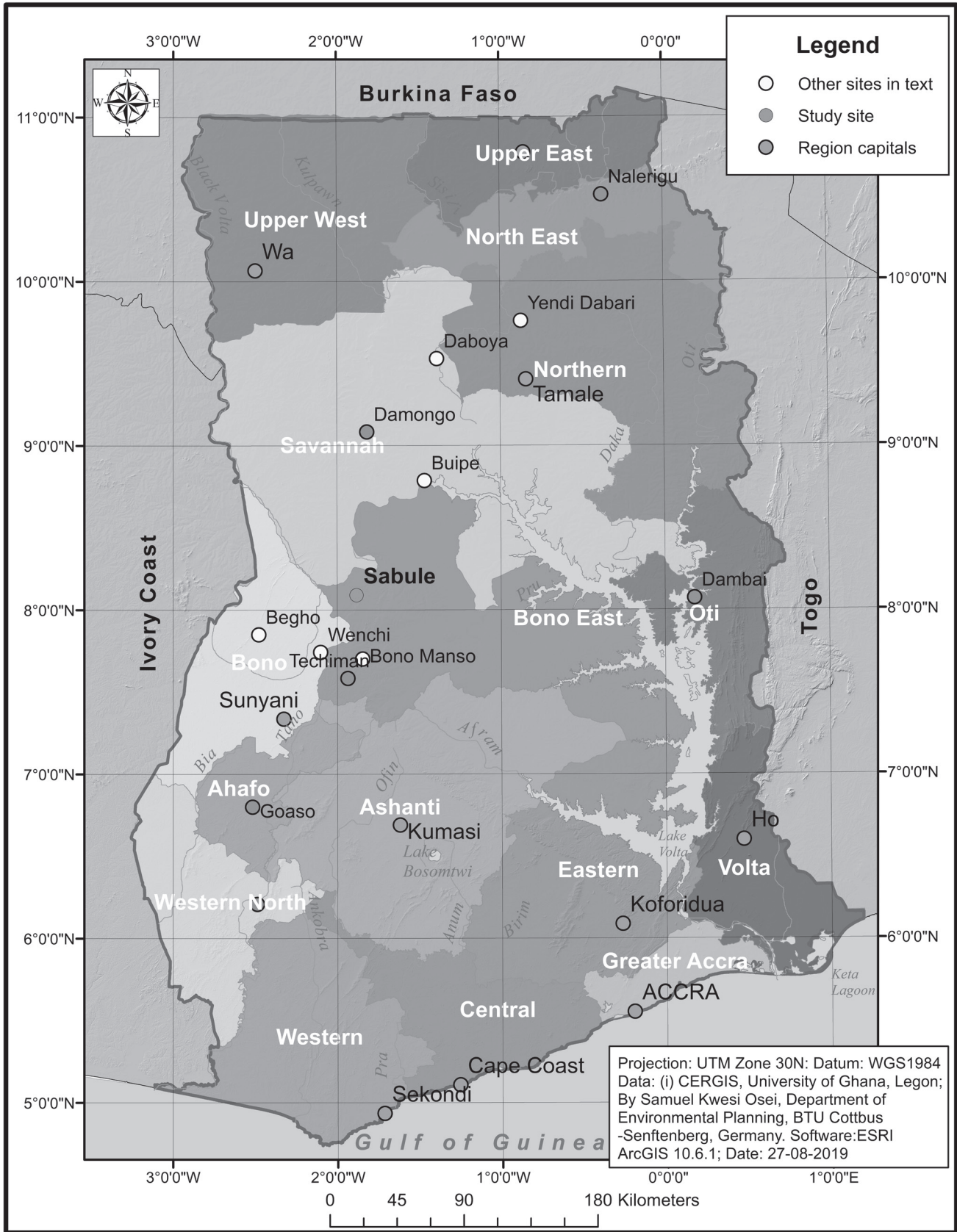
mation in abandoned sites in Ghana. This paper describes and interprets archaeological remains that were recovered from Gonja Dimbia in order to examine the past lifeways of the settlers who occupied the site. An important aspect of the study is to determine the chronology of the site.<sup>1</sup>

#### **Site Context**

The Sabule area falls within the Middle Belt geographic region of Ghana. From the West African context, the Middle Belt is a zone of limited resources and low population densities. According to Manshard (1986: 304), this region is noted for experiencing one of the poorest agricultural climates in West Africa. In Ghana, the region is "the least developed part of the country and it is characterized by poor motorable roads over extensive areas. Current small scale wars and past slave-raiding have resulted in low population density of the area and farmers have migrated due to soil erosion" (Dickson and Benneh 1970: 133-34).

#### **Fig. 1**

*Map of Ghana showing the location of Sabule within Bono East region of Ghana and other archaeological sites mentioned in this text. Cartography by Samuel Kwesi Osei (2019), Department of Environmental Planning, Brandenburg Technical University, Germany.*

