

INTER-CONTINENTAL DISPERSAL OF PALEO-PRIMATES: RETHINKING RAFTING.

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Fossil dates for the evolution of primates indicate origin in Asia (maybe Africa) 65-55 mya, and then rafting across four oceans. Is such frequent rafting believable? Lizards have probably rafted 300 km, and Atlantic westerly currents could have allowed the platyrrhine ancestor to cross in just two weeks. But how likely is four successful trans-oceanic crossings, one of over 1000 km? How likely are two raftings immediately after origination (Tethys, Madagascar), and then only two more successful raftings in the next 55 my? If primates rafted across the Atlantic, why have they not demonstrably rafted across the many far shorter distances in insular SE Asia, or across rivers of less than 1 km in width in potentially millions of years? Why has the rafting hypothesis produced only one novel prediction, which appears not to be supported? But if primates have not rafted, how have they dispersed across four continents? Both fossil and molecular dates allow earlier origins of primates than usually considered, around 85 mya. This date allows an Indo-Madagascar origin, with primates carried to Asia on India, flourishing there post the K-T event, and then dispersing to Africa. Ratites, a flightless avian taxon, might have done the same at the same time. Solely overland routes for primates require late Cretaceous/early Paleocene primate fossils in India; late Eocene/early Oligocene simians in Europe and North America (note the 55 my absence of lemur fossils in Madagascar); and intermittent contact of plates across the Tethys and between the Americas.

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