

Canopy spider diversity in Papua New Guinea: a never ending story?

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Spiders are amongst the most abundant arthropods found in canopies in tropical rainforest but almost nothing is known about their diversity which is mainly due to taxonomic problems (many species are new to science). To have an idea about spider diversity in canopies and to find out whether measurement of the species richness is a realistic objective, material from a huge canopy sampling campaign in Papua New Guinea (Baiteta Forest, Madang Province) was analyzed. The findings clearly state that acquiring a fair estimation of spider diversity in this region is very hard. Even after fogging more than 100 trees in one lowland forest, no clear asymptote (which is an indication of species richness saturation) could be found. After fitting the data to several models, extrapolation revealed that many more samples are needed to obtain a good idea of spider diversity. So, studies on diversity of canopy spider assemblages appear to be a much more daunting endeavor than initially expected. In order to understand the ecological factors that determine the composition of the spider communities a long way of sampling and of resolving taxonomic problems lays ahead