A TENTATIVE ASSESSMENT OF THE PHYLOGENETIC RELATIONSHIPS OF PYRENASAURUS (SQUAMATA)

M. Camaiti1,*, A. Villa1, A. Bolet2,3 and M. Delfino1,3

1 Dipartimento di Scienze della Terra, Università di Torino, Via Valperga Caluso 35, 10125 Torino, Italy
2 School of Earth Sciences, University of Bristol, Life Sciences Building, 24 Tyndall Avenue, BS81TQ Bristol, UK
3 Institut Català de Paleontologia Miquel Crusafont, Universitat Autònoma de Barcelona, Edifici IC-TA-ICP, Carrer de les Columnes s/n, Campus de la UAB, 08193 Cerdanyola del Vallès, Barcelona, Spain

*camaitimarco@gmail.com

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The extinct squamate Pyrenasaurus evansae, from the late Eocene of France and Spain, is considered a scincomorph with possible scincid affinities. In order to preliminary test its relationships, Pyrenasaurus is here included for the first time in a phylogenetic analysis as part of a broader study focused on the phylogeny of extant European scincids and their relationships with extinct forms.

The matrix, comprising a total of 148 cranial and postcranial characters, was created with Mesquite and analyzed with TNT, and it includes seven taxa of extant European scincids, the extinct Pyrenasaurus and an outgroup. All the specimens for each taxon were included in the matrix as distinct OTUs (operational taxonomic units), for a total of 12 OTUs. In the case of Pyrenasaurus, only the characters regarding the dentary could be scored. The preliminary analysis yielded a consensus tree in which Pyrenasaurus is part of a polytomy with all other OTUs but Eumeces schneideri and the outgroup. The application of the implied weighting tool resolved the polytomy, recovering Pyrenasaurus as the sister taxon to Ophiomorus punctatissimus. Of the four “K” values (K=5, K=10, K=50, K=100) used for the implied weighting analyses, only K=5 was able to resolve the polytomy.

The character that distinguishes O. punctatissimus and P. evansae from other European scincids is the elevation of the coronoid process of the dentary. This character is not shared by any other scincid included in this analysis, Further analyses, including a broader sample of taxa, will be needed to confirm this relationship.

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