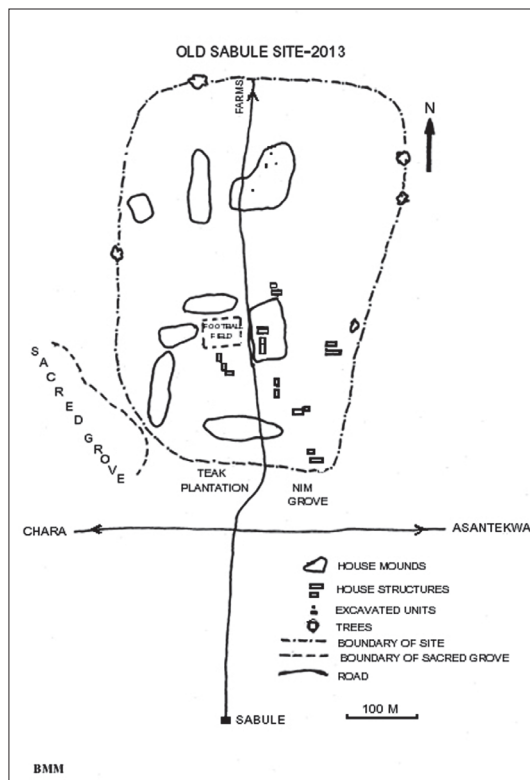


The term Dega means “multiplying,” “spreading quickly,” or “fertility” in the Deg language. From oral accounts, the Dega migrated southwards from Tiwii, a Sissala village in the Upper West Region. A father and son respectively called Judi and Ese led the migrants to Sabule. Other migrants settled in neighbouring small villages including Sisowe, Mansie, and Chaara. Their migration was caused by disagreements between the elders of the Dega and the Sisaala people over a dog’s head, which was a sacrificial offering to the earth god called Teo. The ancestors of the Dega living in Sabule settled near an anthill and as such referred to themselves as people “under the ant hill,” which in the Deg language is translated as *chawu buli* which has been corrupted to “Sabule.” The Dega, who were famous for their achievements in warfare, encountered the Gonja, Dagomba, and the Kupre people at Sabule. They fought, defeated, and drove away all three states. Oral traditions from the Dega of Sabule suggest that the abandonment of the present research site was due to warfare between their ancestors and the defeated ancestors of the Gonja people. However, local informants offered no information relating to the period when the Gonja settled at Sabule.

Documentary sources indicate that from the mid-16th century forward, the Gonja settled in the Bono area and may possibly have had contact with the Sabule area (see Meyerowitz 1958: 119; Boahen 1966: 56; Wilks 1971: 415, 431-32). It is further suggested that the wars of expansion waged by Jakpa Lanta, a ruler and warrior of the Gonja Kingdom from 1622-1623 to 1666-1667 may have further reinforced the sovereignty of the Gonja in the study area (Wilks 1971: 432).

## Study Methods

Research at Sabule was conducted from June 2012 to February 2013 and involved the use of literary sources, oral accounts, and archaeological reconnaissance and excavation. Site surface survey revealed eight large mounds in the entire Sabule landscape (Fig. 2). The site was selected for excavation because of the surface scatter of potsherds and its closeness to two pits that had been dug by a team of researchers investigating anthropogenic soils in Ghana. These dugout pits



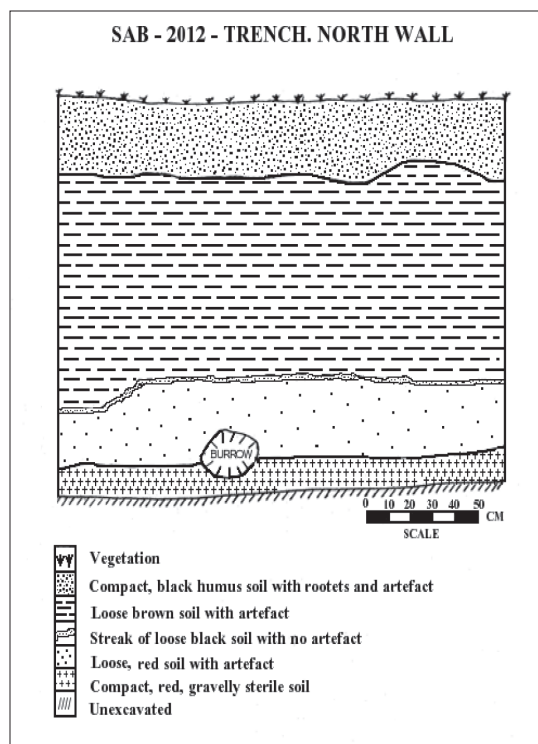
**Fig. 2** Map showing mounds that mark the Sabule landscape. Cartography by Bossman Murrey (2013), Department of Archaeology and Heritage Studies, University of Ghana.

contained potsherds which were probable indicators of what could be found in the excavated units.

Two excavated units consisting of a test pit measuring 1 x 1 metre and a trench measuring 2 x 4 metres were opened 24 metres and 27 metres respectively north of a pit previously dug by soil science researchers. The trench was excavated at a location of 8° 3' 231" N, 1° 55' 14.8" W and at an elevation of between 875 and 900 metres above sea level, while the test pit was dug on the slope of an elevation of 875 metres. The test pit and the trench reached the sterile layer at depths of 150 cm and 165 cm respectively.

Each stratum (soil layer or natural stratigraphy) was removed completely before proceeding to the next. This kind of careful “layer-cake” excavation is the stratigraphic or context system of excavation (Burke and Smith 2004: 117), and works best for sites with easily distinguishable layers (Fagan and Durrani 2016: 168). Both test pit and trench were excavated in order to acquire stratigraphic and chronological information as well as to obtain cultural materials and faunal remains.

Three cultural layers were revealed in the test pit. The first layer was characterized by a black humus soil with rootlets, bones, and very



**Fig. 3**  
North wall of trench.  
Cartography by  
Bossman Murrey  
(2013), Department  
of Archaeology and  
Heritage Studies,  
University of Ghana.

little pottery. This layer measured 40 cm thick on average. The second layer, a brownish loose soil which ended at a depth of 80 cm contained pieces of bones and pottery and produced the largest quantity of finds. The third layer consisted of a loose reddish soil of about 30 cm thick with very little pottery. A compact red, gravelly sterile soil was reached at a depth of 150 cm.

The trench indicated four natural stratigraphic layers. Layer 1 consisted of black, compact and moist humus soil with rootlets, bones, daub, charcoal and pottery. With a thickness of 40 cm, the first layer was underlain by the second layer which consisted of a brown loose soil with charcoal, ash, potsherds, an iron bracelet, a metal arrowhead, pieces of iron slag, bones, shells, grindstones, and a piece of ivory. Layer 2 contained more finds than any of the other cultural layers. It was approximately 80 cm thick at its thickest section and was underlain by layer 3, which consisted of a thin black soil of 5 cm thick (see Fig. 3). This layer contained no finds and was reached at an average depth of 125 cm. Beneath it was the fourth layer of loose reddish soil of about 40 cm thick. Finds from layer 4 consisted of charcoal, bones, iron slag, daub, and pottery. A sterile layer of red soil with gravel was reached at a depth of 165 cm.

