

DISTRIBUTIONAL NOTES AND KEYS TO  
AMERICAN DITOMYIINAE, DIADOCIDIINAE AND  
CEROPLATINAE WITH DESCRIPTIONS  
OF NEW SPECIES<sup>1</sup>

(DIPTERA: MYCETOPHILIDAE)

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(Plates XXIII and XXIV)

This paper deals with the distribution of three subfamilies of Mycetophilidae, the Ditomyiinae, the Diadocidiinae, and the Ceroplatinae (excluding the genera *Platyura* of authors and *Asindulum* which I hope to discuss in another paper). The nearctic fauna only is treated except in the genus *Ceroplatus* where a new species of the neotropical fauna is described and the neotropical species are assigned to subgenera. Descriptions of previously described subfamilies, genera, subgenera, and species (except in two cases) are not given but references to the original description and to other important papers are listed. The known distribution is given. The male terminalia are figured where available; *Platyura pectoralis*, *Symmerus dilutus* and *Ceroplatus fasciatus fenestralis* being the only nearctic species previously figured.

In the distribution records below, the collector's name, when known, is placed in round brackets ( ), the authority of a published record and the date of publication in square brackets [ ]. The location of the specimens in the various collections is indicated by one of the following abbreviations: A.L.M.—Private collection of Dr. A. L. Melander, New York City. A.N.S.P.—The Academy of Natural Sciences of Philadelphia. B.S.N.H.—Collection of the Boston Society of Natural History in the New England Museum

<sup>1</sup> Many of the figures and some of the keys presented in this paper are from a portion of my unpublished thesis presented to Cornell University.

of Natural History, Boston. C.A.S.—Collection of the California Academy of Sciences at San Francisco. C.B.D.G.—Private collection of Mr. C. B. D. Garrett, Cranbrook, British Columbia. C.U.—Cornell University Collection at Ithaca, New York. M.C.Z.—Museum of Comparative Zoology at Harvard University. O.A.J.—Private collection of Dr. O. A. Johannsen, Ithaca, New York. U.S.N.M.—United States National Museum, Washington, D. C.

Where no mention is made of the "type" it is understood that the species was originally described from Europe. An \* indicates I have not seen the specimen or specimens on which the record is based, all others I have examined. There are additional specimens in the Cornell University Collection and in the private collection of Dr. Frank Shaw at Amherst, Massachusetts which I have examined but of which I have only incomplete data; these have therefore not been included except where they noticeably extend the range.

I am greatly indebted to Dr. A. L. Melander for allowing The Academy of Natural Sciences of Philadelphia to retain the types and a share of the paratypes of several of the new species described in this paper, as well as other specimens.

I also wish to thank the following for the privilege of examining the collections in their care: Dr. Nathan Banks, Museum of Comparative Zoology at Harvard. Drs. E. A. Chapin and Alan Stone, United States National Museum. Dr. Richard Dow, The Boston Society of Natural History. Dr. O. A. Johannsen, Cornell University. I also wish to thank this Academy and especially Mr. E. T. Cresson, Jr. for unending aid in many ways.

#### Subfamily DITOMYIINAE

*Mycetobiinae* Winnertz, Verh. Zool.-bot. Ges. Wien., XIII, p. 666, 1863.  
Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, pp. 222-228, figs. 80-81, 1910.

*Ditomyidae* Keilin, Ann. Mag. Nat. Hist., (9), III, pp. 33-40, 1919.

*Ditomyinae* Edwards, Ann. Mag. Nat. Hist., (9), VII, pp. 431-433, 1921.  
Edwards, Trans. Ent. Soc. London, 1924, pp. 509-512, fig. 181, 1925.

The old subfamily name *Mycetobiinae* was changed to the *Ditomyinae* (Edwards 1921) after the genus *Mycetobia* was placed in the family *Rhyphidae* or *Anisopodidae* (Edwards, 1916<sup>2</sup>).

<sup>2</sup> Ann. Mag. Nat. Hist., (8), XVII, pp. 108-116.

Keilin on the basis of larval and pupal structure considered this subfamily a separate family, the *Ditomyidae*. The adult morphology does not point to such a separation (Edwards, 1921) and most workers have considered this group a subfamily of the *Mycetophilidae*.

There are two<sup>3</sup> nearctic genera separable as follows (modified after Edwards 1925):

Eyes reniform; R<sub>1</sub> hardly longer than the second portion of R<sub>s</sub>; anepisternites setose; postnotum bare or setose.....*Symmerus* Walker  
 Eyes rounded; R<sub>1</sub> much longer than the second portion of R<sub>s</sub>; anepisternites bare; postnotum bare.....*Ditomyia* Winnertz

### DITOMYIA Winnertz

*Ditomyia* Winnertz, Stett. Ent. Zeit., VII, pp. 14-16, pl. 1, figs. 1-7, 1846.  
 Johannsen, Gen. Insect., fasc. 93, pp. 10-11, pl. 3, fig. 8, 1909. Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 227, fig. 80, 1910.

#### Key to Nearctic Species of *Ditomyia*

Wings fasciate.....*euzona* Loew  
 Wings hyaline .....*potomaca* new species

***Ditomyia euzona* Loew** (Pl. XXIV, fig. 25.)

*Ditomyia euzona* Loew, Berl. Ent. Zeit., XIII, p. 130, 1869. Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 227, 1910. Johnson, Occas. Pap. Boston Soc. Nat. Hist., VII, p. 76, 1925.

J. M. Aldrich in his Catalogue of North American Diptera<sup>4</sup> lists "N.Y." following the reference to Loew with no reference to the type locality. This reference is either a misprint or refers to a male and female in the Loew collection labelled "N.Y. *Ditomyia euzona*" which I have examined and consider the male to be *Neoempheria macularis* and the female, labelled "*Empheria euzona*" to be *Mycomyia* sp. All these specimens have the same Loew Collection number.

NEW HAMPSHIRE: Franconia, White Mts., Grafton Co. [Johannsen, 1910; Johnson, 1925], 1 ♀, U.S.N.M. Fabyan, White Mts., Coos Co., August 23, (C. H. Townsend), 1 ♀, U.S.N.M.

DISTRICT OF COLUMBIA: no further data, (R. Osten Sacken), [Loew, 1869; Johannsen, 1910], 1 ♂, type, M.C.Z.

<sup>3</sup> *Palaeoptalyura* removed to the *Ceroplastinae* by Edwards 1921, 1925.

<sup>4</sup> Smith, Misc. Coll., no. 1444, p. 138, 1905.

*Ditomyia potomaca* new species

(Pl. XXIII, fig. 1.)

This species differs from the preceding species in having hyaline wings, a polished black color, and a very distinct male terminalium.

*Male*: Total length 5.5 mm. Head, thorax, and abdomen black. The yellow antennal setae with prominent black bases. Fore coxae yellow; mesocoxae and metacoxae deep brown. Wings hyaline with macrotrichia on the membrane except in the posterior half of the basal cell, cell Cu and in the Anal cell. Cross-vein r-m practically eliminated; R<sub>1</sub> arises over the base of the M fork. Male terminalia as figured.

*Female*: Similar to the male. Color a deeper and a more polished black; the fore coxae brown in the allotype, black in the paratype, the mesocoxae and the metacoxae black. The posterior half of the basal cell, cell Cu, and the Anal cell with macrotrichia apically as well as in the other cells.

*Holotype*.—♂; Great Falls of the Potomac, Fairfax County, Virginia; May 2, 1916, (W. A. McAtee); [Acad. Nat. Sci. Phila. no. 6628].

*Allotype*.—♀; Redding, Fairfield County, Connecticut; May 17, 1930, (A. L. Melander); [A. L. Melander Collection].

*Paratype*.—1 ♀; Glen Echo, Montgomery County, Maryland; April 27, (C. H. Curran); [U. S. National Museum].

### SYMMERUS Walker

*Symmerus* Walker, List Dipt. Brit. Mus., I, p. 77, 1848. Johannsen, Gen. Insect., fasc. 93, p. 11-13, pl. 3, fig. 9, 1909. Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 228, fig. 81, 1910.

*Plesiastina* Winnertz, Stett. Ent. Zeit., XIII, p. 55, 1852.

#### Key to Nearctic species<sup>5</sup> of *Symmerus*

1. Postnotum bare.....*coqulus* Garrett
- Postnotum setose.....2.
2. Thorax black; abdomen mainly black (males unknown); eastern species.....*tristis* Loew
- Thorax yellow or yellow with dark vittae.....3.
3. Stalk of M subequal to M<sub>1+2</sub>; male terminalia as in plate XXIII, figs. 4 and 4a.....*lautus* Loew
- Stalk of M shorter than M<sub>1+2</sub>; male terminalia with subovoid styles (see reference to published figure below).....*dilutus* Fisher

<sup>5</sup> *S. annulatus* Mg. is said to occur in America; all specimens recorded of this species belong to one of the other species listed here with the possible exception of Cole and Lovett's specimen which I have not seen.

**Symmerus tristis** (Loew)

*Plesiastina tristis* Loew, Berl. Ent. Zeit., XIII, pp. 131-132, 1869.

*Symmerus tristis* Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 228, fig. 81, 1910. Johnson, Occas. Pap. Boston Soc. Nat. Hist., VII, p. 76, 1925. Shaw, Bull. Brook. Ent. Soc., XXXVI, p. 23, 1941.

Described and known only from females.

MAINE: Bar Harbor, Mt. Desert Island, Hancock Co., August 10, [Johnson, 1925], 1 ♀, B.S.N.H.

MASSACHUSETTS: Chester, Hampden Co., August 3, (C. W. Johnson), [Johnson, 1925], 1 ♀, B.S.N.H. No further data, (W. M. Wheeler), [Johannsen, 1910], 1 ♀, O.A.J.?

DISTRICT OF COLUMBIA: (R. Osten Sacken), [Loew, 1869; Johannsen, 1910], 1 ♀, *type*, M.C.Z.

NORTH CAROLINA: \*Linville Falls, Burke Co., June 21 (3,200'), (C. P. Alexander), Shaw Coll.

INDIANA: Julietta, Marion Co., July 12, (C. W. Johnson), 1 ♀, M.C.Z.

**Symmerus lautus** (Loew)

(Pl. XXIII, figs. 4 and 4a.)

*Plesiastina lauta* Loew, Berl. Ent. Zeit., XIII, p. 132, 1869.

*Symmerus lauta* Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 231, 1910.

*Symmerus annulata* Johnson in part<sup>6</sup> (nec Meigen), Occas. Pap. Boston Soc. Nat. Hist., VII, p. 76, 1925.

*Symmerus lautus* Leonard, Cornell Univ. Agr. Exp. Sta. Mem., no. 101, p. 740, 1928.

The figures are from a specimen in the Cornell University Collection and agree with the terminalium of the type at Cambridge.

