

Exploring Ant Diversity: Updated Inventory of Eastern University Premises in Sri Lanka

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Ant diversity in the Eastern part of Sri Lanka remains a significant yet underexplored research area. This study aimed to examine the ant diversity through repeated sampling at the Eastern University of Sri Lanka from March to December 2023. Based on habitat diversity, A, B, and C Women's hostels back yard, front yard and inside, New wing canteen, ICCA, ICC B Woman's hostels, Backyard of the library, Front yard of the A, B, and C Wing's hostels, Grassy area near the Kovil, Backyard of the Zoology department, Left and right sides near the main gate selected where three 60-meter transects were demarcated in each. Along each transect, twelve quadrats were laid at 5-meter intervals and three using a wet paintbrush, three worker ants of each species within the quadrats were collected. Twelve mixed bait with honey, eggs, fish, and peanuts, were set up at 5-meter intervals along new transects, spaced 5 meters apart from each other. After one hour, attracted ants were collected. Leaf litter sifting was conducted at 5-meter intervals along each transect, with ants that fell onto a white tray being collected. All collected ants were preserved in 80% ethanol and identified to the furthest possible taxonomic levels with reference to related morphological keys. A nineteen ant species belonging to fifteen genera and four subfamilies, Dolichoderinae, Formicinae, Myrmicinae, and Ponerinae, were recorded. Eleven of these species, *Crematogaster* sp. 1, *Crematogaster* sp. 2, *Meranoplus bicolor*, *Pheidole* sp. 1, *Solenopsis* 203otmail203, *Trichomyrmex destructor*, *Tetramorium smithi*, *Tetramorium* sp. 1, *Camponotus reticulatus*, *Camponotus sericeus*, *Camponotus* sp. 1, *Monomorium* 203otmail203z, *Nylanderia yerburyi*, *Nylanderia* sp. 1, *Oecophylla smaragdina*, *Paratrechina longicornis*, *Anochetus longifossatus* and *Tapinoma melanocephalum*, were recorded for the first time within the university premises. Documented Eight species were reported in 2008. Represents 19 ant species an updated assessment for the Eastern University Premises.

Keywords: Ant Diversity, Ant Inventory, Biodiversity, Eastern University, Sri Lankan Ant Fauna