

## New insights into the evolution of the Parareptilia

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The clade Parareptilia, sister group to the Eureptilia, has recently become the subject of increased focus due to the debate about turtle origins. Two different theories argue for turtle affiliations with the clade; one theory argues that turtles belong to the Pareiasauria, while another argues for their close affiliation with the basal procolophonids. This debate has resulted in more intense examination of members of the group; various studies have elucidated basal parareptiles such as the bolosaurids and owenettids, and anatomical, alpha-taxonomic, as well as phylogenetic work has recently been completed on the Pareiasauria. One taxon, *Macroleter poezicus*, from the Middle Permian Mezen Basin of Russia, shares characters with both basal parareptiles and pareiasaurs, and had been problematic in terms of its

relationships to other members of the group. An examination of the anatomy of the taxon was recently completed, and it was included in a phylogenetic analysis of the Parareptilia. *Macroleter* emerges as sister taxon to the Pareiasauria, differing from all previous analyses where it appeared more basally. This additional work leads to even further questions. Many other Russian parareptilian taxa – the nycteroleterids and the nyctiphuretids in particular, have been only briefly described, and many have never been included in phylogenetic analyses. In addition, many pareiasaurian taxa still remain poorly known, and are in need of more detailed description. An analysis of relationships including these new data is necessary, and will serve to further our understanding of the evolution of the group.