Two New Halictus from New Jersey

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Notes on the Life History of Chrysophanus Gorgon.

By J. G. Grundel, Alma, Santa Clara Co., Cal.

The female Chrysophanus gorgon deposits eggs in the forks of a long-stemmed species of Eriogonum, a plant which only grows on the very dry hillsides.

Only one egg is laid in a given fork, but others repeat the act until as many as five or six are found in one place.

The eggs are deposited in June, and the young larvae emerge in or about the latter part of August, and make their way to the lower part of the plant and hide among the old leaves feeding but very little and only on the upper or green side of the leaf, which the larva resembles in color, being of a dark green.

The larvae feed only during the night and early morning up to about 9 o'clock, A. M., growing but very slowly, being only one-eighth of an inch long by the latter part of October.

After several moultings the appearance of the larvae changes to a furry light green, nearly white and exactly resembling the under side of the leaves upon which only it feeds and on which it also fastens its cocoons, becoming full fed about May 1st, a year from the time the eggs were laid, and when full grown one-half inch long, with body thick at middle and tapering to both ends; head very small and hardly to be seen, even when feeding, and appears to be lifeless when removed from the plant and remains so for several hours.

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By J. C. Crawford, Jr.

Halictus vierecki n. sp. ♀.—Head and thorax brassy-green, closely covered with appressed golden-yellowish pubescence, the metathorax contrasting because bare on disk, at times more greenish; pubescence below antennae lighter colored; facial quadrangle slightly longer than wide; face closely and rather coarsely punctate, the basal half of clypeus more coarsely so, the apical half smooth, shiny, rufous; labrum and mandibles rufous; flagellum beneath dull ferruginous; mesothorax closely, finely punctate; legs dark, honey-colored, femora mediately brown; inner hind spur with about four long teeth; tegulae testaceous, pubescent, wings yellowish, splendidly iridescent, nervures and stigma testaceous; base of metathorax enclosed, finely tessellated and finely, irregularly rugose to apex; truncation and sides covered with pubes-
cence, sides closely, coarsely punctate; abdomen dark honey-color, where covered with pubescence appearing lighter; broad apical margins of segments pale testaceous; abdomen closely and very minutely punctate, covered, except disks of segments 1 and 2, with appressed yellowish pubescence; very rarely the medial segments stained with blackish; venter slightly darker than above. Length about 4 mm.

♂ unknown.

Type locality: Clementon, N. J.

Fifty specimens from New Jersey, as follows (H. L. Viereck, coll.): Clementon: on trailing blackberry, June 6, 30 ♀; June 2, 2 ♀; on Rubus villosus, June 2; also (without flower label) Apr. 17; May 9, 30. Riverton: Apr. 17, 2 ♀; Apr. 23; May 9; on Solidago, Aug. 11; on Monarda punctata, Aug. 11, 3 ♀. North Woodbury: June 13; on Helianthemum canadense, June 13. Shark River: July 7. Farmingdale: July 14. Westville: April 19; July 21. Also, one specimen received from Mr. E. S. G. Titus: East Marsh, D. C., Aug. 18, '03, W. V. Warner.

Dedicated to Mr. H. L. Viereck, from whom I received the excellent New Jersey series.

Differs from the descriptions of any Halictus with reddish abdomen and the clypeus anteriorly testaceous in the dense covering of yellowish pubescence, as well as in the following details:

From creberrimus in the clypeus greatly produced, antennæ darker beneath; rugæ reaching the apex of metathorax; abdomen without aeneous reflection.

From inconspicuus in the metathorax not granulose, abdomen not smooth and shiny; size larger.

From testaceus in the metathorax closely punctate; abdomen punctate.

From impurus in the mesonotum not smooth and polished medially; legs not polished; smaller.

From nymphalis in smaller size, finer punctuation of mesonotum, color of abdomen; lighter legs.

Mesillensis is said to differ from nymphalis only in the bluer color and punctate first abdominal segment; so the differences given for nymphalis can be applied to mesillensis also.
Of the species given above, only *nymphaalis* is known to me. In *creberrimus* and *inconspicuus* the color of the anterior margin of the clypeus is not given, as they are included above.

