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Proceedings of the Entomological Society of Washington.

Washington, etc. :Entomological Society of Washington

<http://www.biodiversitylibrary.org/bibliography/2510>

v. 26 1924: <http://www.biodiversitylibrary.org/item/54672>

Article/Chapter Title: District of Columbia Diptera: Tromoptera (Cyrtidae, Bombyliidae, Therevidae, Scenopidae).

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Subject(s): Entomology, Diptera, Cyrtidae, Bombyliidae, Therevidae, Scenopidae

Page(s): Text, Page 182, Page 183, Page 184, Page 185, Page 186, Page 187, Page 188, Page 189, Page 190, Page 191, Page 192, Page 193, Page 194, Page 195

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PROCEEDINGS OF THE
ENTOMOLOGICAL SOCIETY OF WASHINGTON

VOL. 26

OCTOBER 1924

No. 7

**DISTRICT OF COLUMBIA DIPTERA: TROMOPTERA (CYRTIDAE,
BOMBYLIIDAE, THEREVIDAE, SCENOPINIDAE).**

BY F. R. COLE, J. R. MALLOCH, AND W. L. McATEE.

Family CYRTIDAE.

This small family contains some of the most interesting flies known to science, both their structures and their habits being very unusual in the suborder to which they belong. They are unique in the Brachycera in having some of the abdominal spiracles situated in the tergites and also in having larvae which live internally in spiders. The eastern species are for the most part rare in collections and it is very seldom that the insects are met with commonly in the field, though there are records of some cases in which they have been found flying in numbers around dead twigs of trees. All the eastern forms are rather small, with small heads, aborted mouth parts, and inflated balloon-like bodies. The western genus *Eulonchus*, and the species of *Lasia* found in Mexico and South America have the proboscis elongated and are known to feed on the nectar of flowers. These species are quick, strong fliers, but the eastern forms are not very active and have a floating, aimless sort of flight.

Key to the genera.

1. With three distinct ocelli.....2
With but two distinct ocelli.....3
2. Costa of wing thickened near apex of first vein, usually with a spur at this point in the male; antennae inserted below middle of head in profile, third segment with three long apical hairs.....*Pterodontia*.
Costa of wing not thickened and without a spur at apex of first vein; antennae inserted on top of head, third segment with a slender apical arista *Acrocera*.
3. Venation of wings complete, attaining margin, discal cell present; antennae situated on top of head, near vertex.....*Opsebius*.
Venation of wings incomplete, most of the veins not attaining margin of wing; discal cell absent; antennae inserted low down on head, near margin of mouth.....*Ogcodes*.

Genus **PTERODONTIA** Gray.

P. analis Westwood.—Beltsville, Md., July 9, 1916, McAtee.

Genus **ACROCERA** Meigen.*Key to the species.*

1. Second longitudinal vein represented by a very distinct apical rudiment;
wings fumose.....*bimaculata*.
Second longitudinal vein obliterated; wings hyaline.....*unguiculata*.

A. bimaculata Loew.—Virginia shore above Key Bridge, Aug. 3, 1914, McAtee; Plummers Id., Md., May 31, 1915, R. C. Shannon; May 8, 1915, Jacksons Id., Md., Aug. 31, 1902, H. S. Barber.

A. unguiculata Westwood.—Fort Washington, Md., May 26, 1885, C. W. Johnson.

Genus **OGCODES** Latreille.*Key to the species.*

1. Length 7–9 mm.; wings strongly infuscated.....*incultus*.
Smaller species; wings usually hyaline.....2.
2. Male orange to brownish yellow, with dark brown spots on the abdominal spiracles; female brown, with indistinct lighter margins on the abdominal segments.....*dispar*.
Species with a different coloration.....3.
3. Humeri yellowish; scutellum more or less yellow; posterior margins of abdominal segments with broad, sharply defined white margins.....*costatus*.
Humeri blackish; scutellum blackish.....4.
4. Legs dull yellowish, coxae black.....*borealis*.
Legs black or blackish brown; wings hyaline; rims of halteres blackish.....*pallidipennis*.

O. borealis Cole.—Plummers Id., Md., Aug. 23, 1919, H. S. Barber.

O. costatus Loew.—Vienna, Va., June 4, 1913, R. A. Cushman; same locality and date, in copula, C. W. Hooker; Falls Church, Va., June 1, 1916, Wm. Middleton, Aug. 26, 1915, C. T. Greene, Aug. 27, N. Banks; Maywood, Va., June 4, 1922, McAtee; Glen Echo, Md., May 26, 1923, Malloch; Branchville to Beltsville, Md., June 4, 1914, L. O. Jackson.

