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LIST OF CANADIAN COLEOPTERA.

BY JOHN D. EVANS, TRENTON, ONT.

The following list has been prepared from collections made in the Northwest Territories of Canada during the seasons of 1879, 1880 and 1881, by Prof. John Macoun, Botanist of the Geological Survey Department of Canada.

During the summer of 1879 collecting was done, starting from Fort Ellice, thence to the head of Long Lake; thence to the elbow of the South Saskatchewan; then after crossing the river, in an almost straight line to Battleford; then south to the Hand Hills, and still south to Blackfoot crossing; thence west to Calgary, and up the Bow River to the gap in the Rocky Mountains.

In 1880 collecting commenced at Brandon; thence to Moose Mountains, from there to Moose Jaw; thence by Swift Current Creek to the Cypress Hills and Fort Walsh; from Fort Walsh to Dunmore, and then towards the South Saskatchewan, and on to Humboldt, on the old north trail, and thence to Fort Ellice.

In 1881, starting from Portage la Prairie; thence to Lake Manitoba; then up Lake Manitoba and Lake Winnipegosis to its head; then up Red Deer River to its head; then down Swan River to Livingstone, and across to the Assiniboine at Fort Pelly, and down it to Fort Ellice.

The first two years were almost wholly on the plains, and collections made largely on mud by pools and in sand hills. The third year was almost wholly by water.

The species taken during each of these seasons are indicated by the abbreviated figures '79, '80 and '81, respectively.

An asterisk (*) before the several names indicates a species not heretofore recorded as having occurred in Canada, in so far as the Society's list and lists appearing subsequently in THE CANADIAN ENTOMOLOGIST are concerned.

The numbers are those of *Henshaw's* List.

The compiler is very grateful to all who have assisted in determining these insects, particular mention being made of Mr. Henry Ulke, the late Dr. John Hamilton and Prof. H. F. Wickham, for their very many acts of kindness.

Cicindelidae.

- 18c, *Cicindela Montana*, Lec., 1879.
 *25a, " *Audubonii*, Lec., '79, '80.
 25d, " *10-notata*, Say, '80.
 26a, " *generosa*, Dej., '80.
 30a, " *limbata*, Say, '79, '80.
 32, " *vulgaris*, Say, '80.
 33, " *repanda*, Dej., '80, '81.
 35, " *hirticollis*, Say, '79.
 *36, " *cinctipennis*, Lec., '79, '80.
 *55, " *lepida*, Dej., '79.

Carabide.

- *92, *Cychrus angusticollis*, Fisch., '79.
 116, *Carabus Mæander*, Fisch., '81.
 119, " *tædatus*, Fab., '79, '80, '81.
 121, " *serratus*, Say, '79, '80, '81.
 *137, *Calosoma obsoletum*, Say, '79, '80.
 142, " *calidum*, Fab., '79, '80.
 142a, " *tepidum*, Lec., '79, '80.
 *145, " *moniliatum*, Lec., '79.
 *148b, " *Zimmermanni*, Lec., '79, '80.
 153, *Elaphrus cicatricosus*, Lec., '79, '80.
 157, " *riparius*, Linn., '79.
 160, " *ruscarius*, Say, '80, '81.
 165, *Blethisa multipunctata*, Linn., '81.
 178, *Notiophilus sibiricus*, Mots., '79, '80.
 180, *Leistus ferruginosus*, Mann, '79.
 217, *Pasimachus elongatus*, Lec., '80.
 225, *Dyschirius nigripes*, Lec., '80.
 305, *Bembidium carinula*, Chd., '79, '81.
 *306, " *Lorquini*, Chaud., '79.
 307, " *littorale*, Oliv., '81.
 311, " *coxendix*, Say, '79.

313. *Bembidium nitidum*, Kirby, '79, '80.
 *, " *fuscicrum*, Motz., '79.
 359. " *scopulinum*, Kirby, '80.
 *361, " *postremum*, Say, '79, 81.
 363, " *Grapii*, Gyll., '80.
 *378, " *viridicolle*, Laf., '79, '80.
 *380, " *variolosum*, Motz.
 384, " *consersum*, Chd., '79, '80, '81.
 386, " *patruele*, Dej., '81.
 389, " *nigripes*, Kirby, '79, '80.
 *403. " *Scudderi*, Lec., '79, '80.
 *420, " *semistriatum*, Hald., '79.
 *, " *timidum*, Lec., '79, '80.
 " 2 sp., '79.
 " 2 sp., '80.
449. *Tachys nanus*, Gyll., '79.
 550. *Pterostichus punctatissimus*, Rand., '81.
 *558, " *scitulus*, Lec., '79.
 *561, " *corvus*, Lec., '79.
 565, " *lucublandus*, Say, '80.
 *567, " *convexicollis*, Say, '80.
 583, " *Luczotii*, Dej., '79, '81.
 588, " *femoralis*, Kirby, '80.
 *628. *Amara jacobinae*, Lec., '80.
 647, " *latior*, Kirby, '79.
 *654, " *longula*, Zimm., '79, '80.
 657, " *impuncticollis*, Say, '79, '80.
 658, " *littoralis*, Mann, '79, '80.
 664, " *fallax*, Lec., '79, '80.
 669, " *erratica*, Sturm., '80.
 674, " *obesa*, Say, '79, '80.
 *676, " *terrestris*, Lec., '79.
 *678, " *remotestriata*, Dej., '79, '80.
 " sp., '79.
 " sp., '79, '80.
 " sp., '80.

- 710, *Diplochila laticollis*, Lec., '79, '80.
 711, " *impressicollis*, Dej., '80.
 742, *Calathus gregarius*, Say, '80, '81.
 743, " *ingratus*, Dej., '81.
 766, *Platynus sinuatus*, Dej., '79, '81.
 *782, " *funebri*, Lec., '79, '80.
 786, " *errans*, Say, '79, '80, '81.
 796, " *corvus*, Lec., '79, '80.
 800, " *cupripennis*, Say, '79, '80.
 815, " *placidus*, Say, '79, '80.
 818, " *cupreus*, Dej., '79.
 821, " *obsoletus*, Say, '79.
 831, " *ruficornis*, Lec., '79.
 835, " *lutulentus*, Lec., '81.
 836, " *nigriceps*, Lec., '79.
 " sp., '79.
 " sp., '80.
 882a, *Lebia mæsta*, Lec., '80.
 911, *Blechnus nigrinus*, Mann, '79.
 940, *Cymindis cribricollis*, Dej., '79, '80.
 *941, " *planipennis*, Lec., '79, '80.
 996, *Chlænius sericeus*, Forst., '80.
 1021, " *pennsylvanicus*, Say, '80, '81.
 1028, " *interruptus*, Hern, '81.
 1052, *Geopinus incrassatus*, Dej., '79, '80.
 *1054, *Nothopus zabroides*, Lec., '79, '80.
 *1057, *Piosoma setosum*, Lec., '79.
 1061, *Agonoderus pallipes*, Fab., '79, '80.
 1079, *Harpalus erraticus*, Say, '80.
 1081, " *amputatus*, Say, '79, '80.
 1082, " *viridiæneus*, Beauv., '80.
 1087, " *Pennsylvanicus*, Dej., '80.
 1094, " *herbivagus*, Say, '79, '80.
 *1096, " *ventralis*, Lec., '80.
 *1099, " *ellipsis*, Lec., '80.
 1101, " *cautus*, Dej., '79, '80.
 1102, " *innocuus*, Lec., '79.
 1106, " *Lewisii*, Lec., '79.