None of the specimens recorded by Johnson as this species do I consider to belong here; I consider them to be *S. coquilus* Garrett.

VERMONT: St. Johnsbury, Caledonia Co., June 28, (C. W. Johnson), [Johnson, 1925 as *S. annulata* (Meigen)], 1 ♂, B.S.N.H. Dummerston, Windham Co., July 14, (C. W. Johnson), [Johnson, 1925 as *S. annulata* (Meigen)], 1 ♂, B.S.N.H.

NEW YORK: No further data, [Loew, 1896; Johannsen, 1910], 1 ♂, *type*, M.C.Z. Ithaca, Tompkins Co., August 24, (O. A. Johannsen), [Johannsen, 1910; Leonard, 1928], 1 defective specimen, C.U. Niagara Falls, Niagara Co., June 22, 1 ♂, U.S.N.M. North Evans, Erie Co., July, (M. C. Van Duzee), [Leonard, 1928], C.U. Little Valley, Cattaraugus Co., June, (M. C. Van Duzee), [Leonard, 1928], C.U.

MARYLAND: Plummer's Island, Montgomery Co., June 23, (W. A. McAttee), 1 defective specimen, U.S.N.M. Plummer's Island, Montgomery Co., June 30, (R. C. Shannon), 1 ♀, U.S.N.M.

INDIANA: Turkey Run, Parke Co., August 20, (J. M. Aldrich), 1 ♂, U.S.N.M.

<sup>6</sup> "Vt. 18, 22" only; the remainder I consider to be *S. coquilus* Gtt.

**Symmerus dilutus** Fisher

*Symmerus diluta* Fisher, Trans. Am. Ent. Soc., LXIV, pp. 196-197, pl. 9, fig. 1, 1938.

No figure is given of the male terminalium as it has been figured in the above publication.

WEST VIRGINIA: Fairmont, Marion Co., June 22, (E. T. Cresson, Jr.), [E. G. Fisher, 1938], 1 ♂, *type*, A.N.S.P.

**Symmerus annulatus** (Meigen)

*Mycetobia annulata* Meigen, Syst. Besch., vi, p. 294, 1830.

*Symmerus annulatus*? Cole and Lovett, Proc. Calif. Acad. Sci., (4), xi, p. 217, 1921.

*Symmerus annulata* Tarwid, Ann. Mus. Zool. Polonici, ix, pp. 375-379, fig. 1933. Seguy, Fauna de France, Dipt. Nematoceres, xxxvi, pp. 20-21, figs. 60, 61, 1940.

Seguy says that this species has a setose postnotum; nearctic species that have been called *S. annulatus* (Smith, 1910; Johannsen, 1910; Johnson, 1925) have a bare postnotum and have been described as *S. coqulus*. The European forms have been figured by Seguy and Tarwid.

I have not seen those specimens assigned here by Cole and Lovett with a question but I suspect that they also are *S. coqulus*.

? OREGON: \*Corvallis, Benton Co., Sept. 10, (F. R. Cole), [Cole and Lovett, 1921 determined with a ?], Oregon Agricultural College Collection?

**Symmerus coqulus** Garrett

(Pl. XXIII, fig. 2.)

*Plesiastina annulata* Smith (nec Meigen), Ann. Report N. J. State Mus. for 1909, p. 722, 1910.

*Symmerus annulata* Johannsen in part (nec Meigen), Maine Agr. Exp. Sta. Bull., no. 172, p. 231 (records but not description), 1910. Johnson in part (nec Meigen), Occas. Pap. Boston Soc. Nat. Hist., vii, p. 76, 1925.

*Symmerus lauta* Johnson (nec Loew), Occas. Pap. Boston Soc. Nat. Hist., vii, p. 76, 1925.

*Symmerus coqula* Garrett, Sixty-one New Diptera, Cranbrook, B. C., p. 12, 1935.

This species runs in Johannsen's key to the couplet separating *S. lauta* and *S. annulata*. It differs from other species of the genus in having the postnotum bare. Garrett's description is of a female. He has been kind enough to lend me a male which he considers to be the same species as his female holotype. I describe below a male that is conspecific with Garrett's male; this male is from Idaho.

Total length 6 mm. Compound eyes distinctly reniform, almost meeting above the antennae separated by about once to twice the width of a lateral ocellus; ocelli three, arranged in a straight line, the median one slightly smaller. Head black, face yellow. Antennae seventeen jointed, yellow at the base becoming brown distally, the minute last segment yellow, papilliform.

Mesonotum yellow with three wide brown vittae, the median one sometimes lighter in color and with a yellow line along its median line. Scutellum, postnotum and pleura yellow. Mesonotum uniformly setose; anepisternites with a group of setae at the level of the anterior spiracle; sternopleurites, pteropleurites, pleurotergites and hypopleurites bare; scutellum setose, the marginal row hardly distinguishable from those of the disc; postnotum bare. Wings hyaline, appearing clouded due to the macrotrichia on the membrane; the macrotrichia evenly distributed over the entire wing membrane and veins. C ends at  $R_5$ ; Sc ends free about the length of the humeral cross-vein beyond the latter; tip of  $R_4$  parallel to  $R_1$  apically; r-m present, distinct but short, about one third (one half in eastern forms) the length of m-cu; base of M fork clearly before the level of  $R_4$ ; M faint; r-m, m-cu, and the base of  $Cu_1$  in the same straight line; 1st A distinct; 2nd A faint but reaching the wing margin. Halteres yellow. Legs yellow. The middle and hind tibiae and the tarsi ventrally with scattered dark setae among the setulae; those of the fore tibiae and the tarsi not so prominent. Spur formula 1-2-2. All femora ciliate beneath.

Abdomen dark brown shining; bases and apices of the tergites yellow; basal sternites yellow; apical sternites dark brown with yellow lateral and apical margins. Terminalium large, the anal lamellae long, narrow, and yellow; styles deep black; zygosternum brown. The styles are very prominent even in an untreated terminalium.

MAINE: Capen's, Deer Island, Moosehead Lake, Somerset Co., July 15, (C. W. Johnson), [Johnson, 1925 as *S. lauta* (Loew)], 1 ♀, B.S.N.H. Sugar Island, Moosehead Lake, Somerset Co., July 17, (C. W. Johnson), [Johnson, 1925 as *S. annulata* (Meigen)], 1 ♂, B.S.N.H. Eastport, Washington Co., July 16, [Johnson, 1925 as *S. lauta* (Loew)], 2 ♂, B.S.N.H.

VERMONT: Mt. Ascutney (2,000'), Windsor Co., July 11, [Johnson, 1925 as *S. annulata* (Meigen)], 1 ♂, B.S.N.H.

NEW HAMPSHIRE: Mt. Washington, (2,599'), Coos Co., July 24-28, [Johnson, 1925 as *S. lauta* and as *S. annulata*; Johannsen, 1910 as *S. annulata*], 5 ♂, M.C.Z. and B.S.N.H. White Mts., Coos Co., (H. K. Morrison), 1 ♂, U.S.N.M. Dolly Coop, White Mt. Nat. For., Coos Co., July 13, (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P. Franconia Notch, White Mt. Nat. For., Grafton Co., July 9, (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P.

MASSACHUSETTS: Chester, Hampden Co., July 6 and August, (C. W. Johnson), [Johnson, 1925 as *S. annulata*], 2 ♂, M.C.Z. and B.S.N.H. New Lenox, Berkshire Co., July 24, [Johnson, 1925 as *S. annulata*] 1 ♂, B.S.N.H.

NEW JERSEY: Riverton, Burlington Co., June 19, (C. W. Johnson), [Smith, 1910 as *Plesiastina annulata*; Johannsen, 1910 as *S. annulata*], 1 ♂, M.C.Z.

ALASKA: Seward, July 26, (J. M. Aldrich), 1 ♂, U.S.N.M.

ALBERTA: Waubamun, July 25, (E. H. Strickland), 1 ♂, Univ. of Alberta.

BRITISH COLUMBIA: Cranbrook, June, (C. B. D. Garrett), [Garrett, 1925], \*1 ♀, *type*, C.B.D.G. St. Mary's Lake, Kimberley, August 29, (C. B. D. Garrett), 1 ♂, C.B.D.G. *metatype*.

IDAHO: Priest Lake, Bonner Co., August 1, (A. L. Melander), 1 ♂, A.L.M.

WASHINGTON: Mt. Constitution, Orcas Island, San Juan Co., July 23, (A. L. Melander), 1 ♂, A.L.M. Poulbo, Kitsap Co., August 17, (A. L. Melander), 1 ♀, A.L.M. Lilliwaup, Mason Co., July 28, (A. L. Melander), 1 ♂, A.N.S.P.

OREGON: Mt. Hood, Clackmas Co., July 30, (3,000'), (A. L. Melander), 1 ♂, A.L.M. Eagle Creek, Clackmas Co., June 16, (A. L. Melander), 1 ♂, A.N.S.P.

### Subfamily DIADOCIDIINAE

*Diadocidiinae* Winnertz, Verh. Zool.-bot. Ges. Wien., XIII, p. 656, 1863.

Johannsen, Gen. Insect. fasc. 93, pp. 12-13, pl. 3, fig. 10, 1909. Johannsen,

Maine Agr. Exp. Sta. Bull., no. 172, p. 231, 1910.

There is but one nearctic genus, *Diadocidia* Ruthe.

### DIADOCIDIA Ruthe

*Diadocidia* Ruthe, Isis, II, p. 1210, 1831. Johannsen, Gen. Insect. fasc. 93, p. 12, pl. 3, fig. 10, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, pp. 231-232, fig. 91, 1910.

*Macroneura* Macquart, Suites à Buffon, I, p. 146, 1834.

? *Aclada* Loew, Berstein Fauna, p. 35, 1850. (No species.)

### Key to Nearctic Species

Apex of  $R_1$  about opposite the fork of M and proximad of the level of the tip of  $Cu_1$ ; female fore tarsi swollen below; style of male terminalium with a single stout apical spine.....*ferruginosa* (Meigen)

Apex of  $R_1$  distad of the fork of M and usually about opposite the level of the tip of  $Cu_1$ ; female fore tarsi simple; style of the male terminalium with two stout apical spines and two strong subapical setae on their mesal aspects.....*borealis* Coq.

*Diadocidia ferruginosa* (Meigen) (Pl. XXIII, figs. 5 and 6.)

*Mycetobia ferruginosa* Meigen, Syst. Besch., VI, p. 294, 1830.

*Diadocidia ferruginosa* Coquillett, Proc. Wash. Acad. Sci., II, p. 390, 1900.

Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 232, fig. 91, 1910.