O. dispar Macquart.—Plummers Id., Md., May 30, 1911, H. S. Barber, June 4, 1905, E. A. Schwarz; June 13, 1905, D. H. Clemons; Aug. 9, 1902, E. A. Schwarz and H. S. Barber; Aug. 9, 1914, McAtee; Aug. 28, 1912, in copula, E. A. Schwarz; Beltsville, Md., June 15, 1919, L. L. Buchanan.

O. incultus Osten Sacken.—Falls Church, Va., N. Banks.

O. pallidipennis Loew.—Falls Church, June 23, N. Banks; Maywood, Va., June 20, 1921, McAtee; Dixie Landing, Va., May 25; Washington, D. C., June 1, C. H. T. Townsend; June 11, P. R. Myers; College Park, Md., Aug. 17, 1912, W. D. Appel.

Genus **OPSEBIUS** Costa.

O. sulphuripes Loew.—Falls Church, Va., August 11, N. Banks.

Family BOMBYLIIDAE.

This family, various species of which are popularly known as beeflies or flower flies, is not so numerously represented in this as in some other regions. Many of the species frequent sandy areas and as a whole the family is better represented in the western plains states than in the east. The larvae so far as known are predacious or parasitic, some such as *Exoprosopa fascipennis* attacking hymenopterous primary parasites of other insects, others are inquilines or parasites in the nests of bees and wasps, or in the burrows of coleoptera, or are parasitic on grasshopper eggs, or lepidopterous larvae. The adults frequent flowers and fly in bright sunshine. They poise in the air and when disturbed dart away with a rapidity which baffles the eye.

Key to the genera.

1. Distance between anterior cross-vein and furcation of second and third veins, not greater than length of anterior cross-vein; second vein bent at base, leaving third at, or almost at, a right angle, or the discal cell confluent with second basal cell.....2.
- Distance between anterior cross-vein and furcation of second and third veins much greater than length of anterior cross-vein, second vein usually forming an acute angle with third at its base; discal cell always separated from second basal cell.....5.
2. Second vein very short, connecting with first at middle of wing to form a small subtriangular cell; no cross-vein between discal and second basal cells.....*Pachyneres.*
- Second vein long, entering costa near apex of wing; a cross-vein between discal and second basal cells.....3.
3. Apex of antennal style with a pencil of stiff hairs; pulvilli distinct, normal; vertex more or less abruptly declivous immediately behind ocelli, posterior ocelli in line with hind angles of eyes; basal costal process broad, subtriangular or leaf-like.....*Spogostylum.*
- Apex of antennal style without a pencil of stiff hairs; pulvilli vestigial or absent; vertex not abruptly declivous immediately behind ocelli; basal costal process of wing lanceolate or spike-like.....4.
4. Pulvilli of mid and hind tarsi replaced by a tooth-like process which simulates a basal tooth to each claw.....*Exoprosopa.*
- Pulvilli absent, claws at most slightly angulate basally.....*Anthrax.*
5. Wing with 4 posterior cells.....6.
- Wing with 3 posterior cells.....12.
6. First posterior cell closed.....7.
- First posterior cell open.....8.
7. First basal cell of wing not longer than second.....*Systoechus.*
- First basal cell of wing longer than second.....*Bombylius.*
8. Proboscis short, hardly extending beyond anterior margin of mouth opening.....*Anisotamia.*
- Proboscis long and slender, extending very much beyond anterior margin of mouth opening.....9.

9. Anal cell closed; body sparsely hairy.....*Phthiria*.
 Anal cell open; body densely haired or scaly.....10.
10. Vestiture of antennae, thorax, and abdomen consisting entirely of hairs,
 or body almost entirely bare; wings bare.....11.
 Vestiture of antennae, thorax and abdomen consisting largely of flat
 scales; wings partly scaly.....*Lepidophora*.
11. Body robust, densely hairy.....*Sparnopolius*.
 Body slender, practically bare.....*Metacosmus*.
12. Abdomen remarkably elongate and slender, its length distinctly exceeding
 that of wing, segments of basal portion 4 or 5 times as long as broad when
 seen from above, the insect resembling a species of *Sphex* (Hymenoptera,
Aculeata); eyes in both sexes touching above; body sparsely short
 haired.....*Systropus*.
 Abdomen not elongate, subcylindrical or conical, not noticeably longer
 than wings, the tergites basally not longer than broad when seen from
 above; eyes of females widely separated above.....13.
13. Body and legs largely or partly clothed with scales.....*Toxophora*.
 Body and legs without scales.....14.
14. Antennae long and slender, tapered to a point.....*Geron*.
 Antennae robust, not tapered to a point, with a short style before apex
 above.....*Rhabdoselaphus*.

