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# Basicranial morphology and phylogenetic position of the upper Eocene carnivoramorphan *Quercygale*

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*Quercygale angustidens* is a small, early carnivoramorphan from the upper Eocene of northwest Europe including the Phosphorites du Quercy, France. Although there is extensive material of the genus, very little has been published on the auditory region which is an important character complex for taxonomy and phylogenetic studies. This paper presents a detailed description of the basicranium of an undistorted partial skull of Quercygale. The new data form the basis for a phylogenetic analysis of *Quercygale* in the context of basal carnivoramorphan interrelationships. *Quercygale* has a mix of derived and plesiomorphic characters. The promontorium is highly derived, and unlike that of any other 'miacoid'. Yet, based on the evidence from surrounding bones the bulla does not appear to be as expanded as in other closely related miacids. In the phylogenetic analysis *Quercygale* is the sister-taxon to Nimravidae and crown-group Carnivora, and it appears to be the most derived of the stem-group Miacidae. We discuss the implications that the position of *Quercygale* has on carnivoramorphan phylogenetics.

**Key words:** Mammalia, Miacidae, Miacoidea, Quercygale, carnivoran phylogeny, basicranium, Eocene, Quercy.

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