## Summary of Archaeological Findings

Finds recovered from the excavations included potsherds, a perforated pottery disc, grindstones, carved ivory, an iron arrowhead, pieces of slag, an iron bracelet, bones, shells, and charcoal samples. A total of 9, 219 finds constituting 95.22% of the entire finds from the excavations were recovered from the trench while 462 finds (4.77%) were recovered from the test pit. Most of the finds were sherds of locally produced pottery, which constituted 97.07% of the total finds.

A total of 256 (2.64%) faunal remains were recovered from the excavations. Faunal analysis identified bones belonging to bird (*Aves*), cattle (*Bos taurus*), horse (*Equus caballus*), human (*Homo sapien*), grass cutter, (*Rodentia*), land tortoise (*Reptilia*), fish (*Pisces*), bovids and shells of both freshwater mollusc (*Donax oweni* and *Lantina globose*), and land snails (*Achatina achatina*).

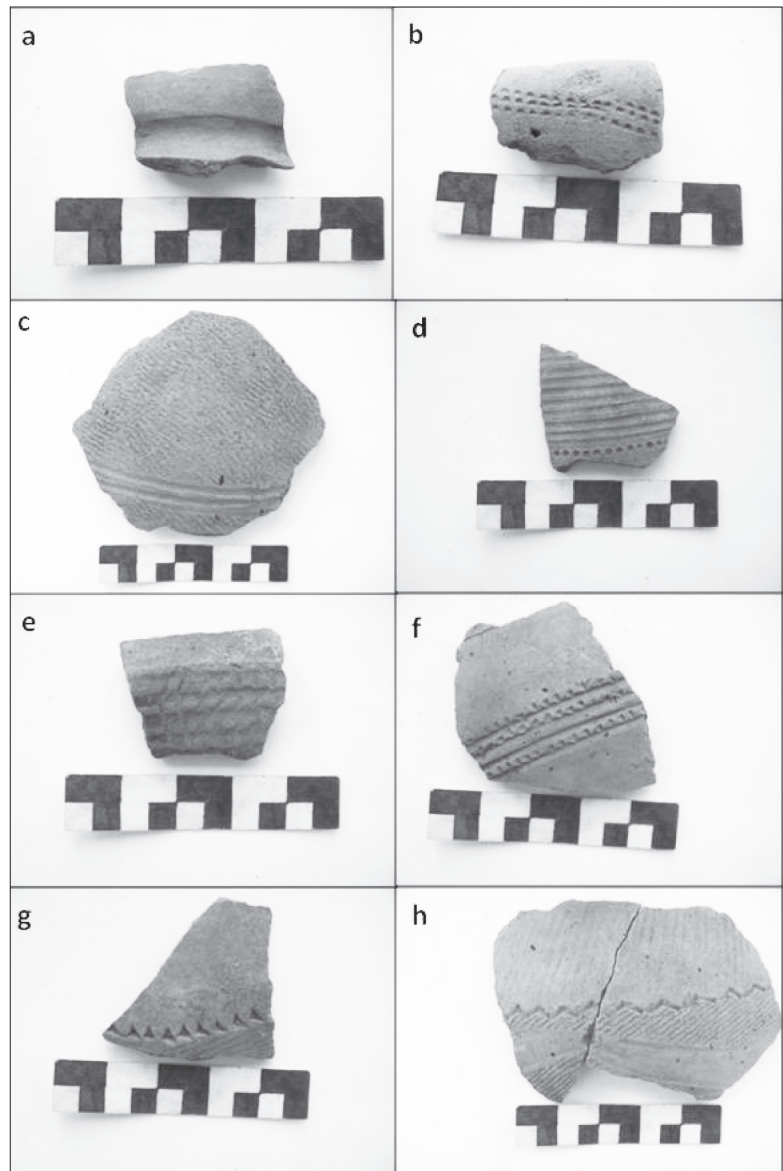
## Analysis and Interpretation of Pottery Sherds

Material culture recovered from the site, specifically pottery, have Gonja Dimbia prefixing their names. Analysis of the sherds revealed three categories of wares: Gonja Dimbia Ware I, Gonja Dimbia Ware II and Gonja Dimbia Ware III. The prevalence of Gonja Dimbia Ware I over Gonja Dimbia Ware II and Gonja Dimbia Ware III indicates that it was manufactured on or close to the site. Gonja Dimbia Ware I consists of well-fired sherds with a hard concrete-like fabric and contain fragments of quartz and laterite. The colour of the inner and outer fabric is black, brown, or grey. A total of 7, 997 sherds constituting 85.09% of the total sherds recovered from the excavations belong to Gonja Dimbia Ware I. Sherds of this ware, which range between the sizes 0-5 cm when measured on their longest axes, are 6, 382 (79.80%). The remaining 1, 482 (18.52%) and 133 (1.66%) fell within the ranges of 5-10 cm and 10-15 cm respectively. Of the total sherds belonging to this ware, 1, 680 (21.0%) sherds are red-slipped versus 6, 317 (78.99%) which are unslipped. A greater proportion of pottery (56.27%) from Gonja Dimbia Ware I are bur-nished and the remaining are not. Undecorated

sherds exceed decorated sherds. Out of the total of 7,997 sherds, 3,252 sherds constituting 40.66% are decorated and the remaining 4,745 sherds constituting 59.33% of the ware are undecorated. The decoration is mainly found on body sherds.