Edwards, Trans. Ent. Soc. London, 1924, p. 515, fig. 185, 1925. Johnson,

Occas. Pap. Boston Soc. Nat. Hist., VII, p. 77, 1925. Leonard, Cornell

Univ. Agr. Exp. Sta., Mem. no. 101, p. 740, 1928. Shaw and Townes,

Bull. Brook. Ent. Soc., XXXI, p. 204, 1936. Shaw, Bull. Brook. Ent. Soc.,

XXXVI, p. 24, 1941.



QUEBEC: Laurentian Mts., June, (C. P. Alexander), det. F. R. Shaw, C.U.

NOVA SCOTIA: Big Intervale, Cape Breton Island, August 30, (E. G. Fisher), 1 ♂, A.N.S.P.

MAINE: Great Pond, Mt. Desert Island, June 27, 1 ♀, B.S.N.H.

NEW HAMPSHIRE: White Mts., Coos and Grafton Cos., (H. Morrison), [Coquillett, 1900; Johannsen, 1910; Johnson, 1925], 2 ♀, U.S.N.M.

MASSACHUSETTS: Auburndale, Middlesex Co., \*July 10, \*July 16, August 16, (C. W. Johnson), [Johannsen, 1910; Johnson, 1925], 1 ♂, B.S.N.H. Chester, Hampden Co., August 7, [Johnson, 1925], 1 ♂, O. A. Johannsen det., B.S.N.H. Petersham, Worcester Co., June 9, (A. L. Melander), 3 ♂, 1 ♀, A.L.M.

CONNECTICUT: Sandy Hook, Fairfield Co., June 5, (A. L. Melander), 1 ♀, A.L.M.

NEW YORK: Wells, Hamilton Co., July, (D. B. Young), [Leonard, 1928], C.U. Erie Co., May, August, (M. C. Van Duzee), [Leonard, 1928], C.U. McLean, Thompkins Co., August, C.U.? Gloversville, Fulton Co., C.U. Ithaca, Thompkins Co., June 27, (A. L. Melander), 1 ♂, A.L.N. and August 10, (C. W. Johnson), [Johannsen, 1910 and Leonard, 1928], C.U.

PENNSYLVANIA: Hazleton, Luzerne Co., May 25, June 23, July 11, September 18, (W. C. Dietz), 4 ♂, A.N.S.P. Dubois, Clearfield Co., September 3, (A. L. Melander), 1 ♂, A.L.M.

NORTH CAROLINA: Great Smoky Natl. Pk., June 6, (5,500'), (C. P. Alexander), Shaw Coll.

SOUTH CAROLINA: \*Old Indian Mt., Greenville Co., July 13, (1,400'), (H. K. Townes Jr.), [Shaw and Townes Jr., 1936], F. R. Shaw det.

WASHINGTON: Skyline Trail, Mt. Baker, Whatcom Co., August 10 (A. L. Melander), 1 ♂, A.N.S.P. Nooksack River, Mt. Baker, Whatcom Co., August 10, (A. L. Melander), 1 ♂, A.L.M. Sequim Bay, Callam Co., September 3, (A. L. Melander), 1 ♂, A.L.M. Puget, Thurston Co., July 4, (A. L. Melander), 1 ♂, A.N.S.P. Fairflax Trail, Mt. Ranier Nat. Park, August 9, (A. L. Melander), 1 ♂, A.N.S.P. Wahkeena Falls, Multnomah Co., June 21, (A. L. Melander), 1 ♂, A.L.M.

CALIFORNIA: Orick, Humboldt Co., June 21, (A. L. Melander), 1 ♀, A.L.M.

These specimens show that the presence or absence of  $Sc_2$  is variable within the species.

### *Diadocidia borealis* Coquillett

(Pl. XXIII, fig. 3.)

*Diadocidia borealis* Coquillett, Proc. Wash. Acad. Sci., II, p. 390, 1900. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 233, 1910. Cole and Lovett, Proc. Calif. Acad. Sci., (4), XI, p. 217, 1921. Johnson, Occas. Pap. Boston Soc. Nat. Hist., VII, p. 77, 1925. Shaw and Townes, Bull. Brook. Ent. Soc., XXXI, p. 206, 1936.

The figure is of one of the typical males from the west coast.

NEW HAMPSHIRE: Bretton Woods, Coos Co., June 24, [Johnson, 1925], 1 ♀, O. A. Johannsen determined this specimen with a question, B.S.N.H.

NORTH CAROLINA: \*Big Pisgah Mt., (1,200-1,400'), Haywood Co., July 16-19, (H. K. Townes Jr.), [Shaw and Townes Jr., 1936], F. R. Shaw det.

SOUTH CAROLINA: \*Old Indian Mt., Greenville Co., July, (H. K. Townes Jr.), [Shaw and Townes Jr., 1936], F. R. Shaw det., Townes or Shaw Coll.?

BRITISH COLUMBIA: Lowe Inlet, [Coquillett, 1900; Johannsen, 1910], 1 ♂, *type*, U.S.N.M.

WASHINGTON: Olga, San Juan Co., May 17, (A. L. Melander), 1 ♂, A.L.M. Vashon, King Co., May 28, (A. L. Melander), 1 ♀, A.L.M. Longmire, Mt. Ranier Nat. Park, June 27, (A. L. Melander), 1 ♀, A.N.S.P. South Bend, Pacific Co., May 23, (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P.

OREGON: \*Forest Grove, Washington Co., February 10, March 14, May 2, (F. R. Cole), [Cole and Lovett, 1921], F. R. Cole det., Oregon Agricultural College Collection?

CALIFORNIA: Berkeley Hills, Alameda Co., April 14, (R. M. Fuchs), 1 ♀, A.N.S.P. Sonoma Co., March 1, (W. C. Dietz?), 1 ♀, A.N.S.P. Eureka, Humbolt Co., (H. S. Barber), 1 ♀, U.S.N.M.

In one female taken by Cole the tip of  $R_1$  is distinctly proximad of the tip of  $Cu_1$ . I have not seen it and do not know whether the fore tarsi are swollen as in the typical specimens.

### Subfamily CEROPLATINAE

*Ceroplatinae*, Winnertz Verh. Zool.-bot. Ges. Wien, XIII, p. 684, 1863. Johannsen, Gen. Insect., fasc. 93 p. 13, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 233, 1910. Edwards, Trans. Ent. Soc. London, 1924, p. 522, 1925. Edwards, Proc. Linn. Soc. N. S. Wales, LIV, pp. 162-175, 1929.

The known Ceroplatinae of Nearctica may be divided into six genera (five if we follow Tarwid or eight if we follow Edwards<sup>7</sup>).

### Key to Nearctic Genera<sup>8</sup>

1. Antennae stout and flattened, often conspicuously so; palpi short apparently consisting of a single porrect segment.....*Ceroplatatus* Bosc
- Antennae not conspicuously flattened; palpi normal.....2.
2. Media with a distinct fold-like basal section.....3.
- Media without a distinct fold-like basal section.....5.
3. Cross-vein r-m short, but present.....*Palaeoplatyura* Meunier
- Cross-vein r-m absent;  $R_s$  and M fused for a distance.....4.

<sup>7</sup> Tarwid, C. R. Soc. Sci. Varsovie, (4), XXIX, p. 39, 1936. Edwards, Rev. Ent., Rio de J., XI, p. 446, 1940; Edwards, Ent. Month. Mag., LXXVII, p. 23, 1941.

<sup>8</sup> Partly after Edwards, 1925.

4. No ocelli;  $R_4$  ends in C.....*Hesperodes* Coquillett  
 Three ocelli;  $R_4$  ends in  $R_1$ .....[*Apemon* Johannsen] *Platyura* Meigen  
 5. Labella greatly elongate and fleshy.....*Asindulum* Latr.  
 Mouthparts not elongate.....*Platyura* of authors

### CEROPLATUS Bosc

*Ceroplatus* Bosc, Acta Soc. Hist. Nat. Paris, I, p. 42, 1792.

*Ceroplatus* Johannsen, Gen. Insect., fasc. 93, pp. 18-19, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, pp. 234-240, 1910. Edwards, Proc. Linn. Soc. N. S. Wales, LIV, pp. 173-175, 1929. Edwards, Rev. Ent., Rio de J., XI, p. 446, 1940.

*Cerotelion* Rondani, Dipt. Ital. Prodrum, I, p. 191, 1856. Johannsen, Gen. Insect., fasc. 93, p. 19, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. 172, p. 234-240, 1910.

*Heteropterna* Skuse, Proc. Linn. Soc. N. S. Wales, III, p. 166, 1888. Johannsen, Gen. Insect., fasc. 93, p. 17, 1909. Edwards, Rev. d. Ent., Rio de J., XI, p. 446, 1940.

Edwards (1929) revised the genus *Ceroplatus* Bosc dividing it into six subgenera. One of these subgenera is not known from this hemisphere. The other five may be characterized as follows (after Edwards 1929):

*Ceroplatus*: Nearctic and Neotropical.<sup>9</sup>  $R_4$  ends in  $R_1$ ; two or three ocelli;

*Cerotelion*: Nearctic.  $R_4$  ends in C; three ocelli; pleurotergites bare; tibial setulae irregularly arranged; face broad.

*Euceroplatus*: Nearctic and Neotropical.  $R_4$  ends in C; three ocelli; pleurotergites bare; tibial setulae regularly arranged; face narrow.

*Heteropterna*:<sup>10</sup> Nearctic and Neotropical.  $R_4$  ends in C; three ocelli;

*Placoceratias*: Neotropical.  $R_4$  ends in C; two ocelli; pleurotergites hairy; tibial setulae regularly arranged.

The American species belong to the following subgenera:

#### Subgenus CEROPLATUS

*Ceroplatus* (*Ceroplatus*) *carbonarius* Bosc, *Ceroplatus* (*Ceroplatus*) *clausus* Coquillett, *Ceroplatus* (*Ceroplatus*) *clausus terminalis* Coquillett, *Ceroplatus* (*Ceroplatus*) *militaris* Johannsen, *Ceroplatus* (*Ceroplatus*) *fiebrigi* Edwards, *Ceroplatus* (*Ceroplatus*) *minimax* Edwards, *Ceroplatus* (*Ceroplatus*) *striatus* new species.

<sup>9</sup> Known distribution given only for the Nearctic and Neotropical Regions. pleurotergites hairy; tibial setulae regularly arranged.

<sup>10</sup> Edwards, 1940, restores *Heteropterna* to generic rank on the structure of the postnotum. The postnotum has a membranous dorsal triangular area. Since this membranous area occurs (less developed and less well defined) in certain species (*Ceroplatus clausus* and *Ceroplatus militaris*) that cannot be included in this genus I have preferred to retain *Heteropterna* as a subgenus. pleurotergites bare; tibial setulae irregularly arranged; face narrow.

Subgenus **CEROTELION**

*Ceroplatus (Cerotelion) johannseni* Fisher, *Ceroplatus* (? *Cerotelion*) *apicalis* Adams.

