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Diversity of *Yala* season diurnal ant community in two selected rice fields in the Wet Zone of Sri Lanka

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Studies on the ant communities of Wet Zone rice fields in Sri Lanka are scarce and the present study was conducted to determine the diversity and species composition of ants throughout *Yala* season. Worker ants were sampled within two, almost similar, rain-fed rice fields (18 x 20 m) in Mahadarawa, Gampaha District from February to September in 2017 encompassing post-harvest, seedling, tillering, flowering and mature grain stages. In each rice field, pitfall trapping (20), honey baiting (20) and hand collection (15) were employed along a 20 m line transect during daytime. The collected ants were preserved in 85% ethanol and identified to the possible taxonomic levels in the laboratory using the relevant references. Air temperature and light intensity varied between 32-36^{0}C and 14478-19983 Lux m^{-2}, respectively. Eleven ant species, *Anochetus graeffei* Mayr, *Anoplolepis gracilipes* Smith F., *Camponotus compressus* Fabricius, *Carebara diversa* Jerdon, *Diacamma rugosum* Le Guillou, *Meranoplus bicolor* Guerin-Meneville, *Monomorium floricola* Jerdon, *Odontomachus simillimus* Smith F., *Paratrechina longicornis* Latreille, *Tapinoma melanocephalum* Fabricius and *Tetramorium walshi* Forel in 11 genera of 4 subfamilies, Dolichoderinae, Formicinae, Myrmicinae and Ponerinae were recorded from the two rice fields. The most speciose subfamily was Myrmicinae whereas Dolichoderinae contained only a single species. Species richness observed for seedling stage and post-harvest stage-2 was 9, while 11 species were observed on the other occasions. Higher Shannon-Wiener Diversity index value (H'= 2.093) was observed for tillering stage than that of the seedling stage (H'= 1.764). The highest mean percentage frequency of occurrence was observed for *C. compressus* followed by *T. melanocephalum* while *A. graeffei* had the lowest value. Significantly higher frequencies of *C. compressus* and *T. melanocephalum* were observed (Chi square test, $p<0.05$) at the 'Field 1' and 'Field 2' on all occasions. A diverse ant community consisting of 9 permanent inhabitant species occurred at the two fields irrespective of the presence of both wet and dry conditions. *Carebara diversa* was a nuisance to farmers because the workers carried away germinated rice seeds from the paddy fields. It appeared that *O. simillimus* was a predator of the rice pest, *Gryllotalpa orientalis* Burmeister (Oriental mole cricket).

Keywords: Diversity, rice fields, worker ant community, *Yala* season