Genus **SPOGOSTYLUM** Macquart.

Key to the species.

1. Anal angle of wing undeveloped, the cell between anal vein and margin of
 wing narrower than the one in front of that vein, and narrower basally
 than apically; wing broadly blackened along fore margin from base to
 apex, the dark color covering entire base, its posterior outline notched
 or undulated beyond base; basal costal process, squamae, and most of the
 hairs in the fringes behind the latter, fuscous.....*argyropyga*.
 Anal angle of wing developed, the cell between anal vein and margin of
 wing broader than the one in front of that vein, widest at or near middle,
 or at base.....2.
2. A cross-vein connecting the vein forming hind margin of discal cell beyond
 its middle with the vein behind it, forming a small closed cell; all veins
 of wings bordered with dark brown, which color is in places confluent,
 forming several large irregular blotches.....*simson*.
 No cross-vein connecting the above veins; rarely there is a spur of a vein
 projecting from hind side of discal cell, but it never connects with the
 vein behind it to form a closed cell; wings otherwise marked.....3.
3. Squamae and basal costal process of wing entirely fuscous.....4.
 Squamae apically whitish, basal costal process yellowish apically.....5.
4. Wings entirely blackened; fringes of squamae fuscous.....*slossonae*.
 Wings blackened on basal half, the angulated outline of the dark area
 extending diagonally across wing from apex of anal cell to a point about
 one-third from apex of costal margin; fringes of squamae largely pale....
anale.

5. Entire field of wing peppered with black dots which form patches on parts of disc, especially on basal half and near costa; fringe behind squamae largely or entirely black.....*oedipus*.

Wing with a few dark spots, confined largely to the cross-veins and forks of the longitudinal veins, and more or less broadly, conspicuously suffused with fuscous basally.....6.

6. Black color of basal portion of wing not sharply limited apically, the tips of wings smoky, not pure hyaline; cross-vein at apex of discal cell usually distinctly infuscated; costal vein distinctly thickened at base; male hypopygium with the apical dorsal pair of processes broad, barely rounded at apices, the bristles fine and hair-like, the shoulders at bases of these processes on inner side forming a right angle, the outer margin of hypopygium with a broad rectangular shoulder about one third from apex.....*obsoletum*.

Black color of basal portion of wing less extensive, sharply limited apically, the tips of wings pure hyaline; cross-vein at apex of discal cell usually unclouded; costal vein not thickened at base; male hypopygium with the apical dorsal pair of processes narrowed apically, the tips narrowly rounded, and with short stiff bristles, the shoulders at bases of these processes not forming a right angle, more forwardly projecting, simulating a short-round process, the outer margin of hypopygium more rounded off on the swollen part at base of the apical process.....7.

7. Fork of third vein with a conspicuous fuscous spot.....*limotulus*.

Fork of third vein not spotted.....*limatulus* var. *pauper*.

S. anale Say.—Great Falls, Va., Sept. 5, 1916, McAtee; Falls Church, Va., July 15, 1917, I. N. Gabrielson; Aug. 4, 1913, Sept. 13, 1912, C. T. Greene; Kalmia Road, D. C., Sept. 9, 1916, McAtee; Riverdale, Md., June 2, Beltsville, Md., July 16, Cole; Odenton, Md., July 29, 1917, McAtee.

S. argyropyga Wiedmann.—The most common species of the genus; found throughout the region; season June 9 to Sept. 1; has been taken on flowers of *Viburnum nudum*. P. I.

S. limatulus Say (*albofasciatum* Macquart; *pauper* Loew).—Cabin John, Md., June 24, Cole; Bladensburg, Md., June 4, 1916, on flowers of *Tephrosia virginica*, L. O. Jackson; Beltsville, June 16, 1918, July 1, 1917, July 4, 1912, McAtee; July 6, 16, Sept. 10, Cole; Odenton, Md., June 11, 1922, McAtee. *S. limatulus* var. *pauper* Loew (var. a. Say).—Beltsville, Md., June 9, N. Banks; July 4, 1912, 1916, McAtee; Aug. 22, 1917, C. T. Greene; Brookland, D. C., June 18, 1914, in copula, J. B. Parker; Bladensburg, Md., June 23, 1916; Camp Meade, Md., June, 1918, Shannon.

S. obsoletum Loew.—Falls Church, Va., June 16, 1915, on flowers of *Ceanothus*, C. T. Greene; Sept. 10, N. Banks; Mt. Vernon, Va., July 4, 1917; Plummers Id., Md., June 14, 1908, July 7, 1912; Beltsville, Md., July 9, 1916, McAtee.

