

## Mermithid nematodes as parasites of *Heliothis* spp. and other crop pests in Andhra Pradesh, India

V S BHATNAGAR\*, C S PAWAR, D R JADHAV and J C DAVIES\*\*

Cropping Entomology, International Crops Research Institute for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502 324, India

\*Present address: FAO/CILSS IPM Project, B.P. 281, Kaolack, Senegal

\*\*Overseas Development Administration, Tropical Development and Research Institute, College House, Wright's Lane, London W8 5SJ

MS received 3 December 1984

**Abstract.** Insect pests were collected from cultivated and wild plant species to study their parasites in Andhra Pradesh, India. Besides insects, nematodes emerged as parasites. While *Hexameris* spp. were common in most lepidoptera, *Ovomermis albicans* (Siebold) was recovered from *Heliothis* spp. The nematodes were active, even more than insect parasites, during early monsoon. They were more active on light-soils than on heavy-soils. Against *Heliothis armigera* (Hubner) in particular, their incidence was more on "low-growing" crops like *Arachis hypogaea* (L.), and *Lycopersicon esculentum* (L.), and weeds. The nematode *Pentatomermis* sp. was recorded from the bug *Nezara viridula* L.

**Keywords.** Mermithids; *Ovomermis albicans*; *Hexameris* spp; *Pentatomermis* sp.; *Heliothis* spp.

### 1. Introduction

The mermithid nematodes, in general, are known to infect a wide range of insects in 15 different orders (Nickle 1972). Ramakrishnan and Kumar (1976) reported the association of species of *Mermis*, *Agameris*, *Hexameris*, and *Geomeris* with 40 insect species in India. In this paper, observations on mermithids as parasites of some important insect pests on dry-land crops and their role in regulating the pests populations are described.

### 2. Material and methods

Insects were collected (1975–83) in their available stages from Medak, Rangareddy and Mahaboobnagar districts of Andhra Pradesh, India and reared in glass vials (9 × 2.5 cm) in the laboratory on the same natural hosts to study critically for nematode and insect parasites. The nematodes, when emerged, were preserved by the method suggested by IA Rubtsov (personal communication). The rates of nematode parasitism recorded over years in different months on different crops were calculated on the basis of total larvae in the samples which showed the nematodes.

















