Comparative study of the diversity and community composition of the worker ants in a forest reserve and a secondary forest in Sri Lanka

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Ants are an essential component of the biodiversity of the forests but very little is known about the forest ants of Sri Lanka. Worker ants were sampled by several methods from ten sites in the Gilimale forest and "Pompakelle" in Ratnapura in February, 2004. At each site, honey and canned fish baits were kept at 4 m intervals along a 100 m transect and the baits were collected in to 50% ethanol after an hour. Also, the litter sieving (10), soil sieving (10) and the manual collection (10) were carried out along the same transect for ten minute intervals. Ten honey baits at 1 m height on trees and ten honey baited pitfall traps were set in the evening at three sites and the traps were collected in the following morning.

Worker ants belonging to the subfamilies, Aenictinae, Aneuretinae, Dolichoderinae, Dorylinae, Formicinae, Leptanillinae, Myrmicinae and Ponerinae were observed in the both forests whereas Amblyoponinae was observed only in the Gilimale forest. *Aenictus* sp., *Aneuretus simoni* Emery, *Dolichoderus* sp., *Dorylus* sp., *Tapinoma indicum* Forel, *Technomyrmex albipes* (Emery), *Anoplolepis gracilipes* Smith, *Camponotus* sp., *Paratrechina* sp., *P. longicornis* Latrielle, *Aphaenogaster* sp., *Lophomyrmex* sp., *Monomorium* sp., *Myrmicaria* sp., *Oligomyrmex* sp., *Pheidole* sp., *Pheidologeton* sp., *Solenopsis* sp., *Tetramorium sp.*, *T. bicarinatum* Mayr, *Anochetus* sp., *Cryptopone* sp., *Hypoponera* sp., *Odontomachus simillimus* Smith, *Pachycondyla* sp. and *Ponera* sp. were observed in different proportions in the both forests (Jaccard Index = 0.62). Significantly higher numbers of worker ants ($X^2 = 27.92$, $p<0.05$) were observed in the Gilimale forest. In addition, eleven uncommon taxa were recorded only from Gilimale forest and the Species Richness reached to 37 (H' = 2.6) with the increase of study sites to ten in this forest. Six taxa including *Oecophylla smaragdina* Fabricius were recorded only from "Pompakelle" and the Species Richness reached to 31 (H' = 2.43) with the increase of study sites to ten in this forest. *Myrmicaria* sp. (24.3%) dominated the ant community in the Gilimale forest whereas *Anoplolepis gracilipes* (33.1%) was dominant in the "Pompakelle". Eight taxa in Gilimale forest and fourteen taxa in "Pompakelle" were observed in the day time as well as night time samples. *Leptomyrmex* sp. is a new record from Sri Lanka.

Financial assistance by NSF/ RG/ 2003/ZOO/ 06 is gratefully acknowledged.