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ANT (HYMENOPTERA, FORMICIDAE) DIVERSITY ACROSS FOUR SELECTED HABITATS IN BATTICALOA DISTRICT, SRI LANKA

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Abstract

Ant diversity in the eastern part of Sri Lanka remains poorly studied. This study aimed to assess worker ant diversity across four different habitats in Batticaloa District in the eastern part of Sri Lanka: Cashew Forest Area (CFA) and Crop Farm at the Faculty of Agriculture (FOA), Iluppadichenai Bare Land (IBL), and Kallady Beach (KB), from August to October 2024. Ant sampling was conducted along three 100 m transects per site using a combination of honey baiting, leaf litter sifting, soil sifting, and pitfall trapping. Honey bait samples were collected after one hour, and pitfall traps were retrieved after three hours. All specimens were preserved in 70 % ethanol and Ants in each collection were sorted and identified to the furthest possible taxonomic levels under a low power stereo-microscope (Motic SMZ-140) at suitable magnifications in the laboratory. Total of 26 ant species belonging to 15 genera across four subfamilies Dolichoderinae, Formicinae, Myrmicinae, and Pseudomyrmecinae, were identified. Six ant species, *Oecophylla smaragdina* Fabricius, 1775, *Polyrhachis punctillata* Roger, 1863, *Monomorium pharaonis* (Linnaeus, 1758), *Monomorium sahlbergi* Emery, 1898, *Solenopsis geminata* (Fabricius, 1804), and *Tetramorium bicarinatum* (Nylander, 1846), were commonly found across all four habitats. With the presence of *Tetraponera allaborans* (Walker, 1859), the Subfamily Pseudomyrmecinae was recorded for the first time from the Batticaloa District. Statistical analysis using the Chi-Square test ($\chi^2 = 3.2972$, $p = 0.348$) indicated no significant difference in species distribution among the sites. The study highlights the effectiveness of multi-method sampling in capturing ant diversity and contributes baseline data for future research on ant diversity in eastern Sri Lanka.

Keywords: *Ant Diversity, Batticaloa, Formicidae*