

**Studies on the North American CHALCIDIDÆ, with
descriptions of new species from Florida.**

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Subfamily—LEUCOSPINÆ.

LEUCOSPIS Fabr.

1. **Leucospis affinis** Say, var. *floridana* Cresson.

One specimen of this variety was identified from South Florida, it measured nearly half an inch in length.

The species is very rare in Florida.

Subfamily—CHALCIDINÆ.

SMICRA Spinola.

2. **Smicra pulchra** Cresson.

This species was originally described by Mr. E. T. Cresson from specimens from Mexico and Cuba.

I took and identified three specimens here last summer.

3. **Smicra bioculata** Cresson.

Originally described from Texas. I took two specimens in Florida last summer.

4. **Smicra flavopicta** Cresson.

I took two specimens of this species last autumn; it was originally described from Cuba.

5. **Smicra torvina** Cresson.

Two specimens of this species were bred from larvæ feeding on oak leaves, with about fifty specimens of an undetermined ichneumon.

The chalcids made their appearance long after the ichneumons, and they may be secondary parasites on it.

Subfamily—PERILAMPINÆ.

PERILAMPIS Latreille.

6. **Perilampis cyaneus** Brullé.
 7. **Perilampis hyalinus** Say.
 8. **Perilampis triangularis** Say.

I have taken here and identified specimens of all three of the above species.

In studying the genus I notice the following synonyms:

- Perilampis alexis* Walker = *P. hyalinus* Say.
 " *entellus* Walker = *P. platygaster* Say.
 " *lepreos* Walker = *P. triangularis* Say.

The following species is undescribed:

9. **Perilampis fulvicornis** n. sp.

♂.—Length .08 inch. Head and thorax brown-black with a slight metallic lustre; head at base metallic green and transversely wrinkled; face smooth impunctured, pubescent; ocelli dark; eyes brown; antennæ, scape more or less metallic green and grooved beneath; thorax coarsely, deeply punctate; scutellum long, highly elevated posteriorly with the tip obtusely rounded; abdomen blue-black, triangular, smooth and shining; coxæ and femora blue-black; tibiæ and tarsi clear yellow; wings hyaline, veins pale or slightly yellowish.

Described from one specimen captured at large.

This species approaches nearest to *P. hyalinus* Say, but is at once distinguished from it by its smaller size, more slender form and by the yellow tibiæ and tarsi.

Subfamily—EURYTOMINÆ.

DECATOMA Spinola.10. **Decatoma maculipes** n. sp.

♀.—Length .11 inch. Black, coarsely punctate and covered with short, white pubescence; antennæ black, with a dull yellow scape; legs: coxæ and femora black, except at tips; tibiae dull yellow, tibiæ with a black blotch in the middle, tarsi pale; wings hyaline, veins pale yellowish.

Described from one specimen bred April, 1885, from oak gall *Dryorhizoxenus floridanus* Ashm.

It is closely related to *Decatoma hyalipennis* Walsh, but the yellow legs and collar in that species readily distinguish it.

SYSTOLE Walker.11. **Systole brachyptera** n. sp.

♀.—Length .12 inch. Slender, black, with the surface finely shagreened, pubescent; head more coarsely shagreened than the thorax, viewed from front

triangular with mouth parts dull yellow; eyes greenish; antennæ 9-jointed, black, or piceo-black, the apex of pedicel and first flagellar joint yellow, the mesonotum is twice as long as wide and transversely shagreened at base; scutellum coarsely but shallowly punctate; legs piceous with coxæ, knees and tips of tibiæ and tarsi dull yellow; abdomen very long, pointed fusiform, the fourth segment is unusually long, occupying considerably more than a third of the whole surface, anus and tip of venter yellow; wings hyaline, short and broadly rounded, veins yellowish, submarginal vein about twice as long as marginal and post-marginal veins combined post-marginal slightly shorter than marginal; stigmal vein clavate.

This interesting species is described from one specimen taken at large last summer. It is the first species of the genus described in our fauna.

ISOSOMA Walker.

12. *Isosoma gigantea* n. sp.

