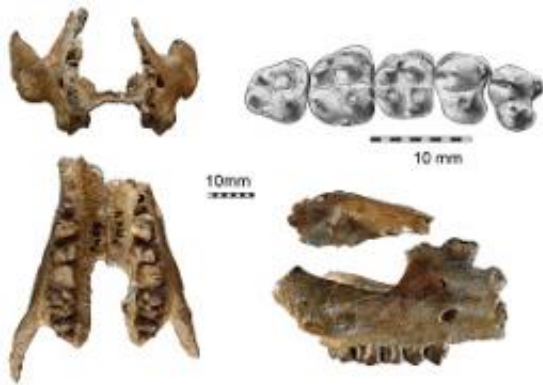


Discovery of the oldest known elephant relative

July 8 2009



View of the type specimen (skull) of the primitive proboscidean *Eritherium azzouzorum*. © MNHN, UMR 7207, C. Lemzaouda et P. Louis

Emmanuel Gheerbrant, paleontologist at the Paris Museum (France), discovered one of the oldest modern ungulates related to the elephant order. The study is published in the *PNAS* journal.

The beginnings of the radiation (diversification) of the modern [mammals](#) (placental orders) remain poorly known because of fossil gaps, and especially in some key Southern continents such as [Africa](#).

Emmanuel Gheerbrant, researcher at the CNRS, reports, in the framework of a Franco-Moroccan Research Agreement between the Museum and the Office Chérifien des Phosphates, the discovery of one

of the oldest known modern ungulates in Paleocene beds from Morocco.

Dated of about 60 millions years, this fossil mammal belongs to a new species called *Eritherium azzouzor*. It comes from the same Ouled Abdoun phosphate basin which yielded *Phosphatherium escuilliei*, which was until the *Eritherium*'s discovery the oldest and most primitive proboscidean, but from lower levels. This is the oldest known African ungulate (called paenungulates), and among them the oldest known member of the elephant order (proboscideans) for which it supports an old African origin.



Map of the Ouled Abdoun phosphate basin (Morocco), showing location of the quarries of Sidi Chennane (circle) where *Eritherium azzouzor* has been found. © MNHN, UMR 7207, D. Geffard

Eritherium azzouzor is small (4 to 5 kg) and extraordinarily primitive. It exemplifies the emergence of a modern order of ungulates at an unrecorded so primitive stage which is illustrated by original reminiscences among proboscideans with primitive groups such as some condylarths (lousinines, extinct) and non-paenungulate afrotherians (elephant shrews, Eocene to Present). Its primitive grade indicates (1) the rapid evolution of the proboscideans at the Paleocene-Eocene

transition (e.g., with increasing size), and (2) the rapid radiation of the African ungulates after the Cretaceous-Tertiary crisis (65 millions years ago), probably in relation to the colonization of the herbivorous African free niches.

More information: Emmanuel Gheerbrant. Paleocene emergence of elephant relatives and the rapid radiation of African ungulates. *PNAS*, 22 juin 2009.

Provided by CNRS

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