Decoration on Ware I sherds consists of twisted cord roulette on body sherds (50.55%); multiple grooves (73.73%) and single grooves (26.36%) occurring on rim lips on the inner parts of rims, necks, shoulders, and on bodies of vessels. The majority of the grooves are aligned in a horizontal pattern, but a few are aligned vertically, or horizontally and vertically. A combination of single and multiple grooves constitutes 3.88% of the total decorations on Gonja Dimbia Ware I sherds. Other decorations include channelling (10.30%) which mainly characterizes bases and rims of sherds (Fig. 4a). Single and multiple incisions are predominately aligned horizontally. Constituting 15.76% of the total decorations on Gonja Dimbia Ware I, they were found on 513 sherds. Rarely, some are aligned in an oblique pattern. Some of the incisions are best designated as striations achieved by raking. Multiple incisions are more prevalent than single incisions and appear on 303 sherds which constitute 59.06% of the sherds that are incised. Incised motifs are found on necks, shoulders and bodies of vessels. Further decorations include: comb stamps (Fig. 4b; represented by 40 sherds), which are circular or squarish in shape; perforated holes (represented by 21 sherds), which constitute 0.64% of the total decorations; short linear stabs (represented by 11 sherds) achieved by impressing short broom-like sticks to produce linear impressions of between 5-7 mm long and which constitute 0.33% of the decorations on Ware I sherds; and wavy line stamps (0.24% and represented by 8 sherds) achieved by impressing a tool in the form of a wavy line on vessels.

In other instances, a combination of two, three, or four decorative techniques were employed on the same sherd. The combined decorations include multiple grooves and cord roulette (Fig. 4c; 1.78%); multiple incisions and cord roulette (1.72%), usually found on body and neck sherds; comb stamps and multiple grooves (1.01%); wavy line stamps and multiple grooves (0.58%); dot stamps and multiple grooves (Fig. 4d; 0.33%); dot stamps, cord roulette and multiple incisions (0.06%); short linear stabs and multiple



**Fig. 4**  
Decorations on Gonja Dimbia Ware I sherds: channelling (a); comb stamps (b); multiple groove and cord roulette (c); dot stamps and multiple grooves (d); short linear stabs and multiple grooves (e); triangular stamps and multiple grooves (f); triangular stamps and cord roulette (g); cord roulette and multiple grooves and wavy groove (h). Photographs by author.

grooves (Fig. 4e; 0.12%); triangular stamps and multiple grooves (Fig. 4f; 0.36%); half-moon stamps, single groove and short linear stabs (0.03%); triangular stamps and cord roulette (Fig. 4g; 0.03%); comb stamps, multiple incisions and single groove (0.03%); comb stamps, multiple grooves and finger impressions (0.03%); multiple grooves, multiple incisions and dot stamps (0.06%); dot stamps, cord roulette and single groove (0.09%); multiple grooves, multiple

incisions and comb stamps (0.09%); hollow stalk stamps, comb stamps and multiple incisions (0.03%); cord roulette, multiple grooves and single wavy groove (Fig. 4h; 0.03%); and herring bone stamps, multiple grooves, cord roulette and comb stamps (0.03%).

Most of the vessels of Gonja Dimbia Ware I are characterized by flowing profiles. This is supported by the fact that out of the total of 7, 997 sherds, only 46 (0.53%) are characterized by carination. Rim, neck, body, handle and base sherds constitute respectively 22.63%, 6.50%, 69.37%, 0.05%, and 0.86% of the total sherds of the ware. One sherd was indeterminate, representing 0.01% of the total sherds. Out of a total of 925 diagnostic rim sherds, 183 (19.78%) are jars, and the remaining 742 (80.2%) are bowls.

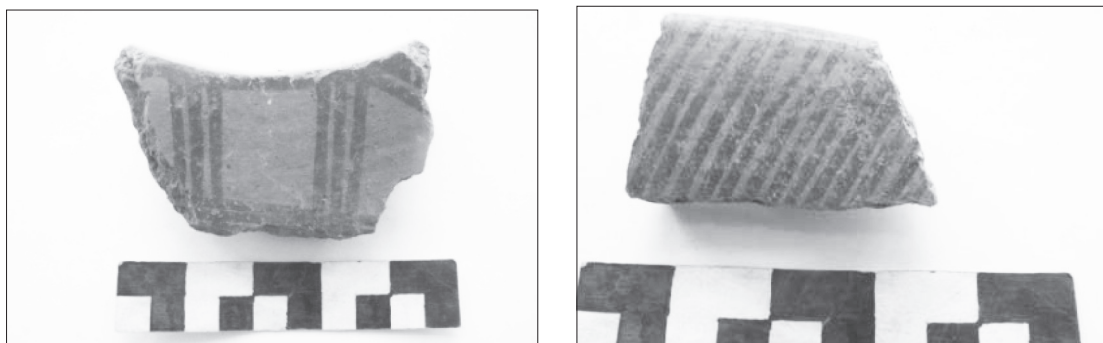
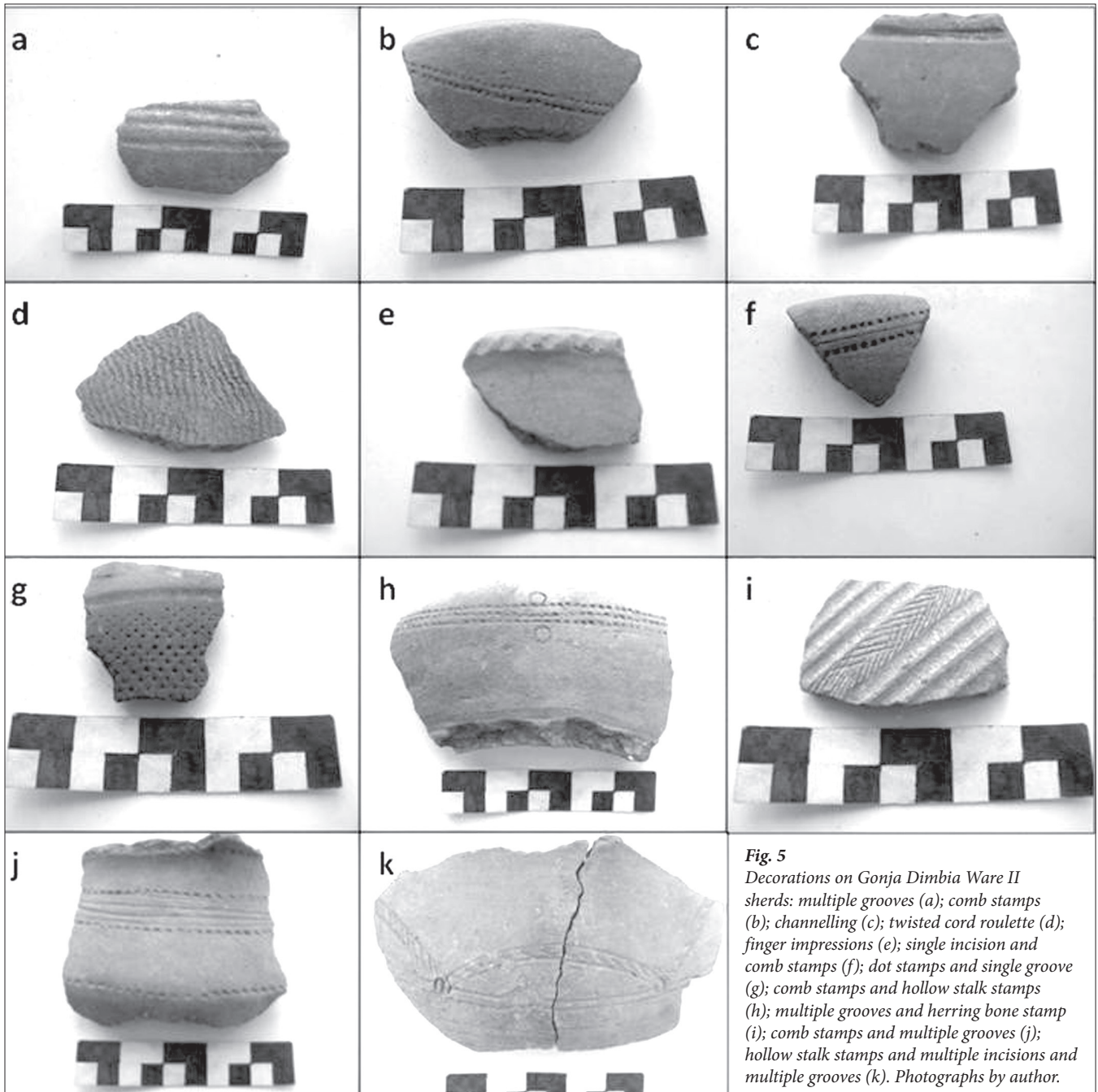
Unlike the first and third ware, Gonja Dimbia Ware II is micaceous and consists of sherds with mica, which appears to be intentionally applied on the outer surface. The ware is made up of 882 potsherds, which constitutes 9.38% of the total sherds from the excavations. The paste of the sherds contain fragments of quartz. The inner fabric is sandy and the colour of the inner and outer fabric is brown or black.