♂.—Length .15 inch. Black, punctate; head wider than thorax; antennæ 9-jointed, brown, pedicel short, flagellar joints long, cylindrical, pubescent, pubescence in whorls, first joint of flagellum longest and thickest, about five times as long as thick, other joints about four times as long as thick; abdomen black, shining, petiole stout, as long as the posterior coxæ; legs a uniform dull yellow with the posterior coxæ black; wings dusky hyaline, rather densely pubescent, veins yellowish, the post-marginal vein very long.

Described from one ♂ captured at large.

Subfamily—TORYMINÆ.

CALLIMOME Spinola.

14. *Callimome theon* Walker.

15. *Callimome lissus* Walker.

I have identified both of these species from specimens captured at large last summer.

SYNTOMASPIS Förster.

16. *Syntomaspis californica* n. sp.

♀.—Length .14 inch; ovip. .25 inch. Golden green, coarsely, deeply punctate; eyes brown; antennæ black, scape dull yellow; coxæ metallic green, legs rufous; abdomen cupreous, first segment smooth, other segments finely reticulately scratched; ovipositor black; wings hyaline, veins dusky.

In the ♂ the first abdominal segment is blue.

Described from three specimens, two ♂ one ♀, bred from Cynipidous gall *Andricus pomiformis* Bass, from California.

Some of my species described as *Callimome* belong to this genus.

MEGASTIGMUS Spinola.17. **Megastigmus flavipes** n. sp.

♂.—Length .12 inch. Head and thorax bright golden green, face finely reticulately strigose; thorax irregularly, transversely, coarsely strigose; antennae clavate, scape and flagellum beneath yellow, flagellum above brown-black; the collar is rather short; the scutellum at tip is divided by a transverse suture and with a raised rim at border posteriorly; abdomen ovate, black; legs waxy yellow; wings hyaline, veins pale, excepting the stigmal vein, which is brown, and ends in a circular stigma.

Described from one specimen taken in August.

This is the second species described from North America, while in Europe there are six species known.

ORMYRUS Westwood.18. **Ormyrus quercus** n. sp.

♂ ♀.—Length .08 - .12 inch. Blue-black, with a greenish metallic lustre in certain lights; head punctate, more or less metallic green, with a long groove on cheek; eyes brown; antennae brownish piceous, scape dull yellow; collar finely transversely strigose; abdomen acuminate, variegated with greenish and bluish bands; legs yellowish, with a large bluish blotch above on posterior femora; posterior tibial spur very long; wings hyaline, veins yellow.

Described from eight specimens (two ♂ six ♀) bred from Cynipidous gall (*Andricus batoides* Ashm.)

19. **Ormyrus andricus** n. sp.

♀.—Length .12 inch. This species is much more robust than the preceding species, and the abdomen is not nearly so pointed, metallic green, finely, transversely rugulose; antennae brown, scape pale; legs: the femora are dark brown, the tibiae rufous and the tarsi yellowish, posterior tibial spurs short; wings hyaline, veins brownish.

Described from one ♀ specimen bred from Cynipidous gall (*Andricus difficilis* Ashm. ms.)

Subfamily—EUELMINÆ.

EUELMUS Dalmon.20. **Eupelmus auratus** n. sp.

♀.—Length .11 inch; ovip. .02 inch. Bright golden green, surface shagreened; antennae long, subclavate and obliquely truncate at tip; thorax but feebly depressed, inclined to scutellum; scutellum declining, obconical; legs bright lemon yellow; coxæ metallic green; wings hyaline.

Described from one ♀ taken at large, and two ♀ specimens bred from the Cynipidous oak gall *Andricus rugosus* Ashm.

The lemon yellow legs and the clear hyaline wings at once distinguish this species from all others in our fauna.

21. **Eupelmus dryorhizoxeni** n. sp.

♂ ♀.—Length .10-.14 inch; ovip. .02 inch. Apterous; head large, much broader than thorax, nearly smooth, greenish metallic on face, bluish on vertex, mentum black; eyes brown; antennæ subclavate, 11-jointed, scape dull yellow, flagellum blackish, hairy, thorax at sides and beneath reddish brown, above golden green with violaceous reflections; collar narrow, quadrate; parapsidal elevations very high, curved and yellowish brown; legs brownish yellow with the upper surface of femora and a blotch on the upper surface of tibiæ, in the middle, dark brown, unguis black; abdomen ovate, brown black, with a submetallic lustre; ovipositor pale.

