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Reassessment of the generic attribution of *Numidotherium savagei* and the homologies of lower incisors in proboscideans

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Near the end of the twentieth century, a medium−sized early proboscidean found in Dor El Talha (late Eocene to early Oligocene), Libya, originally identified as a small species of *Barytherium* , was described as a new species of *Numidotherium* and designated *Numidotherium savagei* . Poorly known, this taxon has been excluded from most of the recent debate about the origin and diversification of the order Proboscidea. New specimens described herein show strong structural similarities of the upper teeth with those of bunolophodont early proboscideans (e.g., *Moeritherium* and *Phiomia*) and document the shared presence of derived traits in the postcranial skeleton. The newly referred material also demonstrates some unique characteristics of this taxon, notably in its mandibular morphology and the microstructure of its dental enamel. Included for the first time in a cladistic analysis (207 anatomical characters applied to all early tethytheres), N. savagei is distinct from both *Numidotherium* and *Barytherium*, and lies in an "intermediate" position between the strictly lophodont Eocene proboscideans and the bunolophodont moeritheres and elephantiforms. Accordingly, the species is herein referred to a new genus, *Arcanotherium*. New data on its mandibular symphysis and, especially, on its lower incisors loci and morphology, bring new support to a hypothesis of homology between the lower incisors of early proboscideans and the ever−growing lower tusks of the elephantiforms, which are identified here as di1 and i1.

Key words: Proboscidea, *Numidotherium, Barytherium*, Elephantiformes, phylogeny, Palaeogene, Libya.

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