



Oral presentation: O6

Ant assemblages on tropical mountain peaks: diversity and community pattern of Formicidae at Mount Mulu and Mount Murud on Borneo island, Malaysia

Martin Pfeiffer, University Bayreuth, Department of Biogeography, Universitätsstraße 30, 95447 Bayreuth, Germany

Abstract

Climate change may have serious impact on ant communities, especially in hot climates, where species already live at their physiological limits. In mountain areas rising temperatures may lead to a range shift of species, when species adapted to cooler climates migrate upwards in order to stay in a temperature range to which they are adapted. This will lead to species extinction, especially at the mountain tops, where species get under pressure by higher temperatures and rising competition with newly arriving species from lower areas.

In order to monitor such species shifts in future time I conducted a baseline study to investigate the present state of ant diversity and species composition at two distinct mountain peaks in Sarawak, Malaysia: Gunung Mulu and Gunung Murud. Both mountains are situated in protected areas and still covered with primary rainforest. In 2008 and 2009 ground ant assemblages of the summit areas were sampled by soil extraction with Winkler's method and with Barber traps. Results on alpha and beta diversity of ants are presented, together with an assessment of their phylogenetic community structure.

Key words: ant phylogeny, baseline study, climate change, summit area, tropical rainforest.