Described from three specimens, one ♂ two ♀, bred May, 1885, from Cynipidous oak gall *Dryorhizoxenus floridanus* ♂ Ashm.

In one ♀ the brown markings on upper surface of femora and tibiæ are almost entirely obsolete.

The only other apterous *Eupelmid* in our fauna known to me is *Eupelmus epicaste* Walk., described in "Annals and Magazine of Natural History," vol. xx, p. 20, but it differs so widely in size and color that it cannot be confounded with this species.

22. **Eupelmus sphericcephalus** n. sp.

♀.—Length .14 inch. Blue-black, long and slender, finely punctate; head nearly spherical when viewed from above; face rather thickly covered with short, white pubescence; eyes dark; antennæ subclavate, including scape, black with a slight lustre; parapsides well defined, scutellum purplish; abdomen very long and narrow, beneath purplish; legs yellowish, middle tibial spur long, whitish, tibiæ with black teeth at tip, first tarsal joint large and widely dilated, beneath with double rows of black teeth; wings pale fusco-hyaline.

Described from specimen taken at large in August, 1885.

23. **Eupelmus cyaniceps** n. sp.

♀.—Length .14 inch; ovip. .03 inch. Head blue, brassy about mouth; eyes red; antennæ subclavate, including scape, black; thorax with the large pleuræ brassy green, sternum and abdomen blue; ovipositor blue with a yellow annulus in the middle; legs yellow, coxæ and femora dark brown with metallic lustre, upper surface of tibiæ at base and the last two apical tarsal joints and unguis brown, spur yellowish, teeth of dilated tarsal joint black; wings hyaline, veins yellow.

Described from one ♀ specimen captured at large.

This species approaches nearest to *Eupelmus lamachus* Walk.

24. **Eupelmus gemmarii** n. sp.

♀.—Length .11 inch; ovip. .02 inch. Rather robust, æneous; head punctate, face gold green; antennæ black; scape, scutellum, scapulæ, mesopleuræ, sternum, coxæ, trochanters, tibiæ at base, tarsi and ovipositor dull yellow; femora, apical half of tibiæ, unguis and last abdominal segment brown; wings hyaline, with a broad brown band across the middle.

Described from one ♀ specimen bred from Cynipidous oak gall *Andricus gemmarius* Ashm.

25. **Eupelmus quereus** n. sp.

♀.—Length .18 inch; ovip. .05.

This species so exactly resembles *Eupelmus mirabilis* Walsh, in size and general appearance, as to be remarkable, and were it not for the exerted ovipositor, might easily be confounded with that species.

It is at once distinguished from it, however, by the yellow exerted ovipositor, by the pleural pieces being black, and not rufo-piceous as in *mirabilis*, and without the white band at base of abdomen. There is a large brown blotch across wings leaving the base and tip hyaline.

Described from one specimen taken on an oak in April, 1881.

26. **Eupelmus zeli** n. sp.

♀.—Length .10 inch; ovip. .10 inch, yellow. Head and thorax finely shagreened and dark metallic green; eyes brown; antennæ pale brown; collar short, triangular; mesonotum with parapsidal grooves well defined, posterior raised lobe convex, bluish, raised parapsides, pleural pieces, sternum, coxæ and legs rufo-piceous, scutellum and scapule bright golden; middle tibial spur as long as first tarsal joint, first, second, third and fourth tarsal joints with black teeth beneath, spur and tarsi yellowish, upper edge of posterior tibiæ blackish; abdomen blue-black, with some long pubescence towards the tip; wings hyaline, with two transverse brown bands.

Described from two ♀ specimens bred April, 1885, from the eggs of the hemipteron *Zelus longipes* Linn.

27. **Eupelmus dryophantæ** n. sp.

♂ ♀.—Length .08-.10 inch. Dull metallic green, in some specimens blackish; the face in ♂ and the abdomen is blue-black; antennæ, including scape, brown-black, slightly lustrous; legs in ♂ black or piceo-black, except tips of tibiæ, spur and tarsi, which are yellowish white; in ♀ the anterior legs are paler, with a blotch on the femora and tibiæ; wings in ♂ clear hyaline; in ♀ there is a brown blotch across the middle of wing, including the marginal and postmarginal veins.

