

ABSTRACT

The study was carried out in the OUSL premises in Nawala and five dominant tree species, Na, Pihimbiy, Mango, Kottamba and Acacia were selected for the work. Biodiversity of canopy arthropods in these canopies showed that most abundant arthropod groups belonged to order Insecta and Aranea. During the study, total 68 arthropod families were collected. Out of this 45 families belonged to insect and 13 families belonged to spider groups. All insects were identified into 9 insect orders and four insect orders namely Coleoptera, Diptera, Hymenoptera and Hemiptera are the dominant in all canopies. 13 insect families were common in all five canopies and highest species richness with 29 insect families recorded in Na tree and lowest richness recorded in Acacia tree species having 21 insect families. It also showed host specificity, recording families Pedilidae, Simuliidae, Scardae, Thervidae and Lyonetiidae only in Na tree and families Siphonuridae, Coreidae were recorded only in Acacia canopy. Na tree is most diverse having highest arthropod diversity.

Canopy spiders identified into 21 spider families and five spider families found in all canopies. Lowest number of spider families recorded in Pihimbiya and highest number of families recorded in Na, and Kottam. Formicids found in all canopies which belonged to 05 sub families and 10 genera. Sub family Formicinae was the most abundant in the study site having 05 genera. 02 genera and 01 genus recorded in sub families Pseudomyrmecinae and Ponerinae.

Feeding guilds among arthropods showed that predatory feeding guild is the most dominant feeding guild in Na, Kottam, Acacia and Pihimbiya due to the presence of dominant predators such as Ants and spiders in these canopies. Herbivory and predatory feeding guilds equally dominant only in Mango tree canopy and it may be due to presence of high herbivorous insects during flowering and fruity seasons.

Species richness always highest during the morning periods but no drastic changes was recorded during evening periods in all canopies.

Information in this study will be helpful in assisting new researchers and would provide beneficial insights of canopy arthropod fauna in Sri Lanka with regard to their biodiversity conversational significance.