About 677 (76.75%), 188 (21.31%) and 17 (1.92%) sherds fall within 0-5 cm, 5-10 cm, and 10-15 cm respectively when measured on their longest axes. A total of 412 sherds are red-slipped. These constitute 46.7% of the total sherds of Ware II. A total of 470 sherds (53, 28%) are unslipped. Sherds, which are burnished constitute 51.36% of the total sherds of the ware. The remaining 429 (48.63%) of the total sherds make up for unburnished sherds.

Unlike Ware I, the total number of decorated sherds belonging to Gonja Dimbia Ware II are more than the total of undecorated sherds. Out of a total of 882 sherds, 553 sherds constituting 62.69% of the ware are decorated. The remaining 329 sherds constituting 37.30% of the ware are undecorated. Various decorations are found on the sherds. The most predominant decorations are grooves. A total of 148 (27.11%) of the entire decorations on sherds of Gonja Dimbia Ware II are grooves. A total of 102 sherds are decorated with multiple grooves (Fig. 5a). Multiple grooves constitute 18.44% of the grooves and single grooves found on 48 sherds constitute 8.67% of the grooves represented on the sherds. Grooves

are mostly found on the rim lips, on the inner parts of rims, shoulders, and on bodies of vessels. Other decorations include comb stamps which are either circular or squarish in shape (Fig. 5b; 20.42%), incisions (5.96%), channelling (Fig. 5c; 41.5%), twisted cord roulette (Fig. 5d; 1.62%) or finger impressions (Fig. 5e; 0.36%). Some sherds possess two or more combinations of decorations such as triangular stamps, multiple grooves and multiple incisions (0.18%); single incision and comb stamps (Fig. 5f; 0.90%); dot stamps and single groove (Fig. 5g; 0.54%); hollow stalk stamps, multiple grooves and comb stamps (0.18%); and comb stamps and hollow stalk stamps (Fig. 5h; 0.36%). Other combined decorations are multiple grooves and herring bone stamps (Fig. 5i; 0.36%); comb stamps and multiple grooves (Fig. 5j; 0.54%); comb stamps, single groove and single incision (0.36%); cord roulette, multiple groove and triangular stamps (0.18%); triangular stamps, multiple grooves and multiple incisions (0.18%); and hollow stalk stamps, multiple incisions and multiple grooves (Fig. 5k; 0.54%).

The third ware is also unique in that it is a design-painted ware (Figs. 6a & b) similar to Silima Ware (see Davies 1964; Mathewson 1968; Shinnie and Kense 1989; York 1973), a characteristic trait of the Volta confluence area in Ghana (see Effah-Gyamfi 1985: 149). Out of the total of 519 sherds, 321 (61.84%) sherds are decorated. The remaining 198 sherds, which constitute 38.15% of the sherds, are undecorated. Comparable to Ware II, sherds belonging to Gonja Dimbia Ware III are largely decorated. The most common decoration is grooves. A total of 102 sherds constituting 18.44% of the total decorations on sherds of the ware are decorated with grooves. Single decorations represented on vessel parts of sherds include multiples grooves (20.56%); single grooves (11.21%) found on body sherds; channelling (18.38%); design-painting (14.01%); comb stamps (5.29%) and twisted cord roulette (0.93%). Painted designs are mostly in red and this may be as a result of preference of both producers and users of the vessels. A band of black paint is represented on only one sherd. The bands of paint are found on the rim lip or body of the sherds. The painted decorations consist of bands of red paint on the rim, red vertical lines in the interior and exterior of vessels, and red horizontal lines in the interior of vessels.



