AN UNDESCRIBED HYMENOPTEROUS PARASITE OF THE HOUSEFLY.¹

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During the summer of 1912, Mr. J. H. Paine reared from the pupæ of *Musca domestica* Linn. at Forest Hills, Mass., a number of specimens of an apparently undescribed Pteromalid belonging to the genus *Spalangia*. These were kindly placed at the writer's disposal and formed the basis of a life-history study which, it is hoped, will be published in the near future.

The present paper deals with a preliminary description of the species which will be known as

Spalangia muscidarum sp. nov.

Male: (Fig. 1) Length 3-3.5 mm. Frontal aspect of head oblong-ovate, with numerous large depressions; eyes ovate, not emarginate in front; entire head covered with a short rather stout light-colored pile; ocelli present; labrum very small in proportion to length of head, the free border rounded, hairy; mandibles bidentate, length more than twice the width at base; antennæ 10-jointed; scape as long as the three succeeding joints, covered with hair of the same texture as that on the head, second joint shortest; third joint almost as long as the succeeding two; the remaining seven joints except the last which is longer, of equal length; they are covered with fine light-colored hair; genæ punctate like the face.

Thorax above with the three divisions distinct; anterior narrowed portion of pronotum finely punctate and sharply marked off from the posterior part, which is sparsely and very coarsely punctate except for a median smooth space widest posteriorly; a transverse row of deep umbilicate punctures near its posterior margin; mesonotum smooth and polished anteriorly, sparsely punctate posteriorly and laterally leaving a smooth median space for its entire length; parapsides prominent with a few scattered punctures; parapsidal grooves deep, punctate; scutellum smooth, sometimes with several scattered punctures at sides; a distinct punctured line crosses it posteriorly; post-scutellum smooth; metanotum with two deeply punctate longitudinal lines separated by a smooth raised area; on either of these lines of punctures is a smooth space bounded posteriorly and laterally by numerous deep punctures, smallest and most abundant on the sides. Mesopleuræ each with a single fovea; an aciculate depression below and behind the tegula. Abdomen smooth except petiole which is finely aciculate; 3rd segment largest. Hind coxæ swollen; first joint of tarsi not quite as long as the succeeding four. Wings hyaline covered with short stout hairs. Venation piceous. Color of thorax deep bronze; abdomen dæneous; the tarsi yellow-brown except the last joint which is black.

The female is larger and of a more delicate structure than the male. The head is longer and narrower (Figs. 3 & 4), the antennæ are more slender and the abdomen (Fig. 2) is of different proportions.

¹Contributions from the Entomological Laboratory of the Bussey Institution, Harvard University, No. 64.

Described from 1 type (male) and several paratypes of both sexes.

Spalangia muscidarum closely resembles *S. rugosicollis* Ashmead¹ from which it may be separated by the presence of a smooth median space on the posterior surface of the mesonotum and the entire absence or extreme paucity of punctures on the sides of the scutellum above the punctured line.

Eight specimens reared from *Stomoxys calcitrans* by Mr. H. Pinkus at Dallas, Texas, agree in detail with the series from Forest Hills, except that they have a more or less uniformly punctured pronotum which, in the latter, is smooth medially.

Musca has appeared as a manuscript name for a species of the genus *Spalangia*² which was taken from a puparium of the house fly by Mr. H. L. Sanford, but no description of the species has been published.

This ecto-parasite was found abundantly within the puparia of house flies, but was not known with certainty to parasitize other species. However, *Stomoxys calcitrans* Linn. whose puparium resembles closely that of *Musca domestica* was breeding quite abundantly with the latter in a region infested with *Spalangia muscidarum*, and it seems reasonable to suppose that the parasites did not discriminate between the two. The fact that the specimens from Texas obtained by Mr. Pinkus were reared from *Stomoxys* favors this view.

The writer is indebted to Dr. L. O. Howard and Mr. J. C. Crawford of the Bureau of Entomology for determination and loan of specimens, and to Mr. F. C. Bishopp for sending the Texan specimens referred to above.

EXPLANATION OF PLATE

- Fig. 1. *Spalangia muscidarum* sp. nov., male.
 Fig. 2. Outline of abdomen of female.
 Fig. 3. Front view of head of male.
 Fig. 4. Front view of head of female.

¹ Proc. Entom. Soc. Washington, Vol. 3, p. 36. (1894).

² Howard, L. O., The House Fly—Disease Carrier, Frederick A. Stokes Company, New York, 1911, p. 90.

Mr. J. C. Crawford (*in lit.*) holds that this is a described species which should be attributed to Howard, since what is probably the same form is referred to by Dr. Howard (*loc. cit.*) in the following words: ". . . a fully formed and active adult black *Spalangia* crawled immediately from the opening . . . This will be described by Girault as *Spalangia musca*." This particular specimen in question is not at present accessible; therefore we have no means of comparing it with the series under consideration.

Unfortunately the word *black*, which constitutes the entire description, will not apply strictly to this species in which the color is distinctly bronzed and a portion of each tarsus is yellow-brown as described above. Likewise if used in the cited general sense, it would apply as well to *Spalangia rugosicollis* Ashm. *S. drosophilæ* Ashm. or to *S. haematobiae* Ashm. as to the present species; it has no diagnostic value. Moreover, since this species will soon enter economic literature, it seems highly expedient to propose a name accompanied by a description by which it may be distinguished from other members of the same genus.

RICHARDSON—SPALANGIA MUSCIDARUM.