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ORIGIN AND EARLY DIVERSIFICATION OF THE EVANIOID PARASITIC WASPS

Alexandr P. Rasnitsyn

Palaeontological Institute, Russian Academy of Sciences, 117997 Moscow, Russia, and
Natural History Museum, Cromwell Road, London SW7 5BD, UK. rasnaa@mail.ru

Superfamily Evanioidea is a small group of parasitic wasps of rich fossil record. With only two extant families, Gasteruptiidae (including Aulacinae) and Evanidae, it comprises twice more of them totally, with the additional extinct families Praeaulacidae and Andreneliidae known since the Middle Jurassic (the former) till the Early Cretaceous (both of them). Both living families start their fossil record since the Lower Cretaceous. Unlike Cainozoic, the Mesozoic evanioids are diverse both morphologically and at higher taxonomic levels. At suprageneric levels, taxonomic diversity of the Mesozoic evanioids is currently underestimated for the cladistic reasons, otherwise we would have minimum nine extinct Mesozoic subfamilies (monotypical families), viz., Praeaulacinae, Anomopterellinae, Cretocleistogastrinae, and a subfamily to be named in a submitted publication, all in Praeaulacidae; Baissinae and Kotujellitinae in Gasteruptiidae; Cretevaniinae and an unnamed subfamily for *Mesevania* and *Lebanevania* (unless two for each of them), and Andreneliidae. Evanoid share in the past hymenopteran assemblages was as high as 3% in the Middle Jurassic of Daohugou, China, 18% in the Upper Jurassic of Karatau, Kazakhstan, 8.5% in the Lower Cretaceous (Berriassian?) of Baissa, Siberia, 5.4% in the Lower Cretaceous (Aptian?) of Bon Tsagan, Mongolia, as opposed to the value of under one per cent in Cainozoic. Evanoids are possibly an isolated branch of Apocrita gained the wasp waist independently. Indeed, some mid-Jurassic fossils in Daohugou, including those of a typical appearance of less advanced Praeaulacinae, demonstrate narrow metasomal base attached to the upper rim of the propodeal orifice which is left widely open under the metasomal base. This apparently exemplifies early steps of formation of the construction characteristic of Evanioidea.