

THE HYPERBOREUS GROUP OF HEPIALUS (LEPID., HEPIALIDÆ)

BY WILLIAM BARNES AND F. H. BENJAMIN

Decatur, Illinois

HEPIALUS ROSEICAPUT N. & D.

- 1893, Neumoegen & Dyar, Can. Ent., XXV, 125, *Hepialus*.
 1894, Neumoegen & Dyar, Jour. N. Y. Ent. Soc., II, 169, *Hepialus*.
 1895, Ottolengui, Ent. News, VI, 290, *Hepialus*.
 1896, Dyar, Can. Ent., XXVIII, 176, *hyperboreus confusus*, *Hepialus*.
 1903, Dyar, Bull. U. S. N. M., LII, 580, No. 6608b, *hyperboreus confusus*, *Hepialus*.
 1911, McDunnough, Can. Ent., XLIII, 292, (? *matthewi* (!) ♀), *Hepialus*.
 1917, Barnes & McDunnough, Check List, p. 197, No. 8488, *matthewi*, *Hepialus*.
 ‡ *hyperboreus* Auct. nec. Moesch.
 1911, McDunnough, Can. Ent., XLIII, 290, *Hepialus*.
 ‡ *pulcher* Auct. nec Grt.
 1911, McDunnough, Can. Ent., XLIII, 291, *Hepialus*.

Described from a single specimen from the Cascade Range near Lytton, B. C. The type is a ♀; not a male, as stated in the original description (1893) and by Ottolengui (1895).

Dyar (1896 and 1903) sinks the name to *confusus*; McDunnough (1911) thought it ♀ *matthewi*; and Barnes & McDunnough (1917) sink it to *matthewi*; but apparently lack of sufficient material in the past was prohibitive to properly sort the various forms allied to *hyperboreus*. This lack of material, coupled with misdeterminations on the part of all authors, has led to a very general confusion of the names in the group. Some authors appear to desire to call all American species synonyms of the European *H. ganna*. Judging from several figures, this species is nearest to *mcglashani*, but we think entirely distinct.

Both authors have independently examined all types involved except *hyperboreus*, which is unknown to us except from the literature and Moeschler's figure of type (1862, Wien. Ent. Monat., VI, pl. I, f. 1), and *pulcher*, of which we possess specimens agreeing well with Grote's figure of type (1864, Proc. Ent. Soc. Phila., III, 522, pl. V, f. 3).¹

A resumé of the species in key form may assist to sort them. We are inclined to think that each name so far proposed represents a distinct species. *H. roseicaput* is the Mt. Hood spe-

¹ Since writing the above we have received a photograph of type *pulcher* through the courtesy of Dr. H. Skinner.

cies, alternately called *hyperboreus* and *pulcher* by McDunnough (1911). Normally, it appears to be sexually dimorphic, the type agreeing with three out of our five females. Another female shows silver markings as in the male, and we call this form *mutatus* nov. We have a single female, with immaculate primaries, and we are calling this *demutatus* nov. Our series of 12 ♂, 5 ♀ were taken by McDunnough on Mt. Hood, Oregon, 8-15 August. We know *confusus* only from the type (♀) in the Bolter collection from Sitka, Alaska, and a female from "Metlakatla, B. C., August 21, 1903, Rev. J. F. Keen," in the Barnes collection. *H. pulcher* is known to us from 1 ♂, Glenwood Springs, Colorado, 16-23 August, and 2 ♂ "Utah." *H. mcglashani* is represented in the Barnes collection by 2 ♂, 1 ♀ from unknown localities, 1 ♂ labeled "Nev." (which may mean Sierra Nevada or Truckee, California), and a ♂ ♀ from Placer County, California. *H. mathewi* is represented by a series of sixteen specimens, both sexes, from Duncans and Victoria, B. C., from Messrs. Blackmore and Hanham. All specimens except one are dated, and the dates range from the 15th to the 29th of September.

***Hepialus novigannus* Barnes & Benjamin, n. sp.**

A series of 21 ♂, 17 ♀ are in the Barnes collection from **Hymers, Ontario**, dates ranging from August 8 to September 15. In general all specimens are similar in size and in shade of ground color to *mcglashani*, but the silver markings are much cleaner cut and entire; aside from the normal V connected to the wing base, these are restricted to one or two spots below vein 1, some slight markings in the costal region, and a tendency toward dots along the outer margin, which, in even the best marked specimens, are obsolescent. No tendency toward sexual dimorphism. A dusk-flying species.