**Fig. 6a & 6b**  
 Design-painting on Gonja Dimbia Ware III sherds. Photograph by author.



A combination of two or three decorative techniques were also applied on sherds. The combined decorations include wavy line stamp and multiple grooves (5.60%); comb stamps and multiple grooves (4.67%); and channelling and multiple grooves (4.36%). The rest are dot stamps and multiple grooves (1.24%); design painting and multiple grooves (0.93%); wavy line stamps and channelling (0.62%); single groove and multiple incisions (0.93%); and design painting and channelling (0.31%). Other combined decorations are wavy line stamps and design-painting (0.31%); channelling, comb stamps and single grooves (0.62%); channelling, single incision and design painting (0.31%); design painting, channelling and multiple grooves (0.31%); and hollow stalk stamps, multiple grooves and comb stamps (0.31%).

Out of a total of 87 diagnostic sherds, 36 (41.37%) were jars and 50 (57.47%) were bowls. Only one diagnostic base sherd was identified. Rims, necks, bodies and bases constitute 51.63%, 8.47%, 34.48%, and 3.85% respectively of the total sherds of Gonja Dimbia Ware III. Eight carinated sherds, which constitute 1.54% of the total sherds, were found. No handles were found. Vessel forms are predominantly those with flowing rather than with angular profiles.

All the three wares consisted of several forms of jars and bowls and some bases. These jars and bowls probably served multiple functions. The presence of soot on some vessels suggested their use as cooking vessels or as vessels for warming food. It is also possible that some of the huge bowls and jars were used to store water or grains or were used as containers for fetching water from streams. Some shallow bowls may have been used as lamps as their short walls would have allowed

the exposure of the wicks to provide light to surrounding areas.

Vessel forms consisted of spherical jars with everted rims (Fig. 7) and open hemispherical bowls with incurved rims (Fig. 8). Other vessel forms included short hemispherical bowls with everted rims, which could have served as lamps or containers for body pomade. Significantly, all the levels with the exception of layer 3 of the trench contained many of the vessel forms. Layer 3 was completely devoid of finds and probably represents a break in the occupation of the site. The presence of similar vessel forms in the stratigraphic levels above and beneath level 3 showed that even if there was a break in occupation, the site was re-occupied by people with similar ceramic traditions, perhaps by the same group of people. The ceramic tradition at the study site shares some resemblance in vessel forms, surface finish, paste characteristics and some aspects of decoration with the ceramic tradition at Begho (see Crossland 1989), Bonoso (the ancestral home of the Wenchi people), Kaam (a site in the Wenchi metropolis from where the Wenchi people moved to their present township), Twemma (another site in the Wenchi Traditional Area; see Boachie-Ansah 1986a), Ohene Ameyaw Anim near the Techiman Senior High (see Boachie-Ansah 2005), Daboya (see Shinnie and Kense 1989), New Buipe (see York 1973), Amuowi (see Effah-Gyamfi 1974), and Bono Manso (see Effah-Gyamfi 1985).

The design-painted ware from the site under investigation could be identified with sherds from Daboya, New Buipe, Yendi Dabari (Shinnie and Ozanne 1962), Bono Manso, and Begho, while the ware with a concrete-like fabric was also found at Bonoso, Kaam, Twemma, Ohene Ameyaw Anim near the Techiman Senior High School, and Bono Manso. The mica slipped ware is also known at Begho, Daboya, and Bono Manso. The material culture of Gonja Dimbia, specifically pottery, therefore shares similarities with materials of some sites within northern Ghana and the Bono east region.



**Fig. 7**  
Spherical jar  
with everted rim.  
Photograph by author.

## Analysis and Interpretation of Other Archaeological Data

The ceramic disc with a hole in the middle, perhaps a treadle of a loom, may be an indication that weaving was practiced. The presence of iron slag in the lowest stratum of the trench also indicates that Gonja Dimbia is an Iron Age site. The iron slag and iron tools (Fig. 9) suggest that the dwellers of the site were smelters and users of iron. The piece of carved ivory suggests it may have been used for body ornamentation while the grindstones (Fig. 10) may have been used as tools for processing vegetables or grains.

The faunal remains also suggest that the occupants of the site survived on dog, cattle, sheep and goat meat as well as the meat of birds and shellfish. Wild animals eaten by the site's inhabitants included cane rat, land tortoise, and unidentified bovids. This implies that hunting was practiced. The inhabitants of northern Ghana do not consume snails, therefore the presence of snail shell in the excavations suggest that the Gonja possibly co-inhabited with the Bono at Gonja Dimbia, who considered *Achatina achatina* as highly desirable in their meals. This interpretation agrees with the nature of Gonja settlements which consisted of a large population of indigenes and compounds of houses in which the Guan rulers, the princes, and their relations lived. The subjugated natives within the Gonja state were permitted to live their lives with very little or no interference with their cultures (see Boahen 1966: 56-57; Wilks 1971: 432). *Achatina achatina* is a forest species and its presence at Gonja Dimbia is also indicative of interaction between the Gonja Dimbia area and forest regions of Ghana.

The horse was considered a high-status animal as it was expensive to keep. As a result, only the rich and influential in society owned them. In northern Ghana, horses were mostly kept by chiefs who used them for various ceremonies and in warfare. The horse bones identified at the site are therefore suggestive of social differentiation at Gonja Dimbia. It is noteworthy that seven out of the eleven horse bones were found in level 2 (80-120 cm below the surface).



