SPIDERS IN DIFFERENT HABITATS OF THE PERADENIYA UNIVERSITY PARK

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Spiders (Arachnida:Araneae) constitute a diverse group of elusive, terrestrial invertebrates which are predatory in habit. They play a significant role in natural food webs and are distributed worldwide, predominantly in tropical regions.

About 37,000 species of spiders belonging to 106 families have been described to date. More than 400 species of spiders belonging to 236 genera have been recorded from Sri Lanka, but the actual number is estimated to exceed 1,000 species.

In this study the diversity of spiders in different habitats of the University of Peradeniya and the influence of some ecological factors on them were investigated.

Five habitats within the University Park, namely, woodland, grassland, pine forest, home garden and the inside of a house were selected for the study. The study was carried out from October 2002 to October 2003. All microhabitats in the study sites were searched for spiders. Spiders found were identified and counted. Spider webs were also identified, counted and a few representative webs were collected and preserved. The density of different families of spiders and different types of spider webs in each study site were recorded. The ambient temperature was measured and the rainfall data for the study period were obtained from the Meteorological Station at Gannoruwa.

During the study, 14 families of spiders, represented by 44 genera were identified. The spiders of the families Araneidae, Salticidae and Theridiidae were present in all 5 habitats. Families Mimetidae and Nestecidae were confined to the woodland, Platoridae and Sparassidae to the house and Lycosidae and Pisauridae to the grassland. The highest spider diversity was recorded from the woodland and the lowest from the home garden, while the spiders in the grassland, pine forest and the inside of the house showed a similar moderate diversity. The type of vegetation, abundance of different microhabitats and the degree of human influence may have contributed to this difference in the abundance of spiders.

Spiders of family Araneidae showed the highest density in the woodland and home garden, Theridiidae in the grassland, Uloboridae inside the house and both Araneidae and Uloboridae showed similar highest densities in the pine forest. The density of spider webs was consistent with the abundance of each spider family in their respective habitat, as the orb webs of Araneidae and mesh webs of Theridiidae were the most common web types. There was no significant variation in temperature throughout the study period. However, the density of spiders showed a temporal variation which was inversely related to the rainfall.