

# FLIES OF THE GENUS PSEUDOTEPHRITIS JOHNSON (DIPTERA : ORTALIDAE)

By JOHN R. MALLOCH

*Biologist, Bureau of Biological Survey, United States Department of Agriculture*

The present paper is the result of a survey of the ortalid flies of the genus *Pseudotephritis* in the collections of the United States Biological Survey and the United States National Museum. The opportunity is taken to present a key to the species and the varieties and to give the description of one new species, the type specimen of the latter being deposited by the Biological Survey in the National Museum collection.

There is considerable doubt as to the definite species in this genus, as there is apparently some variation in the wing markings upon which the species distinctions are based. It is possible that *P. approximata* Banks, *P. conjuncta* Johnson, and *P. metzi* Johnson may be merely varieties of one species, but only actual rearing of specimens from known parents will definitely decide this.

## Genus PSEUDOTEPHRITIS Johnson

*Pseudotephritis* JOHNSON, Ent. News, vol. 13, p. 144, 1902. (Change of name.)  
*Stictocephala* LOEW, Monographs of the Diptera of North America, pt. 3, Smithsonian Misc. Coll. 256, p. 134, 1872. (Preoccupied.)

This genus is quite similar in most respects to *Callopietromyia* Hendel, but may be readily separated from it by the wedge-shaped, instead of almost parallel-sided, prolongation of the posterior apical angle of the anal cell, and the possession of an elongate oval area on the basal third or more of the anterodorsal surface of the hind tibia, which is furnished with microscopic hairs that are erect and much finer than the decumbent hairs on the remainder of that tibia.

The larvae live under slightly loose bark of trees and occur frequently along with those of *Callopietromyia*.

Below I present a key to the species of the genus now known to me.

KEY TO THE SPECIES OF PSEUDOTEPHRITIS

1. Each frontal orbit with two backwardly curved bristles on the upper half; scutellum gray-dusted, with brown or blackish marks, which are never highly glossy; no small spur of a vein emanating from hind side of the fourth vein before inner cross vein (subgenus *Pseudotephritis* Johnson)----- 2.
- Each frontal orbit with but one well-developed upper bristle; scutellum gray-dusted, with a large glossy black spot on each side occupying more than the apical half; a short spur of a vein emanating from the hind side of the antepenultimate section of fourth vein and projecting into the discal cell (subgenus *Pseudotephratina*, new)----- 6.
2. Apex of the wing hyaline from tip of second to tip of fourth vein with the exception of a very small dark spot at the apex of third vein; inner cross vein with a hyaline area separating it from a dark spot on each side of it; the dark angulate mark at apex of second vein extending over disk of wing to the fourth vein----- *corticalis* (Loew).
- Apex of the wing with a brown or fuscous mark extending from, or near, apex of second vein to, or beyond, the apex of fourth; inner cross vein always inclosed in a dark mark; the dark mark at apex of second vein not extending over disk of wing to fourth vein----- 3.
3. A small round dark mark in the costal cell between the humeral dark stripe and the large preapical dark mark; the dark apical mark on wing extending into tip of marginal cell; the dark mark over the outer cross vein and the one nearer apex of second vein usually connected by a paler, yellowish shade.  
*approximata* Banks.
- No small round dark spot in the costal cell between the humeral streak and the large preapical dark mark----- 4.
4. The dark mark over the outer cross vein connected with the one near apex of second vein----- *conjuncta* Johnson.
- The dark mark over the outer cross vein sometimes connected with the one near the apex of the second vein by a yellowish cloud but never by an equally dark portion----- 5.
5. The dark mark over the outer cross vein not connected with the one on the costa before the apex of the second vein----- *metzi* Johnson.
- The dark mark over the outer cross vein connected with the one on costa before the apex of second vein by a paler, yellowish cloud, which incloses the inner cross vein----- *vau* (Say).
6. Penultimate section of fourth vein not so long as the inner cross vein; wing with two complete dark fasciae, one extending from before the apex of the auxiliary vein to the apex of sixth, the other from over the apex of first vein to the apex of fifth, the latter inclosing both cross veins----- *cribrum* (Loew).