**Fig. 8**  
Open hemispherical bowl with incurved rim. Photograph by author.

## Dating the Site

Gonja Dimbia Ware III is identical to Silima ware. Silima ware has been dated to 1300-1850 at Daboya (Shinnie and Kense 1989: 72). At New Buipe, the pottery was found in Phase II (dated by radio-carbon to  $780 \pm 100$  A.D. and  $790 \pm 100$  A.D.) and Phase III (with radiocarbon dates ranging from  $1495 \pm 95$  A.D. to  $1640 \pm 90$  A.D.) (York 1973:20, Table II, 131). Silima ware has also been found at Yendi Dabari (Shinnie and Ozanne 1962: 87) which was likely abandoned in 1713-14 A.D. (Ozanne, n.d: 31). At Begho, the ware has been found at the Nyarko Quarter dated to the early second millennium A.D. (Posnansky 1976:3), and at the Begho B2 site dated to post-16th century A.D. (Crossland 1989: 105). This ware was mainly confined to Phase I at Bono Manso where it has been assigned a date of 1250-1450 A.D. (Effah-Gyamfi 1985: 27, 35, 160-61). By cross-cultural inference, it is likely that Gonja Dimbia dates between 1300 and 1850.

Gonja Dimbia Ware I, characterized by sherds with hard concrete-like fabric with fragments of quartz and laterite has affinities with Bonoso Ware III (see Boachie-Ansah 1986a: 121) from Bonoso (the ancestral home of the Wenchi people), Kaam (a site in the Wenchi metropolis from where the Wenchi people moved to their present township) and Twemma (another site in the Wenchi Traditional Area). Bonoso has produced two uncalibrated radiocarbon dates of  $710 \pm 90$  A.D. (N-2343 and  $970 \pm 85$  A.D. (N-2344) (Boachie-Ansah 1986a:133), and two calibrated 2-sigma radiocarbon dates of 680-776 A.D. (KIA 42817) and 663-774 A.D. (KIA 42818). Two calibrated 2-sigma dates of 1395-1468 A.D. (KIA 42820) and 1385-1428 A.D. (KIA 42821) have been obtained for Kaam. Twemma has also been dated by 2-sigma calibrated radiocarbon



**Fig. 9**  
Iron tools (iron bracelet  
and iron arrowhead).  
Photograph by author.



**Fig. 10**  
Grindstones.  
Photograph by author.

dates to 1440-1524 A.D. (KIA 42824) and 1418-1446 A.D. (KIA 42825).

Bono Manso and Ohene Ameyaw Anim both in the Techiman Traditional Area of the Bono East Region, have also produced pottery identical to Gonja Dimbia Ware I. At Bono Manso, concrete-textured sherds with well-fired hard fabric which are similar to Gonja Dimbia Ware I were found with Silima ware sherds from the site (see Effah-Gyamfi 1985: 151). These sherds have been allotted to Phase I which has been assigned a date of 1250-1450 A.D. (Effah-Gyamfi 1985: 27, 35, 160-61). Similar sherds as Gonja Dimbia Ware I have also been found at Ohene Ameyaw Anim near the Techiman Secondary School (see Boachie-Ansah 2005: 66-69). Ohene Ameyaw Anim has been dated to the late 17th and 18th centuries by locally manufactured smoking pipes and a Rhenish salt-glazed stoneware.

Gonja Dimbia Ware II sherds, characterized by mica coating on the external surface are akin to Mica-coated (Micaceous) ware of Bono Manso (see Effah-Gyamfi 1974: 258-61, 1985: 161-65), Begho Micaceous Ware I (Crossland 1989: 38-41), and New Buipe Micaceous Ware, (York 1973: 146-51). Five radiocarbon dates, which range from  $1430 \pm 100$  A.D. to  $1710 \pm 100$  A.D., have been obtained for the Brong Quarter of Begho from where the micaceous pottery was recovered, representing an occupation between the 14th and early 18th centuries (Crossland 1989: 10).

Seven calibrated radiocarbon dates ranging from 1297 A.D. (N 2493) to 1630 A.D. (N 2491) have also been obtained for Bono Manso (Effah-Gyamfi 1985: 204). At New Buipe, the mica coated pottery was found in Phases II and III. Phase II has been dated by two carbon dates to  $780 \pm 100$  A.D. (I - 2702) and  $790 \pm 100$  A.D. (I - 2701) while Phase III has been dated by five radiocarbon dates which range from  $1495 \pm 90$  A.D (I-2705) to  $1640 \pm 90$  A.D. (I - 2702) (York 1973: 145).

Sherds which are similar to Gonja Dimbia Wares I and II are dated at Bonoso, Kaam, Twemma, Ohene Ameyaw Anim, Bono Manso, Begho and New Buipe from 663 A.D. to 1810 A.D. By cross-cultural dating, the wares from Gonja Dimbia probably date to this period. The two dates of 663 A.D. and 1810 A.D provide a range of about 1,147 years. Considering this wide range, it is not useful for dating the site compared to a range of 391 years attained for the carbon dates for Gonja Dimbia (see Table 1).

Five carbon samples in the form of charcoal were prepared and sent for dating at the Scottish

University Environmental Research Centre (SUERC) Radiocarbon Laboratory in the United Kingdom. The five samples were retrieved from depths of 110, 132, 140, 140, and 150 of levels 2 and 4 of the trench.

The radiocarbon results show some irregularities in the dates. For example, the second sample (GU30191) collected from a depth of 132 cm is later than the first sample (GU30190), collected at a depth of 110 cm. Unfortunately, no range was given for the first sample (GU30190) which was collected from a depth of 110 cm. It is therefore challenging to tell whether the second date partly coincides with the first date.

The third sample (GU30192), collected at a depth of 140 cm (the same depth at which the fourth sample (GU30193) was collected) have produced two unlike calibrated 2-sigma dates of 1321-1392 A.D. (GU30192) and 1360-1432 A.D. (GU30193). However, this problem is alleviated by the fact that the two dates partly coincide. They also correspond with the last date of 1324-1394 A.D. (GU30194).