- 1110, *Harpalus funestus*, Lec., '79.
 1117, " *basilaris*, Kirby, '79.
 " 3 sp., '79.
 " 2 sp., '80.
 1140, *Stenolophus conjunctus*, Say, '79, '80.
 1158, *Bradycellus rupestris*, Say, '80.

Dytiscidae.

- 1302, *Cœlambus impressopunctatus*, Sch., '80.
 1399, *Ilybiosoma bifarius*, Kirby, '80.
 1425, *Agabus punctulatus*, Aubé, '80.
 *1436, " *strigulosus*, Cr., '79, '80.
 1438, " *infuscatus*, Aubé, '80.
 1444, " *erythropterus*, Say, '80.
 1466, *Rhantus bistriatus*, Bergst., '81.
 1474, *Colymbetes sculptilis*, Harr., '79.
 1491, *Dytiscus Harrisii*, Kirby, '81.
 " sp., '79, '80.

(To be continued.)

A NEW PARANOMIA FROM BRITISH COLUMBIA.

BY WILLIAM H. ASHMEAD, A. M., D. SC.

Paranomia Venablesii, sp. nov.—♀. Length 10.5 mm. Black; abdominal segments 1-4 at apex with bands of a golden-yellowish pubescence; the head in front, the cheeks, the occiput, the thorax in front at the sides, the postscutellum, the legs, and the abdomen beneath, all clothed with a pale or whitish pubescence. Wings hyaline, fuliginous at apex, the costæ and parastigma black, the stigmal and internal veins testaceous. Legs mostly black, with tarsal joints 2-5 mostly yellowish. The head is rather finely, sparsely punctate, the thorax more closely and densely punctate, but with the punctures finer on the scutellum, while the metathorax is shagreened, opaque. The abdomen has the first segment minutely punctulate, the following segments being more or less alutaceous.

Type.—Cat. No. 6224, U. S. N. M.

Described from a single specimen, captured July 20th, 1902, at Vernon, B. C., by Mr. E. P. Venables.

SOME DIPTERA FROM ARIZONA.

BY JAMES S. HINE, STATE UNIVERSITY, COLUMBUS, OHIO.

In a collection of Diptera, taken in Arizona by J. Thomas Lloyd, of Cincinnati, Ohio, during the summer of 1902, I find some species of sufficient importance to warrant recording notes concerning them at this time.

Chrysops proclivis, O. S.—Specimens of this species were taken in Oak Creek Canyon, July 5th. I have not seen a record of the species from this territory heretofore.

Tabanus hyalinipennis, n. sp.—Female. Eyes bare; length 15 mm.; antennæ entirely black; proboscis black; palpi yellowish, with short white hairs; face and front brown, but this colour concealed by gray pollen; lower part of face and cheeks clothed with long white hair; front rather narrow, slightly narrowed below; frontal callosity shining brown, nearly square, and as wide as the front and with a linear prolongation above it; thorax reddish above, with four distinct black stripes, which extend back to the scutellum; margin of scutellum reddish, with white hair, remainder blackish, with black hair; femora black, with gray pollen and white hair; tibiæ reddish; apices black, or at least dark; tarsi black; wings entirely hyaline; veins and stigma brown, all the posterior cells wide open. Abdomen black dorsally; first segment broadly white on each side; posterior margin narrowly white, and a white spot beneath the scutellum; second segment with a prominent white triangle on each side of the middle and a white hind margin, which is three or four times as wide external to the triangles as between them; third segment with a narrow white marking on each side corresponding to the lateral triangles of the previous segment and white hind margin, which expands at the middle into a prominent spot, truncate before and attaining the middle of its segment; fourth segment with a narrow white hind margin, which expands into a prominent median triangle, which attains the anterior border of its segment; fifth, sixth and seventh segments with very narrow white hind margins. Ventrally the abdomen is dark, darkest on the middle, and clothed with gray pollen.

Habitat.—Oak Creek Canyon. Several specimens, two of which are before me; one taken July 2nd and the other July 7th.

In form and appearance the species suggests *T. trimaculatus*, but the hyaline wings, the abdominal markings and smaller size are distinctive. It lacks the large median white triangle on the second segment, so conspicuous in *sodalis*.

Leptomydas venosus, Lw.—The species of this genus seem not to be easily recognized, because the sexes of each species are widely different, and all the original descriptions were written from a single sex, some from males and some from females. In the collection before me are the sexes of a species, the male of which agrees very well with *venosus*. I give below the descriptions of both sexes, hoping that such may be of use to some future student of the group:

Male.—Head and its appendages black; face and front clothed with long yellowish gray pile. Thorax black, with four light-coloured stripes above; anterior and middle legs black, with extreme bases of all the tibiae yellowish; broad bases of posterior femora and tibiae yellow, otherwise these legs are black or brown; wings uniform dilute yellowish. Abdomen reddish; posterior margins or all the segments narrowly yellow, and on each side of the second segment the yellow margin surrounds a small reniform black spot; anterior margins of all the segments black; the first segment is wholly black, except the yellow hind margin, and on the sixth and seventh segments the black is mostly confined to the sides. Length 15 mm.

Female.—Whole insect reddish-yellow; eyes, proboscis and part of front blackish; thorax with light yellow stripes; abdominal segments margined behind with distinct light yellow; on each side of the second segment this yellow margin includes a small reniform black spot; spines at end of abdomen red; wings coloured as in the male. Length 19 mm.

In both male and female the first posterior cells of the wings are wide open.

Habitat.—Both sexes taken in Oak Creek Canyon, June 30th.

In the female the black proboscis, the lack of black stripes on the lateral margins of segments (two to seven) and the red spines at the end of the abdomen serve to distinguish this sex from *brachyrhynchus* of Osten Sacken.

Myiolepta aurinota, n. sp.—Male. Length 9 mm. In general coloration the antennae are reddish, but the first two segments are darker and more shining than the third; arista at base concolorous with the

segment that bears it, at apex darker. Region surrounding the ocelli, a space above the antennæ, a triangular spot on the face, including the facial callosity and cheeks, shining black; remainder of the face and front gray pollinose, with sparse white hairs near the eyes. Mesonotum, including the scutellum, entirely densely clothed with coarse golden hair; pleura with white hair; wings nearly hyaline, but from certain views they appear slightly clouded; general colour of legs black, with white hair; all the tibiæ yellowish at base; first two segments of each of the middle and hind tarsi yellow; first two segments of each front tarsus dusky, but lighter in colour than the three remaining segments; all the femora swollen, and with short black spines below on apical parts. Abdomen black, clothed on dorsum with black and golden hair, on sides with white hair; the black hair of the dorsum is very short, and distributed as follows: the anterior half of the second segment, a rectangular patch on anterior middle of the third segment, occupying two-thirds of the length and over half of the width of this segment, and a triangular patch on the anterior third of the fourth segment. The golden hair is longer and coarser than the black, and most dense on the fourth segment. The first segment, and all the sutures between segments, are thinly gray pollinose, giving the effect to the unaided eye of gray bands.

Habitat.—Phoenix, Arizona. Taken June 18th.