Penultimate section of fourth vein longer than the inner cross vein; wing with one complete dark fascia, extending from near the apex of the auxiliary vein to the apex of sixth, the dark marks over apex of first vein and one outer cross vein not connected----- 7.

7. Basal pair of scutellar bristles reduced to fine hairs; the dark marks on the costa very conspicuously darker than those on the disk of the wing; visible tergites 2 to 4 of abdomen each with a dark brown apical fascia, only the fourth with faint setigerous dark spots----- inaequalis new species.

Basal pair of scutellar bristles as long and strong as the apical pair; dark marks on the costa not conspicuously darker than those on the disk of the wing; all the abdominal tergites with dark setigerous dots, second and third each with a pair of dark marks in center at apex----- cribellum (Loew).

#### Subgenus PSEUDOTEPHRITIS Johnson

It is very probable that some subsequent worker will elevate this and the other segregate of the genus to full generic rank as more trivial characters than those cited for their distinction in the key are accepted as of generic value in this family. For the present I propose to consider them as merely subgenera, more closely related to each other than either is to other genera in their immediate vicinity in the family by the possession of the peculiar, and possibly sensory, area on the hind tibia. It may be pertinent to note the occurrence of somewhat similar areas on the same tibia in the great majority of the genera in the subfamily Oscinosominae of the family Chloropidae, and of a peculiar elongate slitlike depression on the hind tibia of many males in the family Sepsidae, particularly in the genus *Themira* Robineau-Desvoidy, the latter not having been mentioned, as far as I know, in print, though there are two recent revisions of the family available.

The type species of the genus, and also of the subgenus as at present limited, is *Ortalis vau* Say. The name *Stictocephala* was preoccupied by *Stictocephala* Stal and a new name proposed by Johnson for that of Loew as above indicated.

#### PSEUDOTEPHRITIS (PSEUDOTEPHRITIS) VAU (Say)

*Ortalis vau* SAY, Journ. Acad. Nat. Sci. Philadelphia, vol. 6, p. 184, 1829.

*Stictocephala vau* LOEW, Monographs of the Diptera of North America, pt. 3, Smithsonian Misc. Coll. 256, p. 138, 1872.

*Pseudotephritis vau* JOHNSON, Ent. News, vol. 10, p. 220, 1899. (*Stictocephala*.)

I have seen this species from Texas, Virginia, Maryland, and Illinois. It has also been recorded from Ohio, New Jersey, Maine, Massachusetts, New York, and Montreal, Canada. It is probably present over the entire eastern half of the United States and northward almost as far as hardwood trees are found.

## PSEUDOTEPHRITIS (PSEUDOTEPHRITIS) APPROXIMATA (Banks)

*Pseudotephritis approximata* BANKS, Proc. Ent. Soc. Washington, vol. 16, p. 138, 1914.

Originally described as a valid species, this form has been reduced to a variety by Johnson in several recent papers, including his list of New England Diptera, and with it is placed *metzi* Johnson as a synonym. I accept *approximata* as distinct from *vau*, and also from *metzi*, though as indicated in the introductory paragraphs it is somewhat doubtful if this is the case.

Originally described from Virginia, I have seen it from Ames, Iowa, Pennsylvania, Lafayette, Ind., and Washington, D. C. It has also been recorded from Massachusetts and New York.

## PSEUDOTEPHRITIS (PSEUDOTEPHRITIS) METZI Johnson

*Pseudotephritis metzi* JOHNSON, Psyche, vol. 22, p. 49, 1915.

Originally described as a valid species from Massachusetts, I have seen it from White Mountains and Springfield, Mass., St. Paul, Minn., and Bilby, Alberta, Canada (Owen Bryant).

## PSEUDOTEPHRITIS (PSEUDOTEPHRITIS) CONJUNCTA Johnson

*Pseudotephritis conjuncta* JOHNSON, Occ. Pap. Boston Soc. Nat. Hist., vol. 5, p. 15, 1915.

