

Assembling the Tree of Life—Phylogeny of Spiders: a review of the strictly fossil spider families

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Abstract: The project Assembling the Tree of Life (AToL)—Phylogeny of Spiders is an ambitious, collaborative, six-year project, which aims to construct a robust cladogram for all spider families. The resulting phylogeny will be based on morphological, molecular, behavioural and palaeontological data. Fossil spiders are not considered in current systematic catalogues. As a first step to compiling the required palaeontological data for the AToL project, this paper reviews all previously described fossil spider families. To date, twenty strictly fossil spider families have been described. One has subsequently had extant species discovered (Archaeidae), others have been synonymized with extant families (Acrometidae, Adjutoridae, Arthrodictynidae, Mithraeidae, Mizaliidae), some are valid taxa (Permarachnidae, Juraraneidae, Lagonomegopidae, Baltsuccinidae, Ephalmatoridae, Insecutoridae, Protheridiidae, Spatiatoridae) and others are in need of revision (Arthrolycosidae, Arthromygalidae, Pyritaraneidae, Inceptoridae, Parattidae). None of the fossil specimens attributed to Archaeometidae are spiders.

Key words: amber, Araneae, fossil record, palaeontology