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## **Egg parasitoids, Hym. Scelionidae and Encyrtidae, associated with Hemiptera Plataspidae**

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Poster

Plataspidae, bugs characteristic for their globular shape, occur in the Ethiopian, Oriental, Australian Regions and in warm areas of the Palaearctic Region. Many are pests to varying degrees of importance on cultivated plants, mainly Leguminosae.

Two new records of egg parasitoids are presented and discussed together with those previously reported to up-date some biotaxonomical aspects and host associations.

### Scelionidae

Several species reared from Plataspid eggs were assigned to different genera until the genus *Archiphanurus* Szabò was described. This genus is based on the Italian species, *A. graeffei* (Kieff.), has now defined the correct taxonomic position of others.

*A. graeffei* is now recorded for the first time from *Coptosoma scutellatum*, the only Italian Plataspid, which lives on a wild plant, *Ononis spinosa* (Leguminosae), in dry, open sunny habitats (Central Italy, Perugia Monte Peglia, ca.500 m a.s.l.). The egg mass, laid on the underside of leaflets, is composed of 3-15 eggs in a rough herring-bone pattern, with one or several dark brown interspersed capsules containing bacteria for the endosymbiosis of 1st instar larvae. Parasitized eggs are marked brushing, with forward strokes, most of the dorsal and lateral side and the egg cap; this marking behavior is different from all other described in Scelionids. Emergence occurs by pushing off the egg cap, as the host does when hatching. Reproduction is thelytokous. Flight period occurs in July and August. Egg parasitism observed over three years ranged from 4.5% to 34.2%.

Other *Archiphanurus* species obtained from Plataspids are *A. tetartus*, reared from *Coptosoma cribrarium* and *Brachyplatys subaeneus* in China and Malaysia, *Archiphanurus* sp. from *B. subaeneus* and *B. vahlii* in Malaysia, *Archiphanurus* sp. from *Coptosoma* sp. in Pakistan.

Two more species of Scelionids, are here transferred to *Archiphanurus* on the basis of their morphological characters and/or host record. These are *A. minor* (Wat.), described in *Asolcus* and obtained from *Coptosoma punctissimum* in Japan, and *A. striativentris* (Risbec), described in *Microphanu-*

rus and obtain from an unknown host in the Ivory Coast.

Other Scelionids have also been recorded from Plataspids in India but they were assigned to genera other than Archiphanurus, such as Telenomus indi Gir. and Trissolcus latisulcus (Crawf.) from Coptosoma cribrarium and Telenomus sp. from C. ostensum.

#### Encyrtidae

An Ooencyrtus sp. has been obtained for the first time from the same Plataspid species and in the same spot where A. graeffei was collected. This Encyrtid emerges cutting a hole in the dorso lateral side of the egg shell. Flight period occurs in July and August. Parasitism observed over three years ranged from 17.6% to 100%. Reproduction is biparental.

#### Conclusions

Scelionids are the dominant group of egg parasitoids attacking Plataspids although, in one case, they compete with Encyrtids for the same host.

Several host records indicate that the genus Archiphanurus could be the only one specialized on these bugs, however, such a conclusion must be confirmed by revising some other records.

To better understand the associations of these egg parasitoids with Plataspids, the host recognition behavior should be investigated checking the role played by the bacterial capsules, as organisms associated with the egg masses, vs other chemical sources such as the secretion which glue the eggs to the leaf.