The species has most affinities with *strigilata*, Loew, and *auricaudata*, Williston, but on comparison with the former species in the U. S. National Museum, I find the two have a very different appearance. From the latter the coloration of the abdomen and legs, the lack of "golden tomentum" on the frontal triangle, and the larger size are sufficient to distinguish it. In accordance with what has been observed in related species, I should expect that the vestiture of the female is paler than in the male.

Milesia bella, Townsend.—Several specimens of this beautiful syrphid were taken at Elden Mountain, June 17th. The black front tibiæ and tarsi and the thoracic markings easily distinguish the species from *ornata*, Say, which is our common eastern member of the genus. A reference to Townsend's fine description in the *Annals and Magazine of Natural History*, Ser. 6, Vol. XIX., 142, will reveal the characters of *bella* and its differences from *ornata*. Townsend's types were taken in southern New Mexico.

A LIST OF CALIFORNIA APHIDIDÆ.

BY WARREN T. CLARKE, BERKELEY, CALIF.

Our knowledge of the group Aphididæ in California has been limited in the past to certain forms that were of economic importance in their relations to cultivated crops. No systematic list of these interesting insects has heretofore been attempted in this region, and this has not been due to any lack of material, for the varying conditions of climate here seem to be particularly favorable to them.

In Hunter's list of the Aphididæ of North America (Bull. No. 60, Iowa Ag. Ex. Sta., 1901) we find nine forms that may be considered as reported from California. Only five of these forms are directly referred to this State, while the other four are stated to be found, as in the case of *Nectarophora avenæ*, Fabr., "throughout the United States." One of the five forms directly referred to the State is *Aphis mali*, Fabr. The writer is doubtful of the occurrence of *mali* here, and believes that other species have been confused with it, and therefore does not include it as a California form. With this exception the following list is made up from the reported Aphididæ of California and from the writer's own collections in the State during the past eighteen months.

Forty-three species are listed, including ten new species. This number does not by any means exhaust the group so far as this State is concerned, as it represents but few localities, yet it is believed that the presentation of the list at this time is desirable, in that it may stimulate further study of the group by other observers.

TABLE OF GENERA.

A.	Third discoidal vein wanting	Phylloxera.
AA.	" " " simple	Pemphigus.
AAA.	" " " one-branched	Schizoneura.
AAAA.	" " " two-branched.	
B.	Antennæ five-jointed	Lachnus.
BB.	Antennæ seven-jointed.	
C.	Style long.	
D.	Frontal tubercles toothed internally	Phorodon.
DD.	Frontal tubercles not toothed internally.	
E.	Frontal tubercles approximate	Nectarophora.
EE.	Frontal tubercles distant	Myzus.
CC.	Style short.	

- F. Honey tubes long.
 G. Antennæ on frontal tubercles Rhopalosiphum.
 GG. Antennæ not on frontal tubercles.
 H. Honey tubes clavate Siphocoryne.
 HH. Honey tubes cylindrical.
 I. Body long Hyalopterus.
 II. Body short Aphis.
 FF. Honey tubes short.
 J. Antennæ shorter than body Chaitophorus.
 JJ. Antennæ longer than body.
 K. Honey tubes longer than
 broad Drephanosiphum.
 KK. Honey tubes shorter than
 broad Callipterus.

PHYLLOXERA—*Vastatrix*, Planchon; *Vitis vinifera*; California.

PEMPHIGUS.—Stigma more than twice as long as broad, *populicaulis*; less than twice as long as broad, *bete*.

Populicaulis, Fitch; cottonwood and poplar; Fresno, Berkeley, Rumsey.

Bete, Doane; sugar-beet, Canaigre (*Rumex hymenosepalous*); red dock; Berkeley, Placer County, Palo Alto.

While these two forms of Pemphigus are reported as separate species, it is the opinion of the writer that it will be found that one is a migrant form of the other. I have noted *bete* to be extremely prevalent on sugar beets planted near cottonwoods infested with *populicaulis*.

SCHIZONEURA—Abdomen chocolate-brown, *lanigera*; pale green, *pinicola*; black, *querci*; lilac brown, *Americana*.

The colour effect is best obtained by bathing the fresh specimens for a short time in 95% alcohol.

Lanigera, Haus.; apple; throughout the State.

Pinicola, Thos.; Pine (*P. radiata*); Berkeley, Palo Alto.

Querci, Fitch; various oaks; Berkeley.

Americana, Riley; elm; Berkeley, Newcastle.

LACHNUS.—*Alnifoliae*, Fitch; alder (*Alnus*, sp.); Berkeley, Colfax.

CHAITOPHORUS.—*Viminalis*, Monell; willow; Newcastle, Watsonville.

CALLIPTERUS—

A. Body with dorsal setæ.

B. Body less than twice as long as broad.

- C. Colour very palehyalinus.
 CC. Colour dark yellowcoryli.
 BB. Body more than twice as long as broad.
 D. Four rows of setiferous tubercles on back of
 abdomen castaneæ.
 DD. Setiferous tubercles not in rows arundicolens.
 AA. Body without dorsal setæ.
 E. Seventh joint of antennæ shorter than sixth caryæ.
 EE. Seventh joint of antennæ longer than sixth betulæcolens.
Caryæ, Monell; black walnut; Berkeley.
Betulæcolens, Fitch; birch; Berkeley.
Castaneæ, Fitch; chestnut; Berkeley.

Arundicolens, n. sp.—Apterous viviparous female.

Length of body, 1.54 mm.; width 69 mm. Length of joints of antennæ: III., .77 mm.; IV., .50 mm.; V., .54 mm.; VI., .27 mm.; VII., .27 mm. Body setiferous; general colour light lemon-yellow to darker yellow. Nectaries reduced to tubercles. Cauda wart-like. Rostrum reaching to second coxæ. Antennal joints III., IV. and V. black at outer ends. Tarsi dusky. Eyes red-brown.

Alate viviparous female.

Length of body, 2.19 mm.; width, .81 mm. Expanse of wings from tip to tip, 7.19 mm. Length of joints of antennæ: III., 1.04 mm.; IV., .58 mm.; V., .61 mm.; VI., .35 mm.; VII., .35 mm. General colour of body light lemon-yellow. Wings hyaline; veins and stigma greenish. Cauda short, tip black. Nectaries reduced to tubercles. Tarsi dusky. Eyes red. Sixth antennal joint dusky; Vth and IVth black at outer end; IIIrd ringed with black one-third distance from joint II. and at outer end.

Small colonies, and also distributed singly on under sides of leaves of bamboo (*Arundo*, sp.), Berkeley.

Hyalinus, Monell; oak (*Quercus imbricata*); Berkeley.

Coryli, Gœtze; hazelnut (*Corylus*, sp.); Berkeley.

DREPHANOSIPHUM.—*Acerifolii*, Thos.; live oak; Berkeley.

HVALOPTERUS.—*Arundinis*, Fabr.; apricot; Berkeley.

APHIS.—

- A. Antennæ not more than half the length of body.
 B. Honey tubes reaching not quite half way to tip of abdomen.
 C. Honey tubes red-brown Alamedensis.
 CC. Honey tubes yellow calendulicola.
 CCC. Honey tubes black.