The irregularities may be due to differing ages of the samples since no clear-cut evidence of disturbance was detected in the archaeological record. It must be noted, however, that all together the dates fall within 1321-1615 A.D. This falls within the period when Silima ware (also Gonja Dimbia Ware III) was in use in several parts of Ghana. The total non-appearance of imported European goods in the samples seems to support a pre-Atlantic contact period. It is likely that the 1498-1615 A.D. date provided by the second sample (GU30191) may not be dependable. On the other hand, the site may have been occupied before and during the Atlantic contact period. If this was the case, then, the two carbon dates for the uppermost levels may reflect, or may partly reflect, the actual dates of the levels. In that case, the lack of European imported goods may not be due to the fact that the site pre-dates the Atlantic contact period. Rather, it may be due to the paucity of European goods in the hinterland even during the Atlantic contact period. It is also possible that the 1498-1615 date (GU30191) may have partly coincided with the 1400 A.D. date (GU30190) had a range been given for it.

There is therefore a need for more carbon dates to grant insights into the chronology of the excavated site. Be that as it may, the carbon date

of 1498 A.D.-1615 A.D. (GU30191) falls within the second half of the 16th century during which time the Gonja expanded their frontiers from their camp at Yagbum. The carbon samples, which produced this date, were collected only 7 cm below level 3, which was totally empty of archaeological finds and which perhaps represents a break in occupation of the site. If the carbon date really reflects the true age of the site, this break in occupation may be related to the Gonja conquest of the area.

## Conclusion

The archaeological data described above provides insights into cross-cultural interactions in this area of the Bono East region. The pottery from Sabule share affinities with pottery from other sites in Ghana. The presence of material culture in the dark humus soil in the excavated units support the view that the dark humus soils in the Sabule area are anthropogenic in nature. It is obvious from the stratigraphic profile that the initial occupation was interrupted by a short break represented by a thin layer of soil of about 5 cm thick. Later, a group similar in culture to the earlier dwellers occupied the site suggesting a continuity of cultural behavior. Material culture from Gonja Dimbia reveals the daily practices of the settlers of the site which include iron working, potting, weaving, hunting, and owning of horses.

Lab. No.	Depth Level	Uncal bp	Cal. AD 68.2%	Cal AD 95.4%
GU30190	110 cm 2	619 ± 29	AD 1324-1393	AD 1400
GU30191	132 cm 2	428 ± 29	AD 1436-1471	AD 1498-1615
GU30192	140 cm 2	660 ± 29	AD 1306-1385	AD 1321-1392
GU30193	140 cm 4	554 ± 29	AD 1345-1419	AD 1360-1432
GU30194	150 cm 4	654 ± 29	AD 1310-1387	AD 1324-1394

Table 1. Radiocarbon Dates of Charcoal Samples from Gonja Dimbia.

NB. Uncal means uncalibrated. Cal means calibrated. (bp represents before present, AD represents anno domini). The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration programme (OxCal4).

It is conclusive that the site is an Iron Age site and its inhabitants were stratified. Literature is supported by faunal evidence that Gonja rulers did not interfere with the cultural practices of the people they subordinated through warfare.

The chronology of site has been inferred from cross-cultural analysis and radiocarbon (C14) dating. Cross-cultural analysis associates Gonja Dimbia Ware III with dates from about 680-1850 A.D. Regardless of the abnormalities in dates, dates provided by the carbon samples place Gonja Dimbia to the period between 1321 and 1615 A.D. The date falls within the period when Silima ware (Gonja Dimbia Ware III) was in use in some parts of Ghana. Critically assessing the three dates obtained from depths of 140 cm and 150 cm below the surface, the site seems to have begun in the 14th century A.D. The sherds which share affinities with Gonja Dimbia Ware I and Gonja Dimbia Ware II are dated at Bonoso, Kaam, Twemma, Ohene Ameyaw Anim, Bono Manso, Begho and New Buipe from 663 A.D. to 1810 A.D. By cross-cultural dating, the wares from Gonja Dimbia probably date to this period. The two dates of 663 A.D. and 1810 A.D provide a gap of about 1,147 years which is too wide a gap and therefore not advisable to use for dating the site. Attention must now be given to the radiocarbon dates obtained for Gonja Dimbia. Regrettably, some of the carbon dates for Gonja Dimbia are problematic. Sample GU30191 (collected at a depth of 132 cm), produced a later date (A.D. 1498-1615) than that of sample GU30190 (collected at a depth of 110 cm) which produced a date of A.D.1400 (no range given). Samples GU30192 (collected at a depth of 140 cm), GU30193 (also collected at a depth of 140 cm) and GU30194 (collected at a depth of 150 cm) have produced 2-sigma calibrated dates

of A.D. 1321-1392, A.D. 1360-1432 and A.D. 1324-1394 respectively. These dates coincide with one another and may generally reflect the actual date of the site. The dates possibly show that the site began in the 14th century. It is also possible that sample GU30191 (collected only 7 cm below Level 3 which probably represents a break in occupation) which has produced the date of A.D. 1498-1615—a date which partially falls within the second half of the 16th century, the period of Gonja advancement—may also reflect the true date of the site. Nevertheless, because the date is later than that of GU30190 collected above it, there is a need for more carbon dates to clarify the dating of the site. It is also regrettable that the date of A.D. 1400 produced by sample GU30190 was not provided with a range or statistical deviation. This supports the fact that more carbon dates are needed to throw light on the chronology of the site.

While information has been revealed about the material culture of Gonja Dimbia, nothing is known about the material culture of the ancestors of the Dega people who are said to have driven the Gonja people from Gonja Dimbia. There is need for archaeological research involving excavations at the abandoned settlement of the Dega people. This abandoned settlement, located south-southwest of Gonja Dimbia, must be excavated to know when the Dega people drove away the Gonja from Gonja Dimbia. The abandoned Dega settlement is now presently being used as a cemetery. Permission to excavate portions of the site must be negotiated with the Dega chief and elders.

Subsequent research could also aim at informing when the Gonja people were driven from Gonja Dimbia. Future work might excavate some of the large mounds in order to shed further light on the chronology of the site.

## Notes

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