

DESCRIPTIONS OF SOME NEW NORTH AMERICAN
PSYLLIDAE WITH NOTES ON OTHERS

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Several new species of Psyllidae have come to hand since the preparation of the author's Monograph of the Psyllinae and Trioziinae of America North of Mexico.¹ These are principally from material received from Montana State College and Massachusetts State College. These new forms are here described and new locality records and notes are given for some previously known.

*Psylla rara*² n. sp.

(Figs. 7, 8, 13)

Length to tip of folded wings 3.75 mm.

Color: General color fulvous. Five more or less distinct darker bands on mesoscutum. Venter often darker. Forewings with black spot at apex of clavus.

Structure: Head deflexed. Vertex $\frac{2}{3}$ as long as wide, discally depressed. Genal processes large, acute, nearly as long as vertex (longer than its median length), slightly divergent. Antennae not quite twice as long as width of head, terminal setae very prominent. Thorax well arched. Forewings large, broad, about $2\frac{1}{4}$ times as long as wide, membrane thickly set with minute setae, costal margin setate; Rs slightly sinuate, Cu₁ strongly arched, pterostigma large, opaque. Hind wings large, minutely setate. Hind tibia with small basal spur.

Genitalia: Male genitalia moderately large. Proctiger long, parallel sided, straight to near apex, then abruptly bent caudad. Forceps shorter than proctiger, in lateral view slender, straight, tapered apically; in caudal view slender, parallel sided, arched to blunt black apices, large setae on inner margins. Female genital segment large, stout; dorsal valve longer than ventral, slender apically, blunt; ventral valve slightly upturned, acute.

Holotype, female, **allotype**, male, Huntington Ravine, White Mountains, New Hampshire, Sept. 4, 1940, altitude 3400 feet, J. F. Hanson. **Paratypes** as follows: one male Tuckerman's Ravine Trail, White Mountains, N. H., 4200 feet, Sept. 3, 1940, J. Hanson; one male Highlands, North Carolina, 4000 feet, June 11, 1940, C. P. Alexander; one female Smoky Mountains, Tennessee, 4000 feet, June 5, 1939, C. P. Alexander; two females Halifax, July 7, 1921.

¹ Iowa State College Journal of Science 17 (4):443-660, 1943.

² rarus-a-um, L. adj.—few in number, rare.

The holotype, allotype and paratypes are in the author's collection. Paratypes are also in the Mass. State College collection and the U. S. National Museum. The Halifax specimens are from the U. S. National Museum.

No host data are available for this species. It apparently is confined to some plant which occurs only at higher altitudes in the mountains of the eastern United States but should be more widespread in Canada. The specimens from Halifax were set aside several years past in the hopes that more specimens would be encountered. In the first of two shipments from Massachusetts State College three more specimens turned up and with two additional specimens at hand it is now being described as new. The author has hesitated so long in describing it as it has so few distinctive characters. It resembles *P. mali* more than any other species known to occur in North America. The much larger genal processes and the spot at the tip of the clavus will serve to distinguish it from *mali* however. It runs to the latter species in the author's key (op. cit.)

***Psylla stricklandi* (Caldwell)**

In the Iowa State College collection there is one female specimen of this species from Blasdell, New York. It bears the date 7-15-92. Although undoubtedly of this species it differs from the western specimens by having antennae slightly over twice as long as the head.

***Trioza sinuosa*³ n. sp.**

(Fig. 6, 10)

Length to tip of folded wings 3.5 mm.

Color: General color fulvous, abdominal tergites brown. Forewings yellowish, most heavily along veins.

Structure: Head broader than thorax, Vertex deeply impressed, margins prominent. Genal processes large, stout, acute, scarcely divergent, nearly as long as vertex (longer than median length). Antennae $1\frac{1}{2}$ times as long as width of head. Thorax broad, moderately arched. Pronotum depressed below plane of vertex. Forewings short, slightly over twice as long as wide, scarcely angulate, membrane thick; Rs long, sinuous, marginal cells small, radular areas unusually prominent. Hind wings large, thickly set with minute setae, somewhat rugose. Hind tibia with serrate basal carina, two inner apical spines. Metacoxae somewhat produced anteriorly, truncate.