- D. Body less than twice as long as broad *persicae-niger*.
 DD. Body more than twice as long as broad *maidis*.
 BB. Honey tubes reaching more than half way to tip of abdomen.
 E. Cauda more than twice as wide at base as at
 tip (conical) *mori*.
 EE. Cauda about as wide at base as at tip
 (filiform) *œnotheræ*.
 AA. Antennæ three-fourths or more length of body.
 BBB. Honey tubes reaching beyond tip of abdomen.
 F. Cauda inconspicuous *sorbi*.
 FF. Cauda evident.
 G. Cauda about as wide at tip as at base
 (filiform) *gossypii*.
 GG. Cauda more than twice as wide at tip as at
 base (conical) *œnothi*.
 BBBB. Honey tubes not reaching to tip of abdomen.
 H. Cauda inconspicuous *brassicæ*.
 HH. Cauda evident *crategi*.

Brassicæ, Linn.; throughout the State on various cruciferae.

Calendulicola, Monell; marigold; Berkeley.

Crategi, Monell; hawthorn (*Cratægus*, sp.); Berkeley.

Gossypii, Glover; shepherd's-purse, watermelon; Newcastle, Wat-
 sonville.

œnothi, n. sp.—Apterous viviparous female.

Length of body, 1.46 mm.; width, 1.19 mm. Length of joints of antennæ: III., .31 mm.; IV., .16 mm.; V., .16 mm.; VI., .13 mm.; VII., .27 mm. Body smooth, globular; general colour clouded yellow-brown. Nectaries reaching beyond end of body, black. Cauda conical, inconspicuous. Legs and antennæ of a uniform yellow-brown colour. Eyes black.

Alate viviparous female.

Length of body, 1.54 mm.; width, .58 mm.; expanse of wings from tip to tip, 5.58 mm. Length of joints of antennæ: III., .38 mm.; IV., .19 mm.; V., .19 mm.; VI., .15 mm.; VII., .27 mm. Colour of head and thorax jet black; abdomen clouded yellow-brown. Wings opalescent, veins dark green. Third discoidal vein obsolete at base. Cauda conical, yellow-brown in colour. Nectaries reaching beyond tip of body, black. Tibiæ yellow-brown except outer end, which is dusky. Other joints of legs dusky. Antennal joints yellow-brown. Eyes black.

Large colonies on tender tips and on blossoms of *Ceanothus integrifolius*, Colfax.

Alemelensis, n. sp.—Apterous viviparous female.

Length of body, 1.27 mm.; width, .50 mm. Length of joints of antennæ: III., .15 mm.; IV., .08 mm.; V., .15 mm.; VI., .08 mm.; VII., .23 mm. Body smooth, general colour yellow-green to red-brown. Nectaries red-brown, reaching not quite half-way to tip of abdomen. Cauda conical. Eyes red.

Alate viviparous female.

Length of body, 2.31 mm.; width, .77 mm. Expanse of wings from tip to tip, 6.15 mm. Length of joints of antennæ: III., .50 mm.; IV., .31 mm.; V., .19 mm.; VI., .12 mm.; VII., .38 mm. Head and thorax black. Abdomen yellow-green to dark brown. Wings hyaline, veins yellowish. Third discoidal vein obsolete at base. Cauda conical and of same colour as rest of abdomen. Nectaries not reaching to end of body, black. Legs dusky. Antennæ dusky yellow. Eyes dark red. Flocculent masses of wax covering abdomen.

Rather large and numerous colonies on leaves of Greengage. Alameda County.

Maidis, Fitch; sorghum, corn; Berkeley, Watsonville.

Mori, n. sp.—Apterous viviparous female.

Length of body, 1.04 mm.; width, .65 mm. Length of joints of antennæ: III., .12 mm.; IV., .06 mm.; V., .06 mm.; VI., .12 mm.; VII., .15 mm. Head and thorax fuscous, abdomen dark green. Nectaries fuscous, reaching to tip of abdomen. Cauda conical. Tarsi dusky, other joints of legs yellow green. A row of six dark spots extends from the nectaries to the thorax on each side of the abdomen. Rostrum extends to middle coxæ. Eyes dark.

Alate viviparous female.

Length of body, 1.22 mm.; width, .54 mm. Expanse of wings from tip to tip, 3.77 mm. Length of joints of antennæ: III., .15 mm.; IV., .12 mm.; V., .12 mm.; VI., .08 mm.; VII., .23 mm. Head and thorax greenish-black. Abdomen yellowish-green, with two black dorsal patches. Wings hyaline, veins greenish. Stigma, long, narrow, greenish. Cauda conical, dusky. Nectaries black, reaching to tip of abdomen. Legs and antennæ dusky. Eyes black.

Found on under sides of leaves of mulberry (*Morus*, sp.), appearing in enormous numbers, and giving the attacked trees a dirty, smutty appearance.

Enothera, Oestl.: *Enothera bectiana*, *Epilobium*; Berkeley.

Persica-niger, Smith; peach, plum; Placer County.

Sorbi, Kalt; apple; Placer County.

SIPHOCORYNE.—*Feniculi*, Pass.; sweet fennel (*F. vulgare*); Berkeley, Newcastle.

RHOPALOSIPHUM.—*Dianthi*, Schrank; English ivy; Berkeley.

MYZUS.—*Cerasi*, Fabr.; Greengage; Berkeley.

PHORODON.—*Scrophulariae*, Thos.; *Scrophularia*, sp.; Berkeley.

Humuli, Schrank. Reported as present on hops and *Prunus domesticus*, in this State. Unknown to me.

NECTAROPHORA.—

- A. Antennæ as long or longer than body.
- B. Honey tubes reaching beyond tip of abdomen.
- C. Honey tubes black valerianiae.
- CC. Honey tubes clouded yellow.
- D. Body more than twice as long as broad.
- E. Cauda more than twice as wide at base as at tip (conical) rosæ.
- EE. Cauda about as wide at base as at tip (filiform). Californica.
- DD. Body less than twice as long as broad.
- F. Cauda more than twice as wide at base as at tip (conical) rhamni.
- FF. Cauda about as wide at base as at tip (filiform) baccharidis.
- BB. Honey tubes reaching to tip of abdomen.
- G. Honey tubes black sonchella.
- GG. Honey tubes yellow lycopersici.
- AA. Antennæ shorter than body.
- H. Honey tubes and cauda black citrifolii.
- HH. Honey tubes and cauda clouded yellow. jasmini.

Citrifolii, Ashm.; orange; Azusa.

Jasmini, n. sp.—Apterous viviparous female.

Length of body, 1.73 mm.; width, .58 mm. Length of joints of antennæ: III., .23 mm.; IV., .23 mm.; V., .19 mm.; VI., .12 mm.; VII., .38 mm. General colour yellowish-green. Nectaries reaching beyond tip of abdomen, clouded yellow in colour, with outer ends darker. Tarsi dusky; other joints of legs light yellow. Antennal joint III. light yellow; others dusky. Rostrum reaching to third coxæ. Eyes pink.

Small colonies on under sides of leaves of jasmin. No winged specimens found. Berkeley.

Sonchella, Monell; *Sonchus*, sp. (Sow thistle); Berkeley, Palo Alto, Newcastle.

Lycopersici, n. sp.—Apterous viviparous female.

Length of body, 2.31 mm. width, .58 mm. Length of joints of antennæ: III., .65 mm.; IV., .54 mm.; V., .54 mm.; VI., .15 mm.; VII., .77 mm. General colour green. Nectaries yellow, occasionally dusky at outer end, reaching to tip of abdomen. Cauda prominent, green, outlined with black. Tarsi black. Tips of tibiæ black. Rest of tibiæ and femora dusky. Eyes red

Alate viviparous female.

