

In *alniella* the posterior end is flattened to a slightly curved line and the mouth deflects to about 90 degrees. These differences are constant in all the specimens that have come under my observation.

Coleophora querciella Clemens. Dyar List N. A. Lep. No. 6040.

Palpi white with very fine golden brown dustings on apical segment. Antennal base clothed above with a long projecting tuft; white, intermarked with golden brown. Antennæ white, annulated beyond basal fourth with light brown. Face and head white. Fore-wings white with apical dustings shading from golden brown to black; cilia black on costo-apical portion to silver gray on dorsal margin. Hind-wings and costal cilia of same, argentious with faint golden overtone; dorsal cilia somewhat darker. Abdomen white. Legs white with faint brownish markings; tarsi not annulated. Alar expanse: 12 mm.

Habitat: Falls Church, Virginia.

Foodplant: *Quercus*.

Two adults reared under Hopk. U. S. No. 11135c and 11135d from larvæ collected on *Quercus prinus* and *Quercus alba*. Moths issued June 21 and 25, 1913. I had considerable misgiving about the identity of the species, as Clemens knew it only in the larval stage and his description of the larval case, while corresponding in nearly all details with the specimens before us, is misleading in one point. He describes the posterior end as "squarely excised," while as a matter of fact it curves inward to a blunt point, similar to *C. leucochrysellæ* Clemens. Larval case 9 mm. long.

THE SPECIES OF PERILAMPIDÆ OF AMERICA NORTH OF MEXICO.

BY J. C. CRAWFORD, U. S. National Museum.

The species in this family fall in three genera *Euperilampus*, *Perilampus*, and *Chrysolampus*. The species which Ashmead referred to the genus *Elatus* must be transferred to *Chrysolampus* since it has only one ring joint and Walker's original description of *Elatus* characterizes that genus as having two ring joints.

GENUS EUPERILAMPUS Walker.

The only species of this genus occurring north of Mexico is *E. triangularis* Say. *E. opacus* Ashm. is a *Eurytoma*, Doctor Ashmead being misled by a piece of extraneous matter which had adhered to the scutellum.

GENUS PERILAMPUS Latreille.

TABLE OF SPECIES.

1. Face with a carina from anterior ocellus running laterad and turning downward on each side and extending to, or almost to, the level of insertion of antennæ..... 2
Face without such carina or at most an indistinct one running only laterad from anterior ocellus..... 7
2. Species distinctly greenish, bluish or coppery..... 3
Species black or aeneous..... 4
3. Green or bluish, facial carina prominent, upper part of face between carina and eyes vertically striate; below from eyes to mouth-parts strongly rugose..... *hyalinus* Say
Bronzy, facial carina delicate, upper part of face almost smooth, lower part with only a few wrinkles..... *subcarinatus* n. sp.
4. Face strongly produced, a line connecting lower margins of eyes being some distance above upper margin of clypeus..... *robertsoni* n. sp.
Face not strongly produced, upper margin of clypeus about on a level with lower end of eyes..... 5
5. Face in front of malar furrow rugose-granular..... 6
Face in front of malar furrow smooth..... *carinifrons* n. sp.
6. Parapsidal areas reticulate, upper part of face between carina and eyes reticulate..... *platygaster* Say
Parapsidal areas and upper part of face between carina and eyes smooth *bakeri* n. sp.
7. Third joint of antennæ as long as wide..... *anomocerus* n. sp.
Third joint of antennæ much shorter than wide..... 8
8. Wings under marginal veins with a large infuscated cloud *stygicus* Provancher
Wings without such a cloud..... 9
9. Malar furrow distinctly longer than width of malar space at apex *similis* n. sp.
Malar furrow shorter than width of malar space at apex..... 10
10. Sides of face above vertically wrinkled; in male the wrinkles extending downward to level of insertion of antennæ..... *chrysopæ* n. sp.
Sides of face smooth..... 11
11. Punctures along middle line of mesoscutum and scutellum well separated..... *granulosus* n. sp.
Punctures of middle of mesoscutum and scutellum close..... 12
12. Small less than 3 mm. face above gently curved... *fulvicornis* Ashmead
Large, about 4 mm., face above produced, angulated from anterior ocellus laterad and no true carina beyond, simulating one being sharply angulated..... *canadensis* n. sp.

Perilampus subcarinatus n. sp.

Female: Length 3 mm. Dark olive green; facial carina delicate, reaching almost to lower level of eyes, face in front of malar furrow with rugulæ

converging toward clypeus, behind the malar furrow with similar more distinct rugulae extending in the same general direction; ocellar triangle transversely rugulose; pronotum and mesonotum coarsely rugoso-punctate, inner margin of parapsidal areas with a broad smooth band; scutellum with the apex emarginate; legs green, bases and apices of tibiae, underside of anterior tibiae and tarsi testaceous.