This species is very close to *approximata* if not actually a variety of it, the only distinctions between it and *metzi* and *approximata* that I can find being those cited in the foregoing key to the species. Some specimens of *metzi* in the National Museum and one of *approximata* have the fascia over the outer cross vein almost as complete as in the present form.

Originally described from Maine, and there is but one specimen identified by Dr. J. M. Aldrich as this in the National Museum, and that from the same State.

## PSEUDOTEPHRITIS (PSEUDOTEPHRITIS) CORTICALIS (Loew)

*Stictocephala corticalis* LOEW, Monographs of the Diptera of North America, pt. 3, Smithsonian Misc. Coll. 256, p. 136, 1872.

This species is readily distinguished from its congeners by the characters cited in the foregoing key to the species.

Originally described from New York State. Subsequently recorded from Connecticut. I have seen a series in the National Museum reared from larvae found under the bark of a tuliptree, Dead Run, Va., April, 1913 (R. C. Shannon), and single specimens taken at Washington, D. C., May 13, 1911 (W. L. McAtee), and Bilby, Alberta, Canada, May 13, 1925 (Owen Bryant).



## PSEUDOTEPHRITINA, new subgenus

The anterior fronto-orbital bristle is very rarely present as a very short setula but never as a well-developed bristle; the specimens available to me all have a quite distinct spur vein projecting from the posterior side of the fourth vein into the discal cell, and the scutellum is more swollen than in the other subgenus and has two large glossy black spots. The legs are much paler than in the other group, but this is not considered as diagnostic.

Type species of subgenus, *Stictocephala cribellum* Loew.

## PSEUDOTEPHRITIS (PSEUDOTEPHRITINA) INAEQUALIS, new species

*Female*.—Head testaceous, densely pale gray-dusted, upper occiput fuscous, frons with numerous oval piliferous reddish dots, no black spot behind ocelli, and the postocular cilia hardly darkened around bases; antennae and palpi testaceous yellow. Thorax fuscous, densely gray-dusted, mesonotum and pleura with many dark-brown piliferous punctures, a large black mark covering postalar region on which there is a group of black setulose hairs; scutellum gray-dusted, with a large glossy black mark on each side at apex. Abdomen fuscous, yellowish at base, densely gray-dusted, tergites 2 to 4 each with an apical dark brown fascia, the fourth with some small piliferous dots, genital segment testaceous yellow, black on sides and along center below, the hairs dark. Legs testaceous. Wings as in *cribellum* Loew, but the costal marks preceding apices of auxiliary, first, and second veins conspicuously darker than those on the disk of the wing.

Structurally similar to *cribellum*, the scutellum thick, with a slight central apical depression. Postalar region quite copiously setulose. Outer cross vein about one-fifth from apex of discal cell.

Length, 7 mm.

*Type*.—U.S.N.M. No. 43457. Collected at De Beque, Colo., July 20, 1922, by E. R. Kalmach.

## PSEUDOTEPHRITIS (PSEUDOTEPHRITINA) CRIBELLUM (Loew)

*Stictocephala cribellum* LOEW, Monographs of the Diptera of North America, pt. 3, Smithsonian Misc. Coll. 256, p. 134, 1872.

Originally described from Nebraska. Recorded subsequently from Minnesota and Quebec, Canada. I have seen specimens from Hot Springs, Ariz., New Mexico, Montana, Indiana, Virginia, and District of Columbia.

## PSEUDOTEPHRITIS (PSEUDOTEPHRITINA) CRIBRUM (Loew)

When Loew described this species he had some doubts as to its specific distinction from *cribellum*, and he indicated that it might be merely a variant, in which case the latter name would have priority.

There is one specimen in the National Museum that has the characters cited in the foregoing key and in addition has the basal pair of scutellar bristles very much smaller and finer than the apical pair; and two specimens that have the same wing characters as cited and the four scutellar bristles about equally long and strong.

Though it may be proved yet that this is merely a variety of *cribellum*, in the meantime the evidence at hand convinces me that it is best to retain them as distinct species until rearing from known parents proves to the contrary.

Originally described from the "Middle States." Subsequently recorded from New York. Specimens in National Museum are from Onaga, Kans., Victoria, Tex., and Redlands, Calif.