Described from several specimens bred from Cynipidous oak gall (*Dryophanta laurifoliae* Ashm.) in 1881.

Subfamily—ENCYRTINÆ.

BLASTOTHRIX Mayr.28. **Blastothrix rosæ** n. sp.

♀.—Length .05 inch. Black, with some hairs; legs long, pale yellow with black coxæ, anterior and middle femora and tibiæ and posterior tibiæ and first tarsal joints brown, posterior femora thickened, pale; middle tarsal spur longer than first tarsal joint, white; abdomen black; wings hyaline veins yellowish.

Described from two specimens bred in April, 1881, from Rose Aphis (*Siphonophora rosæ* var. *floridæ* Ashm.), an aphid found on the Cherokee rose indigenous to Georgia and North Carolina.

ENCYRTUS Dalman.29. **Encyrtus siphonophoræ** n. sp.

♀.—Length .04 inch. Black, in certain lights piceo-black, sparsely pubescent; mouth parts piceous; abdomen at sides and beneath testaceous, above black; legs: femora piceous, coxæ, tibiæ and tarsi yellow; wings hyaline, veins yellowish, submarginal vein broken before reaching the margin, marginal vein long, thick, postmarginal and stigmal veins short.

Described from several specimens bred in 1881, from Orange Aphid (*Siphonophora citrifolii* Ashm.)

Subfamily—PTEROMALINÆ.

PACHYNEURON Walker.30. **Pachyneuron syrphi** n. sp.

♀.—Length .06 inch. ♂ .04 inch. Blue-black, shining, pubescent; antennæ brown; metathorax brassy; legs tawny, with the tibiæ slightly infuscated; middle tibial spur not quite as long as first tarsal joint; wings hyaline, the postmarginal vein as long as marginal and stigmal veins combined, stigmal vein slightly longer than the marginal.

In the ♂ the marginal vein is very short, the legs yellow, and the body is brassy.

Described from ♀ and ♂ specimens bred from *Syrphus* larvæ.

COPIDOSOMA Ratzeburg.31. **Copidosoma melanocephalum** n. sp.

♂.—Length .05 inch. Pale yellow brown; head and eyes black; antennæ thick, clavate; scape, pedicel and first two joints of flagellum tawny yellow, other joints greatly thickened, dark brown, shading into black on club; wings fusco-hyaline, very hairy with the stigmal vein long and curved.

Described from one specimen bred May, 1885, from Cynipidous oak gall *Dryorhizoxenus floridanus* Ashm.

CHILONEURUS Westwood.32. **Chiloneurus cupreicollis** n. sp.

♀.—Length .08 inch. Slender, pubescent; head dull metallic green; eyes red-brown; antennæ very long, slender, subclavate, the scape very long and slender with pedicel and first flagellar joint tawny yellow, flagellum dark brown; prothorax cupreous; scutellum bright yellow at base, dull metallic green towards tip and armed with a long black bristly horn; sternum piceous, the large mesopleural pieces coppery and violaceous; legs: coxæ and anterior legs tawny, middle legs infuscated with brown, posterior femora and tibiæ dark brown; abdomen violaceous above, cupreous beneath, pubescent; wings brown, base and extreme tips hyaline.

This beautiful species, the prettiest yet described of this interesting genus, was taken on *Lecanium* scales on oak in the summer of 1885.

HOMALOTYLUS Mayr.33. **Homalotylus lachni** n. sp.

♀.—Length .06 inch. Robust, rust brown; head and thorax nearly smooth; eyes large brown, face narrow, with a few scattered punctures; surface back of eyes lawny yellow; antennæ brown; thorax with a plumbeous tinge; legs pale brown with the upper surface of tibiæ at base blackish, more apparent on posterior pair; abdomen black; wings whitish, hyaline, with a broad brown band across stigmal region and another narrow band near apex.

Described from specimens bred from the Pine Aphis *Lachnus australi* Ashm.

BOTHRIOTHORAX Ratzeburg.34. **Bothriothorax Peckhamii** n. sp.