S. oedipus Fabricius.—Common and widespread; extreme dates of collection, May 19 and Oct. 10. P. I.

S. simson Fabricius.—Common and widely distributed; season July 12 to August 28; in copula July 14; bred specimens have emerged July 27 and Aug. 8.

S. slossonae Johnson (*cephus* auctt. nec Fabricius).—Falls Church, Va., June 18, N. Banks; June 23, 1915, C. T. Greene; June 24, 1915, S. A. Rohwer; Glencarlyn, Va., July 8, 1915, C. T. Greene; Plummers Id., Md., Aug. 4, 1907, July 19, 1924, Shannon; Maryland near Plummers Id., July 27, 1916, McAtee; Hyattsville, Md., Aug. 3, 1916; Beltsville, Md., July 2, 1916, W. R. Walton; June 25, 1915, R. C. Shannon.

Genus **EXOPROSOPA** Macquart.

Key to the species.

- Wings blackish brown, a small spot near middle of disc, and the apices broadly hyaline, the hyaline part usually extending narrowly along posterior margin and sometimes more or less connected with the central hyaline spot.....*emarginata* Macquart.
- Wings blackish brown, with two broad irregular hyaline fasciae, one near base and the other beyond middle, neither of which reaches the costal margin, and the apical hyaline part usually connected with the outer hyaline fascia at the hind margin.....*fascipennis* Say.

E. emarginata Macquart.—Common; season June 12 to July 29; in copula July 13; has been collected on flowers of *Ceanothus americanus*, *Sericocarpus linifolius*, and *S. bifoliatus*. V. P. I.

E. fascipennis Say.—Fairly common; extreme dates of collection June 12 and September 28; has been collected on flowers of *Sericocarpus bifoliatus*.

Genus **ANTHRAX** Scopoli.

Key to the species.

1. Wings without conspicuous markings; upper mouth margin not produced conically 2.
- Wings with conspicuous brown or fuscous markings..... 3.
2. More slender, smaller species; fourth and fifth abdominal segments with some conspicuous scale-like hairs on sides; fore tibiae without posterodorsal setulae.....*lateralis*.
- More robust, larger species; abdominal segments without conspicuous scale-like hairs on sides; fore tibia with a series of distinct posterodorsal bristles*alternata*.
3. Basal half or more of wings almost or entirely solid brown or fuscous, apical part entirely hyaline..... 4.
- Wings mottled or streaked, not sharply bipartite in color..... 5.
4. Outer edge of dark portion of wing forming an almost straight line, not conspicuously erose nor produced along costa; hairs of abdomen largely fulvous; face conspicuously subconically produced above mouth....*fulvohirta*.

Outer edge of dark portion of wing conspicuously erose and produced to near tip of costa; hairs and scales of abdomen largely black; face very little produced above mouth.....*sinuosa*.

5. Wing markings consisting of fused or subcontiguous fuscous spots which form three more or less well defined groups, one at base, a fascia just before middle, and another beyond middle, with one or two small spots at apex of costa; a cross-vein connecting fork of third vein near its base with the vein in front of it.....*banksi*.

Wing largely yellowish brown, darker along the veins and with one or more small subhyaline marks near middle and at apex; no cross-vein connecting fork of third vein with the vein in front of it.....*ceyx*.

A. alternata Say.—Falls Church, Va., July 1, S. A. Rohwer; Great Falls, Va., June 29, 1915, C. T. Greene; Plummers Id., Md., July 10, 1910, July 21, 1912, McAtee; Hyattsville, Md., Sept. 24, 1916; Riggs Mill, Md., Sept. 18, 1916; Beltsville, Md., July 23, 30, 1916, W. R. Walton; June 28, 1911, F. Knab.

A. banksi Johnson (*serpentina* Auctt. nec Osten Sacken [*Dipalta* O. S.]).—Great Falls, Va., Aug. 6, 1913, C. T. Greene; July 8, Sept. 12, N. Banks; Aug. 1, 1916; Scott's Run, Va., July 4, 1918; Falls Church, Va., Sept. 7, N. Banks; Beltsville, Md., July 4, 1916, McAtee; Linneville, Md., July 4, 1913, R. C. Shannon.

A. ceyx Loew (*halcyon* Auctt. nec Say; *nigripennis* Cole).—Dead Run, Va., June 10, 1922, McAtee; Falls Church, Va., June 24; Glencarlyn, Va., July 2; N. Banks; Beltsville, Md., July 2, 4, 1916, W. R. Walton; July 9, Sept. 7, 1916, Cole; July 6, 1916, C. T. Greene; July 4, 1915, Odenton, Md., July 4, 1913, McAtee.

