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New large-bodied mammals from the late Oligocene site of Chilga, Ethiopia

William J. Sanders, John Kappelman, and D. Tab Rasmussen
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Newly recovered fossil proboscideans and embrithopods from Chilga, Ethiopia are described and evaluated taxonomically. They are dated to ca. 28-27 Ma (late Oligocene), temporally intermediate between late Eocene-early Oligocene Afro-Arabian faunas dominated by archaic, endemic taxa, and replacement faunas of the early Miocene marked by a massive influx of Eurasian migrants. The paucity of similar-aged sites in Afro-Arabia makes Chilga critical for delineating the initiation and sequence of this faunal turnover. While most of the genera present at Chilga persist from older Afro-Arabian localities, at higher elevation and farther inland than elsewhere, there are no Eurasian mammals in the fauna. However, the archaic endemics from Chilga differ morphometrically from their older congeners, and include a new embrithopod, *Arsinoitherium giganteum* sp. nov., and novel species of elephantiform proboscideans, *Phiomia major* sp. nov., aff. *Palaeomastodon* sp. nov. A, and aff. *Palaeomastodon* sp. nov. B. New, primitive deinotheres and gomphotheres also occur at Chilga, extending the fossil records of these proboscideans considerably back in time. The Chilga deinothere, *Chilgatherium harrisi* sp. nov., differs sufficiently from *Prodeinotherium* and *Deinotherium* to be placed in its own subfamily, Chilgatheriinae subfam. nov. The Chilga gomphothere is smaller than Miocene elephantoids, and is referred to cf. *Gomphotherium* sp. nov. Together, this evidence suggests that indigenous Afro-Arabian taxa had greater ecological versatility than previously suspected and continued to enjoy successful evolutionary trajectories into the late Paleogene. Thus, as they spread into Afro-Arabia, new immigrants from Eurasia may have encountered vibrant local mammalian communities. The demise of many endemic inhabitants followed and remains poorly understood.

Key words: Arsinoitheriidae, Deinotheriidae, Gomphotheriidae, Palaeomastodontidae, Paleogene, Afro−Arabia.

William J. Sanders [wsanders@umich.edu], Museum of Paleontology, University of Michigan, 1109 Geddes Avenue, Ann Arbor, Michigan 48109, USA; John Kappelman [jkappelman@mail.utexas.edu], Department of Anthropology, University of Texas, 1 University Station C3200, Austin, Texas 78712, USA; D. Tab Rasmussen [dtrasmus@artsci.wustl.edu], Department of Anthropology, Washington University at St. Louis, Campus Box 1114, St. Louis, Missouri, 63130, USA.

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