♂ ♀.—Length .11 inch. Very stout, robust; head, scape, two depressed humeral spots on thorax, a spot at base of wings and the scutellum bright red-brown; face with scattered coarse punctures; occiput, flagellum, thorax and abdomen black; abdomen æneous at base; legs pale brown, with all the tibiæ brown black, tarsi pale; wings hyaline, a narrow transverse band as wide as and including the bend in the submarginal vein, the apex from beginning of post-marginal vein brown.

Hab.—Milwaukee, Wis.

Described from two specimens kindly sent me by Prof. George H. Peckham, of Milwaukee, Wis., to whom I take pleasure in dedicating the species.

Subfamily—APHELININÆ.

COCCOPHAGUS Westw.35. **Coccophagus purpureus** n. sp.

♀.—Length .10 inch. Robust and of a uniform purplish black color throughout, including abdomen, coxæ and femora; the surface is very finely punctate and the tibiæ and tarsi are yellow; wings except at base brown.

This is an easily recognized species, and was captured on gall berry bushes.

Subfamily—PIRENINÆ.

MACROGLENES Westw.36. **Macroglenes querci-pisi** Fitch.

I have bred two chalcids from Cynipidous gall *Holcaspis ficula* Bass, which agree very well with Dr. Fitch's description of this species.

The following species is new, and approaches nearest to Dr. Fitch's *Macroglenes*:

Macroglenes dryorhizoxeni n. sp.

♀.—Length .10 inch. Black, coarsely but not deeply punctate; head large, much broader than thorax; face, sternum and abdomen blue-black; antennæ subclavate, scape long and slender, pale, becoming yellowish at tip, pedicel twice as long as broad, yellow, flagellum black, pubescent; thorax and abdomen pubescent; abdomen cupreous; collar very short, thorax without grooves; legs yellowish, tibiæ and tarsi pale; wings hyaline, veins yellow, marginal vein but slightly longer than stigmal, the latter slender but thickened at tip.

Described from two specimens bred May, 1885, from the Cynipidous gall *Dryorhizoxenus floridanus* Ashm.

Subfamily—ELACHRISTINÆ.

ELACHRISTUS Spinola.37. **Elachristus flavipes** n. sp.

♀.—Length .06 inch. Aeneous with metallic greenish reflections; head punctate, pubescent above; eyes brown, pubescent; antennæ inserted near lower margin of face, scape pale yellow, flagellum black, pubescent, club greatly thickened; thorax with some long hairs; scutellum with a middle longitudinal groove; legs pale yellow; abdomen ovate with a very short petiole, hairs at tip; wings hyaline, submarginal and postmarginal veins yellowish, marginal piceous.

Described from specimens captured at large.

CIRROSPILUS Westw.38. **Cirrospilus purpureus** n. sp.

♀.—Length .11 inch. Head, sternum and abdomen purplish blue; thorax and scutellum golden green; head smooth, wider than thorax, face emarginate; antennæ 7-jointed (counting 2-jointed club, 8-jointed), scape dark or blackish, shining, flagellum pale brown, pubescent; thorax punctate; mesonotum longer than broad; scutellum large, rounded; abdomen long, ovate, pointed at tip, nearly sessile; legs: coxæ and femora blue-black, tibiæ dark, tarsi and knees pale, last tarsal joint and unguis black; wings hyaline, veins pale.

Described from one specimen captured at large.

Subfamily—EULOPHINÆ.

SYMPIEZUS Förster.39. **Sympiezus flavipes** n. sp.

♀.—Length .11 inch. Head and thorax above golden green, face emarginate; antennæ 7-jointed, scape pale yellow, flagellum brown; eyes red; scutellum rounded, bluish at tip; abdomen brassy above bluish beneath; legs bright yellow, tibiæ and tarsi paler; posterior coxæ metallic green; wings hyaline, marginal and postmarginal veins long, stigmal vein short.

Described from one specimen captured at large.

Subfamily—TETRASTICHINÆ.

GYROLASIA Förster.40. **Gyrolasia nigrocyaneus** n. sp.

♀.—Length .10 inch. Blue-black; head, thorax and abdomen punctate; antennæ 6-jointed, hairy, joints separated and almost moniliform, black; scape, coxæ and femora tawny yellow, tibiæ and tarsi pale yellow, ungues with posterior apical tarsal joint brown; wings hyaline, marginal vein more than twice as long as submarginal, no postmarginal vein.

