**Chiwondo Beds**

Middle Pliocene to Early Pleistocene sediments exposed in the northernmost halfgraben of the Malawi Rift (Karonga Basin), northern Malawi, belonging to the western branch of the East African Rift system. There are two main fossil-bearing regions: one northerly near the town of Karonga, and one more southerly near the village of Uraha. The large-scale transgressive-regressive cycle of the Chiwondo Beds represents a highly dynamic depositional system in a nearshore to backshore position. Facies elements include fluviatile, paleosol, swamp, beach, and foreshore and offshore lacustrine deposits. Maximum thickness is 125 m, and five depositional sequences (Units 1–5) are limited by unconformities (paleosols, angular unconformities) reflecting lake-level changes and/or tectonic activity. Age estimates of somewhat older than 4 Ma (Unit 2) to ca. 1.5 Ma (Unit 3) rely on correlation with radiometrically dated biostratigraphical units in eastern Africa.

The first comprehensive surveys of the Chiwondo Beds were undertaken by J.D. Clark in the 1960s and 1970s, followed by T.G. Bromage and F. Schrenk from 1983 into the late 1990s. Research on the Malawi Rift and its paleofaunas, including an early hominin mandible, UR 501, recovered from Uraha and attributed to *Homo rudolfensis*, provides knowledge of the biogeographical context between the many tropical eastern and temperate southern African Plio-Pleistocene hominid-bearing sites. Situated between climatic regimes, the Chiwondo Beds region has been a meeting point, even a faunal boundary, for many northern and southern endemic faunas. The faunal assemblage also indicates, however, that southern African taxa transgressed this region when ecological extremes effected latitudinal shifts in their temperate vegetation zones. Latitudinal shifts likely began by ca. 2.8 Ma, when cooler
and dryer conditions prevailed until these conditions peaked about 2.5 Ma, resulting in the shift toward the equator of dry grassland and woodland biomes reflected in the habitat theory of E.S. Vrba.

See also Africa; Climate Change and Evolution; Homo rudolfensis; Rift Valley; Urah. [T.G.B.]

Further Readings