Genitalia: Female genital segment much shorter than rest of abdomen; dorsal valve blunt apically; ventral valve shorter than dorsal, blunt.

Holotype, female, Jaffrey, New Hampshire, May 30, 1940, J. F. Hanson; one paratype same data; one, Great Gulf Trail, White Mts. New Hampshire, June 1, 1940, 1500 ft., J. F. Hanson; one, Limerick Mills, Maine, May 31, 1940, J. F. Hanson. Holotype and paratype in author's collection. Paratypes in Mass. State College collection and U. S. National Museum.

In general form this species resembles *T. tripunctata* but differs mark-

³ sinuosus-a-um, L. adj.—sinuous.

edly in the immaculate forewings, the larger genal processes, the wing venation and the genitalia. There is no indication of host plant in the data at hand.

***Trioza stylifera* Patch**

Numerous specimens of this species have been taken in the White Mountains of New Hampshire. Unfortunately no host plant data are available. The previously known collections were made at Brockville, Ontario and Herchmer, Manitoba.

***Trioza pletschi* n. sp.**

(Figs. 1, 1a, 2, 12)

Length to tip of folded wings 3.5 mm.

Color: Male dark brown. Margins of vertex, median line on prescutum light. Legs lighter. Female testaceous, two brown spots on prescutum, indistinct lines on scutum. Dorsum of abdomen dark brown.

Structure: Head small, narrower than thorax. Vertex depressed discally, margins raised. Genal processes $\frac{2}{3}$ as long as vertex, acute, somewhat divergent. Antennae slightly over twice as long as width of head. Eyes small. Thorax strongly arched. Pronotum strongly descending, not entirely below plane of vertex. Forewings $2\frac{1}{2}$ times as long as wide, rounded apically; veins heavy, Rs long, sinuate, marginal cells of moderate size, radular areas unusually prominent. Hind wings large, minutely setate. Hind tibia with serrate basal carina, two inner apical spines.

Genitalia: Male proctiger large, short, caudal lobes as long as axial portion. Forceps enclosed by caudal lobes of proctiger, in lateral view very stout, sharply bent cephalad to acute apices; in caudal view stout, swollen basally, narrowed apically; in dorsal view apices produced latero-cephalad as blunt tooth, mesal margin sharp, black margined. Apical segment of oedagus much enlarged apically, scoop shaped, a smaller lobe basally. Female genital segment short; dorsal valve blunt, black tipped, slightly down-curved apically; ventral valve shorter than dorsal, stout, upcurved, blunt.

Described from 33 specimens collected at Fairy Lake, Gallatin County, Montana, September 4 and 10, 1939 and 1940 by D. J. Pletsch on *Thalictrum occidentale*.

Holotype male, **allotype**, female, in author's collection.

Paratypes in Montana State College and author's collections.

Almost all of the specimens are quite teneral so the color description can not be given with accuracy. This species keys out to *T. singularis* in the author's key (op. cit.).

It may be distinguished from the latter by the rounded forewings, the longer radial sector and the male genitalia as figured.

It is with pleasure that the author dedicates this species to D. J. Pletsch, the collector.

Trioza robusta⁵ n. sp.

(Figs. 4, 5, 9)

Length to tip of folded wings 3.5 mm.

Color: General color orange red. Antennae, genal cones, legs, thoracic venter and abdomen darker with light markings.

Structure: Head large, as wide as thorax. Vertex with discal foveae and medial suture prominent. Genal processes conical, somewhat divergent, $\frac{2}{3}$ as long as vertex. Antennae somewhat over $1\frac{1}{3}$ times as long as width of head. Thorax quite well arched. Pronotum on same plane as vertex. Forewings angularly rounded, about $2\frac{1}{2}$ times as long as wide, cubital cell larger than medial. Hind tibia with serrate basal carina, three inner apical spines. Metacoxae somewhat produced anteriorly.