***Hepialus novigannus mackiei* Barnes & Benjamin,
race nov.**

Another series of 11 ♂, 12 ♀ from **Edmonton, Alta.** (D. Mackie) and 1 ♂, 2 ♀ from Calgary, Alta. (Dod?) appear to represent an insect at least racially distinct. Size and silver markings as in the preceding. While all of the other species before us do not vary greatly, except *mathewi*, the present form, while possessing uniform maculation in both sexes, varies surprisingly in color, ranging from deep brown to salmon-pink. In the event the present insect should ultimately prove consubspecific with the Ontario species, we are restricting our types to

5 ♂, 5 ♀ which show the salmon-colored primaries. The Edmonton specimens range in dates from the 24th of August to the 11th of September. Only one Calgary specimen is dated, "16-23 Aug."

Superficial key to the species and forms of the *hyperboreus* group of *Hepialus*.

I. Some silver or whitish markings on fore wings.

A. Conspicuous silver markings other than a broadly open V connected to wing base;

- a. Fore wing with silver markings irregularly split into spots; hind wing marked by a fuscous band from apex to near wing base. (Labrador).....
..... *hyperboreus*

b. Not so; both characters not present in one species.

- a.¹ Silver banding on fore wing, aside from a basal silver connecting dash, as a broadly open V not very irregular, although sometimes tending to split into spots, the other silver markings disconnected; hind wing with uniformly fuscous disc and disconcolorous pinkish fringes; usually sexually dimorphic; flying 1:30 to 3:30 p. m. in bright sunshine. (B. C.; Ore.).....
..... ♂ *roseicaput*, ♀ *roseicaput* form *mutatus*

- b.¹ Silver banding on fore wing usually forming a V, but the V decidedly irregular, often with some silver tending to form a spur or spurs on the V, either subapically or near the base, the V seldom clean-cut except in some ♀ ♀; sexes similar; flying at dusk. (Calif.) ♂ ♀ *mcglashani*

- c.¹ Silver banding on (left) fore wing tending to form an oblique E, usually with an additional apical spur. When the E is broken into spots these spots are connected by black.

- a.² Silver markings usually broken into numerous small spots connected by black; hind wing with uniformly fuscous disc. (Alaska; B. C.).... ♀ *confusus*

- b.² Silver markings mainly contiguous; hind wing with salmon-colored disc, on which there is an irregular blackish suffusion. (Colo.; Utah)..... ♂ *pulcher*

B. Silver markings restricted to a broadly open V connected to wing base; except for one or two marks on or near

costa, the markings below vein 1, and obsolescent spots at base of fringes;

- a. Fore wing usually with a black spot at the end of the cell, the apical portion of the silver V tending to become obsolescent or obsolete and usually replaced by black; hind wing basally more hairy than in other species, usually of some shade of luteous, salmon, or rufous, and usually marked by black. (Vanc. Is.) ♂ ♀ *mathewi*
- b. Forewing without black spot at the end of the cell; the apical portion of the silver V not tending to become obsolescent or to be replaced by black; hind wing less hairy than in the preceding, and usually smoother and less mottled-looking;
 - a.¹ Some shade of brown, often more or less slightly tinged with rufous; flying at dusk. (Ontario)..... ♂ ♀ *novigannus*
 - b.¹ Color variable; types restricted to salmon-pink form. (Alberta.).....
.....*novigannus* race (or form) *mackiei*

II. No silver or whitish markings.

- A. Fore wing marked with more or less of a black V. (B. C.; Ore.)..... ♀ *roseicaput*
- B. Fore wing unmarked. (Ore.).... ♀ *roseicaput* form *demutatus*

THE BLAISDELL COLLECTION OF COLEOPTERA

At the November meeting of the California Academy of Sciences, Dr. Barton Warren Evermann, Director of the Academy, announced that Dr. Frank E. Blaisdell, Sr., had presented to the Academy his entire collection of Coleoptera on the same terms under which the Van Dyke collection of Coleoptera was accepted by the Academy. Under these terms Dr. Blaisdell retains control of the collection during his lifetime, with the privilege of retaining any portions for study at home as he may require. When the Van Dyke and Blaisdell collections, which are comparable in size, are finally incorporated into the Academy collection, it will constitute a remarkably complete representation of the coleopterous fauna of the western United States, as well as an excellent general collection of beetles. These two collections supplement one another, so there is less duplication than one might expect. The Blaisdell collection is very complete in the Tenebrionidæ, Melyridæ and some other families, while the Van Dyke collection excels in the Carabidæ, Elateridæ, and certain groups of forest insects, such as the Buprestidæ and Cerambycidæ.—E. P. Van Duzee.



Barnes, William and Benjamin, Foster Hendrickson. 1925. "The kyperboreus group of Hepialus (Lepid., Hepialidae)." *The Pan-Pacific entomologist* 2, 81-84.

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