NOTES ON TINGIDÆ.

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In recent numbers of Psyche, Mr. H. M. Parshley has presented articles on Tingidæ in which he has called attention to what he considers errors in articles written by the writers and offered numerous criticisms that it seems necessary to note. In so far as these criticisms and corrections are warranted they are of course to be welcomed, but there are many instances in which a careful reexamination of material studied and a study of material coming to hand since our papers were published fail to establish the validity of Mr. Parshley’s criticisms. Some of these are considered in the following notes and others are discussed in a paper in the Ohio Journal of Science. (Vol. XVII, pp. 295–307.)

Fenestrella ovata Osborn & Drake (Plate VIII, Fig. d).

The criticism by Parshley of the drawing of this species in his second paper is quite inaccurate as a comparison of the photograph (Fig. d) of the type with the drawing will indicate. The statement, “the base of the third antennal segment is slightly capitate,” is entirely absurd as there is no such structure present, and, furthermore, capitate refers to a structure at the distal end of a segment. We have recently received a second specimen of this unique little form from Ohio.

Key to the Nearctic Species of Physatocheila.

1—Rostrum short, reaching between the intermediate coxae

P. brevirostris Osb. & Drk.

Rostrum considerably longer and of various lengths........2

2—Rather large insects (length 4.6 mm.), second antennal segment small at the base and much enlarged at the apex.

P. major n. sp.

Smaller insects (length 4 mm. or less), second antennal segment not as the above......................... 3

3—Rostrum not extending beyond the apex of the rostral sulcus; outer costate nervure that bounds discoidal area nearly straight; color dull, uniform yellowish-brown.

P. parshleyi n. n. (= plexa Parsh.)

1 December, 1916; February, 1917.
Rostrum reaching more or less beyond the rostral sulcus; outer costate nervure that bounds discoidal area sinuate; color either brownish, or brownish more or less tinged with yellow, or brown or grayish-brown variegated with pale cinereous and black, or cinereous.

P. plexa Say (= P. variegata Parsh.)

Physatocheila parshleyi nom. nov. (= P. plexa Parsh.).

This species was described by Parshley in his first paper as the true form of P. plexa Say. Although the species meets the requirement of the writer’s contracted form of Say’s description and his assumed characters of a true plexa it is distinctly at variance with the original description if taken in its entirety. Compare as follows: (Say) “Body brownish, more or less tinged with yellow” surely cannot be the same as (Parshley) “Uniform dull yellowish brown”; (Say) “two series of which on the lateral margins are a little larger” in reference to the reticulations of the elytra is hardly identical with (Parshley) “Costal area of the hemielytra with two almost regular series of areoles”; the rostrum is not mentioned in the original description of plexa and the length of the rostrum is entirely an assumed character by Parshley. It might be well to note that the length of the rostrum is not given by Say in any Tingid description, also that this species has never been taken in the regions where Say did his entomological work. In as far as we know this species has only been taken in the New England States and eastern Canada; plexa is a common species in the states where Say worked and our collections include numerous specimens of this species from Portland, Oregon, to the Atlantic Ocean. The structures mentioned in the key will readily separate this species from allied forms and the other characters can be noted in Parshley’s first paper under plexa Say.

Physatocheila plexa Say, Uhler, Heidemann, Osborn & Drake (=variegata Parshley, but not plexa).

The conclusions drawn by Parshley in his first paper are based on a special interpretation of Say’s description and a few assumed characters as indicated below.
Parsley.

"... brownish, more or less tinged with yellow," and "... two series [of reticulations] ... on the lateral margins ... [of the hemelytra] ... ."

Say.

"Body brownish, more or less tinged with yellow, with dilated approximate punctures; head with three elevated lines: thorax not dilated on the sides; with three elevated lines: scutel also with three elevated lines: hemelytra with small, symmetrical, orbicular reticulations of nervures; two series of which on the lateral margins are a little larger; those near the inner margin of the membrane also a little larger."

The color description of *plexa* is rather indefinite as only the color of the body is mentioned by Say and this is not of a constant and uniform color as distinctly indicated by the words, "*more or less tinged with yellow.*" By omitting "of which" Parsley gives a different meaning to the portion of the description which describes the lateral margins of the elytra, and, furthermore, in the form that the author calls *variegata* (= *plexa* Say) the costal area is not always either triseriate or averaging three rows of areolae as stated in the description. Evidently, the writer failed to study all his paratypes as Fig. 1, *b* will indicate; this is a photo-

Fig. 1. *a*, *b*, and *c*, *Physatocheila plexa* Say (= *variegata* Parsh.); *d*, *P. major* n. s. p. (Photographs by Carl J. Drake.)
graph of the paratype from Wellesley, Mass., which was sent to
the junior author by Parshley as a typical form of variegata. As
stated under parshleyi, Say never mentioned the length of the
rostrum in any Tingid, and the length there given is only an
assumed character.

