

one female has the marginal cell open while another female and a male have this cell closed.

In the Ohio Naturalist, vol. 14, 1914, p. 340, Prof. Jas. S. Hine suggests that *Volucella ardua* Wied. might be a synonym of *V. tympanitis* Fabricius. I was inclined to the same view until I saw the paper by Mik quoted above. There the statement is made that the type of *ardua* (a female) is a *Phalacromyia*, in other words, has the marginal cell open. In five specimens of *tympanitis* before me, all females, the marginal cell is closed. The two species should therefore be held apart, at least until definite proof is forthcoming that the same variability occurs that has been indicated for *vaga* and *incommoda*.

SOME NEW AMERICAN HYMENOPTERA

By J. C. CRAWFORD

Below is given a table of the American genera, exclusive of *Cælioxys*, assigned by Ashmead to his subfamily Cælioxyinæ. As Prof. Cockerell has long ago pointed out, these are not all closely related and must be split up into several groups, so my table is one of convenience only.

Of the genera tabulated, *Dioxys* and *Neopasites* are closely related and the group easily recognized by the bidentate mandibles. *Neolarra* and *Phileremulus* are related and characterized by the narrow stigma and the very short marginal cell. The American species referred to *Phileremus* are, I think, not that genus and are true Epeolines with only two cubital cells. *Oreopasites* is unknown to me, but from the description it appears to be somewhat closely related to the true *Phileremus*. *Holcopasites* stands by itself and the coarse sculpture and rostriform labrum distinguish it from the other American genera. *Townsendiella*, new genus, also stands alone, in general habitus curiously resembling the *Neolarra* group.

TABLE OF GENERA

1. Mandibles bidentate at apex.....	2.
Mandibles acute at apex.....	3.

2. Metanotum medially spined; labrum rostriform.....*Dioxys* Lep.
 Metanotum not spined; labrum not rostriform....*Neopasites* Ashm.
3. With one cubital cell and one recurrent vein....*Phileremus* Ckll
 With two cubital cells and two recurrent veins..... 4.
4. Marginal cell hardly longer than the very narrow stigma, the metacarpus almost wanting.....*Neolarra* Ashm.
 Marginal cell long, stigma broad, metacarpus long..... 5.
5. First recurrent vein subinterstitial or received by the first cubital cell 6.
 First recurrent vein received by the second cubital cell far from base 7.
6. Labrum rostriform; claws toothed near apex or simple,
Holcopasites Ashm.
 Labrum short, not rostriform; claws of female cleft, flattened,
Townsendiella new genus.
7. First cubital cell much shorter than the second, labrum elongate,
Oreopasites Ckll.
 Cubital cells nearly equal or the first longer.....*Phileremus* Latr.

***Neopasites cressoni*, new species.**

Male.—Length, 5 mm. Black, head coarsely, closely punctured, more coarsely so on clypeus, clothed with white plumose hairs, those on vertex brown; side margins of clypeus reflexed and produced above surface to a sharp edge, laterad of this a smooth foveate space; mandibles red at apex; labrum rugose, medially near base with a short spicule; antennæ short, subclavate, 12-jointed, scape very short; labial palpi 4-jointed, joint 1 about as long as 2-4 combined, 2 slightly longer than 3+4; 4 twice as long as 3; maxillary palpi 3-jointed, first a mere tubercle, second and third subequal in length; third segment with a long large bristle at apex; vertex flattened; mesothorax closely, rather coarsely, punctured and with white plumose hair, that on disc of mesoscutum and on extreme anterior margin medially and on lobes of scutellum brownish; scutellum slightly bilobed; metanotum, sides of propodeum and pleuræ with pubescence dense; propodeum with a triangular rugose enclosed area extending into posterior face; the dorsal part of this enclosure rugose, with a very few of the rugæ longitudinal, the part on posterior face with much finer sculpture; below the enclosure the surface smooth, polished, sides of propodeum punctate; wings dusky, with a lighter area beyond second

cubital and second discoidal; tubercles and tegulæ reddish, legs black with white densely plumose hairs; knees and extreme bases and apices of tibiæ reddish, tarsi becoming somewhat reddish apically; claws toothed at base; abdomen closely punctured, the punctures almost as coarse as those on mesoscutum; apical margins of abdominal segments reddish; segments 2-4 with apical margins slightly emarginate medially; sixth segment with a pseudopygidium; abdomen with white densely plumose pubescence as follows: Sides of segments 1-6, apical margins of segments 1-2; a pair of spots on segments 3-5 extending to base of segment.

Type locality, La Quinta, California.