**Halictus marinus** n. sp. ♀.—Green, inclining to olive, with a very slight brassy reflection, clothed with abundant white pubescence, long and conspicuously plumose on the sides of face, pleura, scutellum, post-scutellum, metathorax, base of first abdominal segment and lateral margins of other segments; head closely and moderately coarsely punctate, facial quadrangle distinctly longer than wide; clypeus with large sparse punctures, apex smooth, purplish-black; antennae black, the flagellum dull ferruginous beneath; mesothorax finely roughened, finely and closely punctate, scutellum with two smooth spots on disc; mesopleura rather coarsely punctate, metapleura finely roughened; medial and parapsidal grooves apparent but not very distinct; base of metathorax finely, strongly longitudinally rugose to apex, not enclosed, truncation finely roughened, rounded at top; legs dark brown, femora with aeneous reflection, pubescence white; inner hind spur with four long teeth, the last rather short; wings hyaline, splendidly iridescent, nervures and stigma very light honey color; tegulae dark, pubescent, very large and pointed behind as in *tegularis*, punctate all over; abdomen finely transversely lineolate, finely, sparsely punctate, the first segment with finer, very sparse subobsolete punctures; apical margins of segments 1–2 rather narrowly testaceous, of 3–4 broadly testaceo-hyaline; all abdomen, except disks of segments 1 and 2, rather thinly covered with whitish plumose, sub-appressed pubescence, more abundant toward apex; venter dark, apical margins of segments lighter. Length 6–7 mm.

♂ unknown.

Four specimens from Ocean City, N. J., June 19, '01 (Viereck, coll.)

"Swept from grass *Scirpus*, *Ammophila*, etc., growing along the strand just within the beach, and constituting the first zone of plant life from the ocean—maybe they were flying up from their nests in the sand." (Viereck in litt.)

Received from Mr. H. L. Viereck, who remarked: "Allied to *pilosus* Sm., but distinct by whitish pubescence and larger, less crowded punctures on dorsulum." It is also distinguished by the tegulae, which place it in the *tegularis* group, but the large size easily separates it from those species. *Nymphaearum* also has the tegulae punctate, but they are rounded behind; the metathorax is very coarsely rugose, and the abdomen black, easily separating it from *marinus*. 
North Carolina Records of Odonata in 1903.

BY C. S. BRIMLEY and F. SHERMAN, JR.

During 1903 we have collected nineteen species of Odonata not previously recorded from North Carolina, besides which we have received records of two others from other parties. Additional localities for species already recorded have also been secured.

The collecting was done by the two authors and by Mr. S.W. Foster, who was Mr. Sherman’s assistant during the summer. Thanks are due to Mr. R. P. Currie, U. S. National Museum, and Dr. P. P. Calvert, Academy of Natural Sciences, Philadelphia, for the identification of specimens.

In the following list an * before the name of a species denotes that the species has not been previously recorded from North Carolina; a B, S, or F after a record means that the species was taken by Brimley, Sherman, or Foster, as the case may be.

Gomphus exilis Selys; Lumberton, April 7, nine specimens (S & B).
Gomphus parvulus Selys; Lumberton, April 7, three specimens (S & B).
Gomphaeschna furcellata Say; Raleigh, March 24, one female (S); April 3, two males (B); April 9, four males (B); July 8, one male (S); the last specimen was caught in a house.
*Basiaeschna janata Say; Southern Pines, March 28, one male (S); Lumberton, April 7, two males (B).
Nasiaeschna pentacantha Rambur; Washington, N. C., July 16, one male (S).
Epiaeschna heros Fabr.; Cape Hatteras, April 6, one female, H. H. Brimley.
Anax junius Drury; Beaufort, N. C., June 15, 18 (S).
Æschna (sp.); Raleigh, N. C., one specimen with broken appendages, October 16 (F). A number of good-sized Æschnas were seen on the wing during October and November (B), apparently not A. junius or E. heros.
Cordulegaster maculatus Selys; Raleigh, April 13, male and female (B).
Didymops transversa Say; Raleigh, March 31, one male (B); Lumberton, April 7, common (S & B).
Tetragon neuria cynosura Say; Lumberton, April 7 (S & B).
Tetragon neuria semiaquea Burm.; Lumberton, April 7 (S & B).
Tetragon neuria complanata Rambur; Lumberton, April 7, six specimens (S & B).

*Helocordulia selysi* Hagen; Southern Pines, March 28, one male (S); Lumberton, April 7, one male and two females (S & B). The spotting on the antenodals is much heavier in the two males than in the two females.

**Perithemis domitia** Drury; Fayetteville, July 10 (F).

**Pachydiplax longipennis** Burm.; Lumberton, July 3 (S); Washington, N. C., July 16 (S); Beaufort, N. C., June 11, 13 (S).