Type-locality: San Bernardino County, California.

Type-specimen: Cat. No. 18298, U. S. N. M.

Described from two specimens collected in May.

Perilampus robertsoni n. sp.

Female: Length about 2.5 mm. Black, face smooth, malar furrow distinctly longer than width of malar space at apex, facial carina indistinct beyond the point where it turns downward along inner orbits; ocellar triangle rugulose, in front of lateral ocelli indistinctly rugulose; pronotum and mesonotum coarsely rugoso-punctate; inner margins of parapsidal areas with a broad smooth area; scutellum at apex slightly emarginate; legs black, the knees, bases and apices of tibiae and the tarsi testaceous.

Male: Length about 2.5 mm. Similar to the female but the malar space vertically lineolate; the facial carina distinct almost to lower margin of eyes; ocellar triangle and the areas in front of lateral ocelli more distinctly sculptured than in female.

Type-locality: Southern Illinois.

Type-specimen: Cat. No. 18299, U. S. N. M.

Described from one female and two males collected by Mr. Chas. Robertson and bearing his Nos. 9729 (type female), 9841 (allotype), 9730 (paratype).

This species is named in honor of the collector and is readily distinguished from the other species by the elongate face.

Perilampus carinifrons n. sp.

Female: Length about 3.25 mm. Black, facial carina extending only slightly below middle of anterior orbits; face smooth, malar space vertically lineolate; antennae dark brown, scape black; ocellar triangle indistinctly transversely rugulose, pro- and mesonotum coarsely rugoso-punctate, inner edge of parapsidal areas with a broad smooth band; legs black, the knees reddish, tarsi testaceous.

Male: Length about 2 mm. Similar to the female but the funicle ferruginous beneath; the tibiae obscurely reddish.

Type-locality: Kerrville, Texas.

Other localities: Corpus Christi, Beeville, and Dallas, Texas.

Described from four females and two males; types collected by F. C. Pratt, June 19, 1907; two females from Corpus Christi collected October 16, 1908, by Messrs. J. D. Mitchell and F. C.

Bishopp; a male from Beeville, Texas, September 7, J. D. Mitchell, collector; a female from Dallas, Texas, October 12, 1905, F. C. Bishopp, collector.

Type-specimen (female): Cat. No. 18300, U. S. N. M.

***Perilampus bakeri* n. sp.**

Female: Length about 3 mm. Black, facial carina extending about to level of insertion of antennæ, below this the sides of face granular; posterior orbits vertically lineolate; face between carina and inner orbits very indistinctly finely wrinkled, at upper end of orbit more granular; ocellar triangle with a few transverse striæ; antennæ dark brown; pro- and mesonotum coarsely rugoso-punctate, inner margin of parapsidal areas with a broad smooth band; scutellum at apex sub-emarginate; legs black, knees, bases and apices of tibiæ, a stripe on rear of front tibiæ and all tarsi reddish testaceous.

Male: Length about 3 mm. Similar to the female but the antennæ ferruginous beneath; the sculpture of the face stronger; the sides of the face between the facial carinæ finely vertically rugulose, between the carina and the eye more distinctly sculptured than in female, the upper portion being distinctly granular.

Type-locality: Colorado.

Type-specimen: Cat. No. 18301, U. S. N. M.

Described from four females and two males from the C. F. Baker collection, type female bearing the No. 2044, the allotype No. 1584, one female and one male paratypes No. 1591, one female, No. 1596, and one, No. 1630.

***Perilampus anomocerus* n. sp.**

Female: Length about 2 mm. Green, with the thorax above coppery and the abdomen so dark as to appear almost black; face produced, the malar furrow slightly longer than the width of the malar space at apex; upper margin of the clypeus slightly below the level of the lower margin of eyes; face rather densely pubescent, each hair situated in a distinct puncture; anterior portion of the malar space smooth, posterior part vertically rugulose; scape green, rest of antennæ ferruginous, above brownish; ring-joint distinctly as long as broad; mesonotum coarsely umbilicately punctured, the punctures well separated especially along median line, the space between the punctures finely lineolate; medial half of parapsidal areas smooth, polished; wings hyaline, with a small indistinct brownish spot at apex of submarginal vein; femora, except apices, greenish, tibiæ and tarsi reddish testaceous.

Allotype: Length about 2 mm. Similar to the female except in secondary sexual characters.

Type-locality: Colorado.