A. fulvohirta Wiedemann.—Common in the Coastal Plain; season June 30 to Sept. 28; has been collected on flowers of *Sericocarpus bifoliatus*.

A. lateralis Say.—Abundant and widespread, extreme dates of collection June 10 and October 2; has been taken on flowers of *Ceanothus americanus* and *Daucus carota*. P. I.

A. sinuosa Wiedemann.—Common and widely distributed; season June 4 to Sept. 3; visits flowers of *Ceanothus americanus*. P. I.

Genus **BOMBYLIUS** Linnaeus.

Key to the species.

1. First posterior cell of wing open, or closed only at extreme apex.....*ater*.
First posterior cell of wing closed at a considerable distance from margin of wing2.
2. Cross-vein distinctly beyond middle of discal cell; wings with isolated dark spots.....3.
Cross-vein not beyond middle of discal cell.....4.
3. Wing markings fasciate, the spots almost all connected; cross-vein at much less than its own length from apex of discal cell; apical curvature of second vein almost a right angle.....*pulchellus*.

Wing markings consisting of a fuscous suffusion on front half of wing from base to middle which tapers off beyond that point; and several isolated spots in the hyaline posterior half of wing; cross-vein at about its own length from apex of discal cell; apical curvature of second vein rounded....

pygmaeus.

4. Mid femur with a few bristles on anteroventral surface; wings grayish, slightly darker basally and along costa; pile of body mostly hoary....*incanus.*
Mid femur without anteroventral bristles, with fine hairs basally.....5.
5. Wing almost uniformly infuscated, paler (lutescent) rather than darker basally*fraudulentus.*
Wings with contrasting hyaline and fumose areas, darker basally.....6.
6. Wing with the dark markings consisting of a dark brown costal blotch extending from base to apex of second vein, the posterior margin of which is irregularly sinuated and abruptly differentiated from the hyaline hind part of wing; pile of body mostly tawny.....*major.*
Wing with the dark markings consisting of a basal suffusion of fuscous or brownish which extends along costa but not to apex of second vein and more or less gradually shades off into the hyaline posterior portion of wing.....7.
7. Mid and usually also fore femora each with one or two short black bristles at apex behind; wings rather conspicuously browned basally, the dark color extending along costa to slightly beyond middle.....*varius.*
Mid and fore femora without a bristle at apex behind.....8.
8. Proboscis about as long as body of insect including head; hairs along upper margin of pleura in front of wings much darker than those on margin of mesonotum.....9.
Proboscis shorter than entire body; hairs along upper margin of pleura in front of wings not darker than those on margin of mesonotum; body pile mostly yellowish, no pale patches; wing with a brownish cloud covering entire base and extending to middle along costa.....*fulvibasis.*
9. Pile of dorsum yellow; wings marked as in *fulvibasis*.....*validus.*¹
Pile of dorsum chiefly dark, with white patches on thorax and abdomen; wing clouding similar to that of preceding two species, but blackish.....
azaleae.

B. ater Coquillett (*Parabombylius* Coq.).—Beltsville, Md., July 4, 1912, McAtee.

B. azaleae Shannon.—A common visitant to the flowers of Azalea including both *A. nudiflora* and *A. viscosa* in Coastal Plain localities; the extreme dates of collection are May 5 and July 4.

B. fraudulentus Johnson.—Bladensburg, Md., June 23, 1916, R. C. Shannon; Branchville to Beltsville, Md., June 4, 1914, L. O. Jackson; Beltsville, Md., June 25, R. C. Shannon; July 2, 4, 1916, W. R. Walton, McAtee; July 9, Cole; Odenton, Md.,

¹An old specimen of *B. validus* Loew labelled Va. only, may be from our region; at any rate the species is to be expected here.

June 20, 1915, in copula, McAtee; Falls Church, Va., June 6, 1915, June 25, 1917, C. T. Greene.

B. fulvibasis Macquart.—Common, chiefly on the Coastal Plain; has been collected at dates ranging from May 19 to July 4; visits flowers of *Ceanothus* and *Xolisma*.

B. incanus Johnson.—Has been taken only at Bladensburg, Beltsville, and Odenton, rather plentifully, however, at the intermediate locality; season June 9 to July 20; frequents flowers of *Xolisma* and is fond of resting on sandy roads.

B. major Linnaeus.—The most common and widely distributed species of the genus; it is also the earliest species of the family to appear in spring; extreme dates of collection are: March 13 and June 10; visits flowers of apparently every kind in bloom during its season. P. I.