Genitalia: Male proctiger nearly triangular in lateral view, caudal lobe not as long as axial portion, curved dorsad. Forceps about $\frac{1}{2}$ as long as proctiger; in lateral view stout, rounded apically and produced cephalad to sharp points; in caudal view stout, straight, narrowed and incurved apically, apical portion black. Female genital segment shorter than rest of abdomen; dorsal valve strongly concave dorsally, apical portion attenuate, blunt, slightly longer than ventral; ventral valve thick dorso-ventrally, dorsal margin convex, covering central portion of dorsal valve in lateral view, apex acute and slightly upturned.

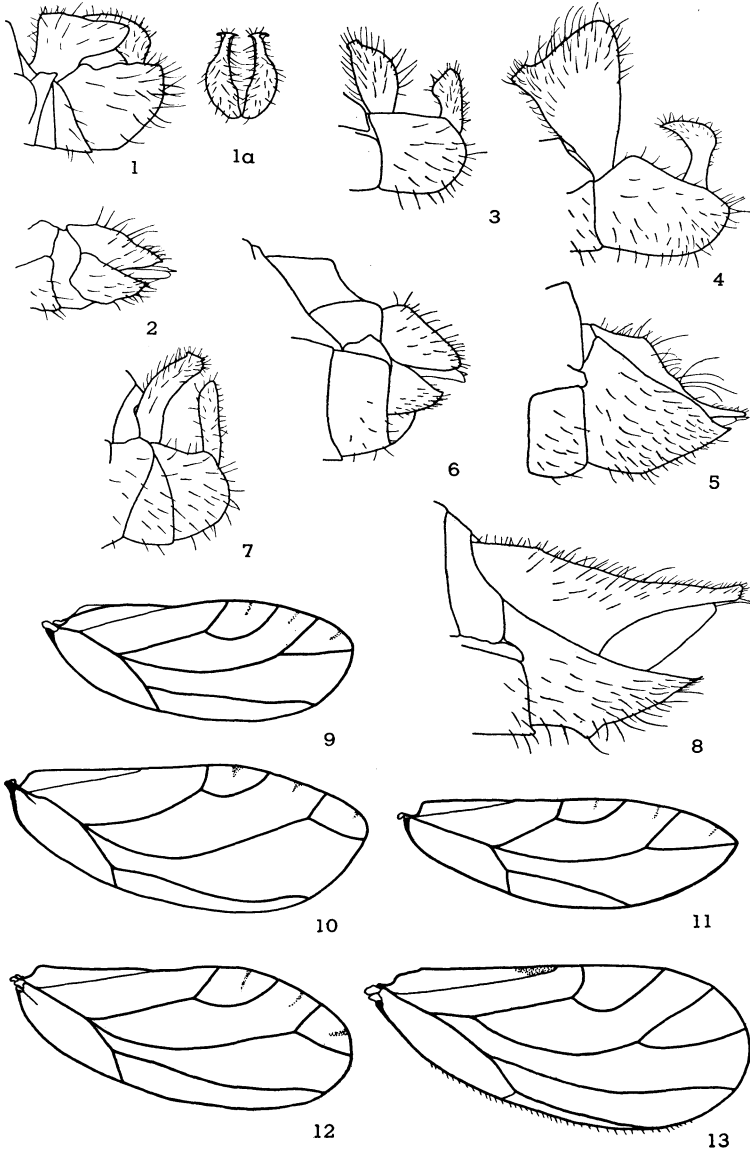
Holotype, male, Spring Hill, Gallatin County, Montana, Oct. 17, 1940, D. J. Pletsch; **allotype**, female, Langohr's Meadow, Middle Creek, Gallatin County, Montana, Oct. 7, 1939, D. J. Pletsch; 2 male and 3 female paratypes same data as allotype. All specimens taken on Douglas fir. One female paratype, Haugan, Montana, Aug. 9, 1931, R. H. Beamer. Holotype, allotype and paratypes in author's collection, paratypes in Montana State College collection and Snow Collection, University of Kansas.