Subgenus **EUCEROPLATUS**

*Ceroplatus (Euceroplatus) fasciolus* Coquillett, *Ceroplatus (Euceroplatus) fasciatus* (Garrett), *Ceroplatus (Euceroplatus) fasciatus fenestralis* Fisher, *Ceroplatus (Euceroplatus) bellulus* Williston.

Subgenus **HETEROPTERNA**

*Ceroplatus (Heteropterna) major* (Curran) nec Meunier, *Ceroplatus (Heteropterna) cressoni* new species, *Ceroplatus (Heteropterna) tetraluceus* (Edwards), *Ceroplatus (Heteropterna) trileucus* (Edwards).

Subgenus **PLACOCERATIAS**

*Ceroplatus (Placoceratias) bimaculipennis* (Enderlein), *Ceroplatus (Placoceratias) fuscithorax* (Enderlein), *Ceroplatus (Placoceratias) longimanus* (Williston).

## Subgenus unknown

*Ceroplatus* (....?) *obscurus* Philippi, *Ceroplatus* (....?) *fernaldi* Shaw.

*Key to Nearctic Species*<sup>11</sup> *of Ceroplatus*

1.  $R_4$  ends in  $R_1$ ; pleurotergites hairy (*Ceroplatus*).....2  
 $R_4$  ends in C; pleurotergites bare.....5
2. Tips of antennae white; large specimens 10–13 mm. in length  
*carbonarius* Bosc  
 Antennae uniform in coloration; smaller specimens 3.7 mm.–10 mm. in length.....3
3. Male terminalium with the style tips rounded; abdomen predominately yellow.....4  
 Male terminalium with the style tips pointed; abdomen predominately dark brown.....*militaris* Johannsen
4. Eastern forms; delicate species for this genus; usually under 8.5 mm.; wings usually with a brown spot apically over vein  $R_4$  and beyond  
*clausus* Coquillett  
 Western forms, robust forms; usually over 8.5 mm.; the wing apex very deeply clouded especially anteriorly and behind  $Cu_2$   
*clausus terminalis* Coquillett
5. Tibial setulae irregularly arranged (*Cerotelion* and *Heteropterna*).....6  
 Tibial setulae regularly arranged (*Euceroplatus*).....8

<sup>11</sup> For those specimens of *Ceroplatus bellulus* listed from Nearctica see *Ceroplatus johannseni*. I do not know Shaw's *C. fernaldi*, 1941, and have omitted it from this key.

6. Face very narrow; non-sclerotized triangular area on metanotum large and well defined (*Heteropterna*).....*crassoni* new species  
 Face of normal width; metanotum normal (*Cerotelion*).....7
7. Sc ends in C beyond the level of  $R_s$ .....*johannseni* Fisher  
 Sc ends in C before the level of  $R_s$ , half-way between the humeral cross-vein and  $R_s$ .....*apicalis* Adams
8. Wings with the tip only with a diffuse fascia anteriorly; delicate species for this genus.....*fasciatus* Garrett <sup>12</sup>  
 Wings with the whole tip with a diffuse fascia; robust species.....9
9. Wings with tip more deeply colored in cells  $R_4$  and  $R_5$  and with a hyaline spot before the apex of cell  $R_3$ .....*fasciatus fenestralis* Fisher  
 Wings with tip diffusely but uniformly colored and with cell  $Cu_1$  colored.....*fasciolus* Coquillett

### *Ceroplatus* (*Ceroplatus*) *carbonarius* Bosc

*Ceroplatus carbonarius* Bosc, Nouv. Dict. Nat. Hist. (edit. 1), iv, p. 543; (edit. 2), v, p. 585, tab. B, 21, figs. 4, 4a, 1802-1804. Johannsen, Gen. Insect., fasc. 93, p. 18, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 236, 1910.

*Platyura carbonarius* Wiedemann, Aussereup. Zweigl. Ins., I, p. 61, 1828.

PENNSYLVANIA: No further data, [Loew, manuscript as "*C. ater?* Bosc"], 1 defective specimen, M.C.Z.

"CAROLINA": \*, [Bosc, 1802-1804], *type*.

INDIANA: Princeton, Gibson Co., June 17, (J. H. Davis), 1 ♂, U.S.N.M.

TENNESSEE: Clarksville, Montgomery Co., July 7, 1 ♂, U.S.N.M.

These last two specimens and the first specimen differ in color from the type description. They are brown rather than black but have the prominent white tips to the antennae.

The male terminalia resemble *Ceroplatus clausus* except the styles and the setulae on them are very robust.

A description of the Tennessee specimen follows:

Male: Total length 13 mm. Head with three ocelli on a black ocellar area; the face and occiput yellow, the palpi yellow, the terminal segment porrect. Antennal flagellum with fifteen segments, the basal segments black, the terminal five white. The distal antennal segment very minute.

Pronotum, propleura, and prosternum brownish yellow with black setae. The posterior division of the propleura with many black setae above. Setae present both before and behind the anterior spiracle. Mesonotum light brown with a brown V and faint lateral lines of brown, uniformly setose,

<sup>12</sup> I suspect that *C. fasciatus* Garrett and *C. fenestralis* Fisher are simply varieties of *C. fasciolus* Coquillett but until a male is found agreeing with *C. fasciolus* more closely I believe it is better to retain *C. fasciatus* as distinct from *C. fasciolus* and to treat *C. fenestralis* as a variety of *C. fasciatus*. The latter agree in terminalial structure.

the setae thicker laterally. Anepisternite yellow above, brown below, with a few inconspicuous setae. Sternopleurites yellow above, brown below and bare. Pleurotergites brown anteriorly, uniformly setose, projecting. Scutellum setose above in addition to the numerous marginal setae. Postnotum brown, yellow at the margins, bare.

Coxae yellow, the fore coxae brown mesally; the hind femora brown at their bases and at their mid-points. Tibial setulae regularly arranged, all rows alike.

Wings fasciate; a very prominent spot over the tip of  $R_1$ , over  $R_4$  and extending posteriorly to  $M_{1+2}$ ; tips of  $M_{1+2}$ ,  $M_3$ ,  $Cu_1$  and Anal vein with brown clouds;  $Cu_2$  with a cloud just before the apex.

Abdomen yellow, the lateral margins of the tergites brown. The bases of the first and second tergites and the posterior margin of the eighth tergite brown. The apical half of the first sternite and the margin of the eighth brown. Male terminalium yellow.

**Ceroplatus (Ceroplatus) clausus** Coquillett (Pl. XXIII, figs. 9, 10.)

*Ceroplatus clausus* Coquillett, Proc. U. S. Nat. Mus., xxiii, p. 594, 1901.

Slosson, Ent. News, xiii, p. 7, 1902. Smith, Ann. Report N. J. State Mus. for 1909, p. 723, 1910. Johnson, Occas. Pap. Boston Soc. Nat. Hist., vii, p. 77, 1925.

*Ceroplatus militaris* Johnson in part (nec Johannsen), Occas. Pap. Boston Soc. Nat. Hist., vii, p. 77, 1925.

The type of *C. clausus* is a female. There are three ocelli. The face is moderately broad;  $R_4$  ends in  $R_1$ ; the tibial setulae are in very distinct rows; the pleurotergites are bare. There is a male from the same locality as the type in the U. S. National Museum; this specimen is probably one of the original co-types. The male terminalium does not differ from that of *C. terminalis*. The character Johannsen used to separate these species (length of M stalk compared to length of R and M fusion) is variable.

MAINE: Bar Harbor, Mt. Desert Island, Hancock Co., September 13, [Johnson, 1925], 2 ♀, B.S.N.H.

NEW HAMPSHIRE: Franconia, Grafton Co., (Mrs. A. T. Slosson), [Coquillett, 1901; Slosson, 1902], 1 ♀, type, U.S.N.M. Same data, 1 ♂, U.S.N.M.

MASSACHUSETTS: Lynn, Essex Co., February, (G. H. Parker), 1 ♂ det. C. W. Johnson as *C. militaris* Joh., B.S.N.H. Brookline, Norfolk Co., September 24, 1 ♂, det. C. W. Johnson as *C. militaris* Joh., B.S.N.H.

RHODE ISLAND: \*Kington, Washington Co., August 21, [Johnson, 1925].

CONNECTICUT: Redding, Fairfield Co., July 20, September, (A. L. Melander), 1 ♀, 1 ♂, A.L.M. and A.N.S.P.

NEW YORK: Ithaca, Thompkins Co., (O. A. Johannsen), [Johannsen, 1910], C.U., June and August, (E. G. Fisher), A.N.S.P. South Wales, Erie Co., July, (M. C. Van Duzee), [Leonard, 1928], C.U.?

NEW JERSEY: No further data, (H. Loew), 1 ♂, M.C.Z. New Brunswick, Middlesex Co., (J. B. Smith), [Coquillett, 1901 as *C. clausus*; Smith, 1910 as *C. clausus*], 1 ♂, A.N.S.P.

PENNSYLVANIA: Philadelphia, Montgomery Co., July 6, 1 ♂, det. D. W. Coquillett, A.N.S.P.

MARYLAND: No further data, 1 ♂, M.C.Z. Seat Pleasant, Prince Georges Co., June 14, (J. M. Aldrich), 1 ♂, U.S.N.M.

SOUTH CAROLINA: \*Greenville, Greenville Co., September 18, (950'), (H. K. Townes Jr.), [Shaw and Townes Jr., 1935], F. R. Shaw det., Shaw or Townes Coll.?

MICHIGAN: East Lansing, Ingham Co., September 8, (C. W. Sabrosky), 1 ♂, 1 ♀, Univ. Michigan Coll.

ILLINOIS: White Heath, Piatt Co., August 27, (J. C. Dirks), 1 ♂, A. Stone det., U.S.N.M.

IOWA: Muscatine Co., August 20-28, (B. Berger), 3 ♂, Iowa Insect Survey Collection at Iowa Wesleyan College and A.N.S.P. Henry Co., September 3, (B. Berger), 1 defective specimen, W. V. Balduff Collection. Des Moines Co., September 3, (B. Berger), 1 ♂, W. V. Balduff Collection.

LOUISIANA: Negreet, Savine Co., April 15, (W. Newell; Louisiana Crop Pest Comm.), 1 ♂, U.S.N.M.

TEXAS: Dallas, Dallas Co., August 31, (F. C. Pratt), 1 ♂, U.S.N.M. Dallas, Dallas Co., September 20, (W. E. Hinds), 1 defective specimen, U.S.N.M. Victoria, Victoria Co., (J. D. Mitchell), 1 ♂, 1 ♀, U.S.N.M. Houston, Harris Co., (A. C. Chandler), 1 ♀, U.S.N.M.

There is a great deal of variation between the Iowa specimens. Those from Henry and Des Moines Cos. have black spots over the tip of vein  $R_1$  and  $R_4$ . The two Maines specimens show a variation in size. The male terminalia are all apparently identical.

