

SUPPLEMENTARY NOTE ON THE ANTHOMYIID GENUS
PHYLLOGASTER (DIPTERA).

BY J. R. MALLOCH, URBANA, ILL.

Since sending my paper, on the genus *Phyllogaster*, which appeared in Can. Ent. XLIX, p. 227-228, 1917, I have read C. W. Johnson's paper in the April number of the same volume, in which he describes a new species of this genus under the name *robustus*. An examination of paratypes of *robustus* discloses the fact that in addition to the difference in size between the species and *cordyluroides* the male may readily be separated from the latter and also from *littoralis* by the presence of a large number of strong bristles on the basal dorsal segment of the hypopygium (two in the others) and the much larger pulvilli which exceed in length that of the apical tarsal joint, whereas in the others they are much shorter than it. The female of *robustus* has two thorns on apical abdominal segment, *littoralis* has four, the female of *cordyluroides* is unknown to me. As in *cordyluroides* the third vein of the wing is bare in *robustus*.

THE GENUS HADRONEMA UHL. (MIRIDÆ;
HETEROPTERA.)

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The flower bugs of the genus *Hadronema* Uhl. constitute an interesting little group closely allied to the genus *Lopedia* Uhl. species of which are known to most collectors of insects, such as the common Phlox bug. Those of *Hadronema* may be distinguished from the species of *Lopedia* by the fact that the base of the vertex is strongly carinate across its whole width.

Most of the species are of western occurrence, though, *militaris* Uhl., the haplotype of the genus, is distributed over the entire United States and Southern Canada. Little is known of the economic importance of the species, and in all probability they are but little restricted in food preferences.

The genus belongs to the division *Lopediaria* Van D. of the tribe *Orthotylini* Van D. and was characterized by Uhler as follows: Aspect of *Lopus*, cranium somewhat convex, face almost vertical, eyes prominent, oval, almost vertical; occiput with a

high, transverse carina between the eyes; tylus a little prominent narrowing towards the tip; cheeks short and blunt; bucculae narrow, shorter than the basal joint of the rostrum; that joint sub-cylindrical, robust, a little longer than the head. Antennae short, about as long as the corium and cuneus united, stout; the third and fourth joints of nearly equal thickness, not tapering to a setaceous termination; the latter less than one-half the length of the preceding. Pronotum trapezoidal; the angles rounded; the collum forming an obtuse, narrow collar, and behind it is an arcuated carina abbreviated a little way from the lateral margins; the lateral edges prominently carinated. Costal margins of the hemelytra almost straight, parallel.

Hadronema was described by Uhler in 1872 in the Rep. of the U. S. Geol. Survey, page 412. The genus now contains 7 species, two of which are herein described as new.

KEY TO THE SPECIES.

1. Third joint of antennae distinctly shorter than second.....3
 Third joint equal to or longer than second.....2
2. Third joint of antennae slightly longer than
 second.....*festiva* Van D.
 Third joint about equal in length to the second.....*pitta* Uhl.
3. Pronotum red or with red markings.....4
 Pronotum black or gray, devoid of any red mark-
 ings.....*splendida* n. sp.
4. Costal margin of corium and cuneus broadly bordered with
 white or cream.....*militaris* Uhl.
 Costal margin of corium and cuneus very narrowly if at all,
 bordered with white or cream.....5
5. Basal joint of antennae comparatively long and slender, a dis-
 tinct light spot at anterior margin of cuneus.....*princeps* Uhl.
 Basal joint of antennae comparatively short and stout, no dis-
 tinct light spot on cuneus.....6
6. Anterior margin of pronotum slightly sinuate.... *robustus* Uhl.
 Anterior margin of pronotum not at all
 sinuate.....*confraterna* n. sp.,

Hadronema militaris Uhl.

Hadronema militaris Uhler, Rept. U. S. Geol. Surv., p. 412
1872.

The largest member of the genus. Elytra black with wide, light coloured costal borders.

Distributed over the entire United States and Southern Canada.

Hadronema robusta Uhl.

Hadronema robusta Uhler, Proc. Cal. Acad. Sci., ser. 2, vol. IV, p. 250, 1894.

Distinguished by the bright red pronotum and scutellum and lack of colour marking on cuneus. Occurs from Kansas to Texas and west to the Pacific Coast.

Hadronema confraterna, n. sp.

General form of *robusta* Uhl., slightly shorter and more narrow. Head nearly vertical, strongly convex. First joint of antennæ comparatively short and stout, third joint distinctly shorter than the second. Antennæ black, head black except for border next to and under the eyes red, cheeks red, bucculæ whitish, rostrum dark red. Pronotum red with large black callosities, deeply depressed anteriorly at the middle, anterior border of pronotum convex, posterior border sinuate at the middle. Pronotum much broader than long, and much wider posteriorly. Scutellum very dark wider than long. Elytra red becoming dark towards inner margins, no markings on cuneus. Membrane smoky. Legs dark red to black. Abdomen red along borders, whitish below. Plate dark red or black. Size 4.2 mm. long, 1.2 mm. wide.

Distinguished from *robusta* by the shape of the anterior margin of pronotum, the larger callosities, and colouring, especially of the elytra and scutellum.

Described from a single male specimen from Las Cruces, N.M. Taken on *Bigelovia*. Type in the U. S. National Museum.

Describing a species from a single specimen is here warranted, although it is diverging from good practice.

Hadronema princeps Uhl.

Hadronema princeps Uhler, Proc. Calif. Acad. Sci., ser. 2, vol. IV, 1894.

A much narrower form than the other species with usually a distinct light mark on the cuneus. Occurs throughout the West.

Hadronema picta Uhl.

Hadronema picta Uhler, Colo. Exp. Sta. Bull. No. 31, p. 31, 1895.

Separable from the other species in having the second and third joints of the antennæ equal in length. Recorded as occurring in Colorado and Dakota.

Hadronema festiva Van D.

Hadronema festiva Van Duzee, Trans. Am. Ent. Soc., vol. XXXVI, No. 2, p. 80, 1910.

The only species of the genus having the third joint of the antennæ longer than the second. Also readily distinguishable by the radically different colour markings.

Mr. Van Duzee records its occurrence in New Mexico.

Hadronema splendida, n. sp.

Resembles *festiva* Van D. Head small, vertical, black with light markings next to eyes, near base of head, on the centre of the face, and below the antennæ. Bucculæ bordered with white. Antennæ black, third joint noticeably shorter than second. Pronotum dark gray or black, callosities black, anterior border of pronotum light. Scutellum red. Elytra greenish white, smoky at middle of corium, clavus smoky along inner margin, cuneus white except smoky at apex. Costal border of elytra whitish. Membrane smoky. Abdomen dark beneath but light at the middle. Femora bright orange red, tibia and tarsi black. Size 3.8 mm. long, 1.2 mm. wide.

Described from a female collected at Albuquerque, N.M., Aug., 1909, now in the U. S. National Museum.

The peculiar colour markings readily separate this species from all others.