Described from one ♀ specimen bred from Cynipidous oak gall *Dryorhizoxenus floridanus* Ashm.

TETRASTICHUS Haliday.41. **Tetrastichus racemariæ** n. sp.

♂ ♀.—Length .07 to .09 inch. Aeneous black, smooth; scape of antennæ tawny yellow, flagellum, coxæ and femora black, trochanters and a narrow annulus near base of tibiæ piecous brown, tibiæ and tarsi yellowish white; scutellum with two large parallel grooves; wings hyaline, veins yellowish, the post-marginal vein wanting; there is no noticeable difference in the ♂.

Described from three ♂ bred from Cynipidous oak gall *Amphibolips racemaria* Ashm., and numerous specimens in both sexes bred from oak gall *Amphibolips cinerea* Ashm.

The specimens bred from the latter are much the smaller, but otherwise similar.

42. **Tetrastichus rosæ** n. sp.

♂ ♀.—Length .04-.06 inch. Black, shining; antennæ, femora and wing veins yellowish, ungues brown; scutellum with two longitudinal grooves, post-marginal vein in ♀ wanting, in ♂ slightly developed.

Described from several specimens bred June, 1881, from the rose gall *Rhodites ignota* O. S.

This species resembles *T. racemariæ* somewhat, but its much smaller size and the color of antennæ and legs will at once distinguish it.

43. **Tetrastichus acutus** n. sp.

♂.—Length .08 inch. Blue-black with greenish metallic reflectious; face greatly emarginate, making the head very sharp on vertex; eyes and antennæ brown; antennæ 6-jointed; thorax and scutellum with microscopical longitudinal engraved lines; scutellum with two grooves; abdomen acutely pointed, rather strongly tinged with greenish metallic reflections, posterior coxæ green; legs yellow, posterior femora brown, excepting the yellow tip, ungues brown.

Described from one specimen captured at large.

A very distinct species.

44. **Tetrastichus flavipes** n. sp.

♀.—Length .07 inch. Black, very elongate and slender; head much larger than thorax and greatly emarginate in front with vertex sharp, region around ocelli yellow testaceous; eyes brown; antennæ 6-jointed, brown, pubescent; thorax slender, elongated and not thick through, the collar is pointed, so that the head appears prominently separated; the scutellum has the usual two grooves, space between it and the mesoscutellum deeply depressed; abdomen ovate much broader than thorax and slightly flattened, hairy; legs long, slender, the posterior pair much longer than anterior pair, femora and middle of tibiæ black or brown, tibiæ and tarsi and base of fore-femora testaceous; wings hyaline, bordered with short ciliæ, veins testaceous, marginal vein slightly thickened, postmarginal wanting, stigmal short.

Described from three ♂ specimens bred from Cynipidous oak gall *Holcaspis feigera* Ashm.

OXYMORPHA Förster.45. **Oxyomorpha livida** n. sp.

♀.—Length .14 inch. Uniform dark blue, including legs, excepting the first three tarsal joints, which are pale or white, and the upper surface of the thorax which has a greenish metallic tinge; the antennæ are black and hairy; thorax punctate; abdomen is very long and slenderly pointed; wings hyaline, with pale yellowish veins, the marginal vein is long and thickened, the stigmal short, while the postmarginal vein is long.

Described from one ♀ specimen swept from bushes in a low swampy meadow.

This genus was founded by Dr. Förster in 1856. "Hymenopterologische Studien II Chalcidiae und Proctotrupii p. 145," and this is the first species described in our fauna.

**A Review of the species described by Olivier in the
"Entomologie."**

BY GEORGE H. HORN, M. D.

In the following pages it is proposed to pass in review the species described by Olivier, whether originally by himself or by quotation from others, cited from our fauna. These species have been gone over so frequently in past years that it seems to have been assumed that nothing remained to be done. Really comparatively little new will be found in the following pages, but it is deemed sufficient to warrant the publication of the entire list.

The "Entomologie" consists of six large quarto volumes of text and two of plates, which bear date as follows: vol. i, 1789; vol. ii, 1790; vol. iii and iv, 1795; vol. v, 1807; vol. vi, 1808. In the first four volumes the different genera are treated as if distinct pamphlets,