

## GHANA

### **A Middle Stone Age Component at the Birimi Site, Northern Region, Ghana**

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The 1996 survey and excavation of the Birimi Site in the Northern Region of Ghana has revealed the presence of a Middle Stone Age (MSA) component in addition to the already known Kintampo component. The Birimi site is located on a terrace beside the Birimi stream, south of the Gambaga Escarpment, and 3.5 km northwest of the village of Nalerigu (Casey 1993:113,116). Research carried out to date suggests that the MSA component may be in archaeological context. If this is the case, Birimi would be the first MSA site in Ghana at which artifacts have been found in archaeological rather than geological context.

The MSA artifacts found at Birimi come from several field contexts: (1) on the surface of the site, mixed with Kintampo Complex and Iron age materials; (2) redeposited at the bottom of erosional gullies dissecting the site; (3) redeposited or recycled within Kintampo deposits; and (4) in place approximately a meter below the surface in a light yellow-buff B horizon. A small sample of excavated material suggests that there may be two MSA horizons separated by about 15 cm of sterile deposits. Siliceous mudstone artifacts from the lower occurrence are worn, have concretions adhering to

them and have an orange patina. Those from the upper occurrence are fresh and have a blue-grey patina.

Birimi site sediments are locally derived from a well sorted, medium to coarse, heavily oxidized sandstone. Fine quartz sand to silt dominate the sedimentary column throughout, however the presence of appreciable amounts of clays is indicated by the extreme hardening of the sediment upon drying, and its rapid and complete softening when penetrated by rainfall. There is a gradual change in sediment colour and structure throughout the column. The top 20 cm are dark reddish brown due to the presence of large quantities of ferrous oxides and organic matter. Downward leaching results in progressive lightening of the sediment to about 80 cm below surface (b.s.) from dark to light reddish brown. A layer of nodular iron oxides (iron concretions) is present at about 56 cm b.s. At 80 cm b.s. there is a dramatic sedimentological change indicated by abrupt colour shift to light yellow-buff, and textural change to a friable, blocky structure. MSA artifacts occur within the middle zone of the lower yellow-buff subunit, which extends beyond 180 cm b.s. Optically stimulated luminescence dates will be obtained on sediment samples from the MSA horizons and from the sediments above and below.

Sediment samples from both MSA occurrences were processed by manual flotation to recover small-scale remains: 4 litres from the upper and 5 litres from the lower horizon. In this technique, sediment is placed into a bucket filled with water, and floating materials are slowly poured through two nested sieves of 2.0 and 0.4 mm mesh. The heavy, or sinking fraction is then gently water screened through a 1.18 mm mesh sieve. Although light fractions from these two contexts have not yet been analysed, several small bone fragments were recovered in the heavy fraction component of the upper MSA level. The precise identification of these bone specimens is not possible because of their fragmentary nature, but it appears that they may be representative of a medium to large sized mammal. Microlithic and other small-scale remains were not identified in either heavy fraction sample.

Raw materials exploited include locally available siliceous mudstone and possibly quartz. These same raw materials were used by Kintampo people, however MSA mudstone artifacts are generally

easily distinguishable from Kintampo ones on the basis of technology and patina. Neither siliceous mudstone nor quartz are available on site. Mudstone occurs interstratified with sandstone in the Voltaian Formation (Bates 1962:55). The closest known raw material source is 10 km from Nagbo, some 15 km south of Nalerigu (Casey 1993:126). Other, closer mudstone sources may exist but have not been identified. Quartz is found in abundance at the bottom of the Gambaga escarpment (Casey 1993:124).

The excavated sample of artifacts is small (N=32), but includes a blade with a faceted butt (Figure 1a) and a broken Levallois core. A larger sample was obtained through collection of materials lying on the surface and from the gullies dissecting the site. Abraded and relatively fresh material was found in both of the latter situations. The artifact assemblage has only been examined cursorily at this time, however the following observations have been made. Both disc cores and Levallois cores are present. The proportion of cores to flakes and tools is very low, a finding in keeping with the fact that raw materials are found at some distance. Levallois flakes and parallel-sided specialized flakes or "blades" are present, with blades being slightly more common than Levallois flakes. Tools found include a biface worked on an elongated Levallois flake (Figure 1b), a basally thinned Levallois flake (Figure 1c), denticulates, notches and numerous retouched flakes and blades. In addition, a bifacial foliate which had been recycled and ground at a later date was found on the surface. The basally thinned Levallois flake is reminiscent of the North African Tabalbat points (Caton-Thompson 1946).

Affinities with the Lupemban or other MSA Industrial Complexes cannot be verified at this time. The MSA of West Africa is very poorly known. There is evidence of the presence of the Sangoan and Lupemban Industrial Complexes in West Africa (Davies 1967; Soper 1965). In addition, Davies has noted the existence of a (presumably later) "undifferentiated" MSA (Davies 1967:127). The material we have recovered bears no evidence of a heavy-duty component such as is found in the Sangoan and Lupemban. Description of the artifacts found at Nakpanduri, Northern Region, Ghana and classified by Davies as "Ultimate MSA" suggest that this is more similar to the MSA at Birimi (Davies 1967: 140). Other Middle Stone Age

materials have been found at Kintampo sites near Gambaga. These include patinated Levallois flakes and large parallel-sided quadrilateral flakes. They occur singly or in very small numbers and are thought to have been "mined" from MSA sites by Kintampo people. Casey has identified one other likely MSA site in the area: Banjiri Kuliga. As she notes, analysis of material from this site "was extremely difficult owing to its extreme friability" (Casey 1993:118).

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**Figure 1:** (a) upper left: Blade found in archaeological context at ca. 100 cm below surface; (b) upper right: fragment of a biface worked on a Levallois flake; (c) bottom: basally thinned Levallois flake. Scale 1:1

