

**CHILGA KERNET:  
AN ACHEULEAN LANDSCAPE ON ETHIOPIA'S WESTERN PLATEAU**

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In the closing days of the British Abyssinian campaign, J. Desmond Clark spent a hurried hour at a Fauresmith site east of Gondar, Ethiopia collecting artifacts that are now described as Acheulian bifaces. He then left to participate in the military assault on the town (Clark 1945) and the next day, November 27, 1941, witnessed the fall of Gondar and the final liberation of Ethiopia from Italian rule. Shortly thereafter, Moysey excavated a small rock shelter near the former Italian military station at Gorgora (Moysey 1943) and L.S.B. Leakey (1943) described the collections.

This pioneering work represents the entire published corpus on Palaeolithic archaeology in the Gondar, Gojam, and Welega Regions of Ethiopia (Figure 1). Although these two reports are among the earliest published records of archaeological sites for the country, their significance has been eclipsed by more recent paleoanthropological study of the Rift Valley of eastern Ethiopia, particularly of the Afar and Awash localities. With such a limited number of observations, only the coarsest-grained understanding of the Paleolithic in western Ethiopia has been possible.

Since 1998 the Blue Nile Basin Survey Project has worked west of Gondar focusing on Oligocene vertebrate paleontology and paleobotany. In 2002, we began investigations at a location in the Chilga district (Figure 2) that is similar to Clark's Gondar Fauresmith site. This preliminary work in Chilga suggests that the Gondar site may be part of a much more extensive Acheulean record on the Plateau. At Chilga Kernet (Lat 12° 31' 56.33"N, Long 36° 07' 31.83"E) as at Gondar, the raw material is predominately fine-grained basalt and surface collected artifacts are so weathered that "all evidence of their human origin except their shape has been lost" (Clark 1945:22).

The oldest known Acheulean comes from Konso (Asfaw, et al. 1992) within the Rift Valley of southern Ethiopia and is dated to 1.6 mya. The Acheulean is divided into three techno-typologically phases (1.6 - .2 kyr): Early, Later, and Terminal (Clark 1994). Melka-Kounture, Bodo, and other Middle Awash localities contain lithic material that is commonly considered Later and Terminal Acheulean. With the exception of the highland sites of Gadeb, Gondar, and now Chilga Kernet, all Ethiopian Acheulian sites are associated with the Rift Valley.

The distribution of the Acheulian techno-complex has been interpreted as the result of paleoclimatic and ecological factors, such as the glaciation and desertification of the Sahara (Clark 1994; Rogers, et al. 1994). Given its unique location on the western plateau of Ethiopia and its proximity to the Saharan desert of Sudan, continued work at Chilga Kernet will contribute to our understanding of the factors affecting the hominid colonization of Africa and adjacent parts of the Old World.

Chilga Kernet's surface is littered with several thousand hand axes and other heavily weathered basalt implements (Figure 3). Documentation began by establishing control points using fixed GPS receivers and post-processing geodetic triangulation (Figure 4). Then a sub-centimeter accuracy GPS system was used to create a contour map, to map sample collection areas, to layout three test trenches, and to document a subset of the surface artifacts (Figure 5). Surface collections were made in 2 by 5 meter blocks situated on three distinct topographic surfaces. Each of the 111 artifacts in these units was mapped, collected, and analyzed. Although the bifaces and picks from Chilga Kernet are not, on average, as large as those from Early Acheulian sites, biface morphology suggests the Early-Later Acheulian

Of the three test trenches, only one (Figure 5: EX3) encountered *in situ* artifacts (Figure 6). Artifacts and bone fragments, including a well-preserved large bovid talus, were mapped in the 2 by 2 m excavation. These were found at the base of a fine to coarse clayball pebble conglomerate. Most artifacts were resting on, or near, the contact of this zone with the underlying Oligocene sediments.

