

An Egg Parasite of Thrips in Hawaii

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During January, 1920, the writer collected some minute Trichogrammatid adults on leaves of an undetermined tree in a forest near Mountain View, Hawaii. These were in association with a small quantity of an undetermined thrips and were suspected of being probable egg-parasites of this thrips because of their behavior. These were later described by Timberlake¹ as *Megaphragma mymaripenne* Timberlake; representing a new species and genus. It was next seen by Swezey² on March 29, 1927, when he collected two specimens, associated with thrips on a croton leaf in Honolulu.

On May 10, 1930, the writer noted this parasite on leaves of *Brassaia actinophylla* F. von Mueller and croton, *Codiaeum variegatum* Blume, in Honolulu in association with small colonies of *Heliothrips haemorrhoidalis* Bouché. Minute swellings on the leaves where the thrips were clustered were found upon dissection to contain the thrips eggs; a fair percentage of which were discovered to contain mature *Megaphragma* pupae. Owing to the small size of the thrips egg and its fragile nature, no fresh eggs were removed successfully to reveal the living *Megaphragma* larva. The upper end of the egg, however, could be broken off and the mature *Megaphragma* pupa examined intact within the thrips egg shell and removed to a slide in a slightly damaged condition; but sufficiently perfect to permit positive conclusions and identification.

Some of these bits of leaf containing thrips eggs were saved in vials and seventeen *Megaphragma* adults emerged therefrom. The parasite cuts a neat, imperfectly circular exit-hole at the point of emergence. This measures from .08 to .09 mm. in diameter. Such emergence holes can be readily seen scattered over the surface of the leaf on top of the small swellings on the leaf where thrips eggs have been inserted. The empty thrips egg shells can be readily found beneath these exit holes.

The abundance of the parasite emergence holes on leaves where thrips have been, the comparative ease with which the parasites were obtained where thrips were still present on leaves and the general unimportance of *Heliothrips haemorrhoidalis* as a pest in Honolulu, suggests that *Megaphragma mymaripenne* is an important factor in its control. Mr. Timberlake assumes it to be a probable immigrant to Hawaii.

Heliothrips haemorrhoidalis, presumably a native of tropical America, is well known in Europe and the United States as a greenhouse pest of many plants and as a pest of various ornamentals, especially crotons, in tropical and semitropical regions³.

A related thrips, *Heliothrips fasciatus* Pergande, is parasitized in the prepupal stage in California.⁴ This parasite has also been reared from *Thrips tabaci* Lindeman and *Euthrips tritici* Fitch in California, but no egg parasites are recorded to our knowledge.

REFERENCES

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- (3) Russell, H. M.—The Greenhouse Thrips. U. S. D. A., Bur. Ent., Bull. 64, Pt. 6, August, 1909.
- (4) Russell, H. M.—An Internal Parasite of Thysanoptera. U. S. D. A., Bur. Ent., Tech. Ser. 23, Pt. 2, April 27, 1912.