Type, Cat. No. 20830, U. S. Nat. Mus.

Described from one specimen collected by F. R. Cole and labeled 4.14.

Much smaller than *fulviventris* Cress., from which it also differs in having the abdomen dark, first joint of flagellum only slightly longer than pedicel (it is twice as long in *fulviventris*), darker anterior and middle legs, etc.

Named in honor of Mr. E. T. Cresson, Sr.

Neopasites fulviventris Cresson.

When in Philadelphia recently I made a few notes on the type of this species which may aid in the identification of it. The mandibles are bidentate at apex; the labrum medially near base with a short spicule; scape very short, the relative lengths of the first few antennal joints can be expressed by the following figures: scape 11, pedicel 4, first joint of flagellum 8, second 5, third 4; first cubital very slightly longer than second; sixth abdominal segment with a pseudopygidial area.

Comparing these characters with the new species described shows that certain of them are generic instead of specific.

Dioxys martii Ckll.

The type, which is in the United States National Museum, is a male instead of a female as originally stated by Prof. Cockerell.

Townsendiella, new genus.

Mandibles simple, labrum triangular, wider than long; rear of occiput with a carina interrupted medially; labial palpi 4-jointed, the first joint over three times as long as the second and about twice as long as joints 2-4 combined; maxillary palpi 6-jointed, the first joint very short; the second longest; third and fourth subequal, shorter than second; fifth about half as long as fourth; sixth slightly shorter than fifth; tongue elongate, broadly linear, almost as long as the labial palpi; axillæ not toothed; scutellum slightly bilobed; marginal cell obliquely truncate at apex; first cubital cell one and one-half times as long as the second; first recurrent vein at base of second cubital cell (interstitial); second about one-third the length of second cubital cell from its apex; claws of female cleft, flattened.

Townsendiella pulchra, new species.

Female.—Length about 5.5 mm. Head and thorax black, abdomen red; head rather finely, closely punctured, the punctures on face crowded, those on clypeus becoming finer apically, the apical margin of clypeus smooth, reddish; labrum and mandibles, except apices, reddish; head covered with dense white, densely plumose pubescence, that on face above antennæ brownish; antennæ rather long, not thickened apically, reddish beneath; mesonotum closely punctured, covered with brownish plumose pubescence; pubescence on the margins of mesoscutum and of scutellum, that on metanotum, propodeum, pleuræ and a short median line on mesoscutum, together with two lateral lines at front of mesoscutum, white; propodeum with a delicate median carina; triangle at base of propodeum without pubescence and with an almost granular sculpture; tubercles and tegulæ reddish; wings dusky apically; veins brown, stigma darker; legs reddish, femora dusky at bases; coxæ brown; abdomen closely punctured, base of first segment and apical margins of first four segments with strong bands of appressed white pubescence; rest of surface of segments with short light golden hairs; fifth segment with apical margin smooth, brown; pygidial area sharply defined, broad, apex broadly rounded.

Type locality, Las Cruces, New Mexico.

Type, Cat. No. 20831, U. S. Nat. Mus.

Described from two females collected May 12, by Dr. C. H. T. Townsend, in honor of whom the genus is named, on flowers of *Dithyræa wislizeni*.

Phileremulus cockerelli, new species.

Female.—Length slightly over 3 mm. Head and thorax black, abdomen red, legs reddish, femora somewhat dusky at bases, coxæ darker; head rather coarsely and closely punctured, shiny, with white appressed pubescence, very dense on sides of face; clypeus finely closely, but faintly punctured, shiny, reddish apically; antennæ reddish, slightly darker above; mesoscutum and scutellum rather coarsely closely punctured; pleuræ, sides of mesoscutum and sides of scutellum with white densely plumose pubescence, that on rest of mesoscutum slightly brownish and not densely plumose; that on disk of scutellum brownish, more plumose than on mesoscutum; axillæ drawn out into long teeth; scutellum bilobed; metanotum with a strongly projecting, deeply bifid median process covered with white densely plumose pubescence; propodeum, except basal triangle, which has a strong median carina, covered with similar pubescence; apical margins of abdominal segments with bands of white plumose pubescence; apex of abdomen dusky.

Described from one specimen from Victoria, Texas, September 25, 1904, J. C. Crawford, collector.

Type, Cat. No. 20832, U. S. Nat. Mus.

Distinguished from *vigilans* and *nanus* by the strongly projecting, deeply bifid process on metanotum; *mallochi* has the clypeus rugoso-punctate, the coxæ and femora brown, pubescence of disk of mesoscutum white and densely plumose and the lateral margins of the clypeus strongly reflexed.