The total length varies from five to eight millimeters. The abdomen varies from almost entirely yellow to almost entirely brown; the color of the head is brownish or yellow with black around the ocelli. This is apparently a very variable species.

#### **Ceroplatus (Ceroplatus) clausus terminalis** Coquillett

*Ceroplatus terminalis* Coquillett, Jour. N. Y. Ent. Soc., XIII, p. 69, 1905.

*Ceroplatus clausus* var. *terminalis* Fisher, Cornell Univ. Abstracts of theses—1937. Ithaca, N. Y., p. 221, 1938.

The terminalia of *C. clausus* and of *C. terminalis* in the Johannsen collection are identical. There are western forms in the Cornell University Collection showing the coalesced portion of the media longer than the petiole with the abdominal markings as described for *C. clausus*.

The holotype of *C. terminalis* differs from that of *clausus* as indicated in the key above.

BRITISH COLUMBIA: Kaslo, July 16, (R. P. Currie), [Coquillett, 1905 as *C. terminalis*; Johannsen, 1910 as *C. terminalis*], 1 ♂, *type* of *terminalis*, U.S.N.M.

TEXAS: Victoria, Victoria Co., (Bridwell), ?6 ♀, U.S.N.M.

**Ceroplatus (Ceroplatus) militaris** Johannsen (Pl. XXIII, figs. 7, 8, 12.)

*Ceroplatus militaris* Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 237-238, 1910. Johnson in part, Occas. Pap. Boston Soc. Nat. Hist., vii, p. 77, 1925. Leonard, Cornell Univ. Agr. Exp. Sta. Mem., no. 101, p. 741, 1928. Jacques and Berger, Iowa Acad. Sci., XLVI, p. 421, fig. 1, p. 419, 1939.

MAINE: Bar Harbor, Mt. Desert Island, Hancock Co., September 13, [Johnson, 1925], 1 ♂, B.S.N.H.

NEW HAMPSHIRE: Intervale, Carroll Co., August 28, (G. M. Allen), [Johannsen, 1910 and Johnson, 1925], 3 ♂, O. A. Johannsen det., *paratypes*, B.S.N.H. \*Hampton, Rockingham Co., June 30, (I. H. Shaw), [Johnson, 1925].

CONNECTICUT: Redding, Fairfield Co., Aug. 19, Sept., (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P.

NEW YORK: Ithaca, Thompkins Co., July, [Johannsen, 1910; Leonard, 1928]. McLean Wildflower Preserve, McLean, Thompkins Co., August, (E. G. Fisher), A.N.S.P.

NEW JERSEY: New Brunswick, Middlesex Co., 1 ♂, U.S.N.M.

PENNSYLVANIA: Hazleton, Luzerne Co., September 3, (W. C. Dietz), 1 ♂, A.N.S.P. Philadelphia, August 12, (C. W. Johnson), 1 ♂, *type*, M.C.Z. Philadelphia, August 1, (C. W. Johnson), [Johannsen, 1910], 1 ♀, *paratype*, M.C.Z. Frankford, Philadelphia, September 13, (J. R. Malloch), 2 ♂, A.N.S.P.

MARYLAND: Plummer's Island, Montgomery Co., August 4-13, (H. S. Barber), "larvae spinning slimy webs underside of *Polyporus*," 1 ♂, 2 ♀, U.S.N.M.

DISTRICT OF COLUMBIA: Washington, 1 ♂, U.S.N.M.

FLORIDA: Paradise Key, Dade Co., February 23, (C. W. Johnson), 1 ♂, det. as *C. carbonarius* evidently by C. W. Johnson, M.C.Z.

TENNESSEE: Knoxville, Knox Co., July 3, (J. R. Malloch), 1 ♂, U.S.N.M.

MICHIGAN: Midland Co., June 28, (R. R. Dreisbach), 1 ♂, R. R. Dreisbach Collection.

IOWA: Muscatine Co., August 11, (B. Berger), [Jacques and Berger, 1938], 1 ♂, Iowa Insect Survey Collection at Iowa Wesleyan College.

WASHINGTON: Ashford, Pierce Co., (H. G. Dyar and A. N. Caudell), 1 ♀, U.S.N.M.

**Ceroplatus (...?) fernaldi** Shaw

*Ceroplatus fernaldi* Shaw, Psyche, XLVIII, pp. 20-21, 1941.

MASSACHUSETTS: Amherst, Hampshire Co., 1 ♂, *type*, Shaw Coll.

I do not know this species.



**Ceroptatus (Cerotelion) johannseni** Fisher (Pl. XXIII, fig. 11.)

*Cerotelion bellulus* Johannsen in part (nec Williston), Maine Agr. Exp. Sta. Bull., no. 172, p. 240, 1910. Johnson (nec Williston), Occas. Pap. Boston Soc. Nat. Hist., VII, p. 77, 1925. Brimley (nec Williston), The Insects of N. Carolina, N. C. Dept. Agr., Div. Ent., p. 326, 1938.

*Ceroptatus (Cerotelion) johannseni* Fisher, Ent. News, LI, pp. 243-245, 1940. Shaw, Bull. Brook. Ent. Soc., XXXVI, p. 24, 1941.

NEW HAMPSHIRE: Franconia, Grafton Co., (Mrs. A. T. Slossom), 2 ♂, U.S.N.M.

MASSACHUSETTS: Brookline, Norfolk Co., July 21, [Johnson, 1925 as *Cerotelion bellulus*], 1 ♂, B.S.N.H.

RHODE ISLAND: Buttonwood, Kent Co., June 22, [Johnson, 1925 (July 22) as *Cerotelion bellulus*], 1 ♀, B.S.N.H.

CONNECTICUT: Redding, Fairfield Co., June 10-16, (A. L. Melander), 2 ♂, 1 ♀, *paratypes*, A.N.S.P. and A.L.M.

NEW JERSEY: Delaware Water Gap, Warren Co., July 12. (C. W. Johnson), ?1 ♀, det. C. W. Johnson as *Platyura melasoma*, M.C.Z.

PENNSYLVANIA: Pottstown, Montgomery Co., (C. W. Johnson), [Johannsen, 1910 as *Cerotelion bellulus*], 1 ♂, O.A.J.

MARYLAND: Plummer's Island, Montgomery Co., May 22-August 17, (Swartz, Barber and Crawford; "taken in spider webs"), 11 ♂, U.S.N.M. Glen Echo, Montgomery Co., July 20, (R. M. Fouts), 1 ♂, U.S.N.M. Glen Echo, Montgomery Co., July 2, (W. L. McAtee), 1 ♂, U.S.N.M.

NORTH CAROLINA: Raleigh, Wake Co., April 25-27, (B. B. Fulton), [Fisher, 1940], 1 ♂, *type*, A.N.S.P., 2 ♀, *paratypes*, A.N.S.P. Raleigh, Wake Co., May, (C. S. Brimley), [Brimley, 1938 as *C. bellulus*], 1 ♂, North Carolina State College Collection. Southport, Brunswick Co., April 11, (B. B. Fulton), 1 ♀, allotype, A.N.S.P. April 24, (B.B. Fulton), [Fisher, 1940], 1 ♀, *paratype*, B. B. Fulton Collection. Black Mts., Buncombe and Yancey Cos., (W. G. Dietz), [Fisher, 1940], 1 ♂, A.N.S.P. \*Great Smoky National Park, (3,000'), (C. P. Alexander), Shaw Coll.

GEORGIA: Fort Benning, Chattahoochee Co., October 11, (I. R. Slaughter), 1 ♂, U.S.N.M.

IOWA: Muscatine Co., August 28, (B. Berger), [Fisher, 1940], 2 ♂, *paratypes*, A.N.S.P. and Iowa Insect Survey Collection at Iowa Wesleyan College.

There is considerable difference in size and in color among these specimens. All agree in the structure of the male terminalium.

**Ceroptatus (Cerotelion?) apicalis** Adams

*Ceroptatus apicalis* Adams, Kansas Univ. Sci. Bull., II, p. 22, 1903.

*Cerotelion apicalis* Johannsen, Gen. Insect., fasc. 93, p. 19, 1909. Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 239, 1910.

This species, described from a male specimen, was placed by Johannsen in *Cerotelion*. I do not know this species so retain it

in the subgenus *Cerotelion* although it may belong to any of the other subgenera in which  $R_4$  ends in C as these were unrecognized at the time of Johannsen's monograph.

KANSAS: \*Douglas Co., (E. S. Tucker), [Adams, 1903], 1 ♂, *type*, University of Kansas Collection.

**Ceroplatus (Euceroplatus) fasciolus** Coquillett

*Ceroplatus fasciola* Coquillett, Ent. News, v, p. 126, 1894.

*Platyura fasciola* Coquillett, Canad. Ent., xxvii, p. 200, 1895. Johannsen, Maine Agr. Exp. Sta. Bull., no. 172, p. 251, 1910.

I have seen the type and consider this species to belong to this genus as the antennae are flattened and the palpi are porrect and minute. No males of this species are known (see footnote number 12).

WASHINGTON: (O. B. Johnson), [Coquillett, 1894], 1 ♀, *type*, U.S.N.M.

ARKANSAS: "Mapewate," \* September 27, (C. W. Johnson), 1 ♀, M.C.Z.

**Ceroplatus (Euceroplatus) fasciatus** (Garrett)

*Cerotelion fasciata* Garrett, Sixty-one New Diptera, Cranbrook, B. C., p. 12, 1925. [*Cerotelion lapsus calami* for *Cerotelion*.]

I am greatly indebted to Mr. C. B. D. Garrett for a metatype male of *C. fasciatus* with which I compared the holotype of *C. fenestralis*. My specimen is very different in coloration and in wing markings but the male terminalia do not appear to differ; I therefore treat my specimen as a subspecies of Garrett's (see footnote no. 12).

BRITISH COLUMBIA: Cranbrook, (C. B. D. Garrett), [Garrett, 1925], \*1 ♀, *type*, C.B.D.G. Cranbrook, (C. B. D. Garrett), 1 ♂, metatype, C.B.D.G. Terrace, (Mrs. Hippley), 1 ♂, det. C. W. Johnson as *Cerotelion bellulus* Will., M.C.Z.

WASHINGTON: Ilwaco, Pacific Co., May 25, August 27, (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P.

CALIFORNIA: Calistoga, Napa Co., October 19, (P. C. Ting), 1 ♂, U.S.N.M.

**Ceroplatus (Euceroplatus) fasciatus fenestralis** Fisher

*Ceroplatus (Euceroplatus) fenestralis* Fisher, Trans. Amer. Ent. Soc., LXIV, p. 197, pl. 9, fig. 8, 1938.