Type-specimen: Cat. No. 18302, U. S. N. M.

Described from nine females and two males from a large series in the C. F. Baker collection, the types and one paratype female with his No. 1584, the paratype male and one female with his No. 2044, one No. 2084, one No. 2158, and four, No. 1591.

✓ **Perilampus similis** n. sp.

Female: Length about 2 mm. Black, with a more or less distinct greenish tinge on head and thorax; very similar to *P. anomocerus*, having a similar produced face but the ring-joint very short, distinctly less than half as long as broad; femora black, tibiae and tarsi reddish testaceous, the tibiae all with a dark brown stripe above.

Type-locality: Colorado.

Type-specimen: Cat. No. 18303, U. S. N. M.

Described from four specimens from the C. F. Baker collection, all bearing his No. 2041.

✓ **Perilampus chrysopæ** n. sp.

Female: Length about 2 mm. Green, malar furrow about half as long as width of malar space at apex; upper part of face wrinkled; ocellar triangle transversely rugose; scape greenish, flagellum ferruginous with the base somewhat brownish; pro- and mesonotum coarsely, closely rugoso-punctate, inner half of parapsidal areas smooth; scutellum at apex emarginate; legs greenish, knees, bases and apical portion of tibiae and tarsi testaceous.

Male: Length about 2 mm. Similar to the female but the sculpture of the face much stronger and extending half way down anterior orbits; antennae above brown.

Type-locality: Batesburg, South Carolina.

Type-specimen: Cat. No. 18304, U. S. N. M.

Described from seven females and six males reared from cocoons of *Chrysopa* sp. with the Bureau of Entomology, U. S. Department of Agriculture Hunter No. 3414.

✓ **Perilampus granulosus** n. sp.

Female: Length about 2 mm. Green, malar furrow almost as long as the width of malar space at apex; flagellum ferruginous; pedicel brown; scape with a distinct greenish tinge; pro- and mesonotum coarsely umbilicately punctured, the punctures well separated especially medially where they are more than half a puncture width apart, the space between punctures on rear of mesoscutum and on scutellum smooth; lateral on scutellum, parapsidal areas and middle lobe of mesoscutum between the punctures the surface is granular; inner edge of parapsidal areas with a broad smooth band; femora brown, their apices, the tibiae, and tarsi reddish testaceous.

Male: Length about 2 mm. Similar to the female except in secondary

sexual characters but the granular areas on the mesonotum extend further centrad.

Type-locality: Alabama.

Type-specimen: Cat. No. 18305, U. S. N. M.

Described from one female and two males from the C. F. Baker collection; female with his No. 1967, allotype with his No. 2497, and the paratype, No. 1912.

***Perilampus canadensis* n. sp.**

Female: Length about 4 mm. Black, with a distinct bronzy luster on the mesonotum; antennæ dark, apically becoming obscurely ferruginous; vertex produced, sharply angulated, appearing, unless examined closely, carinate as in the species which have a facial carina; sides of face and malar space below with a few coarse punctures, malar furrow somewhat more than half as long as width of malar space at apex; ocellar triangle transversely rugulose; pro- and mesonotum coarsely, closely rugoso-punctate, inner edge of parapsidal areas with a broad smooth band; legs black, tarsi testaceous.

Male: Length about 4 mm. Similar to the female but more distinctly bronzy, and the head bronzy; femora distinctly greenish; tibiæ obscurely ferruginous.

Type-locality: Canada.

Type-specimen: Cat. No. 18306, U. S. N. M.

Described from one male and one female from the C. F. Baker collection; the female with his No. 2021, the male, No. 2066.

This species, owing to the produced vertex, resembles the species belonging to the other section of the genus but careful examination shows that the face bears no real carina, the sharp angulation of the produced portion merely simulating a carina.

GENUS CHRYSOLAMPUS Spinola.

Doctor Ashmead considered *Lamprostylus* as a synonym of *Chrysolampus* and this synonymy is here adopted. *L. floridanus* Ashm., however, is a species of the genus *Eurytoma*, and is consequently omitted.

TABLE OF SPECIES.

1. Mesoscutum and scutellum coarsely rugoso-punctate.....*lycti* n. sp.
Mesoscutum not as above, either with well separated punctures or finely rugulose..... 2
2. Mesoscutum transversely rugulose.....*sisymbrii* Ashm.
Mesoscutum punctured..... 3
3. Scutellum parapsidal areas and pronotum above, except anteriorly, almost entirely impunctured.....*parcipunctatus* n. sp.
Scutellum and pronotum almost covered with punctures...*schwarzi* n. sp.

Chrysolampus lycti n. sp.