B. pulchellus Loew.—Mt. Vernon, Va., April 28, 1918; Maywood, Va., April 27, 1919; Bladensburg, Md., April 19, 1914, on flowers of *Houstonia caerulea*; Beltsville, Md., May 31, 1920, McAtee; Brookland, D. C., May 3, 1916, Parker.

B. pygmaeus Fabricius.—Falls Church, Va., May 1, N. Banks; Glencarlyn, Va., May 7, 1922; Maywood, Va., April 27, 1919, on flowers of *Vaccinium*, McAtee; Dyke, Va., April 26, 1913, W. D. Appel; Brookland, D. C., May 3, 1916; Parker; Odenton, Md., May 5, 1918, on flowers of *Potentilla quinquefolia* and *Vaccinium corymbosum*, McAtee.

B. varius Fabricius (United States specimens sometimes misidentified as *B. mexicanus* Wied.).—Common, mostly in Coastal Plain localities; season May 25 to July 9; in copula, July 4; visits flowers of *Ceanothus*, *Xolisma*, and *Azalea*. V. P. I.

Genus **SYSTOECHUS** Loew.

S. vulgaris Loew.—Beltsville, Md., Sept. 3, 1916, McAtee.

Genus **ANISOTAMIA** Macquart.

Ogcodocera Macquart.

A. leucoprocta Wiedemann.—Falls Church, Va., June 16, 1915, on flowers of *Ceanothus*, C. T. Greene; Barcroft, Va., June 17, 1917, on flowers of *Ceanothus*; Beltsville, Md., June 15, 1913, McAtee; Bladensburg, Md., June 23, 1916, R. C. Shannon.

Genus **PHTHIRIA** Meigen.

Key to the species.

1. A faint cross-vein present near apex of auxiliary vein connecting it with first vein; a line drawn obliquely from apex of second vein to upper outer angle of discal cell would bisect cell enclosed within fork of third vein near its base; cross-veins in disc of wing narrowly clouded; third antennal segment not three times as long as its greatest width.....*sulphurea*.

No cross-vein between auxiliary and first veins; a line drawn obliquely from apex of second vein to upper outer angle of discal cell would pass clear of base of cell formed by fork of third vein; no clouds on cross-veins; third antennal segment over three times as long as its greatest width.....

coquilletti.

P. coquilletti Johnson.—Maryland near Plummers Id., July 12, 1913, R. C. Shannon.

P. sulphurea Loew.—Odenton, Md., June 11, 1922, McAtee.

Genus **LEPIDOPHORA** Westwood.

L. aegeriiformis Westwood.—Beltsville, Md., Sept. 3, 10, 1916, McAtee; these were sitting on a telephone pole near a marshy creek bed.

Genus **SPARNOPOLIUS** Loew.

S. fulvus Wiedemann.—A common autumn bee-fly frequenting the flowers of *Chrysopsis mariana*; dates of collection range from Aug. 20 to Oct. 30; in copula, Sept. 21, 23. P. I.

Genus **SYSTROPUS** Wiedemann.

S. macer Loew.—An autumnal species, season Aug. 28 to Oct. 30; usually found in numbers together about flowers.

Genus **METACOSMUS** Coquillett.

M. mancipennis Coquillett.—Difficult Run, Va., July 7, 1915, R. C. Shannon; Chain Bridge, Va., June 23, 1913, C. T. Greene; Beltsville, Md., July 4, 1916, W. R. Walton. On the latter date these little Pipunculus-like flies were common and all apparently pairing.

Genus **GERON** Meigen.

Key to the species.

1. Section of third vein beyond base of fork much shorter than the section in front of it, the cell within the fork wide, distance between apices of veins forming fork measured along margin of wing exceeding the length of the section between fork and second vein; femora black; frons of female wide, black, whitish on sides and in front, with yellow pile in center and whitish hairs on sides.....*subauratus*.

Section of third vein beyond base of fork not shorter than the section in front of it, the cell within the fork long and narrow, distance between apices of veins forming fork not exceeding that between fork and second vein; femora largely yellowish; frons of female narrow, white plumose, with a few short decumbent whitish hairs.....*calvus*.

G. calvus Loew.—Difficult Run, Va., July 7, 1915, on *Ceanothus*, Dead Run, Va., June 22, 1915, R. C. Shannon; New Alexandria, Va., July, 1907, Wm. Palmer; Falls Church, Va., July, 1915, Cole; Glen Echo, Md., July 9, 1922, Malloch; Riverdale, Md., June 5, 1915; Beltsville, Md., July 9, 1916, Cole; July 4, 9, 1916, McAtee; June 25, 1915; Bladensburg, Md., June 23, 1916, R. C. Shannon.