MICHIGAN: Isle Royale, Keweenaw Co., August 3-7, (C. W. Sabrosky), [Fisher, 1938], 1 ♂, *type of fenestralis*, A.N.S.P.

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\*I am unable to locate this locality and wonder if the handwritten label should read Maplevalle, Pulaski Co.

**Ceroplatus (Euceroplatus) bellulus** Williston

*Ceroplatus bellulus* Williston, Biol. Centr. Amer. Dipt., 1, p. 219, pl. 4, fig. 3, 1900.

*Cerotelion bellulus* Johannsen, Gen. Insect., fasc. 93, p. 19, 1909.

*Ceroplatus (Euceroplatus) bellulus* Edwards, Proc. Linn. Soc. N. S. Wales, LIV, p. 174, 1925.

Edwards (1925 and in litt.) says that the type specimen in the British Museum from Mexico belongs to the subgenus *Euceroplatus*. Nearctic specimens that have been referred here (Johannsen, 1910; Johnson, 1925; Brimley, 1938) belong to the subgenus *Cerotelion*. The author has described the nearctic species under the name *Ceroplatus (Cerotelion) johannseni*.

**Ceroplatus (Heteropterna) cressoni** new species (Pl. XXIV, fig. 14.)

This is the first nearctic species to be referred to this subgenus.

This species differs from *Ceroplatus (Heteropterna) major* (Curran) nec Meunier in having three rather than one apical segment yellow and in having the coxae black not yellow. Curran's species, described from a female, is from Jamaica; this species is from Pennsylvania. It apparently is close to the Brazilian species *Heteropterna tetraleuca* Edwards and *Heteropterna trileuca* Edwards resembling the latter more closely in coloration.

Male: Total length 7 mm. Head black above, face very narrow, yellow. Palpi minute, porrect. Three ocelli, the middle ocellus much smaller than the lateral ocelli. The antennal scape and the eleven proximal joints of the flagellum black, the distal portion of the flagellum yellow.

Prothorax deep brown with black setae. Prosternum setose. Mesonotum yellow with a median black line, a black V-shaped line whose anteriorly directed arms meet the lateral stripes at the humeral angles. Anepisternites bare, black above, deep brown below. Sternopleurites deep brown with a yellow spot. Pteropleurites yellow above, bare. Scutellum yellow. Postnotum yellow, its dorsum with a very distinct triangular membranous area (see footnote 10).

Coxae black. Tibiae with their tips deep brown especially the hind tibiae; tibial setulae are irregularly arranged; the middle and the hind tibiae with a row of internal bristles; hind tibiae enlarged apically. Femora dusky yellow especially proximally and dorsally. First hind tarsal segment with two regular ventral rows of setae. Fore basitarsi longer than the fore tibiae (40:32).

Wings with  $R_4$  ending in C. Membrane dusky with the anterior border dark, extending posteriorly to cell  $R_3$ ; three hyaline spots in the anterior

border, one at the base extending apically beyond the humeral cross-vein, the next beyond the tip of Sc, the third beyond the tip of R<sub>4</sub>.

Halteres yellow, knob black.

Abdominal tergites black with yellow spots; the first to the fifth tergites yellow basally, the second to the fourth with central spots, smaller on the fourth. Second sternite with two large apical yellow spots on either side the mid-line; the third and the fourth sternites with two basal as well as two apical spots; the fifth and sixth sternites with two basal spots only.

*Holotype*.—♂; Swarthmore, Delaware County, Pennsylvania; August, (E. T. Cresson Jr.); [Acad. Nat. Sci. Phila. no. 6629].

**Ceroplatus (Ceroplatus) striatus** new species (Pl. XXIV, fig. 13.)

There are but two other neotropical species in this subgenus, *Ceroplatus minimax* Edwards and *C. fiebrigi* Edwards. *C. fiebrigi* has but two ocelli. *C. minimax* has a brown spot on the fore coxae and the mesonotum brown without distinct brown marks above. This species has three ocelli, front coxae entirely yellow, and the mesonotum with spots above. The face is narrower than usual in this subgenus.

*Male*: Total length 8 mm. Head yellow; the three ocelli surrounded by a well defined black area; the antennae deep brown, the last segment minute; palpi yellow, porrect; face narrow.

Thorax yellow and brown. Mesonotum yellow anteriorly with a brown central spot, laterad of this a brown V-shaped mark with its apex directed posteriorly to the dorsum of the scutellum, elongate brown spots above the wing bases, lateral margins with brown stripes that connect anteriorly with the arms of the V. Pleura yellow with two prominent horizontal stripes; the upper stripe beginning on the cervical plates crossing the propleura, the lower end of the anepisternites, pteropleurites and the upper portion of the pleurotergites; the lower stripe covers the ventral portion of the sternopleurites and the pleurotergites. Scutellum yellow except the center above. Postnotum with its caudal face brown. Anepisternites setose; hypopleurites with a small group of setae. Coxae yellow, the mesocoxae and the metacoxae dark apically; the mesofemora and the metafemora dark basally; tibial setulae regularly arranged in rows.

Wings with R<sub>4</sub> ending in R<sub>1</sub>. Wing membrane with clouds, the first over the base of R<sub>5</sub>, the second extending from just before the tip of R<sub>1</sub> back into cell M<sub>2</sub> covering vein R<sub>4</sub> and almost completely covering cell R<sub>4</sub>.

Abdomen swollen basally. The first through the seventh tergites are brown with lateral yellow spots, less prominent on the sixth and seventh tergites. Male terminalium yellow.

*Holotype*.—♂; Vera Cruz; (J. C. Crawford); [Acad. Nat. Sci. Phila. no. 6630].

## PALAEOPLATYURA Meunier

*Palaeoplatyura* Meunier, *Miscell. Ent.*, vi, p. 164, 1899. Johannsen, *Gen. Insect.*, fasc. 93, p. 10, pl. 3, fig. 7 (*Mycetobiinae*), 1909. Johannsen, *Maine Agr. Exp. Sta. Bull.* no. 172, pp. 224-225, fig. 78 (*Mycetobiinae*), 1910. Edwards, *Ann. Mag. Nat. Hist.*, (9), vii, p. 433 (*Ceroplatinae*), 1921. Edwards, *Trans. Ent. Soc. London*, 1924, pp. 522-523 (*Ceroplatinae*), 1925.

*Key to Recent Species of Palaeoplatyura*

1. Wing with distinct markings, anal vein reaches the wing margin; male terminalium as in plate XXIV, figures 18 and 22... *johnsoni* Johannsen  
Wing hyaline with its tip faintly smoky, never with distinct markings... 2
2. Anal vein does not reach the wing margin,  $R_4$  ends in C beyond the tip of  $R_1$ ; mesonotal setae black; male terminalium as in plate XXIV, figures 16 and 17..... *aldrichii* Johannsen  
Anal vein reaches the wing margin,  $R_4$  ends in  $R_1$  at the tip of  $R_1$ ; mesonotal setae yellow; male terminalium as in plate XXIV, figures 15 and 19..... *melanderi* new species

*Palaeoplatyura aldrichii* Johannsen (Pl. XXIV, figs. 16 and 17.)

*Palaeoplatyura aldrichii* Johannsen, *Gen. Insect.*, fasc. 93, p. 10, 1909. Johannsen, *Maine Agr. Exp. Sta. Bull.*, no. 172, p. 225, 1910.

WASHINGTON: Bellingham, Whatcom Co., July 30, (A. L. Melander), 1 ♀?, A.L.M. Friday Harbor, San Juan Island, San Juan Co., (J. M. Aldrich), [Johannsen, 1909, 1910], 1 ♂, *type*, U.S.N.M. Mt. Constitution, Orcas Island, San Juan Co., June 9, (A. L. Melander), 1 ♂, A.L.M.

*Palaeoplatyura johnsoni* Johannsen (Pl. XXIV, figs. 19 and 22.)

*Palaeoplatyura johnsoni* Johannsen, *Maine Agr. Exp. Sta. Bull.*, no. 172, pp. 225-227, fig. 78, 1910. Leonard, *Cornell Univ. Agr. Exp. Sta., Mem. no.* 101, p. 740, 1928. Shaw, *Bull. Brook. Ent. Soc.*, xxxvi, p. 24, 1941.

VERMONT: Burlington, Chittenden Co., June 24, (C. W. Johnson), [Johannsen, 1910; Johnson, 1925], 1 defective specimen, *type*, B.S.N.H.

MASSACHUSETTS: Petersham, Worcester Co., June 9, (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P. Sunderland, Franklin Co., May 24, 1 ♂, B.S.N.H. Lake May, June 13, (C. P. Alexander), 1 ♂, B.S.N.H. Great Barrington, Berkshire Co., June 15, [Johnson, 1925], 1 ♂, B.S.N.H.

NEW YORK: Filmore Glen, near Moravia, Cayuga Co., June 15, (E. G. Fisher), 1 ♂, A.N.S.P. Ithaca, Thompkins Co., June, [Leonard, 1928], C.U.

MARYLAND: Loch Raven, Baltimore Co., May 8, (E. G. Fisher), 2 ♂, A.N.S.P.

NORTH CAROLINA: \*Great Smoky Nat. Pk., June 10, (C. P. Alexander), Shaw Coll.

*Palaeoplatyura melanderi* new species (Pl. XXIV, figs. 15 and 19.)

This species is close to *Palaeoplatyura aldrichii* Johannsen differing as indicated in the key above.

*Male*: Total length 7 mm., wing 4.8 mm. Head brown to black above; face yellow. Antennal flagellum except the basal joint dark brown, scape and base of the flagellum and the palpi yellow. The palpi slender, the last joint slender and elongated. Three ocelli, the middle one smallest. Thorax yellow; setae yellow. Mesonotum yellow, sometimes with a narrow dark brown median stripe posteriorly and brown before the scutellum. The postnotum dark brown to blackish; scutellum yellow. Wings hyaline, Sc ending in C beyond the level of the origin of R<sub>5</sub>; Sc<sub>2</sub> well before halfway between the humeral cross-vein and the tip of Sc; sometimes faint to absent. R<sub>1</sub> ending distinctly in R<sub>2</sub> very close to the tip of R<sub>1</sub>; r-m cross-vein very short but distinct, basal section of M very delicate and transparent to almost invisible; stalk of M and m-cu subequal. Second anal vein reaches the wing margin. Halteres yellow. All trochanters with black spots below. Tibial setulae irregularly spaced; small scattered setae on all aspects. Abdomen brown above, yellow below except apically entirely brown; narrow hind margins of the tergites white. Terminalium yellow, ninth tergite brownish, tips of styles black.

*Holotype*.—♂; Tahoma Fork, Mt. Ranier, Pierce County, Washington; July 25; [Acad. Nat. Sci. Phila. no. 6631].

