

ants put the waste matter anywhere else in the nest, it was collected by the authors and put inside the shallow container which was meant to be used eventually by the ants for dumping rubbish. Within a few days the ants started throwing more waste matter into the concerned container than anywhere else inside the nest and within about two weeks, they developed the habit of dumping the rubbish exclusively into the container kept for the purpose. The olfactory factor must have played an important role in this learning process. Later, when a few small bits of paper were littered inside the nest one evening, the ants, by the following morning, had already collected and thrown them into the rubbish container.

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22. LARVAL PARASITES OF *PSEUDALETIA SEPARATA* (WALKER)

Pseudaletia separata (Walker) is an important pest of graminaceous crops including sugarcane, maize, jowar, rice and grasses. During the course of investigation on its biology at R.A.K. College of Agriculture, Sehore, Madhya Pradesh, in 1964, attempts were made to study its natural enemies. No predator could be recorded during the study but cannibalism amongst the caterpillars was noticed.

Out of the 200 caterpillars collected from the field during October, 70% were found to be parasitised. The adults of different parasites that emerged from the above sample were 548 *Apanteles ruficrus* Haliday, 21 *Disophrys* sp.; 9 *Rhogas* sp.; 3 *Dolichocelon paradoxum* B.B. and 5 *Exocrista fallax* Mg. This indicates that *A. ruficrus* is the dominant parasite at Sehore.

Out of the above parasites *A. ruficrus* (Braconidae) has been recorded earlier on the pest by Khan (1946) and Bhatnagar (1948). Other parasites recorded previously in India on *Pseudaletia* are *Actia monticola* Mall, *Cyphocera* (*Cyphocera*) *varia* F., *Sturmia inconspicuides* Baranov (Cherian & Ananthanarayanan 1941), and *Parasierola* sp. (Avasthy & Chaudhary 1963), which were not recorded by the authors at Sehore.

The parasites, *Rhogas* sp., *Disophrys* sp. both Braconids and *Dolichocelon paradoxum* B.B. and *Exocrista fallax* Mg. both Tachinids have been recorded for the first time in India on the pest.

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23. A NEW RECORD OF ALTERNATE HOST OF ARMYWORMS

Armyworms, *Pseudaletia separata* Walker and *Cirphis loreyi* Duponchel have been reported as major pest of paddy (Fletcher 1917; Katiyar & Patel 1969). In India armyworms have been observed to feed on various other crops including maize, jowar, wheat, sugarcane (Fletcher 1917), gram, linseed and mustard (Singh & Sinha 1965). Besides these crops their occurrence has been noted on grasses, fodder and green manure crops (Ayyar 1963). Kadam & Patel (1960) described bajra and other cereals as its host plants, while Fletcher (1917) found them on 'kodon' (*Paspalum scrobiculatum*) and oats.

Apart from these, the armyworms have been found to attack timothy, flax, barley, buckwheat, rye, cranberry, some legumes and several grasses in other parts of the world.

In Raipur district of Madhya Pradesh, larval stages of both *P. separata* and *C. loreyi* have been found to feed on a weed, *Eriocaulon sexangulare*. The weed grows profusely in the paddy fields in this locality. When the weed was provided to the caterpillars of armyworms it was readily accepted by them for food. Similarly, caterpillars feeding on weeds readily migrated and normally fed on paddy plants in the laboratory. It was felt that the earlier stages of the caterpillars prefer this weed to paddy plants. Later they migrate from the weed to the crop. Large number of caterpillars were collected from this weed for laboratory studies.



Katiyar, O P and Rawat, R R. 1972. "Larval Parasites of *Pseudaletia separata*." *The journal of the Bombay Natural History Society* 69, 212–213.

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