

THE FOSSIL RECORD OF EARLY PRIMATE EVOLUTION IN AFRICA: IMPLICATIONS FOR PRIMATE ORIGINS

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The taxonomically diverse primate communities that have been documented in the late Eocene and early Oligocene of northern Africa have had an important influence on debates surrounding the biogeography of primate origins. In particular, diverse assemblages of anthropoid and strepsirrhine primates from these horizons have hinted at an ancient origin for both groups on the Afro-Arabian landmass. For the last two decades, the hypothesis of an ancient African origin for Anthropoidea appeared to be supported by limited fossil evidence from much older horizons in Algeria and Morocco, but recent discoveries that have been made at these Maghrebi sites have revealed that some early Eocene taxa that had previously been identified as anthropoids are in fact stem strepsirrhines. Here I present new primate and non-primate fossil evidence from the oldest primate-bearing locality in Egypt (Birket Qarun Locality 2) that provides new support for a biogeographic link between Asia and Afro-Arabia during the middle Eocene, suggests an Asian origin for stem Anthropoidea, and indicates a later arrival of Anthropoidea in Africa than was previously suspected. Phylogenetic analysis of 361 morphological characters across a variety of assumption sets nests all known Paleogene African primates within clades that are reconstructed as having arisen on northern continents. Nevertheless, instability in the placement of key basal taxa, such as species of *Teilhardina*, *Donrussellia*, and asiadapine adapiforms, leaves it unclear whether crown primates arose in Asia, Europe, or North America. This research has been supported by the U.S. National Science Foundation and The Leakey Foundation.

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