*Paratypes*.—17 ♂; Index, Snohomish Co., August 2; Canyon Creek, Snohomish Co., July 25; Lake Cushman, Mason Co., July 22; Lilliwaup, Mason Co., July 23; Olymphia, Thurston Co., June 22; Tahoma Fork, Mt. Ranier, Pierce Co., July 25; Hansen Camp, Mt. Ranier, Pierce Co., July 31; Naselle, Pacific Co., July 2; Ilwaco, Pacific Co., June 28; Pluvius, Pacific Co., July 16.

All specimens were collected by Dr. A. L. Melander in Washington. Paratypes are deposited in the Melander collection and in the collection of the Academy. I take pleasure in naming this species after the collector.

### HESPERODES Coquillett

*Hesperodes* Coquillett, Ent. News, XI, p. 429, 1900. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 241, 1910.

There is but one described species of which I know only two specimens.

*Hesperodes johnsoni* Coquillett, Ent. News, xi, p. 429, 1900. Smith, Ann. Rept. N. J. State Mus. for 1909, p. 725, 1910. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 241, 1910.

MASSACHUSETTS: Wellesley, Norfolk Co., June 30, 1 ♀, A.N.S.P.

NEW JERSEY: Delaware Water Gap, Warren Co., July 12, (C. W. Johnson), [Coquillett, 1900; Smith, 1910; Johannsen, 1910], 1 ♂, *type*, U.S.N.M.

The holotype, a male, has simple styles as in *Macrocera*. The ocelli are lacking in both sexes.

### PLATYURA Meigen<sup>13</sup>

*Platyura* Meigen (not authors), Illiger's Mag. f. Insek., II, p. 264, 1803.

*Apemon* Johannsen, Gen. Insect., fasc. 93, p. 20, 1909, Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, pp. 241-245, figs. 88, 97, 1910. Edwards, Trans. Ent. Soc. London, 1924, p. 526, 1925.

*Paraplathyura* Enderlein, Stett. Ent. Zeit., LXXII, p. 163, 1910.

#### Key to Nearctic Species of *Platyura*<sup>14</sup>

1. Sc short, ending at or before the base of R<sub>s</sub>.....2  
Sc long, ending distad of the base of R<sub>s</sub>.....3
2. Total length 6 mm.; abdomen yellow with the anterior portion of each segment black, western species.....*gracilis* Williston  
Total length 8-12 mm.; abdomen reddish yellow, first segment black  
*pectoralis* Coquillett
3. Mesonotum black or reddish with brown stripes.....4  
Mesonotum and abdomen reddish yellow, the first segment black; narrow wing cloud along R<sub>s</sub>; cloud from C covering R<sub>1</sub> and extending into the base of cell M<sub>2</sub>; another diffuse cloud from just before the tip of R<sub>1</sub> to just beyond the tip of Cu<sub>1</sub>; western  
*pectoralis* Coquillett (*rufa* Van Duzee)
4. Abdomen almost wholly black.....5  
Abdomen in part reddish yellow.....6
5. Wings with a deep black cloud which extends from midway between Sc and R<sub>1</sub>, pass vein M<sub>1+2</sub> and at the margin of the wing passes vein M<sub>3</sub>  
*manteri* (Johnson)  
Wings of male very faintly smoky, of female more distinctly smoky but never as above.....*nigriventris* (Johannsen)
6. Mesonotum black, or black with a triangle back of the humerus and the dorso-pleural suture yellowish.....7  
Mesonotum reddish yellow with three dark brown stripes; part of the third, fourth, and fifth abdominal segments yellow, the other segments black.....*pulchra* Williston

<sup>13</sup> Synonymy after Stone, Ann. Ent. Soc. Amer., xxxiv, pp. 407, 415, 1941.

<sup>14</sup> Partly after Johannsen, 1910. *Apemon maudae* and *A. pulchra* have been reversed in Johannsen's key.

7. Mesonotum black; abdomen yellow except the first two segments

*maudae* Coquillett

Mesonotum black usually with a yellow triangle back of the humerus (not in a paratype in M.C.Z.) and the dorso-pleural suture yellowish; abdomen with the first and second segments black, then a varying number of red segments and the caudal end of the abdomen black

*similis* (Johnson)

**Platyura gracilis** Williston

*Platyura gracilis* Williston, Kansas Univ. Quart., II, p. 60, 1893.

*Apemon gracilis* Johannsen, Gen. Insect., fasc. 93, p. 20, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 243, 1910.

WASHINGTON:\* (S. W. Williston), [Williston, 1893], 1 ♂, type, Univ. of Kansas.

**Platyura pectoralis** Coquillett

*Platyura pectoralis* Coquillett, Canad. Ent., xxvii, pp. 199-200, 1895.

*Apemon pectoralis* Johannsen, Gen. Insect., fasc. 93, p. 20, 1910. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 243, fig. 88, 97, 1910. Cole and Lovett, Proc. Calif. Acad. Sci., (4), xi, p. 217, 1921.

? *Apemon rufa* Van Duzee, Proc. Calif. Acad. Sci., (4), xvii, pp. 32, 33, 1928.

Coquillett's type is described as a female; the type is a male.

Van Duzee, 1928, states that Johannsen's Nevada males of *Apemon pectoralis* Coquillett are the same species as his *Apemon rufa*. He must have meant the Idaho males. Coquillett's holotype is from Nevada and the specimens that Johannsen described are from Idaho. All of these specimens are in the U.S.N.M. and I consider them conspecific in spite of the difference in the ending of Sc<sub>1</sub>. One specimen is smaller than the others as was pointed out by Johannsen, but I agree with him that these are all conspecific.

Van Duzee's description fits perfectly with Johannsen's, Coquillett's and Cresson's specimens. Of the specimens I have seen one specimen shows a slight variation in the position of the ending of Sc<sub>1</sub> in relation to the base of R<sub>5</sub>; the slant of R<sub>4</sub> varies in Cresson's specimens; the tarsi are brown in all specimens. The metanotum varies from entirely black to yellow with black only on the posterior face; pronotal color entirely black or black with red on its upper half.



I have not seen Van Duzee's holotype so list his species as a synonym with a question.

IDAHO: Troy, Latch Co., May 31, (E. T. Cresson Jr.), 1 ♂, 1 ♀, A.N.S.P. Moscow, Latch Co., June 27, (J. M. Aldrich), [Johannsen, 1910; Van Duzee, 1928 as *A. rufa*, in error as "Nevada males"], 1 ♂, 1 defective specimen, U.S.N.M. Grangeville, Idaho Co., June 27, (J. M. Aldrich), [Johannsen, 1910; Van Duzee, 1928 as *A. rufa*, in error as "Nevada males"], 1 ♂, 1 defective specimen, U.S.N.M.

WASHINGTON: \* North Bend, King Co., July 10, (E. C. Van Dyke), [Van Duzee, 1928 as paratype of *A. rufa*], 1 ♀, C.A.S. Ilwaco, Pacific Co., June 28, (A. L. Melander), 1 ♀, A.L.M.

OREGON: \* Corvallis, Benton Co., June 4, [Cole and Lovett, 1921], Oregon Agricultural College Collection?

NEVADA: [Coquillett, 1895; Johannsen, 1910], 1 ♂, *type*, U.S.N.M.

CALIFORNIA: \* Sobre Vista, Sonoma Co., (J. A. Kusche), 2 ♀, C.A.S. \*Lagunitas, Marin Co., April 26, (E. P. Van Duzee), [Van Duzee, 1928 as *A. rufa*, paratype], 1 ♂, C.A.S. \*Mill Valley, Marin Co., April 11-18, (M. C. and E. P. Van Duzee), [Van Duzee, 1928 as type and paratype of *A. rufa*], 1 ♀, 1 ♂, C.A.S. \*Yosemite Valley, Yosemite National Park, June 10, (E. C. Van Dyke), [Van Duzee, 1928 as allotype of *A. rufa*], 1 ♂, C.A.S.

**Platyura maudae** Coquillett (Pl. XXIV, fig. 28.)

*Platyura maudae* Coquillett, Canad. Ent., xxvii, p. 199, 1895.

*Apemon maudae* Johannsen, Gen. Insect., fasc. 93, p. 20, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 244, 1910. Cole and Lovett, Proc. Calif. Acad. Sci., (4), xi, p. 217, 1921.

WASHINGTON: No further data, [Coquillett, 1895], 1 defective specimen, *type*, U.S.N.M. 1 ♂, *co-type?*, U.S.N.M. Canyon Creek, Snohomish Co., July 26, (A. L. Melander), 1 ♂, A.L.M. Ilwaco, Pacific Co., June 28, (A. L. Melander), 3 ♂, A.L.M. and A.N.S.P.

OREGON: Corvallis, Benton Co., May 5, [Cole and Lovett, 1928], 1 ♂, U.S.N.M. \*Others same data, May 3-30, [Cole and Lovett, 1928], Oregon Agricultural College Collection?

Johnson's specimens (1925) belong to *P. similis*.

**Platyura pulchra** Williston

*Platyura pulchra* Williston, Kansas Univ. Quart., II, p. 59, 1893.

*Apemon pulchra* Johannsen, Gen. Insect., fasc. 93, p. 20, 1909. Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, pp. 244-245, 1910.

This species, represented apparently only by the holotype, is unknown to the author.

WASHINGTON: \* [Williston, 1893], 1 ♂, *type*, Univ. of Kansas.

**Platyura manteri** (Johnson)*Apemon manteri* Johnson, Psyche, xxxviii, p. 23, 1931.CONNECTICUT: West side of Williamatic River near Mansfield Station, Tolland Co., June 6, (C. W. Johnson), [Johnson, 1931], 1 ♂, *type*, B.S.N.H.**Platyura nigriventris** (Johannsen) (Pl. XXIV, fig. 21.)*Apemon nigriventris* Johannsen, Maine Agr. Exp. Sta., Bull. no. 172, p. 245, 1910.BRITISH COLUMBIA: Prairie Hill, (5,800'), July, (J. C. Bradley), [Johannsen, 1910], *co-type*, O.A.J. Selkirk Mts., Rogers Pass, (4,600'), (J. C. Bradley), [Johannsen, 1910], *co-types*, O.A.J. and C.U. Kalso, June 18, 20-29, July 12, (R. P. Currie, H. G. Dyar, A. N. Caudell), 4 ♂, 2 ♀, U.S.N.M. as *Platyura marginata* Meigen.

MONTANA: Avalanche Lake, Glacier Nat. Park, July 14, (A. L. Melander), 1 ♀, A.L.M.

IDAHO: Troy, Latch Co., May 31, (E. T. Cresson Jr.), 1 ♂, A.N.S.P.

