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### **Leiomyza in North America (Dípt., Drosophilidae.)**

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#### HISTORICAL.

*Leiomyza* was proposed by Macquart in 1835 for Meigen's *Agromyza glabricula* and *lucigata*, which, as Macquart observed, differed too much on the absence of vibrissae and of anterior frontal bristles to remain in *Agromyza*; he also men-

tions approximated crossveins and the forward curvature of the fourth vein as generic characters, but the former of these proved to be a mistake.

Meigen in 1838 accepted the genus and added a third species, *Heteroneura scatophagina* Fallen, which he had himself previously referred to *Agromyza*. He figures *glabricula*, but the venation is not quite alike in the two wings, and he shows a full complement of basal cells which afterward proved an error. He mentions as generic characters only the absence of bristles on the anterior part of the front and the course of the fourth vein.

Westwood in 1840 placed *Leiomyza* as a subgenus of *Agromyza*, defining it in a few words and repeating Macquart's error about the approximation of the crossveins; he mentioned *scatophagina* as "typical species," although he probably had no thought of giving it any taxonomic prominence above the other two by so doing. As it was not originally included, it could not be the type species in a modern sense.

Zetterstedt in 1848 gave the best description of the genus yet published, evidently drawing the characters from Fallen's type of *scatophagina*, which he also redescribed; he also designated this species as "*Typus generis*."

Schiner in 1864 was unable to give a satisfactory account of the genus, his only material being a determined specimen from the Haliday collection and one from Winnertz, which were obviously not congeneric, yet both resembled the descriptions. We can now decide that Winnertz was right, but Schiner could only adapt the earlier descriptions after a fashion, leaving the genus more confused than before.

Rondani never attempted to place the genus.

Becker cleared up the matter very much in 1902 by publishing the characters of the specimen standing as type of *laevigata* in the Meigen collection, with a figure of the venation. This specimen has the characters assigned by Meigen to the genus, but specifically agrees better with *glabricula*, as it has yellow halteres and the hind femora not black at tip. The *glabricula* type, or supposed type, is preserved with it but is now headless. It has the same wing characters and is un-

doubtedly congeneric. Becker makes the genus out as a perfectly good one, differing from *Asteia* chiefly in having a hind crossvein and a longer (normal) second vein, and he places it in Drosophilidae next to that genus. From the material (North American) that I have seen, I entirely agree with this; we have a genus still more nearly related. *Sigaloessa*, which possesses a hind crossvein, hence differs hardly at all except in its greatly shortened second vein.

Czerny in 1903 gave some notes on a specimen of *scatophagina* in Zetterstedt's collection, including additional generic characters. This species is strictly congeneric with the other two, if not in fact an earlier name for *glabricula*. Meigen in the original description of *laevigata* suggested that it might be only a variant (Abänderung) of *glabricula*. As no valid designation of a genotype has been made, *glabricula* is hereby designated.

Williston in 1896 (a) reported the genus from North America and placed it in his table of Agromyzidae (1896b); but in 1908 he omitted it, evidently not satisfied with his identification.

Melander in 1913, in his exhaustive treatment of Agromyzidae and related families, mentions *Leiomyza* as a genus unknown to him.

Lorenz Oldenberg in 1914 gives generic characters from numerous specimens and from Becker and Czerny. He finds the flies in the forest in Germany on exuding sap of trees, on tree fungi, and on boards in the sun. His specimens show considerable variation in the amount of infuscation of the front, antennae and femora, but seem to agree with *laevigata*.

With this historical review, I proceed to a description of the genus and two new North American species.

#### GENERIC CHARACTERS.

Head nearly hemispherical, concave behind, the eye very large, bucca and parafacial extremely narrow. Antennae ordinary, inserted at about the middle of the head in profile, arista bare or slightly pubescent. Face short, not carinate; a minute pair of vibrissae present. Front and face of equal width, less than one-third that of head; front flat, smooth, or-

bits more or less differentiated above for a short distance, and shortly above antennae with a transverse depression. Two pairs of verticals, one of frontals, which are at the level of the median ocellus. Post-verticals absent (in ours, said to be divergent by Oldenberg).

Thorax and abdomen in all the species black and highly polished. Chaetotaxy of thorax: dc 1, npl 1, stpl 1, sc 1 (and a very minute lateral pair, apparently absent in the female of *slossonae*); acrostichals in the North American species a very delicate single row of hairs, laterad of which the surface is entirely bare to another row in the dc line. Wing as figured, second basal and anal cells wanting, fourth vein gently curved forward from near the crossvein, so that the first posterior cell is about two-thirds as wide at apex as near its base.

*Table of North American Species.*

Front and hind femora distinctly stouter than middle ones

*slossonae* n. sp.

Front and hind femora of about the same diameter as the middle ones

*melanderi* n. sp.

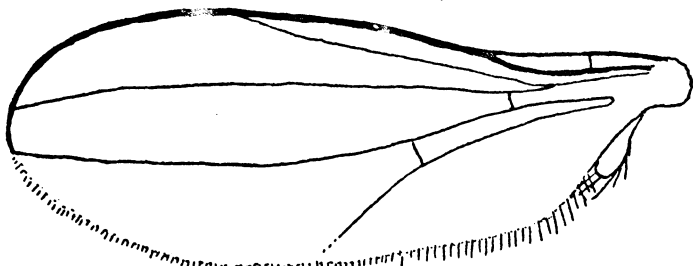
*Leiomyza slossonae* n. sp.

Front brown, including an extension to the vertex on each side of the ocelli; ocellar triangle and the upper third of frontal orbits shining black; lower edge of front yellow; antennae yellow, third joint, oval, slightly infuscated or not on upper edge; arista microscopically pubescent, appearing bare under hand lens. Face, parafacials and bucca almost white, sometimes more yellowish, with a narrow brown line usually perceptible separating the first two and bordering the sides of the mouth cavity. Palpi yellow; proboscis small, yellow. Halteres yellow. Legs including coxae wholly yellow except last tarsal joint, which is brown; front and hind femora thickened in both sexes, and their coxae and trochanters a little elongated. Length 1.8 mm.

*Types*, one male (holotype), one female, mounted on same pin, from Franconia, New Hampshire, collected by Mrs. Slosson and in her possession. *Paratypes*, one each from Pullman, Lyndon and Almota, Washington, and one from Moscow Mountain, Idaho, all collected by Professor Melander. Paratype from Washington deposited in the United States National Museum.

***Leiomyza melanderi* n. sp. (Text Fig. 1, wing).**

Smaller than *slossonae* (1.5 mm.), all the femora slender; legs pale yellow, last tarsal joint almost black. Face not usually so whitish, more yellow. The specimen from Montreal has the head darker, front blackish-brown, with a faint median paler streak, lower edge pale



Text Fig. 1.—*Leiomyza melanderi* n. sp. Right wing, under side.  $\times 46$ .

yellow, face and bucca quite dark yellow, third antennal joint about half infuscated. This I can only regard as a dark form of the same species, although the front looks different.

*Types*, one male, one female, Moscow Mountain, Idaho; *paratypes*, one each from Moscow Mountain, Idaho; Pullman, Olga, Everett and Almota, Washington; all the preceding collected by Professor Melander, in whose possession the types remain. Also one female paratype from Montreal, Canada, collected by Rev. Jos. Ouellet. Two paratypes from Washington in the United States National Museum.

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