Length of body, 2.50 mm.; width, .96 mm. Expanse of wings from tip to tip, 8.65 mm. Length of joints of antennæ: III., .77 mm.; IV., .58 mm.; V., .58 mm.; VI., .19 mm.; VII., .77 mm. General colour green. Nectaries yellow, occasionally dusky at outer end, reaching beyond tip of abdomen. Cauda prominent. Tarsi black. Tip of femur and tibiæ black, rest of joints of legs greenish, yellow. Antennæ dusky. Wings hyaline, veins and stigma yellow-green. Third discoidal vein obsolete at base.

A handsome insect, found on tomato, generally on the blossoms, which they destroy. Occasionally found on tender leaves. Individuals isolated or in very small colonies. Berkeley.

Valerianæ, n. sp.—Apterous viviparous female.

Length of body, 2.85 mm.; width, 1.15 mm. Length of joints of antennæ: III., .81 mm.; IV., .69 mm.; V., .58 mm.; VI., .19 mm.; VII., .88 mm. General colour of body yellow-brown. Nectaries black, reaching beyond tip of abdomen. Cauda prominent. Antennæ dusky. Tarsi and outer ends of femur and tibia black. Rest of joints of legs yellowish. Rostrum reaching to third coxæ and tipped with black. Eyes yellowish.

Alate viviparous female.

Length of body, 2.92 mm.; width, 1.15 mm. Expanse of wings from tip to tip, 9.61 mm. Length of joints of antennæ: III., 1.00 mm.; IV., .77 mm.; V., .65 mm.; VI., .19 mm.; VII., .96 mm. Antennæ and head, back of thorax, nectaries and outer ends of femora and tibiæ black. General colour of rest of body and legs yellow-brown. Wings greenish-yellow, veins darker. Third discoidal vein obsolete at base. Rostrum reaching to second coxæ. Cauda prominent. Nectaries reaching beyond tip of abdomen. Eyes black.

Small colonies on growing tip of valerian (*Valeriana officinalis*), Berkeley.

Rhamni, n. sp.—Apterous viviparous female.

Length of body, 1.73 mm.; width, .81 mm. Length of joints of antennæ: III., .50 mm.; IV., .38 mm.; V., .38 mm.; VI., .19 mm.; VII., .96 mm. General colour green. Nectaries greenish-yellow, reaching beyond tip of abdomen. Cauda prominent, conical. Legs and antennæ light yellow. Rostrum reaching to middle coxæ. Eyes dark red.

Small colonies on under sides of leaves of *Rhamnus Californica*. No winged specimens found. Lander.

Baccharidis, n. sp.—Apterous viviparous female.

Length of body, 1.38 mm.; width, .62 mm. Length of joints of antennæ: III., .58 mm.; IV., .27 mm.; V., .27 mm.; VI., .11 mm.; VII., .38 mm. General colour of body green. Nectaries clouded yellow, reaching well beyond tip of abdomen. Antennæ, tibiæ and tarsi dusky. Cauda prominent, filiform. Rostrum dusky, reaching to second coxæ. Eyes dark red.

Alate viviparous female.

Length of body, 2.11 mm.; width .77 mm. Expanse of wings from tip to tip, 6.92 mm. Length of joints of antennæ: III., .62 mm.; IV., .31 mm.; V., .31 mm.; VI., .15 mm.; VII., .38 mm. General colour of body green. Nectaries, tip of femora, tibiæ and tarsi black. Wings hyaline, stigma greenish, veins dusky. Cauda prominent. Nectaries reaching much beyond tip of abdomen. Eyes dark red.

Isolated individuals and small colonies on *Baccharis*, sp. Berkeley.

Rosæ, Linn. Very common on rose in many parts of the State.

Californica, n. sp.—Apterous viviparous female.

Length of body, 1.92 mm.; width, .77 mm. Length of joints of antennæ: III., .35 mm.; IV., .38 mm.; V., .50 mm.; VI., .19 mm.; VII., 1.08 mm. General colour green. Joints of the antennæ and the tarsi black. Rostrum reaching to second coxæ, tip black. Nectaries yellow-green, reaching beyond tip of abdomen. Eyes pale.

Small colonies on tips of new growth of willow. No winged individuals present. Newcastle.

Avenæ, Fabr. Present in the State, but unknown to me, and not included in synoptical table.

FOUR NEW SPECIES OF CULEX.

BY D. W. COQUILLET, WASHINGTON, D. C.

Culex cantator, new species.—Female. Near *sylvestris*, but the seventh abdominal segment almost wholly yellow scaled, etc. Head black, oral margin and base of antennæ yellow, remainder of antennæ and the proboscis black, palpi brown, its scales chiefly concolorous, no cluster of white hairs or scales at their apices; narrow scales of middle of occiput golden yellow, the upright ones chiefly black, sides of occiput covered with depressed whitish scales and with a small cluster of black ones; thorax reddish brown, scales of mesonotum golden yellow, becoming pale yellow in front of the scutellum and on the pleura; abdomen black, its scales black, except a crossband of yellowish white ones at base of each segment, the bands considerably narrowed at the middle, similar scales scattered over the sixth and nearly the whole of the seventh segment and along apices of the two preceding segments; legs yellow basally, becoming brown on the tibiæ and tarsi, scales of femora chiefly pale yellow, of the tibiæ mostly black, those on the hind side pale yellow, on the bases of the tarsal joints whitish, those on the second joint of the hind tarsi covering about one-fourth the length of the joint, front tarsal claws toothed; wings hyaline, lateral scales of the veins long and narrow, hind crossvein nearly its length from the small crossvein, petiole of first submarginal cell from one-half to four-fifths as long as the cell; length, 4 mm. One specimen bred May 6, by Mr. LaRue Holmes.

Habitat.—Summit, New Jersey.

I have also examined 8 females and as many males, bred by Prof. J. B. Smith, from the salt-marshes of New Jersey. In the male the scales of the palpi are black, those of the under side and at bases of the last two joints yellowish white, no whitish band at base of the antepenult joint.

Prof. Smith informs me that the larva is readily separated from that of *sylvestris*.

Culex aurifer, new species.—Female. Near *triseriatus*, but the scales on sides of mesonotum golden yellow instead of white, and the venter is without crossbands of black scales. Black, the halteres, coxæ and femora largely yellow; scales and hairs of palpi brown, scales of occiput golden yellow, the upright ones brown; scales in middle of mesonotum brownish black, those on the sides and many in front of the scutellum golden yellow, those of pleura pale yellow; scales of abdomen black, those on the venter pale yellow, sometimes encroaching a trifle on the dorsum,

hairs of the first segment and at the apices of the others pale yellow; scales of femora and on posterior side of tibiæ pale yellow, remaining scales of tibiæ and those on the tarsi black, front tarsal claws toothed; wings hyaline, lateral scales of the veins long and narrow, hind crossvein about its length from the small crossvein, petiole of first submarginal cell three-fifths the length of the cell; length, 4.5 mm.

Three specimens, collected June 22 and 25, by Dr. H. G. Dyar.

Habitat.—Centre Harbour, N. H.

I have also examined two males and two females from Lahaway, N. J., bred by Dr. J. B. Smith, who writes that the larva is very different from that of *triseriatus*. The adult male is similar to the female except that the hairs of the palpi are chiefly whitish, and the dorsum of the abdomen has several yellow scales on the apical half.

