First record of phytophagous Systasis (Hymenoptera: Pteromalidae)

by

S. R. WADHI & B. R. VERMA

For quarantine purposes while screening seeds of Cenchrus ciliaris and C. setigerus (N.O. Gramineae) for hidden infestation by X-radiation (WADHI et al., 1967), at the Division of Entomology, the X-ray plates indicated the presence of infestation in some seeds. The infested seeds were separated from the healthy seeds (Plate 1) after they were made transparent in lacto-phenol (KOURA, 1958) and insects discovered by dissection. These insects were later identified as Systasis cenchrivora Farooqui & Menon.

Cenchrus ciliaris seeds, made transparent to show infestation due to Systasis cenchrivora.

Of the dozen and a half species described under the genus Systasis, the host is known in case of five species only: the rest having been described from material collected by sweeping. These five species are all parasitic in habit viz., S. dasyneurae on Dasyneura lini (AHMAD, 1939); S. dalbergiae on Contarinia dalbergiae (MANI, 1942); S. encyrtoides on C. citri (RUBIN, 1965), C. medicaginis (MANNIGER, 1940), D. affinis (BOHM, 1954) and Stenodiplosis panici (SELANOVA, 1948); S. diplosidis on Retinodiplosis inopsis and R. resinicola (MILLER, 1958) (all dipterous hosts); and Systasis sp. on Noorda moringae.
Cherian & Basheer, 1939) (lepidopterous host), thus suggesting the general habit of the species falling under this genus. Taking the present species also to be parasitic, a thorough search was made for the presence of any insect in C. ciliaris and C. setigerus seeds. For this purpose more than 2,000 seeds were examined which resulted in the discovery of over 80 specimens of Systasis, but no other insect was found. This total absence of any other insect species in the Cenchrus seeds, both as independent phytophagous pest or as remains of a parasitised insect strongly suggests that the species under question is phytophagous. Subsequently similar observations were made from two more samples, one each of C. ciliaris and C. setigerus seeds. The incidence of this pest was noted to be 4.5% and 4% in C. ciliaris and C. setigerus seeds respectively.

The pests noted on Cenchrus are the striped grasshopper, Mosis repanda (Vickery, 1924), the aphid, Toxoptera graminum (Dahms et al., 1954) and the harvester ant, Iridomyrmex (Champ, 1961) none of which infests seeds or is parasitised by Systasis. Therefore the present observation constitutes a first record of Systasis cenchrivora as phytophagous in habit and also as a pest of C. ciliaris and C. setigerus seeds.

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Indian Agricultural Research Institute,
Division of Entomology,
New Dehli 12, India.