Female: Length about 2.75 mm. Dark bronzy with the head green and the abdomen so dark as to appear almost black; sides of face below level of insertion of antennæ obliquely rugose, above smooth, rear of head circularly rugose with the posterior orbits smooth; parapsidal areas smooth, the outer margin with about two rows of very coarse punctures, sculpture of the median lobe of mesoscutum and of scutellum is in reality umbilicate punctures but they are so coarse and crowded as to become reticulately rugose; scutellum before apex with a transverse carina and back of this one row of longitudinal carinæ; propodeum reticulately rugose, medially with a longitudinal carina; femora brown, with a greenish luster, posterior ones more green; knees, tibiæ and tarsi reddish testaceous, the posterior tibiæ brown except bases and apices; abdomen smooth.

Male: Length about 2.5 mm. Similar to the female but the face above level of insertion of antennæ is vertically rugulose.

Type-locality: Top of the Alleghanies, Pocahontas County, West Virginia.

Host: *Lyctus striatus*.

Type-specimen: Cat. No. 18307, U. S. N. M.

Described from one female and seven males collected by Dr. A. D. Hopkins and recorded under his West Virginia note No. 5781.

This is the species recorded in Bulletin 32, West Virginia Agricultural Experiment Station by Dr. A. D. Hopkins as *Perilampus hyalinus* Say, the determination being made by Doctor Ashmead.

Chrysolampus parcipunctatus n. sp.

• *Female*: Length about 3 mm. Green, face below level of insertion of antennæ with fine oblique striæ which at insertion of antennæ curve and extend upward for a short distance but are much more indistinct than the oblique portion; face with large scattered punctures; posterior surface of head very finely circularly striate; pronotum with scattered large punctures, viewed from above the visible portion except at extreme base almost impunctured; middle lobe of mesoscutum basally transversely rugulose and with scattered large punctures; parapsidal areas with a few punctures outwardly and a few along inner line; scutellum with a few large punctures basally and along lateral margins; propodeum with medial longitudinal carinæ, very finely subtransversely rugulose; petiole about as long as propodeum, with a median longitudinal carina, the sculpture about as coarse as that on propodeum; coxæ and femora green; apices of femora, tibiæ and tarsi reddish testaceous, tibiæ with a brownish spot medially.

Type-locality: Los Angeles County, California.

Type-specimen: Cat. No. 18309, U. S. N. M.

Described from one specimen collected in April.

Chrysolampus schwarzi n. sp.

Female: Length 4 mm. Green, face above level of insertion of antennæ vertically rugulose, at insertion of antennæ curving inward and becoming oblique, the face also having scattered punctures; the clypeus smooth with a few scattered punctures; vertical striæ on face reaching almost to level of anterior ocellus, above this the face smooth except for the scattered punctures; rear of head semicircularly rugulose; pronotum with coarse punctures separated by about half a puncture width; middle lobe of mesoscutum at extreme base transversely rugulose, rest of surface with punctures about as close as on pronotum and between them the surface on the anterior part transversely rugulose; parapsidal areas anteriorly transversely rugulose with scattered large punctures; scutellum with large punctures but with the medium line almost impunctured; propodeum irregularly rugulose, petiole about as long as the propodeum, with a median longitudinal carina, surface irregularly rugose; coxæ and femora green, tibiæ bronzy with the bases and apices reddish testaceous.

Type-locality: Wasatch, Utah.

Described from two specimens collected June 27, 1891, by Mr. E. A. Schwarz.

Type-specimen: Cat. No. 18308. U. S. N. M.

The manuscript name used by Doctor Ashmead is adopted.

O. M. REUTER.

BY OTTO HEIDEMANN, *Bureau of Entomology.*

Dr. O. M. Reuter, entomologist, poet and philosopher, one of our foremost hemipterists, died on September 2, 1913, in Abo, Finland, his native town, at the age of sixty-three years.

Five years before his death his eyesight became impaired and during the last two years he was totally blind. In spite of failing eyesight he contemplated new studies in some groups of the Hemiptera and finished some of his manuscripts with the aid of his assistant, Dr. B. Poppius.

In his last letter written in September, 1912, Doctor Reuter said: "I intend to finish my work on the Termatophylidæ and have the paper published in Wytzman's *Genera Insectorum*, also the genera of Cimicidæ."

His chief study was the large and very difficult family of the Capsidæ (or Miridæ of some authors). Besides numerous Palæarctic species, he described 56 new species of North American Capsids as early as 1875, and 78 more new species in his publication on Nearctic Capsidæ in 1909. In 1905, appeared his classification of the Capsidæ (*Hemipterologische Speculationen*); but the