Named in honor of Prof. T. D. A. Cockerell.

Halictoides viridescens, new species.

Male.—Length, 5 mm. Head and thorax green, with white pubescence, dense on clypeus and below antennæ; propodeum black, abdomen brown, apical margins of segments 1-6 hyaline;

face with rather coarse well-separated punctures, closer above, those of clypeus finer and closer; clypeus not produced, the face below antennæ therefore very short; antennæ reaching about to posterior margin of tegulæ; scape very short, subglobose; first joint of flagellum only slightly longer than wide; second joint slightly longer than first; third slightly shorter than second; following joints subquadrate, subequal, nodose, the last slightly longer; apical end of second joint of flagellum reaching to anterior ocellus; mesoscutum with rather fine punctures separated by about a puncture width; propodeum with parallel longitudinal rugulæ; tegulæ and tubercles with a reddish spot; wings slightly dusky; veins honey color, the stigma along anterior margin and subcosta brown; femora and mid tibiæ somewhat thickened; hind tibiæ slightly thickened, broadest about the middle; first joint of hind tarsi flattened, rather broad; joints 2-4 of hind tarsi produced on one side; abdomen sparsely, rather coarsely punctured; fourth ventral segment with a slight elevation on each side near apical margin bearing a short slender spicule pointing inward; sixth sternite without processes, but deeply angularly emarginate on the sides, produced medially almost to a point and with a hyaline margin at apex.

Described from one specimen labeled "Los Angeles Co., Calif., collection Coquillett."

Type, Cat. No. 20833, U. S. Nat. Mus.

Easily distinguished by the greater amount of green color; from *oryx* by the much shorter antennæ, the subglobose scape, etc.; from *mulleri* by the less thickened legs, the less produced hind tibiæ, the shape of the scape, etc.

Cothonaspis gillettei Washburn.

Pseudeucoila gillettei Washb.

Trybliographa gillettei Ashm. Mss.

Eucoila anthomyia Ashm. Mss.

Although this species has been referred to in economic literature several times it was never described by Ashmead and the name must be credited to Washburn, Eleventh Report State Entomologist of Minn., 1906, frontispiece, fig. 7.

Genus FIDIOMBIA Ashmead

The original description of this genus must be amended somewhat; the frons is not always smooth; the antennæ are 9-jointed in the female, the funicle being 4-jointed; the mesonotal furrows are visible posteriorly but are shallow wide gashes; the propodeum has two carinæ instead of foveolæ.

The new species described below is strictly congeneric with the genotype but is larger and its characters more easily discernible.

Fidiobia rugosifrons, new species.

Female.—Length, 0.8 mm. Black, antennæ, except the brown club, and legs, reddish testaceous; head and mesonotum with rather coarse almost thimble-like sculpture; scutellum smooth, polished; propodeum with two carinæ; apical margin testaceous and carinate.

Type locality, Montoursville, Pennsylvania.

Type, Cat. No. 20786, U. S. Nat. Mus.

Described from two females with the additional data, "reared from egg in wheat stubble, P. R. Myers, Coll., emerged April 17, 1916."

Very similar to *flavipes* Ashm. but larger, more coarsely and strongly sculptured, the head completely covered with sculpture as is mesonotum except for broad furrows.

Microdontomerus fumipennis, new species.

Female.—Length, 3 mm., ovipositor about 1.25 mm. Differs from *anthonomi* by its bluer color, the face more produced below, first joint of funicle subquadrate instead of transverse, antennæ darker in color, wing distinctly dusky with a darker area back of stigmal vein; veins dark brown (instead of honey color); hairless line along postmarginal vein less distinct, extending only as far as point of stigmal knob instead of to apex of vein, and with some hairs along anterior side of stigmal vein; point on stigmal knob longer than width of knob instead of shorter.

Male.—Length about 2 mm. Agreeing with the female except for secondary sexual characters.

Type locality, Maxwell, New Mexico.

Described from a series reared from *Malacosoma fragilis* by D. J. Caffrey under Bureau of Entomology, Maxwell No. 16177.

Type, Cat. No. 20823, U. S. Nat. Mus.

Genus PTINOBIUS

P. dysphagæ Girault, known from the male only, appears to be *magnificus*.

TABLE OF FEMALES

1. Propodeum covered with thimble-like punctures... *magnificus* Ashm.
Propodeum smooth, polished..... 2
2. Wings with a dusky band from near base of marginal to apex of stigmal *californicus* n. sp.
Wings with a dusky band from base of marginal almost to apex of wing; a hyaline band, interrupted medially, across wing on apical three-fourths of marginal vein..... *texanus* n. sp.

