



Review of the hymenopteran fauna of New Caledonia with a checklist of species

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Abstract

The hymenopteran fauna of New Caledonia is reviewed and compared with that of Australia and New Zealand, as well as other islands in the south-west Pacific. In conclusion, several different scenarios (e.g., recent dispersal events and radiations) can be used to explain the extant distribution of New Caledonian Hymenoptera. A detailed checklist of 409 species and subspecies of Hymenoptera of New Caledonia is provided, along with estimates of the undescribed fauna, and a summary of the general biology of the families represented in the region.

Key words: Hymenoptera, wasps, bees, ants, Australia, New Zealand, south-west Pacific, biogeography

Zealand and New Caledonia. This is perhaps not surprising given the weather over New Zealand is dominated by the continual eastward passage of anticyclones at about weekly intervals (Robertson 1966), giving virtually no chance for Hymenoptera (or for that matter other insects) to be blown the 1,500 km north-north-west to New Caledonia.

More commonly, there are taxa (e.g., Gasteruptionidae, Eucharitidae, Ormyridae, Ichneumonidae, Pompilidae) shared among neighbouring island groups such as Fiji, New Guinea and Vanuatu, and their distributions suggest these groups can readily disperse from island to island.

Whilst several different scenarios might explain the origin of the New Caledonian hymenopteran fauna, until various phylogenies are examined using molecular dating, there is little evidence for or against the 'museum model', diversification after submersion(s), either with or without refugia and long-distance dispersal (Murienne 2009), or cryptic mass extinction (Crisp & Cook 2009).

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