Our collections include specimens from Oregon (Portland),
Idaho, Nebraska, Kansas, Iowa, Wisconsin, Illinois, Michigan,
Virginia, New York, and Massachusetts. Stål also records the
species from "Illinois." This series of specimens indicate the
species to be quite variable, especially in color, length of rostrum,
and in number of rows of areoles in costal area, but there seems
to be no distinct variety. The many variations in color may be
noted in the key. Our Illinois specimens are almost of a uni-
form brownish color and the costal area is quite uniformly biseri-
ate. The costal area of the elytra is either uniformly biseriate,
or triseriate, or more or less irregularly triseriate, or with various
intermediate forms between bi- and triseriate. The length of the
rostrum is quite variable, always extending beyond the end of the
rostral sulcus, but never reaching beyond the posterior margin of
the second abdominal segment. In taking the length of the
rostrum one should always note the position of the head and
prothorax. In the senior author's collections are specimens de-
termined by Uhler and Heidemann. The specimen determined
by Heidemann is listed by Parshley as a paratype under variegata
from Berkeley Springs, Va.

Physatocheila major sp. nov.

Head armed with five spines, the spines arranged as in plexa
Say. Antenniferous tubercules large, curved inwardly. Antennae
clothed with fine short hairs; basal segment swollen, a little longer
than the second; second segment short, small at the base and
strongly swollen at the tip; third segment longest, slenderest,
about two and a half times the length of the fourth; fourth segment
fusiform. Pronotum tricarinate, the carinae low and uniseriate;
lateral margins as in related species; hood a little larger than in
other Nearctic species. Rostral sulcus broad, the rostrum almost
reaching posterior margin of second abdominal segment. Elytra
a little longer than the abdomen, broadly rounded at the apex;
costal area rather broad, irregularly areolate, with two or three
confused rows of areolae; discoidal area a little broader and the
outer boundary slightly more sinuate than in plexa. Wings slightly longer than abdomen. Abdomen quite broad in both male and female. Length, 4.6 mm.; width, 1.8 mm.

Color.—General color brownish, slightly marked with yellowish and black. Antennae brownish, the distal half of apical segment blackish.

Two specimens, a male and female from Urbana, Illinois. The photograph illustrates the type specimen; all specimens of Physatocheila are equally enlarged. This species is readily separated from allied forms by its larger size and the second segment of the antennae.

Melanorhopola duryi Osborn & Drake (Plate VIII, Fig. e).

The form of this species is not very broad when compared with females of other species in the genus. The third antennal segment is slightly enlarged towards the apex and the distal segment is decidedly conical rather than fusiform as stated by Parshley in his second paper. The photograph of the type will illustrate the structures mentioned. All photographs of the species in this genus are of the same magnification and the antennae have been placed in a horizontal position with the body so that the proportions between the same or different species are quite accurate.

Melanorhopola clavata Stål (Plate VIII, Figs. a, b and c).

This is a common and well-known species in the
eastern part of United States. Our most western records are Iowa and Nebraska. The photographs show the difference between the short winged and long winged forms, also the extreme variations in the lengths of the antennæ.

**Melanorrhopola uniformis** Stål (Plate VIII, Fig. f).

This species, as we determined it, is quite closely allied to *lurida*. The photograph represents the South Dakota specimen listed in our Ohio bulletin.

**Melanorrhophola lurida** Stål (Plate VIII, Figs. h and g).

Parshley has erroneously stated the length of the antennæ of this species in his second paper. The antennæ either slightly exceed, equal, or fall considerably short of the tip of the abdomen; the third segment is also more or less swollen near the apex. The lateral margins of the pronotum are either vertical or reflexed more or less against the surface of the pronotum. The form of *lurida* and *uniformis* is also very much confused and not based on specimens of the same sex. The male of *lurida* is narrow, but the female is as broad or broader than the female of *uniformis*. The male of *uniformis* is unknown to us. The Figures *f* (*uniformis*) and *g* (*lurida*) illustrate the short winged females of the two species; Figure *h* is the macropterous male of *lurida*. The two specimens of *lurida* show almost the extreme variations in the length of the antennæ.

**Explanation of Plate.**

*Photographs by Carl J. Drake.*

Figs. *a*, *b*, and *c*. *Melanorrhophola clavata* Stål (*a*, macropterous female; *b* and *c*, brachypterous females, the latter with short antennæ).

Fig. *d*. *Fenestrella ovata* Osborn and Drake (type greatly enlarged).

Fig. *e*. *Melanorrhophola duryi* Osborn and Drake (type).

Fig. *f*. *Melanorrhophola uniformis* Stål (brachypterous female).

Figs. *g* and *h*. *Melanorrhophola lurida* Stål (*g*, brachypterous female with short antennæ; *h*, macropterous male with long antennæ).