Similar deposits are exposed at roughly the same elevation on the sides of the Chilga Kernet hilltop. Figure 5 illustrates a pattern of low surface artifact density at the higher elevations and a zone of greater density beginning near the 1891 m line. Mapping concentrated on zones of artifact frequency change rather than on the construction of a comprehensive distribution map. Many more artifacts are strewn down the slopes to the north all the way to the banks of the Kernet River, which is roughly 40 m lower in elevation. These observations suggest that much of the upper portions of the Chilga Kernet hill are underlain by an *in situ* Acheulean landscape of approximately 2 ha. Further fieldwork is planned at Chilga-Kernet. This project received partial support from NSF Grant 0001259.

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## FIGURE CAPTIONS

- Figure 1. The Acheulean locality, Chilga Kernet provides additional information on the Paleolithic in western Ethiopia.
- Figure 2. Using synchronized GPS receivers and in-field data processing at Chilga Kernet.
- Figure 3. Surface artifact scatter along the site's northern slopes.
- Figure 4. Three of the 17 hand axes excavated from a 2 x 2 meter test unit EX3 (see Figure 5 for test location).
- Figure 5. Contour map of Chilga Kernet showing the zone of artifacts encircling the hilltop. It appears that the upper portions of the hill are underlain by an approximately 2 ha Acheulean paloesurface.

FIGURE 1. The Acheulean locality, Chilga Kernet provides additional information on the Paleolithic in western Ethiopia (map L.C. Todd).

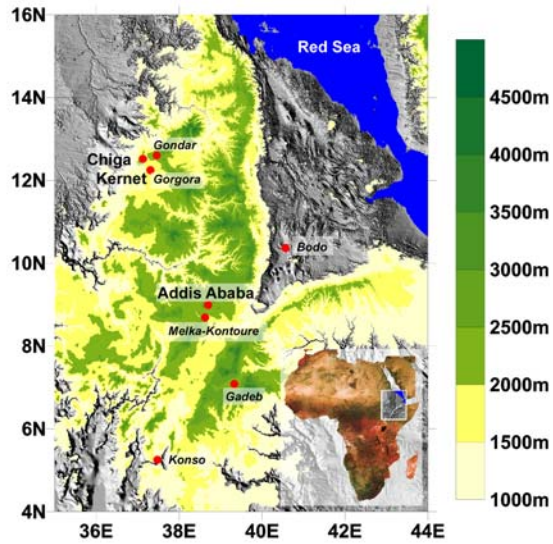


FIGURE 2. Using synchronized GPS receivers and in-field data processing at Chilga Kernet (Photo L.C. Todd).

FIGURE 3. Surface artifact scatter along the site's northern slopes (Photo L.C. Todd).



FIGURE 4. Three of the 17 hand axes from 2 x 2 meter test unit EX3 (see Figure 5 for test location). (Photo L.C. Todd).

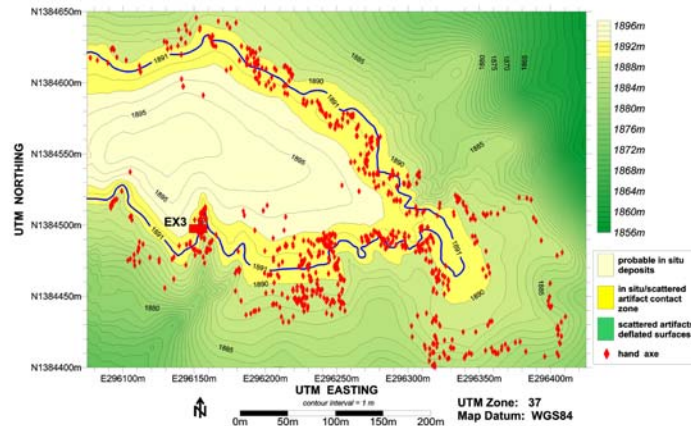


FIGURE 5. Contour map of Chilga Kernet showing the zone of artifacts encircling the hill top. It appears that the upper portions of the hill are underlain by an approximately 2 ha Acheulean palaeosurface. (Map L.C. Todd).