
New research in the upper sequence of the Shungura Formation, Lower Omo Valley, Ethiopia

Jean-Renaud Boisserie*^{†1,2}, Tomas Bedane^{3,1}, Blade Redae^{4,1}, and Omo Group Research Expedition

¹Centre Français des Etudes Ethiopiennes – Éthiopie

²Laboratoire de paléontologie, évolution, paléoécosystèmes, paléoprimatologie [UMR 7262] – Université de Poitiers = University of Poitiers, Centre National de la Recherche Scientifique – France

³Ethiopian Heritage Authority – Éthiopie

⁴Arizona State University – États-Unis

Résumé

The Shungura Formation is a major Plio-Pleistocene sequence from the Turkana Depression in southwestern Ethiopia, with a nearly continuous fossil record subdivided into 12 members, from Basal Member and Member A up to L (omitting I). With a total of ca. 49,000 specimens found at Shungura, the International Omo Research Expedition constituted so far the largest fossil vertebrate collection in eastern Africa, dated to between 3.75 Ma and 1.09 Ma. This fossil record is notably known through material found in the lower part of the Shungura sequence, i.e., from Basal Member to lower part of Member G (3.75 Ma to 2.06 Ma), representing 89 % of the known collection. The Shungura publication record essentially addressed this lower sequence and is mainly known for its fossil hominins from top of Member B to lower Member G, including *Australopithecus* sp., *Paranthropus aethiopicus*, *Paranthropus boisei*, and *Homo* sp. Since 2010, the Omo Group Research Expedition has focused a large part of its time in the field on the upper sequence of the Shungura Formation. More than 3,000 fossil vertebrates were collected in deposits of Member L or slightly younger, multiplying by 4.6 the known record for these deposits, for a time interval (1.38 Ma to ca. 1 Ma) with limited evidence throughout eastern Africa. Field research on L deposits is multifaceted, including paleontological surveys, geological logs, archeological surveys, and zooarcheological sampling. An additional ca. 1,500 fossils were also collected from the upper part of Member G to Member K, notably significantly increasing the sampling of Member J. Compared to the lower sequence, this younger fossil record seems relatively monotonous, dominated by semi-aquatic and aquatic taxa, notably three ubiquitous hippopotamid lineages. The most common mesoherbivores are reduncines (especially *Kobus* in L) and advanced representatives of the suid *Kolpochoerus*. From Member H to Member L, 21 fossil hominids have been discovered by the OGRE, contrasting with the six specimens found by the IORE. They include specimens attributed to *Homo* sp., *Homo* cf. *erectus*, and *Paranthropus boisei*. Stone tools can be unequivocally associated with Member L deposits and are accompanied by abundant evidence for butchering activities.

Mots-Clés: Evolution, paléoécosystèmes, Afrique orientale, paléontologie, préhistoire

*Intervenant

†Auteur correspondant: jean.renaud.boisserie@univ-poitiers.fr