

A NEW EGG PARASITE (HYMENOPTERA: SCELIONIDAE)
OF THE ELM SPANWORM, *ENNOMOS SUBSIGNARIUS*
(LEPIDOPTERA: GEOMETRIDAE)

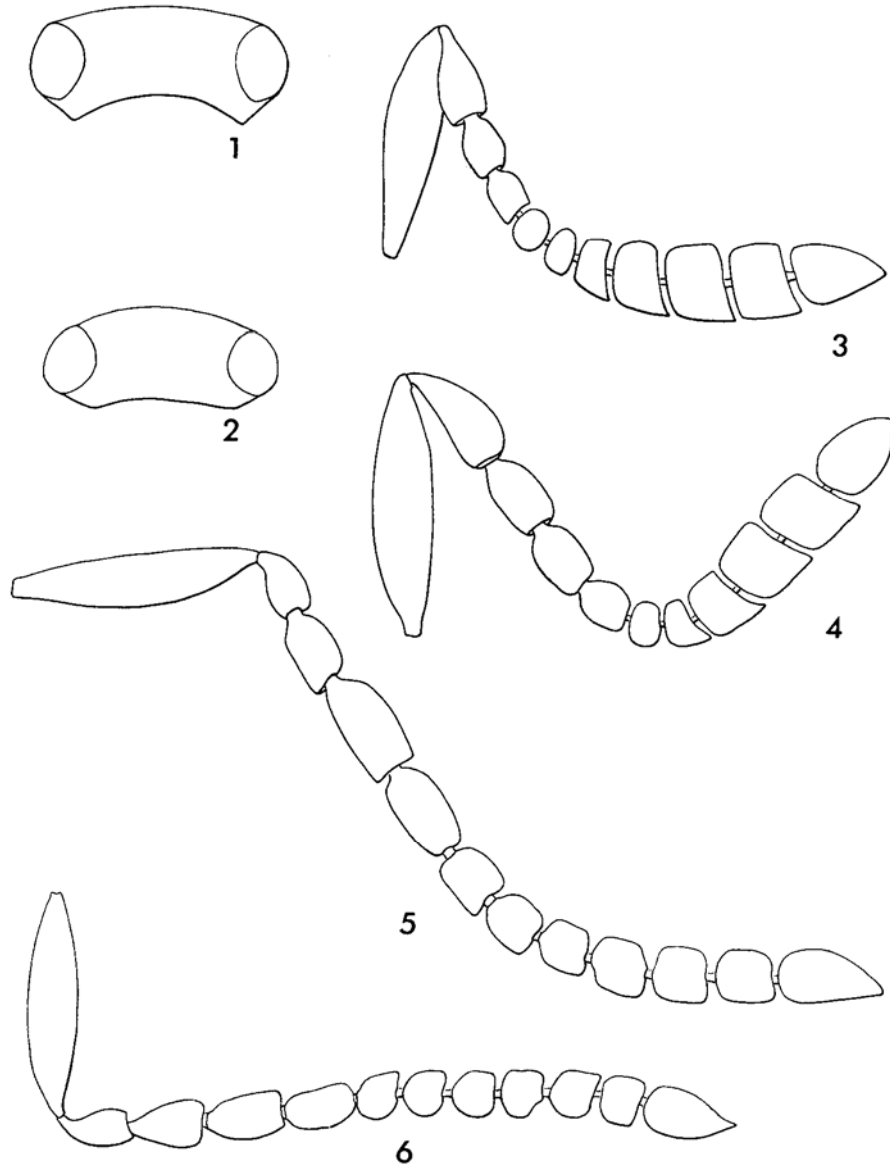
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Abstract.—*Telenomus droozi*, new species, a parasite in the eggs of the elm spanworm, *Ennomos subsignarius* (Huebner), is described from Pennsylvania.

The species described below, which develops as a parasite in the embryonated eggs of the elm spanworm, *Ennomos subsignarius* (Huebner), has been confused with another parasite of geometrid eggs, *Telenomus alsophilae* Viereck. Recent studies (Drooz et al., 1976) have shown that it is distinct biologically and is not a parasite of eggs of the fall cankerworm, *Alsophila pometaria* (Harris), the normal host of *Telenomus alsophilae*. As a result of that disclosure, critical studies were made of both forms, and some morphological differences were discovered. Although these differences are subtle and sometimes not readily recognized, they appear to distinguish the two species.

