

A NEW AMERICAN PARASITE OF THE HESSIAN FLY
(MAYETIOLA DESTRUCTOR SAY)

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A NEW AMERICAN PARASITE OF THE HESSIAN FLY
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During the course of some biological investigations of the parasites of the Hessian fly, *Mayetiola destructor* Say, by Mr. W. R. McConnell and the author, a parasite new to America was reared from puparia in great abundance. This parasite runs to *Polygnotus* Förster in Ashmead's key (Monograph of the North American Proctotrypidae). It was compared with specimens of European Proctotrypoid parasites of the Hessian fly in the United States National Museum collection, some of which are labeled *Platygaster minutus* Lindeman and others, *Polygnotus (Platygaster) minutus* Lindeman. This European material represents two distinct species. The specimens labeled *Platygaster minutus* Lindeman were sent from Russia and are probably paratypes of Lindeman's species. These specimens are closely related to our *Polygnotus hiemalis* Forbes but are distinct from those labeled *Polygnotus (Platygaster) minutus* Lindeman and the new species described in this paper. The specimens standing as *Polygnotus (Platygaster) minutus* Lindeman are labeled "France" and were probably determined by Ashmead. One of these specimens has "zosine?" written at one end of the label. These specimens are apparently the same as the specimens described as a new species in this paper. This new parasite will be found to compare somewhat favorably with the original description of *Platygaster zosine* Walker, but his description is too brief and indefinite to enable the writer to determine whether or not the material before him represents Walker's species. Because of the difficulty encountered in securing authoritatively named material or having comparisons made with the types of European species at the present time on account of the unsettled conditions in Europe, it has been decided to describe this American Hessian fly parasite as a new species, since it is necessary that we should have a specific name for use in the notes relating to our investigations. In the writer's opinion, this new parasite may prove to be *Platygaster zosine* Walker, and in that case it was probably introduced by Riley 1891 with *Pleurotropis (Entedon) epigonus* (Walker) Riley, if indeed it had not already been introduced previous to that time.

POLYGNOTUS VERNALIS, new species.

Female.—Length about 1.36 mm.; black and shining; front, vertex, occiput, and cheeks transversely rugulose and bare; mandibles fusco-testaceous, a few long, scattered, whitish hairs on clypeus and mandibles; eyes black; antennae 10-jointed, fusco-piceous; scape about as long as the four apical joints, longitudinally rugulose, with a few scattered whitish hairs; pedicel oblong globose, nearly as long as first and second joints of the flagellum, pubescence sparse; first and second joints of flagellum cylindrical, closely united, narrowest of all joints, pubescence sparse; remaining joints granose, rounded at base and truncate at apex, apical joint longest of all; third and fourth joints subequal, shortest of all, pubescence sparse; joints 5, 6, 7 thickest of all, rather densely pubescent and forming the club; pronotum shining, bare, reticulose, mesonotum shining, bare, indistinctly aciculated longitudinally; scutellum convex, smooth and polished, distinctly margined, very faintly aciculated, and sparsely pubescent, foveae at base widened laterally, narrowed medially; parapsidal furrows very indistinct; propleurae shining and transversely aciculated; mesopleura smooth and polished with transverse curved aciculations dorsally; metapleura shining with dense whitish pubescence; propodeum with two broad, rugose, median carinae and a transversely striated knob at the apex, with long whitish pubescence except on the knob and between the carinae; lateral carinae distinct; petiole dorsally sulcate, its base flared especially dorsally to receive knob on propodeum, densely pubescent except in sulcus; abdomen ovate, smooth and highly polished, second segment very long, with two shallow, dorsal concave areas at the base, base hairy; four remaining segments very short, a fringe of fine hairs on apex; coxae black, trochanters fusco-piceous, femora black, tibiae black except anterior tibiae which are fusco-piceous at base and apex, tarsi dark testaceous on middle and posterior legs, a little lighter on the anterior legs, all apical tarsal joints black; all tibiae and tarsi with white pubescence; all femora and tibiae aciculated; wings hyaline, very long, about two and a half times as long as the abdomen.

Allotype.—Essentially the same as the type; second joint of flagellum dilated; apex of abdomen not quite so pointed as in female; all tarsi fusco-piceous. Antennae 10-jointed. Length, 1.04 mm.

This species may be easily distinguished from *Polygnotus hiemalis* Forbes by the transversely rugulose head, the long wings, long, slender legs and the body generally of less robust form.

Type.—Cat. No. 21135, U.S.N.M.

Type and allotype locality.—Hagerstown, Maryland.

Paratype localities.—Pennsylvania: Andersonburg, Butler, East Waterford, Ford City, Greensburg, Hellertown, Indiana, Lansdale,

Lenape, Lewisburg, Linden, Marysville, Middleburg, Montgomery, Montoursville, Muncy, Northumberland, Pennbrook, Sellersville, Red Lion, Vicksburg, Warfordsburg. Virginia: Berryville, Front Royal, Strasburg. West Virginia: Charlestown, Martinsburg.

Described from 12 females and 17 males. Types in United States National Museum collection. All specimens were reared from Hessian Fly puparia collected at the above-mentioned localities during the summer of 1915, by W. R. McConnell and the author.