

Natural parasitism of rice leaf folder *Cnaphalocrocis medinalis* (Guénee) in Karaikal region*

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ABSTRACT: Seven parasitoids were reared from natural population of rice leaf folder *Cnaphalocrocis medinalis* (Guénee) in Karaikal region, Union Territory of Pondicherry. *Goniozus* sp. and *Elasmus johnstoni* Ferriere were the most effective. The parasitism ranged from 4.0 - 22.0 per cent. *Pediobius bruchicida* (Rondani) is reported for the first time on *C. medinalis* from the coastal region of Karaikal. Parasitization by *Pediobius bruchicida* was up to 4.0 per cent.

KEY WORDS: *Cnaphalocrocis medinalis*, *Elasmus johnstoni*, *Goniozus* sp., parasitism, *Pediobius bruchicida*, rice

In recent years, rice leaf folder has gained the status of major pest in South and South East Asia (Ramasubaiah *et al.*, 1980; Bentur *et al.*, 1989). Among the four leaf folder species recorded in India, *Cnaphalocrocis medinalis* (Guénee) causes heavy yield losses (Pandya *et al.*, 1987; Srivastava, 1989). At present, this pest is not controlled by insecticides, as it has developed resistance to many insecticides. The purpose of the present study was to find out the parasitoid complex associated

with leaf folder and make a quantitative estimation of its extent in paddy.

The paddy crop (var. CR 1009 and ADT 36) was heavily damaged by leaf folder during 1995-96. During 1995, the caterpillars of *C. medinalis* were collected from coastal region of Karaikal, and reared in the laboratory to determine the number of parasitoid species associated. During 1996, the parasitism levels were recorded over the entire cropping season. Fifty

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caterpillars of leaf folder were collected every fortnight, from rice fields free from insecticides and reared in the laboratory. Per cent parasitism by various parasitoids was worked out. The data were subjected to square root (\sqrt{x}) transformation and analysed statistically. Duncan's Multiple Range Test was applied for comparing the means.

During 1995, seven parasitoid species viz., *Apanteles angustibasis* Gahan, *Brachymeria* sp., *Elasmus johnstoni* Ferriere, *Goniozus* sp., *Macrocentrus* sp.,

A. angustibasis up to 12.81 per cent in the present study is in accordance with the findings of Alam and Alam (1964) in Bangladesh, Rao (1964) in peninsular India, and Bharti and Kushwaha (1990) in Haryana. *Tetrastichus* sp. showed low level of parasitism (10.21%).

Pediobus bruchicida (Rondani) is reported for the first time on *C. medinalis* from the coastal region of Karaikal. The extent of parasitism was up to 4.0 per cent. Hitherto, there is no record about the occurrence of this parasitoid on rice pests.

Table 1. Natural parasitisation of *Cnaphalocrocis medinalis* on paddy in the coastal region of Karaikal

Name of parasitoid	Parasitism (%)
<i>Apanteles angustibasis</i> Gahan.	12.81 (3.58) ^b
<i>Brachymeria</i> sp.	14.87 (3.85) ^b
<i>Elasmus johnstoni</i> Ferriere	15.42 (3.92) ^b
<i>Goniozus</i> sp.	22.42 (4.73) ^a
<i>Macrocentrus</i> sp.	10.41 (3.22) ^b
<i>Pediobus bruchicida</i> (Rondani)	04.00 (2.00) ^c
<i>Tetrastichus</i> sp.	10.21 (3.19) ^b

Figures in parentheses are square root transformation values Means followed by a common letter (s) are not significantly different at P=0.05 by DMRT

Pediobus bruchicida (Rondani) and *Tetrastichus* sp. were found to be associated with leaf folder of rice (Table 1). *Goniozus* sp., as larval parasitoid has been reported from India by Rao (1964) and Abraham *et al.* (1973). Larval parasitism by

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