Telenomus droozi Muesebeck, new species

This species may usually be distinguished without much difficulty from specimens of *T. alsophilae* that have developed in eggs of the fall cankerworm. It is consistently a little larger; the head is slightly narrower relative to the width of the thorax, and as seen from above it is a little flatter in front (Fig. 1); normally there is a continuous, narrow strip of delicate microsculpture along the inner eye margin (in *alsophilae* the frons medially is completely smooth and polished); there are slight but recognizable differences in the basal segments of the antennal flagellum (Figs. 4 and 5); and when the insect is viewed from the side, the level of the dorsum of the abdomen normally appears to be nearly on a line with that of the mesonotum whereas in *alsophilae* it is usually much lower. A. T. Drooz and certain of his associates at the Southeastern Forest Experiment Station, U.S. Department of Agriculture Forest Service, have found that *T. alsophilae* will develop in the eggs of a number of Geometridae other than *Alsophila pometaria*. When the eggs of the host species are larger (as in the case of *Abbotana clementaria* (J. E. Smith) and *Oxydia trychiata* (Guenée)), the resulting parasites are noticeably larger than those emerging from eggs of *Alsophila*; they are as large as specimens of *Telenomus droozi* and the antennae very closely resemble those of that species. However, the other differences mentioned above are apparent in these larger specimens also.



Figs. 1, 4, 5. *Telenomus droozi*. 1. Dorsal view of head; 4. Female antenna; 5. Male antenna. Figs. 2, 3, 6. *Telenomus alsophilae*. 2. Dorsal view of head; 3. Female antenna; 6. Male antenna.

No significant differences in the male genitalia of the two species have been noted.

Female.—Length approximately 1 mm. Head just about as wide as maximal width of thorax, in frontal view broadly subtriangular, in dorsal view as shown in Fig. 1; eyes weakly setose; surface of vertex with delicate reticulate sculpture; weaker microsculpture narrowly along inner eye margins; lower part of frons with delicate reticulate sculpture like that of vertex; elsewhere the frons smooth and polished; sharp margin bordering the eyes behind not continued as a ridge across vertex, which is rather smoothly convex from front to back; lateral ocelli situated on vertex at eye margins and barely above level of median ocellus; antenna as illustrated (Fig. 4).

Thorax with mesoscutum sculptured like vertex; disc of scutellum strongly transverse, smooth and polished; metanotum short, usually smooth but sometimes with a little microsculpture across base; propodeum short, very shiny, and with a little indefinite sculpture, especially laterally; forewings overreaching abdomen by hardly $\frac{1}{2}$ length of the latter; hindwings about $5\times$ as long as their maximal width; stigmal vein nearly as long as width of hindwing and $\frac{1}{2}$ as long as postmarginal vein, the terminal end of which is rather vague but is determined by the row of 10 or 11 evenly spaced bristles arising from it.

Abdomen a little longer than thorax, apical segments usually not retracted; in lateral view level of dorsum of abdomen nearly on a line with level of posterior part of mesonotum; 1st segment of gaster dorsally with a row of foveae or short striae across base; large 2nd segment smooth and polished but sometimes with a row of minute punctures across extreme base.

Coloration.—Black; antennae, including scapes, black; legs largely black or blackish, the tarsi usually paler; wings hyaline.

Male.—Essentially like the female except for the antennae (Fig. 5), a smaller abdomen and paler legs.

Holotype.—USNM No. 74012.

Described from 40 females (one, the holotype) and 41 males reared 2 June 1976, by A. T. Drooz from eggs of *Ennomos subsignarius* (Huebner) which had been collected at Pottersdale, Pennsylvania.

Literature Cited

- Drooz, A. T., G. F. Fedde, and J. A. Copony. 1976. Egg parasite of the elm spanworm is not *Telenomus alsophilae*. Environ. Entomol. 5:492-494.

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