G. subauratus Loew.—This is the more common and generally distributed species; season June 18 to Sept. 23; visits numerous kinds of flowers. V. P. I. The genitalia are of the type described for *G. digitaria* Cresson (1919, pp. 184-5). Cresson records from Linnieville, Md., July (R. C. Shannon), a variety of his *G. nivea* (l. c. p. 185).

Genus **TOXOPHORA** Meigen.

T. amphitea Walker.—Common; has been collected at dates ranging from May 23 to Sept. 23; visits many kinds of flowers. A pupal skin and adult were found in a bee's nest at Licking Banks, D. C., Nov. 27, 1914, H. S. Barber. P. I.

Genus **RHABDOSELAPHUS** Bigot.

R. sigma Coquillett.—A series of specimens was taken by Cole in East Riverdale, Md., March 25, 1917. These are only 2.25 to 3 mm. in length as compared to western specimens 3.75 to 4 mm. in length. The proboscis is shorter than in the western material examined, but otherwise the specimens are structurally the same. These little flies are among the first to brave the spring weather and were locally quite abundant in 1917. Other local records are Berwyn, Md., April 1, 1917, and Beltsville, Md., April 2, 1917, McAtee. In all these cases the insects were collected from telephone poles. At Widewater, Va., April 2, 1916, McAtee took the species on flowers of *Salix tristis*.

Genus **PACHYNERES** Greene.

P. crassicornis Greene.—Originally described from specimens reared from a decaying tree of *Quercus velutina* in the grounds of the Soldiers Home, Washington, D. C. (April 15-20, 1923, Miss E. E. Myers), and others obtained in Manitoba and Pennsylvania. A species of this genus occurs in New South Wales, Australia also, but no others are as yet known.

Family **THEREVIDAE**.

The members of this family resemble some of the Asilidae in general habitus, and especially some Dasypogoninae, but the vertex of the head is never sunken as in the members of that family nor do the eyes bulge out so much on the sides. The flies occur most commonly in sandy areas and are fond of settling on the bare sand in the sunshine, though they occur also on flowers. They are recorded as being predacious, but the record requires confirmation. The larvae that are known feed on coleopterous larvae, some of them doing considerable good by destroying the larvae of Elateridae, and Malloch has found a species feeding upon coleopterous larvae in a hollow, much-decayed apple tree. Therevidae are rare in the east but some occur quite commonly in the Western States.

Key to the genera.

1. Sides of face with long erect pile between lower margin of eye and base of antenna.....*Thereva*.
- Sides of face bare between lower margin of eye and base of antenna.....2.
2. Prosternum hairy between bases of fore coxae; wings not fasciate.....*Psilocephala*.
- Prosternum bare between bases of fore coxae; wings usually fasciate with fuscous.....*Epomyia*.

Genus **PSILOCEPHALA** Zetterstedt.*Key to the species.*

1. Halteres brownish yellow; hairs on dorsum of thorax golden yellow, the disc without a dark median vitta; hairs on the male hypopygium all yellow.....*flavipennis*.
- Halteres fuscous or black; hairs on dorsum of thorax in male mostly white, in female yellowish mixed with black, both sexes with a distinct black opaque dorsocentral vitta; male hypopygium with some black hairs.....2.
2. Hairs on sternite forming basal ventral portion of male hypopygium whitish, only a tuft on each inner apical angle black; silvery pruinescence on each side of frons in female carried in the form of a narrow lateral stripe above bases of antennae, not forming a triangle.....*frontalis*.
- Hairs on most of disc of sternite forming basal ventral portion of hypopygium black, no tuft of black hairs on each apical angle; silvery pruinescence forming a triangle on each side of frons above bases of antennae....*haemorrhoidalis*.

P. flavipennis Cole.—Cupid's Bower, Id., Md., July 8; Plummers Id., Md., July 14, Aug. 3, at light, R. C. Shannon; Falls Church, Va., July 13, 1912, C. T. Greene; July 13, 1913, F. Knab; July 17, 25, N. Banks.

P. frontalis Cole.—Falls Church, Va., Aug. 15, 1913, C. T. Greene.

P. haemorrhoidalis Macquart.—The most common species of the family; it is of general distribution and has been collected from June 14 to Sept. 2; comes to light, and is attracted to honey dew. An active larva collected in sand on Plummers Id., Md., May 5, 1914, by R. C. Shannon, had transformed and emerged as an adult by May 5.

Genus **EPOMYIA** Cole.*Key to the species.*

1. Scutellum red, narrowly black at base.....*scutellaris*.
- Scutellum black.....2.
2. Scutellar pile yellowish or whitish along hind margin; abdomen usually entirely or largely reddish.....*rufiventris*.
- Scutellar pile black; abdomen black, male hypopygium yellowish....*pictipennis*.

