D–27: The spider fauna of a paddy field ecosystem in Sri Lanka

C N B Bambaradeniya. Jayanthi P Edirisinghe
(*Dept of Zoology, University of Peradeniya*)

A study of the spiders associated with a paddy field ecosystem was carried out at 2 sites at Batalagoda. The species composition and guild structure of spider communities based on web architecture, mode of prey capture and micro-habitat occupation were determined. Thirty sites in the paddy field and the field bunds were sampled fortnightly for spiders during 3 paddy cycles using a quadrat and a standard sweep net respectively

A total of 48 species of spiders in 32 genera under 11 families were recorded. These represented 3 guilds : regular orb-weavers (ROW), irregular space-web spinners (ISWS) and cursorial hunters (CH). The ROW were mainly confined to the paddy canopy while the ISWS occupied the base of paddy hills and soil crevices. The CH were distributed between the canopy and soil surface. The CH were high in species richness (Margalef's index), followed by ROW and ISWS respectively. However, in terms of the total number of individuals recorded, ISWS were the most abundant group (45%) followed by CH (35%) and ROW (20%). The most common spider family representing each of these 3 guilds were Theridiidae, Lycosidae and Tetragnathidae respectively. The most common genera among ROW, ISWS and CH genera were *Tetragnatha, Atypena* and *Pardosa* respectively. Fortnightly sampling revealed that the spider assemblages increased in numbers along with crop age, while application of biocides at different stages of growth resulted in a considerable decrease.

The predatory spiders form an important component of the paddy field fauna as natural enemies of paddy insect pests and hence need to be conserved and encouraged.

This work forms a part of a larger study on biodiversity and water quality in a paddy field ecosystem, funded by NARESA (Grant RG/95/B/04)