DIVERSITY AND FOOD HABITS OF COCCINELLIDAE IN FOUR SELECTED HABITATS

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Ladybird beetles (F. Coccinellidae) are an important group of insects as majority of them are predators of aphids and coccids and hence act as biological control agents. Few coccinellids are plant feeders and some of them have become pests.

A study was carried out to document the coccinellids associated with 4 habitats namely, cultivated areas, rice fields, weedy areas and roadsides. Coccinellids were collected by sweeping the vegetation using a standard insect net as well as by searching the vegetation. Collected coccinellids were identified using several taxonomic keys and reference research collections in the Department of Zoology. Representative specimens of collected coccinellids were dissected to remove their mandibles. Mandibles were slide mounted following standard procedure to examine the teeth pattern in the mandibles. Based on the teeth pattern their food habits were determined. Plants on which coccinellids were found were removed for identification.

Nine species of coccinellids belonging to 7 genera and one unidentified species were recorded. They are, *Aspidermere cicumflexus* (Koch), *Brumoides suturalis* (Fabrecius), *Coccinella tranversalis* (Koch), *Coccinella octomaculata* (Koch) Fab., *Coccinella rependa* (Koch), *Epilachna sp.* (Dejen), *Liochrimus coccinella* (Glover), *Micrsaspis discolor* (Koch) (fabricus) and *Scymnus nubilis* (Koch.). Of the 4 different habitats, the highest number of coccinellid species was recorded from the cultivated area and roadside. *Coccinella transversalis* and *Micraspis discolor* were present in all 4 habitats. Each of *Epilachna* spl, *Aspidermeres circumflexus*, *Liochrimus coccinella* and *Coccinella octomaculata* were recorded only from a single habitat. *Micraspis discolor* was the most abundant species in all 4 habitats and *Aspidermeres circumflexus* and *Coccinella octomaculata* were the least common. In the cultivated areas and roadsides *Micraspis discolor* was the most abundant species. In the rice fields, *Coccinella transversalis* was the predominant species and *Brumoides sutularis* in the weedy area. The cultivated areas had the highest species diversity while the rice fields showed the highest species evenness. The high diversity of coccinellids in agricultural areas is a reflection of their contribution to natural control of insects.

Examination of the mandibles of the 10 coccinellid species revealed that only one species is phytophagous (*Epilachna* sp 1) and the others are predatory. Coccinellids in the respective habitats were collected from 5 different grasses and 3 broad leaf plant species. Of the grasses, *Panicum maximus* was the predominant host.