

## IDENTIFICATION OF THRIPS AND THEIR HOST PLANTS: A PRELIMINARY STUDY

KALPANA TILLEKARATNE,<sup>1</sup> INOKA KARUNARATNE,<sup>1</sup> SHANTHILATHA DHARMARATNE<sup>1</sup>, J.P. EDIRISINGHE,<sup>1</sup> AND C.V.S. GUNATILLEKE.<sup>2</sup>

<sup>1</sup>Department of Zoology, <sup>2</sup>Department of Botany, Faculty of Science, University of Peradeniya

Thrips (Order Thysanoptera) are minute insects, unique in having asymmetrical mouthparts, wings with a marginal fringe of long hairs and a protrusible bladder at the end of legs. Thrips are found only on plants and many are pests causing damage to flowers, leaves, shoots, fruits and also are vectors of crop viruses. Certain predatory thrips are used in biological control, while certain species are pollinators. Thrips comprise world wide about 5500 identified species in 750 genera and 9 families. Thrips of India comprise 647 species in 248 genera and 9 families. Previous studies in Sri Lanka by several workers have documented 78 species in 46 genera and 3 families. The objectives of the study were to collect and identify thrips from selected locations and habitats and record their host plants and the damage caused.

Thrips were collected during a period of six months. They were hand collected using a fine brush and off vegetation using a beating tray. A record of the host plants and type of damage was made. Slide mounted thrips specimens were identified using taxonomic keys, digital images, descriptions and confirmed by experts. Host plant specimens were identified with help from the National Herbarium, Peradeniya.

A total of 31 different types of thrips belonging to 4 subfamilies were collected. Of them, 14 were identified to species level, 8 to generic level and 9 to subfamily level. Among them are 2 species that have not been recorded previously. Thrips were collected from 9 locations on 87 species of plants in 75 genera and 38 families, of which 34 were crop plants. Plants of the Family Fabaceae (18 spp.) were infested mostly with *Thrips palmi* in the seedling stage and with only *Megalurothrips* spp. at flowering. Similarly, flowers of the Family Asteraceae were infested only with *Microcephalothrips abdominalis*. Crops of the Family Cucurbitaceae were infested with only *Thrips palmi*. *Haplothrips gowdeyi* was the most common species on flowers and was collected from 9 plant families. Genus *Thrips* represented by 7 species was always associated with flowers. Furthermore, *Thrips palmi*, *Scirtothrips dorsalis*, *Haplothrips ceylonicus*, and *Thrips* sp.5 were associated with both flowers and shoots of the same plant. Thrips of the subfamily Panchaethripinae were found on hard, mature, leaves. Feeding by *Gynaikothrips ficorum* resulted in leaf galls while *Scirtothrips dorsalis* on chilly resulted in leaf curl disease. Flower buds of *Gossypium arboreum* in particular was infested with *Heliothrips haemorrhoidalis*. A single species of spore feeding thrips, *Dinothrips spinosus* was recorded from dead tree trunks. The distribution of thrips appeared to be determined by the presence of the host plants rather than the locality or habitat.

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