THE NORTH AMERICAN SPECIES OF *SILVIUS* (*SILVIUS*) MEIGEN (DIPTERA: TABANIDAE)

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ABSTRACT

An isolated eastern population of *Silvius* (*Silvius*) *gigantulus* Loew is described as *weemsi* n. ssp. and a key to and figures of the 3 Nearctic taxa of *Silvius* (*Silvius*) are presented.

The genus *Silvius* was established by Meigen in 1820 for the Palearctic *Tabanus vituli* Fabricius 1805, later shown to be a synonym of the earlier *Silvius alpinus* (Scopoli) 1763, (Chvala and Lyneborg 1970). At one time many species from all parts of the world were included in the genus, but now it is restricted to a relatively small number of northern hemisphere species, and has been split into 5 subgenera. Only the nominate subgenus is considered here. This consists of about 15 Palearctic and Oriental species and 2 Nearctic species, to which is added the new taxon described below.

The 3 Nearctic taxa are very similar in appearance, as are a number of the Palearctic species, so it seems useful to present here figures and key to the Nearctic forms before describing the new subspecies.

**KEY TO FEMALES**

1. Frontal callus small, less than 1/2 width of frons. Frontoclypeus and genae entirely pollinose. Abdomen with a broad dark integumental stripe or series of spots overlaid by conspicuous middorsal pale pollinose and pale-haired middorsal triangles on tergites 1 to 6 nearly width of their respective segments

1'. Frontal callus larger, over 1/2 width of frons: Frontoclypeus and genae with bare shiny areas. Abdomen without marked pale pollinose middorsal triangles

2. Frontoclypeus and genae with large bare areas. Ocellar tubercle extensively bare and shiny. Palpi somewhat inflated basally. Abdomen yellow in ground color, largely dark haired, with or without small dull yellow median triangular hair patches and dark integumental patches on first 3 tergites, the thorax contrastingly dark in ground color, yellow to steel grey pollinose

2'. Frontoclypeus and genae with small bare areas, largely confined to the sutures between clypeus and genae. Palpi not inflated basally. Abdomen brown in ground color, with an

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elongate black integumental triangle from first to third tergites, black haired and with faint dull yellow median hair triangles on tergites 2 to 5 or 6, the thorax not much darker, brown pollinose ........................................... *gigantulus weemsi*

**Silvius (Silvius) microcephalus** Wehr

*Fig. 1*


![Silvius microcephalus Wehr](image)

**Fig. 1. Silvius microcephalus** Wehr. Female paratype. Frons, antenna, palpus.

The species has been adequately described by Wehr (1922) and redescribed by Brennan (1935) who also described the male, and should be recognizable from the key and figure given here. Brennan (loc. cit.) says the male is easily associated by abdominal pattern and lack of facial bare areas. His male appears to have been the specimen from Ft. Garland, Colo. listed above. I have seen the paratype studied by Brennan through courtesy of Dr. C. A. Triplehorn of Ohio State University, who also loaned another specimen, lacking 1 wing and the distal half of the other, labelled Bailey, Colo., Aug. 1890, probably the same specimen reported by Brennan as “Riley, Aug. 1890.” The paratype bears an additional label reading “Sago Flats, R. W. Dawson coll.” The holotype is said to be in the University of Nebraska, but owing to their standing policy against lending types, neither Brennan nor I have seen it.

**Silvius (Silvius) gigantulus** (Loew)

*Fig. 2*


*Silvius gigantulus* Osten Sacken 1877, Western Dipt., p. 215. Brennan 1935,
Fig. 2. Silvius gigantulus Loew. Female. China Flat, Eldorado Co., Calif. Frone, fronto-clypeus, antenna, palpus.


This species is readily separated on the characters in the key. It is widespread in the west, though apparently seldom abundant, and quite variable in color. The thorax may be steel gray, yellow, or brownish pollinose, and the abdomen clear yellow to almost brown, with or without a variable amount of integumental black on first 2 or 3 tergites.

S. (S.) gigantulus is reported by Philip (1965) from British Columbia east to Nebraska, south to California and New Mexico. I have studied specimens of both sexes from B. C., Ore., and Calif., those from the first 2 localities being darkest and closest to ssp. wuumisi in color. The degree of barricness of fronto-clypeus varies from patches on each side to nearly total, but is always more extensive than in wuumisi.

Silvius gigantulus wuumisi n. ssp.

Fig. 3

Female length 10 mm, of wing 10 mm. Eyes bare, the color not recorded. Head structures as figured. Frone, fronto-clypeus, and genae pale yellowish brown, the sparse beard yellowish. Bare areas of face black above tentorial pits, yellow below. Antennae with first 2 segments yellow, the third dull
orange, darkening to black at tip of basal plate and style. Palpi dark orange, yellow pollinose, with a few dark hairs. Proboscis wholly membranous, longer than palpi though shorter than head height, brown.

Mesonotum brown in ground color, brown pollinose, faintly striped, beset with short dull yellow hairs. Scutellum and pleura concolorous, slightly grayer posteriorly. Legs including coxae dark yellow, the joints or articulations between all leg segments blackish, and apical halves of fore tibiae and fore tarsi dusky, though hardly bicolored. Wings faintly brownish, the costal cell orange, the veins brown, and a short appendix at fork of third vein.

Abdomen dull orange brown in ground color, but slightly paler than thorax, with a black median integumental triangle, its base on first tergite, its apex in middle of third tergite. Whole abdomen pale brown pollinose, black haired, except for small sparse median tufts of dull yellow hairs on hind margins of tergites 1 to 5 or 6, and on posterolateral margins of tergites 4 and 5. Beneath the abdomen is the same color as dorsally, largely black haired, but with a few yellow hairs on the hind margins of all sternites. There may be also a small dusky median integumental spot on the fore border of tergite 4.

Male unknown.


Paratypes. 7 females, same data as holotype. In F.S.C.A. and Colls. of L. L. Pechuman and C. B. Philip. These paratypes vary very little, only the development of the dark integumental marking on abdomen being confined to first 2 tergites in 2 specimens. One female, Gibsonia, Alegany Co., Penna., 17

Fig. 3. Silvius gigantulus weemsi n. ssp. Female holotype. Frons, frontoclypeus, antenna, palpus.
Aug. 1962, G. E. Wallace coll. The abdomen crushed, but head characters agree with holotype.

This subspecies is only separable with certainty from *gigantulus* by the reduced bare areas on the face and more slender palpi. In general it is darker and more brownish than *gigantulus*, but the latter is rather variable in this respect, some specimens being as dark as *weemsi*. It represents a disjunct population, possibly a remnant of a preglacial continuous population. The locality is a relict bog, with sphagnum and other boreal plants, at a high elevation in extreme southern West Virginia. No ecological information on the Penna. paratype is available.

An additional female sent by L. L. Pechuman has the characters of the subspecies, except for being lighter in color. It bears only a small printed "N.Y." label, and is excluded from the paratype series for lack of definite locality data.

**Literature Cited**


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The night comes on; but soon did night display
More wonders than it veiled: innumerable tribes
From the wood-cover swarmed, and darkness made
Their beauties visible; one while they streamed
A bright blue radiance upon flowers which closed
Their gorgeous colours from the eye of day;
Now motionless and dark eluded search,
Self shrouded; and anon, starring the sky,
Rose like a shower of fire.

Robert Southey