**Mesothemis simplicicollis** Say; Washington, N. C., July 16 (S).

**Libellula cyanea** Fabr.; Fayetteville, July 10 (F); Weldon, July 15 (F).

**Libellula axiliena** Westw.; Beaufort, N. C., June 9, 11, 18 (S).

**Libellula incesta** Hagen; Washington, N. C., common (S); Raleigh, fairly common in May, June, July and August (B).

**Libellula flavida** Ramb. (plumbea Uhler); Raleigh, July 7, one male; August 25, two males (B).

*Libellula auripennis* Burm.; Beaufort, N. C., June 9, 11, 18, five specimens (S); Washington, N. C., one male (S).

*Libellula exusta* Say; there is a specimen in the entomological collections of Cornell University from North Carolina, but without date or locality (S).

*Micrathyria berenice* Drury; there is a specimen in the entomological collections of Cornell University from North Carolina, but without date or locality (S).

*Pantala flavescens* Fabr.; Raleigh, July 22, one seen; August 10, one male taken in Green's rock quarry (B).

*Tramea carolina* L.; Lumberton, April 7, two males (S & B).

*Calopteryx amata* Hagen; two specimens in the entomological collections of Ohio State University, collected at Magnetic City, N. C., by Prof. W. C. Wetherby. (Prof. J. S. Hine in letter.) (B).

*Calopteryx dimidiatula* Burm.; Lumberton, April 7, three specimens (S).

*Lestes inaequalis* Walsh; Raleigh, May 28, June 4, 10, 13, seven specimens (B).

*Lestes disjunctus* Selys; Raleigh, July 15, one male (B).

*Lestes forcipatus* Rambur; Lumberton, April 7 (S & B); Raleigh, March 31 to August 10; all taken later than April were in Green's rock quarry (S & B); Lumberton, July 3 (S).

**Lestes rectangularis** Say; Weldon, July 15 (F).

**Argia putrida** Hagen; Fayetteville, July 10 (F).

**Argia tibialis** Rambur; Fayetteville, July 10 (F). Several females from Raleigh and one from Fayetteville have the thorax with blue markings (B).

*Argia fumipennis* Burm.; Lumberton, July 3, three specimens (S).

**Argia bipunctulata** Hagen; Raleigh, May 28, 30, July 8, 9, 15, 16; taken only along very small, somewhat marshy streams (S & B).

**Erythromma conditum** Hagen; Raleigh, common March, April, May; frequently seen resting with half-spread wings like a *Lestes* (B).

**Anomalagrion hastatum** Say; Raleigh, April to September, commoner late in the season (B).
Nehalennia posita Hagen; Raleigh, April to September, common throughout the season (B).

Ischnura ramburi Selys; Raleigh, May 27, June 8, in Green's rock quarry, July 18, one male on Walnut Creek (B); Washington, N. C., July 16 (S).

* Ischnura verticalis Say; Raleigh, April 3, three females (B).

* Enallagma doubledayi Selys; Raleigh, common from May to August in Green's rock quarry (B).

* Enallagma civile Hagen; Raleigh, May 21, July 16, two males in Green's rock quarry (B).

* Enallagma aspersum Hagen; Raleigh, common from May to August in Green's rock quarry (B).

* Enallagma traviatum Selys; Raleigh, June 8, July 16, two males in Green's rock quarry (B).

* Enallagma divagans Selys; Raleigh, May 16 to 28, around pools near Walnut Creek (B); Lumberton, April 7, one (S & B).

* Enallagma exsulans Hagen; Raleigh, July 23, three males, on Neuse River, at Poole's (B).

* Enallagma signatum Hagen; Raleigh, May 19, 21, August 5, five specimens in Green's rock quarry (B).

* Telagrinus deceki Calvert; Raleigh, June 10, 13, 20, about 130 specimens in all taken; all were along the edges of the same large marsh; the females stayed mainly in the thickets a little distance from the marsh (B).

SPECIAL NOTICE.

A department for the advertisement of the wants of specialists, particularly those working on the classification of groups of insects.

Announcement: Under this heading and as part of "Notes and News," we wish to place announcements of the doings and wants of the systematist.

Persons wishing to obtain material for the sake of making more perfect classification, or for other work of a comprehensive character, are invited to send a notice of their intentions to this department. It is hoped that through the prominence given the news mentioned, all material in collections will be made available and the chances of duplicating work become remote. It is becoming more and more desirable that systematists should confine their efforts to the treatment of groups of species rather than to miscellaneous single descriptions, especially of species belonging to a group which has not yet been treated in some comprehensive work as a monograph or synopsis.