WASHINGTON: Diamond Lake, Pend Oreille Co., June 15, (A. L. Melander), 2 ♂, A.L.M. and A.N.S.P. S. Fork Dry Creek, Blue Mts., Columbia Co.?, June 27, (V. N. Argo), 1 ♂, A.L.M. White River, Mt. Ranier Nat. Park, July 19, (A. L. Melander; on *Heracleum* sp.), 1 ♂, A.L.M.**Platyura similis** (Johnson) (Pl. XXIV, fig. 24.)*Apemon maudae* Johnson (nec Coquillett), Occas. Pap. Boston Soc. Nat. Hist., VII, p. 77, 1925.*Apemon similis* Johnson, Psyche, xxxviii, pp. 22-23, 1931.

QUEBEC: Chelsea, 1 ♂, C.U.

MAINE: Oquossoc, Rangeley Lake, Franklin Co., July 3, (C. W. Johnson), [Johnson, 1931], 1 ♀, *paratype*, M.C.Z.NEW HAMPSHIRE: Bretton Woods, June 28, (C. W. Johnson), [Johnson, 1925 as *A. maudae*; Johnson, 1931], 1 ♂, *type*, B.S.N.H. Franconia, Grafton Co., (Mrs. A. T. Slosson), [Johnson, 1925 as *A. maudae*; Johnson, 1931], 1 ♀, *allotype*, B.S.N.H. Tucheran Ravine, Mt. Washington, Coos Co., July 8, (July 28 in Johnson), (3,000'), [Johnson, 1925 as *A. maudae*; C. W. Johnson, 1931], 1 defective specimen, *paratype*, B.S.N.H. Halfway House, Mt. Washington, Coos Co., July 4, (C. W. Johnson), 1 ♀, M.C.Z.

The number of reddish-yellow abdominal segments varies.

## EXPLANATION OF FIGURES

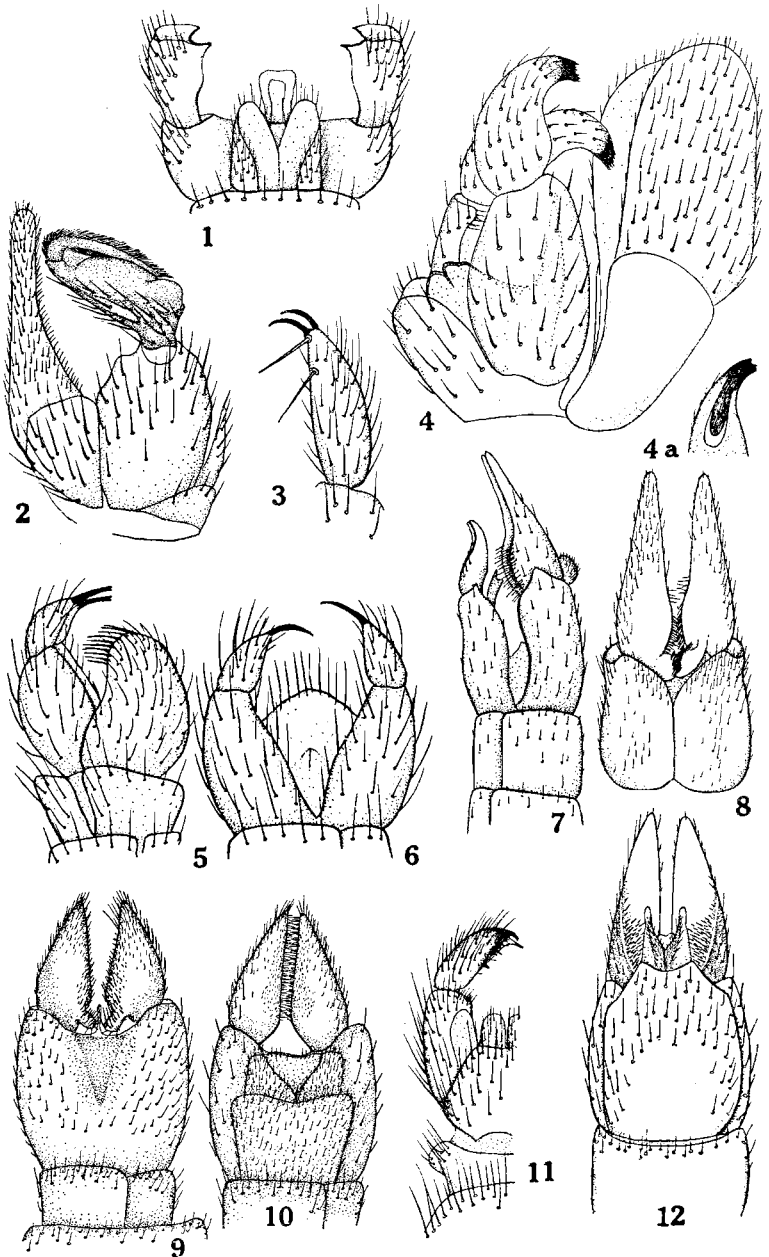
## PLATE XXIII

Fig. 1.—*Ditomyia potomaca* new species. Dorsal aspect of male terminalium of holotype.Fig. 2.—*Symmerus coqulus* Garrett. Lateral aspect of male terminalium (styles swollen by treatment with KOH solution). (Compared with metatype.)

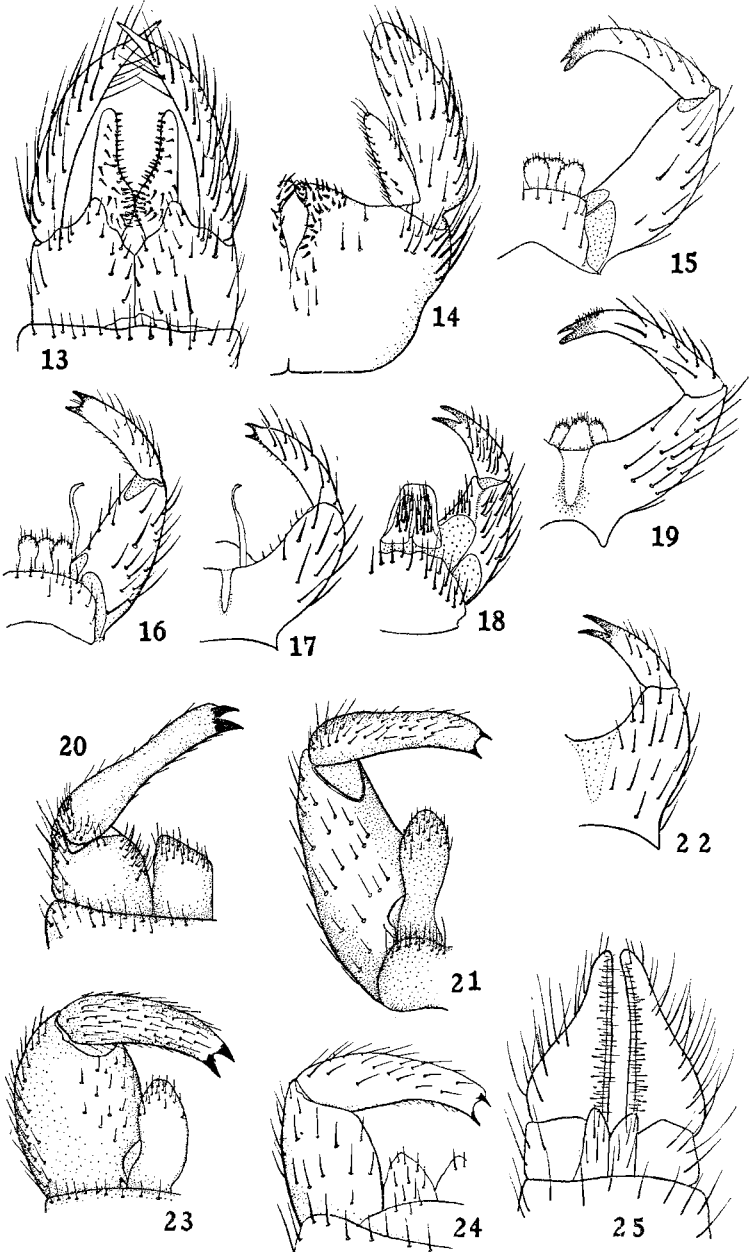
- Fig. 3.—*Diadocidia borealis* Coquillett. Style of unprepared male terminalium (compared with unprepared style of holotype).
- Fig. 4.—*Symmerus lautus* (Loew). Lateral aspect of male terminalium; the dorsal to the right. 4a. mesal aspect of style tip (figures compared with holotype).
- Fig. 5.—*Diadocidia ferruginosa* (Meigen). Lateral aspect of male terminalium.
- Fig. 6.—*Diadocidia ferruginosa* (Meigen). Ventral aspect of male terminalium (agree with European figures).
- Fig. 7.—*Ceroplatus militaris* Johannsen. Lateral aspect of male terminalium (compared with holotype).
- Fig. 8.—*Ceroplatus militaris* Johannsen. Ventral aspect of male terminalium.
- Fig. 9.—*Ceroplatus clausus* Coquillett. Ventral aspect of male terminalium (compared with holotype).
- Fig. 10.—*Ceroplatus clausus* Coquillett. Dorsal aspect.
- Fig. 11.—*Ceroplatus johannseni* Fisher. Dorsal aspect of male terminalium (half) of holotype.
- Fig. 12.—*Ceroplatus militaris* Johannsen. Dorsal aspect of male terminalium (figure compared with holotype).

## PLATE XXIV

- Fig. 13.—*Ceroplatus striatus* new species. Dorsal aspect of male terminalium of holotype.
- Fig. 14.—*Ceroplatus cressoni* new species. Ventral aspect of male terminalium of holotype.
- Fig. 15.—*Palaeoplatyura melanderi* new species. Dorsal aspect of half of male terminalium of holotype.
- Fig. 16.—*Palaeoplatyura aldrichii* Johannsen. Dorsal aspect of half male terminalium.
- Fig. 17.—*Palaeoplatyura aldrichii* Johannsen. Ventral aspect.
- Fig. 18.—*Palaeoplatyura johnsoni* Johannsen. Dorsal aspect of half of male terminalium.
- Fig. 19.—*Palaeoplatyura melanderi* new species. Ventral aspect.
- Fig. 20.—*Platyura pectoralis* Coquillett (*rufa* Van Duzee). Dorsal aspect of half of male terminalium of an Idaho specimen.
- Fig. 21.—*Platyura nigriventris* (Johannsen). Dorsal aspect of half of male terminalium.
- Fig. 22.—*Palaeoplatyura johnsoni* Johannsen. Ventral aspect of half of male terminalium.
- Fig. 23.—*Platyura similis* (Johnson). Dorsal aspect of half of male terminalium.
- Fig. 24.—*Platyura maudae* Coquillett. Dorsal aspect of unprepared male terminalium.
- Fig. 25.—*Ditomylia euzona* Loew. Dorsal aspect of unprepared male terminalium of holotype.



FISHER—AMERICAN MYCETOPHILIDAE



FISHER—AMERICAN MYCETOPHILIDAE