Ptinobius californicus, new species.

Female.—Length about 3 mm. Dark green with varying shades of blue and purple especially on abdomen; face with fine crowded shallow punctures, rear of head with delicate irregular rugulæ; scape testaceous, dark at apex; flagellum brown; pronotum and mesonotum irregularly reticulated; median elevation of metanotum smooth; propodeum smooth, polished, with a row of pits at base and a strong median carina; wings subhyaline with a dusky band across forewing extending from just beyond base of marginal vein to apex of stigmal vein; postmarginal slightly less than half as long as marginal; stigmal somewhat shorter than postmarginal; coxæ and hind femora greenish, rest of legs reddish testaceous, fore and mid tibiæ with a violaceous sheen; abdomen with delicate rather large reticulations.

Described from one specimen from Los Angeles, California.

Type, Cat. No. 20820, U. S. Nat. Mus.

Ptinobius texanus, new species.

Female.—Length, 3.5 mm. Bronzy green, head and thorax rather finely reticulated with raised lines; antennæ reddish,

pedicel and club brown; first, second and third joints of funicle about as long as wide; fourth slightly longer than third; metanotum medially smooth, polished; propodeum with a median carina, with a basal row of pits and one along each side of median carina and a row replacing lateral folds; between these latter smooth; anterior half of mesopleuræ reticulated; posterior half smooth, polished, except below where a narrow line of reticulations extends almost across smooth portion from anteriorly; below this a few horizontal striæ; metapleuræ faintly reticulated; stigmal vein almost as long as postmarginal, the latter about three-fourths as long as marginal; legs, including coxæ, reddish-testaceous; posterior coxæ bronzy green, mid coxæ with an outward tinge of this color; mid tarsi and an annulus near base of hind tibiæ whitish; basal joint of hind tarsi dusky; forewings from base of marginal vein almost to apex of wing dusky and with dark cilia; a hyaline band from near base of marginal to base of stigmal, interrupted medially, extends across wings; extreme apex of wing hyaline; hind wings hyaline; stigmal vein almost as long as postmarginal; hind tibiæ exteriorly with a mid longitudinal row of small white spines and another row at rear; first abdominal segment smooth, rest of segments, except smooth apical margins, reticulated; first segment short; second and third segments shorter than first; fourth longer than second and third, its apical margin gently emarginate; fifth as long as second, third and fourth; sixth slightly shorter than fourth.

Male.—Length, 2.2 mm. Similar to male, except in secondary sexual characters, but blue-green in color; sculpture of head and thorax more delicate; wings hyaline; stigmal vein over half as long as postmarginal; all coxæ metallic blue-green; fore and mid femora and all tibiæ brown, with a slight metallic tinge; hind femora green; tarsi brown; no annulus on hind tibiæ.

Type locality, Dallas, Texas. Reared from *Otidocephalus carinicollis*.

Other localities: Victoria, Texas, from *Trichobaris texana* (J. D. Mitchell coll.), and from *Aræocerus fasciculatus* (Hallettsville, Texas).

Type, Cat. No. 20821, U. S. Nat. Mus.

P. magnificus, female, is much larger; its sculpture is more thimble-like; the metanotum is finely reticulated medially; the propodeum is covered with thimble-like punctures and without a row of pits along median carina; mesopleuræ and metapleuræ covered with strong reticulations; all coxæ green; rest of legs light ferruginous; hind tibiæ with medial spines not arranged in a straight row and toward apex of tibiæ often three abreast; hind femora beneath apically with a few short blunt teeth; hyaline band on forewing complete; stigmal vein short, about one-fourth as long as postmarginal, the latter about three-fourths as long as marginal. The male of *magnificus* has the spines on hind tibiæ as in the female and the stigmal vein is less than half as long as postmarginal.

Perilampus chrysopæ* var. *lævicephalus, new variety.

Female.—Length, 2 mm. Differs from *chrysopæ* in being blue, the mesonotum somewhat blue-green, the antennæ darker, being reddish only at tips; the face with the wrinkling above antennæ almost obsolete; the tibiæ entirely bluish, except that the anterior and middle have a little light color at apex.

Male.—Length, 2 mm. Resembles the female except that the face is more distinctly wrinkled, not as distinctly as in *chrysopæ* nor do the wrinkles extend downward so far, being obsolete below upper third of scape.

Described from 2 females and 1 male reared at the California State Insectary from *Chrysopa californica*.

Type, Cat. No. 20822, U. S. Nat. Mus.