Culex nanus, new species.—Female. Near *jamaicensis*, but much smaller, the light-coloured scales on the tibiæ not collected into spots, mesonotum without round spots of yellowish scales, etc. Black, the base of the antennæ except the first joint, a band at middle of proboscis, the halteres and bases of femora yellow; scales and hairs of palpi black, appressed scales of occiput golden yellow, the upright ones black, scales of mesonotum golden yellow, those of the abdomen black and with a broad crossband of whitish ones on the hind margin of each segment, the last two segments nearly wholly whitish scaled; scales of venter white, those of femora and tibiæ mixed black and whitish, the latter forming a ring near three-fourths the length of each femur, scales of tarsi black, those at narrow bases of the joints whitish, tarsal claws simple; wings hyaline, the scales mixed black and white, the black ones not collected into spots, lateral scales of the anterior veins narrowly lanceolate, those of the other veins almost linear; length, 3 mm. Four specimens collected at Key West, Florida, in August, 1901, by Mr. August Busck, and six by Mr. E. A. Schwarz, April 1 to 3, 1903.

Type.—No. 6893, U. S. National Museum.

Culex discolor, new species.—Female. Differs from the above description of *nanus* as follows: palpi with a cluster of white scales at the apices, upright scales of occiput yellow, whitish crossbands of abdomen prolonged forward in the middle, crossing or almost crossing the segments, scales on posterior side of front and middle tibiæ and on anterior side of the hind ones almost wholly pale yellow, first tarsal joint bearing many yellow scales, black and yellow scales of wings not evenly distributed, the

black ones forming a distinct spot at forking of the second vein with the third, another on upper branch of fifth vein at the hind crossvein, and a third on the apical third of the last vein, remaining scales of this vein wholly yellow; length 4 mm. A specimen from Delair, New Jersey, received from Prof. J. B. Smith.

Type.—No. 6894. U. S. National Museum.

CORRECTIONS AND NOTES ON DR. DYAR'S LIST OF NOCTUIDS.—II.

BY A. RADCLIFFE GROTE, HILDESHEIM, GERMANY.

Page 99. *Apatela*. As might have been expected from the inconspicuous markings and uniform gray colour of the moths, the identifications of species of *Acronycta*, described by Walker and Guenée, have proved difficult and often contradictory. I am now inclined to waive all objections and accept Dr. Dyar's list as it stands. The only point I make is, the difficulty I have in believing that, having identified *xyliniformis*, Guen., already and originally for Riley, I should have redescribed specimens at a later period as *pallidicoma*; it seems to me yet possible that two forms are here "mixed up," although I know *xyliniformis* to be inconstant.

106. *Fragilis* having been transferred to *Apatela*, *diphtheroides* becomes type of *Microcoelia*. Guenée writes *Diphthera*, following Ochseneimer. Hübner originally wrote *Diphthera*, which is the correct Greek form.
107. The generic term should read "*Cyathissa*," not "*Cyathisa*."
112. This genus should be called *Monodes*, Guen., type *nucicolora* (r. *nucicolor*); the type of *Oligia* being *strigilis*.
113. *Crasia*, Auriv., 1891, Staud. and Rebel, 295, is a synonym of *Hillia*, Grote, 1883. According to the European catalogue *iris*, Zett., is an older name for the variable species.
121. The genus is "*Momaphana*," not "*Momophana*."
120. No. 1267. The name *illepida* should be preferred, since the type of *diversilineata* had patched wings and the species is irrecognizable from this description, and the identification of the type uncertain.
124. As I have shown in these pages, the citation to *Pseudanarta* of Hy. Edwards is spurious. There is no such name in Proc. Cal. Acad. Sci., Pac. Coast, Lep., Nos. 1 to 22.

132. *Blanda*, cited, I believe, wrongly under *Metalepsis*, is repeated in the right place on page 178 under *Pseudoglaea*. It should be struck out here.
138. Prof. Smith is responsible for the confusion in the name of this common species. *Subgothica* of Stephens is = *jaculifera*, Guen. The original *subgothica* of Haworth is claimed as British by Tutt. In the meantime Slingerland says *subgothica* of Haworth is *tricosa*, Lintner. My original determination should not have been altered. But whether *jaculifera*, Guen., *tricosa*, Lintner, and *herilis*, Grote, which I still claim as the correct scientific names for the three forms (leaving out Haworth's variously interpreted name entirely, for the sake of clearness and precision) are distinct species and not forms of one, seems not definitely known.
140. The new name *Paragrotis* is unnecessary. *Carneades* being preoccupied, the genus should be called *Pleonectopoda*, with the type *Lewisii*, which has in any way priority. In the meantime I cannot but believe the genus must be represented in Europe, and that some Hübnerian name will eventually be found for it. Others of our American names at expense of *Agrotis*, Lederer, may be found in the same case.
149. It should be *aratrix*, not "*atratrix*."
150. From photographs and descriptions, I cannot believe that Prof. Smith's *profundus* and *obscurus* are distinct species from our eastern *Anytus sculptus*.
154. At length the dispute as to *comis* is decided in my favour, and the type is therefore not "like typical *olivacea*, but so spread that the insect appears more plump, shorter winged and differently marked"! It now appears that after having disposed of my species in this manner, Prof. Smith has redescribed the form or species five times, thus affording ample proof of the incorrectness of the original statement. Time, as Mr. Strecker used to say, at length sets all things even.
157. Instead of *Neuronia* (preocc.) it would appear that *Epineuronia*, Rebel, should be used for No. 1883.
167. The term *Acerra* with the type *normalis* should be used here as being more correct and also earlier published than *Stretchia*, described as a notodont, and which I regard as a synonym of

- Perigrapha*, Led. I am not agreed with the reference of *muricina* to *plusiformis*, but I have no material of the former to compare.
173. For *Asteroscopus*, Boisd. *Brachionycha*, Hübn., should be used; see Staud. & Rebel, p. 181, l. c.
177. *Xanthia*. The type is *paleacea*. According to Staud. & Rebel, 207, the species cited as "*flavago*," No. 2199, should be called *lutea*, Ström.; it belongs to *Citria*, Hübn. From the photograph *pulchella* belongs to *Orthosia*; this specific name is too often used. *Puta* is same as *Orthosia euroa*.
181. Morrison sent me *apiata* as "*Glea*, n. s.," Bull. B. S. N. S., 211, 1875. It was not type of *sericea* which I noted, Bull. Brklyn Ent. Soc., 37, 1880, but a spec. of *venustula* so named. But Morrison's original description cannot well apply to a *Glea* at all, as elsewhere shown by me. At any rate *venustula* is being called *sericea*.
- No. 2183. The authority should read Grote, not Grote & Robinson.
2197. I regard *angulata (exprimens)* as a distinct species.
- Page 178. It is my fault that *Trigonophora* is here used. The genus should be *Habryntis*, Lederer, 1857. I have a specimen of the green *H. scita*, which shows an orange-brown tinting, and recalls thus more nearly the American species.
179. For "*Cosmia*, Ochs," read *Xanthia*, Hübn.
- No. 2222. I prefer *ferruginoides* for the species and *bicolorago* for the variety, since this arrangement brings the forms into correspondence with the original descriptions. It ought to make no difference which stands first on Guenée's page. The important point is, that the name is sustained by the original description, which should always be looked up, and is the only basis and warrant for the application of the name.
2354. *Arcifera* is a dimorphic ♀ form of *Spraguei*; a similar variation is shown by *brevis* and *atrites*. I figure both sexes of *Spraguei* with yellow hind wings. I wonder how many times more I must repeat this. I have never seen a male *arcifera* with black secondaries.
2358. I think *mortua* might stand as an immaculate form of *Packardii*; *nobilis* merely has the lines more distinct than the latter, better written.