This species is in the *T. frontalis* complex and resembles the latter very much. In the author's key (op. cit.) it runs to *T. sembla* Caldwell which it resembles in type of male genitalia. The accompanying figures will serve

⁵ robustus-a-um, L. adj.—robust, strong.

EXPLANATION OF PLATE

1. *Trioza pletschi*, lateral aspect of male genitalia.
- 1a. *Trioza pletschi*, caudal aspect of male forceps.
2. *Trioza pletschi*, lateral aspect of female genital segment.
3. *Rhinopsylla caldwelli*, lateral aspect of male genitalia.
4. *Trioza robusta*, lateral aspect of male genitalia.
5. *Trioza robusta*, lateral aspect of female genital segment.
6. *Trioza sinuosa*, lateral aspect of female genital segment.
7. *Psylla rara*, lateral aspect of male genitalia.
8. *Psylla rara*, lateral aspect of female genital segment.
9. *Trioza robusta*, forewing.
10. *Trioza sinuosa*, forewing.
11. *Rhinopsylla caldwelli*, forewing.
12. *Trioza pletschi*, forewing.
13. *Psylla rara*, forewing.



to distinguish it from the latter. Although all the specimens at hand were taken on Douglas fir it is almost surely an *Amelanchier* inhabiting species as are its close relatives. Its occurrence on Douglas fir, so late in the fall, very possibly indicates hibernation on that plant.

***Trioza aylmeriae* Patch**

Three specimens are at hand from N. Cottonwood Canyon, Gallatin County, Montana, collected May 11, 1940, by D. J. Pletsch. These specimens are identical with others from Maryland. Known heretofore from Ontario, Maryland and Ohio.

***Rhinopsylla caldwelli* n. sp.**

(Figs. 3, 11)

Length to tip of folded wings 3.25 mm.

Color: General color fulvous. Eyes and clypeus dark. Wings hyaline.

Structure: Head large, nearly as wide as thorax, scarcely cleft anteriorly. Vertex broad, strongly impressed discally, medial suture strong. Eyes small, hemispherical, lateral, not extending forward. Genae roundly produced, as in *Kuwayama*. (Antennae missing). Clypeus large, extended, plainly visible from front. Thorax moderately arched. Prothorax very narrow, depressed below plane of vertex. Prothoracic episterna strongly produced, collar like. Forewings slender, angulate apically, 3 times as long as wide; costal margin strongly curved; Rs short, very slightly sinuate; medial cell larger than cubital. Hind wings slender, exceeding abdomen. Hind tibia with large basal spur, one outer and two inner apical spines. Metacoxae produced anteriorly.

Genitalia: Male proctiger arcuately produced on caudal margin, with a distinct apical epiphysis, longer than forceps. Forceps in lateral view spatulate, produced on cephalic margin midway; in caudal view stout, very slightly arched. Female unknown.

Holotype, male, Bonefish Key, Florida, Feb. 22, 1940, J. S. Caldwell. No host data. Type in the collection of J. S. Caldwell.

This unique male is undoubtedly related to the other species of *Rhinopsylla* although the genae are scarcely produced to give any appearance of a "cleft" head.

It is with great pleasure that I name this species for Dr. John S. Caldwell, the collector, a fellow psyllidologist and friend.

***Aphalara nebulosa kincaidi* Ashmead**

Five specimens of this distinctive species are present in the Massachusetts State College material. All were taken at the Dolly Copp Camp, White Mountains, New Hampshire, June 1, 1940, by M. A. Hanson. Heretofore recorded from Alaska, Alberta, Washington, California and Colorado.

***Psylla hamata* n. n.**

The name *Psylla uncata* Tuthill (Ia. St. Coll. Jour. Sci., 17: 498, 1943) is preoccupied by *Psylla uncata* Ferris and Klyver (Trans. and Proc. New Zealand Inst., 63: 53, 1932). The name *Psylla hamata* is proposed for *Psylla uncata* Tuthill.