

Hymenoptera in Burmese amber: new families and a review of the fauna

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The Burmese amber assemblage is now the richest for Hymenoptera in the Cretaceous, the number of described species of Hymenoptera is soared to 93 until September 2017. The collections of Burmite (Burmese amber) from the Hukawng Valley in NIGPAS were examined, the diversity of Burmite inclusions is very high and many new families were found. There are about 12800 insect amber pieces registered by our research team containing approximately one hundred thousand insects. A total of 1774 hymenopteran inclusions has been recorded from 1409 amber pieces. The data show presence of 46 hymenopteran families which give a considerable addition to any other lists. In this list, our records new for the Burmese amber are Anaxyelidae, Burmorossoidea, Myanmarinidae, Radiophronidae, Trigonalidae (?), Peleserphidae, Roproniidae, Austroniidae, Sclerogibbidae, Angarosphecidae, Burmusculidae and possibly Mymarommatoidea fam.nov.? (undescribed). These add five transitional families (Anaxyelidae, Roproniidae, Austroniidae, Sclerogibbidae and Angarosphecidae), five endemics (Burmorossoidea, Myanmarinidae, Peleserphidae, Burmusculidae and possibly undescribed Mymarommatoidea fam.nov.?), and one the youngest fossil record (Radiophronidae). The Burmese hymenopteran assemblage shows the highest diversity (46 families) among all fossil assemblages except the Baltic amber one (55 families). This rich Cretaceous fauna coupled with the unusual concentration of endemics suggest a kind of exclusiveness in the biogeographic position of the respective source territory which undoubtedly deserves special study. On this occasion, the Hymenoptera fauna of Burmese amber is revised.

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