2617. For "*pentia*" read *penita*.

2650. For "*lixivia*" read *lixiva*.

2696. I draw attention to my papers in CAN. ENT, Vols. IX. and XI. I believe the three forms here cited to be distinct. I refer *tortricina* to *Spragueia*. *Fruva fasciatella* and *obsoleta* appear to differ in the structure of the front as well as in ornamentation. The Californian *acerba* is near *fasciatella*. I do not know who is responsible for the present jumble. If these forms are not kept separate they will inevitably be described over again.

A NEW CECANTHUS FROM ILLINOIS.

BY E. S. G. TITUS, WASHINGTON, D. C.

Cecanthus Forbesi, n. sp.—♂. General colour pale yellow. Length to tip of wings 17 mm.; greatest width across closed wing-covers, 3.5 mm. Very slender, elongate in general shape, somewhat resembling *Zabea bipunctata* (DeG.), but the outline of the closed wing-covers is more elongate.

Face rather more elongate than in other species in the Cecanthinae; *maxillary palpi* 5-jointed, *first* and *second* short, broadened at tips; *third* slender, elongate, as long as fourth and fifth united; *fourth* slightly clavate, distinctly constricted at the middle; *fifth* shorter than fourth, elliptical, elongate, and very dark; all the joints pubescent; *labial palpi* with *first* joint short; *second* $\frac{1}{2}$ longer; *third* slightly longer than second, obliquely truncate at tip and very slender at base. Eyes reddish-brown. Antennae filiform, almost as long as the body; all the joints except basal two alternately equal in length up to 20th joint (except also the fifth, it being slightly elongate), 12-15th joints not elongated. First basal joint with a broad longitudinal black stripe on the inner side beneath, and a slight trace of a brownish horizontal line near the apex on the outside; second joint with two longitudinal parallel black lines beneath. This joint and those following have each at their apex, beneath, a brown line.

Thorax elongate, narrower anteriorly; sides deflexed, with their lower margins slightly reflexed. Wing-covers flattened, very narrow; wings $\frac{1}{2}$ longer than covers. Hind legs long and slender, their tibiae armed with six pairs of medium spines, all tipped with black. All the tarsi and claws black. Abdomen quite dark beneath.

Male cerci reaching almost to tip of the wings.

Habitat.—Urbana, Ill., September; C. H. Hart.

This differs from typical *Æcanthus* by not having maxillary palpi with last three joints elongate, subequal, and last joint excavated at tip beneath; from *Zabea* by not having fifth joint of maxillary palpi longer than third and fourth very short. It can easily be separated by the antennal characters noticed above from other species in the subfamily (*Æ. argentinus* and *Æ. californicus* not seen.)

In all other species examined there were several joints between the second and twentieth of the antennæ that were much elongated.

This species was first noticed by the author when classifying the species of *Æcanthinae* in the Ill. State Laboratory of Nat. History, for the purpose of making some food studies in the group. It is described at the request of the Director of the Laboratory, Dr. S. H. Forbes, in whose honour I have named the species.

NOTES ON CULEX KELLOGGII, THEOBALD.

BY D. W. COQUILLET, WASHINGTON, D. C.

In the CANADIAN ENTOMOLOGIST for August, Mr. Theobald described a *Culex Kelloggii* as new; the description agrees well with the specimens on which I founded *Culex tarsalis**, and undoubtedly refers to the same species.

My specimens were from the same lot as the one which Dr. Williston described as *Culex*, n. sp.†, to which description Lieut. Giles applied the name of *Culex Willistoni*, n. sp.‡; the latter name is therefore also a synonym of *tarsalis*.

On page 25 of the Kansas University Science Bulletin, June, 1903, Mr. C. F. Adams described a *Culex affinis*, n. sp. (not of Stephens, 1825), which is evidently founded on a somewhat abraded specimen of *tarsalis*.

The synonymy at present is therefore as follows:

CULEX TARSALIS, Coquillett, 1896.

Culex, n. sp., Williston, 1893.

Culex Willistoni, Giles, 1900.

Culex affinis, Adams, June, 1903.

Culex Kelloggii, Theobald, August, 1903.

*Can. Ent., Feb., 1896, p. 43.

†North American Fauna, No. 7, May 31, 1893, p. 253.

‡Handbook of Gnats or Mosquitoes, 1900, p. 281.

EUTHRIPS AND HEDYCHRIDIUM IN NEW MEXICO.

BY T. D. A. COCKERELL, EAST LAS VEGAS, N. MEX.

THRIPIDÆ.

Euthrips tritici (Fitch.).—At Las Vegas, Hot Springs, N. M., on May 17, 1903, I found *Ribes cereum*, Dougl., presenting numerous flower-galls of rather pumpkin-like form and greenish-white colour, about 9 mm. long and 8 broad. These consisted of the swollen and deformed flowers, the walls of the calyx being thickened and greatly inflated. I rather expected to find in them dipterous larvæ, but they contained nothing but thrips, which, I am sure, is responsible for the damage. After careful comparison with the published accounts, and especially that of Mr. W. E. Hinds, I am quite unable to separate the thrips from the well-known *Euthrips tritici*.

CHRYSIDIDÆ.

Hedychridium amabile, sp. n.—Length about 3 millim., shining green and crimson. Head yellowish green, the vertex crimson, shading into yellow; antennæ black; thorax green, the pro- and mesothorax mostly crimson dorsally, the crimson shading into golden at the sides; scutellum suffused with the same colours; sides of post-scutellum, and hind corners and narrow hind border of prothorax, more or less brilliant blue; abdomen yellowish-green shot with crimson. Ocelli in a not far from equilateral triangle; prothorax and mesothorax, seen from above, about equal in length; prothorax with large, close subconfluent punctures; mesothorax with well-separated punctures of various sizes; triangular area at base of metathorax with no median ridge, the area is minutely transversely ridged, except at the lateral corners, where the ridges run obliquely; sides of metathorax irregularly cancellate; abdomen very closely punctured, third segment without any fovea or peculiarity of sculpture; legs dark, basal half of tarsi light reddish. When the abdomen is viewed laterally, the apex of the second segment is level with the base of the third.

Hab.—Mesilla Park, N. M., on campus of Agricultural College, May 8, 1900. (*Cockerell*). A lovely little species, known from others by its metathoracic sculpture.

I will take this opportunity to record *Chrysis inflata*, Aaron (det. du Buysson), from the Wiegand Ranch, near Las Vegas, N. M., March 1. With this the recorded New Mexico Chrysididæ now number 19 species.

TWO NEW PTINIDÆ.

BY C. SCHAEFFER, MUSEUM OF THE BROOKLYN INST. OF ARTS AND SCIENCES.

A number of new species, either entirely new or known only from Mexico or Central America, have been brought back by me from the lower Rio Grande. The description of these new species, together with a list of the species known to occur in that region, will be published by me in the Bulletin of the Museum of the Brooklyn Inst. of Arts and Sciences. The two following species are here described in advance, in order that they may be included in the revision of the Ptinidæ on which Prof. Fall is at work.

The types are in the collection of the Museum of the Brooklyn Institute of Arts in Sciences.

