

The cranial anatomy, intraspecific variation and phylogenetic position of *Elosuchus cherifiensis*

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The mid-Cretaceous crocodyliform *Elosuchus* from northern Africa is known by various specimens including some well-preserved skulls. Two species were described, *Elosuchus cherifiensis* and *Elosuchus broinae*. However, there are only a handful of studies that deal with the morphology of *Elosuchus* (Lavocat 1955; de Lapparent de Broin, 2002; Meunier & Larsson, 2016; Young et al., 2017). In phylogenetic analysis, *Elosuchus* is either a member of Pholidosauridae or Tethysuchia. Here, I described a nearly complete skull of *Elosuchus* (MNHF31156) in the Museum d'Histoire Naturelle in Fribourg, Switzerland from Begaa, Morocco, which helps to find new insights in cranial anatomy, intraspecific variation and phylogenetic position about the genus *Elosuchus*.

The specimen could be diagnosed as *Elosuchus cherifiensis*. The description and comparison of MNHF31156 with the other *Elosuchus* specimens allowed the identification of new phylogenetic characters and intraspecific variations (especially ontogenetic). Phylogenetic analyses based on modified second matrix of Ristevski et al. (2018) were run to find the place of *Elosuchus* spp. in Tethysuchia, to test the validity of *Elosuchus broinae*. Furthermore, I performed an ontogram analysis to define ontogenetic stages for *Elosuchus cherifiensis*.

Phylogenetic analyses reveal that *Elosuchus cherifiensis* and *Elosuchus broinae* form a clade with *Vectisuchus leptognathus* and are member of Pholidosauridae. The validity of *Elosuchus broinae* is supported by the third phylogenetic analyses and well supported by autapomorphies. For the ontogram analysis, five growth stages are recognized on the basis of intraspecific characters variation. Further scientific excavations in the Kem Kem beds need to be done to clarify the validity of *Elosuchus broinae* and the sequence of morphological changes through ontogeny.

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