Trichodesma Texana, n. sp.—Cylindrical oblong, form of *sordida*, black, twice as long as wide, with white and fulvous recumbent pubescence, intermixed with longer erect hairs. Antennæ brown, last three joints longer than the preceding. Head black, densely granulated, pubescence white, intermixed with fulvous. Thorax broader than long, sides arcuate in front, sinuately narrowing to the hind angles, disc gibbous, hardly sulcate at the gibbosity, surface granulate and densely clothed with white and fulvous short recumbent hairs, intermixed with longer erect hairs, gibbosity with four black spots, two at the summit and two below these, no brush-like tufts. Elytra as broad as the thorax at middle, regularly striate, with coarse, deep, closely-placed punctures, very densely clothed with white recumbent pubescence, reaching nearly to the apex, terminated by a few black spots; apex sparsely clothed with fulvous pubescence. Body beneath black, shining, with dense gray pubescence.

Length, 4-5 mm.

Esperanza Ranch, near Brownsville, Tex.

This species seems to be very near *T. albina*, Gorb.*, but, judging from the description and figure, is distinct from it. All the specimens I have taken are quite constant, except in the distinctness of the hind angles. These are in some specimens distinct, and the sinuation before them is very pronounced, in others the angles can be called rounded, in these the sinuation is much less pronounced.

* Biol. Central. Americana, Vol. III., part 2, p. 199.

Trichodesma pulchella, n. sp.—Oblong, slightly more robust than *gibbosa*, black, with very short brown recumbent pubescence, intermixed with longer erect hairs, sides of thorax, base of elytra, a narrow strongly dentate median band and apex with a denser white pubescence. Antennae brownish, last three joints as long as the preceding. Head black, with not densely-placed granules, clothed with white pubescence, denser at apex. Thorax broader than long, sides arcuate in front, slightly to the hind angles, which are almost rounded, disc gibbous behind, slightly sulcate from the apical margin to the summit of gibbosity, surface distinctly granulate, clothed with dense, very short hairs, white at sides and apex, light brown at middle, without brush-like tufts at gibbosity. Elytra as wide as the thorax at middle, surface with irregular, closely-placed, coarse, deep punctures, clothed with very fine, short recumbent brownish hairs, a band at base, a narrow, sharply dentate median fascia and apex of dense white pubescence. Between the median fascia and the white apical space near the suture is a white longitudinal streak on each elytron, reaching to the apical space and terminated by a black spot. At the apex of the white basal band is also a black spot on each side. Body beneath black, shining, densely pubescent, with short, fine gray hairs.

Length, 5.5-7 mm.

Esperanza Ranch, near Brownsville, Tex.

A number of this beautiful species I obtained by beating ebony, but it occurred on different other trees also, but rarely. A few specimens of a species which I take to be *T. sordida*, Horn, were taken at the same place.

CULEX CONSOBRINUS: A REJOINDER.

BY J. M. ALDRICH, MOSCOW, IDAHO.

In the August number of this journal, Mr. Coquillett has given his reasons for not accepting *Culex inornatus* as the proper name for the species which he has called *C. consobrinus*. He bases his claim for the name *consobrinus* on a supposed error of Desvoidy's in the identification of *pipiens*, relying on the length mentioned, 3 lines, as proof that Desvoidy's species could not have been the real *pipiens*. My own article on the subject, in the July number, had intimated that Desvoidy had erred in the measurement given. Since then I find that Theobald (Mon. Culicidæ. II.; 135) gives 6 mm. as the maximum length of *pipiens*; this, of course, is equivalent to Desvoidy's 3 lines.

The locality given by Desvoidy, "Pennsylvania," is not of great significance, as it was not uncommon for the older entomologists to assign this locality to material received from Philadelphia, even if not collected near there. It is Osten Sacken, I think, who in one place instances a species published with the locality Philadelphia, which has not since been taken except in Texas.

Considering the facts brought out in this discussion, it is clear that nobody knows, or can know, what *consobrinus* is. Whether a sufficient probability has been adduced to justify the use of the name, is a question upon which entomologists may differ; as before, I think the name should not be used. A much larger problem is involved here than the name of a single species. The use of old names which are of more or less doubtful application has been overdone in the Diptera in recent years, in my opinion. The idea that we must "do something" with all the old names seems to me unscientific. Rather we should try to follow the rule of not using a name unless we know that it stands for something. The difficulty of harmonizing the practice of entomologists arises from the fact that there is no definite criterion in most cases, and the decision rests on the "entomological sense" of the person making it; what is convincing to one will not be to another.

I have not the slightest interest in saving the name *inornatus* from synonymy, except from the fact that it is the only name which is positively known to apply to the species under consideration. I doubt if the species could be recognized from the description; but in this case we have the type in the U. S. National Museum, examined by Mr. Coquillett and found to be this species.

I have in my previous article explained why *impatiens* and *pinguis* cannot be used for this species. Mr. Coquillett seems to argue that either name is available unless somebody can disprove it; my position is that affirmative proof is necessary.

MISS ALICE L. EMBLETON, of Newnham College, Cambridge, England, has been awarded the Royal Society's Mackinnon Studentship in Biology, the object of which is to encourage scientific research in any department in this great field of natural science. She has decided to confine her investigations to the parasites of destructive insects, in the hope that she may be rewarded with discoveries of great economic importance by finding natural enemies of greater efficiency than any artificial insecticides. It is much to be hoped that she may prove a worthy successor of the late Miss Eleanor Ormerod.

BOOK NOTICE.

A CATALOGUE OF THE COCCIDÆ OF THE WORLD.—By Mrs. Maria E. Fernald, A.M., Amherst, Mass. Special Bulletin (No. 88) of the Hatch Experiment Station of the Massachusetts Agricultural College, 1903. One Vol., 8vo., pp. 360.

The authoress gives us in this volume a most valuable and complete catalogue of the Coccidæ of the World, the results of nearly twenty-five years of patient and careful labour. No one who has not attempted work of this kind can form any idea of the difficulties of the task, the immense number of publications to be gone over, the care and accuracy that are required and the systematic methods that must be adopted, and consequently few estimate as highly as they should the gratitude that is due to one who spends years of toil in making the way easy for all future students in the particular department of natural science that is taken up. The classification of the Coccidæ has long been in a somewhat chaotic condition; the present work will help very materially in reducing the confusion and bringing out order and system instead. Mrs. Fernald does not expect entire agreement with her conclusions, but we venture to think that few will endeavour to criticise her work, inasmuch as it has been done with such care and freedom from prejudice. In every case where changes in nomenclature are made the history of the genus or species is given by means of the full bibliographical references, and the evidence seems complete. No less than 1514 species are listed, and of each one bibliographical references are given, with the geographical distribution and food-plants when known. The volume is well and clearly printed, and its value is much enhanced by the very full index to species as well as genera with which it closes.

A COLEOPTEROUS CONUNDRUM.—There has been so great a desire to obtain specimens of the remarkable beetle described by Mrs. Slosson in the May number of this magazine, that she is compelled to say that she has only a few examples left and is unable to give away any more.

Dr. Dyar, in his zeal for the laws of priority, contends that the name jocularly given to the insect by Mrs. Slosson (*Igotus enigmaticus*) should be taken as founding a new genus and a new species. This seems absurd, when there was no attempt made to give a scientific description of the creature, and the authoress says expressly that she merely applied the name "sometimes, in chat over her discovery!"

Mailed September 4th, 1903.