E. pictipennis Wiedemann.—Maryland near Plummers Id., June 29, 1913, June 20, 1916; Bladensburg, Md., June 23; R. C. Shannon; Beltsville, Md., June 15, 1913, McAtee.

E. rufiventris Loew.—Maryland near Plummers Id., June 29, 1913, R. C. Shannon; Beltsville, Md., May 28, 1916, June 14, 1914, McAtee; June 9, N. Banks; June 28, 1917, L. O. Jackson; July 1, 1911, J. D. Hood.

E. scutellaris Loew.—Plummers Id., Md., June 15, 1903, A. Busck; Lakeland, Md., June 25, 1906, D. H. Clemons.

Genus **THEREVA** Latreille.

Key to the species.

1. Frons with two distinct round velvety black spots.....*bimaculata*.
 Frons with a dark crossband.....*candidata*.

T. bimaculata Cole.—Falls Church, Va., May 18, 1917, C. T. Greene.

T. candidata Loew.—Eleven records, all from Piedmont localities; dates range from May 30 to Aug. 6. P. I.

Family SCENOPINIDAE.

Of the genera of this family some have clung to the original habitat where their larvae have been found in decaying fungi and wood, but members of one genus, *Scenopinus*, have become almost solely house inhabitants. Their larvae are reported to be carnivorous and to prey upon clothes-moths among other things; the slug-like and slow-moving adults are seen more frequently on windows than elsewhere, and are called window flies.

Key to the genera.

1. First posterior cell open.....*Scenopinus*.
 First posterior cell closed before margin of wing.....*Metatrachia*.

Genus **METATRACHIA** Coquillett

M. bulbosa Osten Sacken.—Washington, D. C., June 19, 1914, P. R. Myers; Vietch to Torrison, Va.; July 18, 1915; Mt. Vernon, Va., July 4, 1917, on flowers of *Sericocarpus linifolius*, McAtee.

Genus **SCENOPINUS** Latreille.

Key to the species.

1. Frons polished, bluish black.....*fenestralis*.
 Frons more or less granular, greenish-black.....*glabrifrons*.

S. fenestralis Linnaeus.—Fairly common; dates of collection range from May 7 to Aug. 15; comes to light. P. I.

S. glabrifrons Meigen.—All records (8 in number) are for the city of Washington, and at dates between May 20 and Sept. 23, inclusive.

SUMMARY.

A comparison of the District of Columbia representation of

the four families here treated with that reported for New Jersey (Ann. Rep. N. J. State Museum (1909) 1910, pp. 744-748) is given in the following tabulation. For convenience of local students the number of species collected on Plummers Id. (P. I.) and additional ones in the vicinity (V. P. I.) also are included.

Family	Number of Species.			
	N. J.	D. C.	P. I.	V. P. I.
CYRTIDAE	5	9	3	1
BOMBYLIIDAE	40 ¹	37	12	10
THEREVIDAE	9	8	4	2
SCENOPINIDAE	2	3	1	—
	—	—	—	—
Totals	56	57	20	13

The slight superiority of New Jersey as a collecting place for Bombyliidae no doubt is correlated with the greater proportion of sandy country in that State. Bee-flies love sand. Locally this statement is strongly exemplified by the preeminence of the sandy Beltsville region as a habitat for these flies; of the 37 species of Bombyliids known from the District of Columbia region, 33 have been collected near Beltsville.

Species of the various families not yet collected here, that may reasonably be expected are: Cyrtidae, *Opsebius gagatinus* Loew; Bombyliidae, *Exoprosopa fasciata* Macquart, *Anthrax tegminipennis* Say, *Bombylius atriceps* Loew, *B. validus* Loew, *Anastoechus barbatus* Osten Sacken; Therevidae, *Tabuda fulvipes* Walker, *Psilocephala morata* Coquillett; and Scenopinidae, *Scenopinus nubilipes* Say.

BIBLIOGRAPHY.

BANKS, NATHAN.—At the *Ceanothus* in Virginia. Ent. News, 23, No. 3, March, 1912, p. 109.

Six species of Bombyliidae recorded as visiting *Ceanothus* in this region.

COLE, FRANK R.—Notes on Osten Sacken's group "Poecilanthrax," with descriptions of new species. Journ. N. Y. Ent. Soc. 25, No. 1, March, 1917, p. 70.

Anthrax nigripennis n. sp. described from local material = *A. ceyx* Loew. The dipterous family Cyrtidae in North America. Trans. Am. Ent. Soc. 45, pp. 1-79, Pls. I-XV, April 12, 1919.

Acrocera unguiculata Westwood (p. 54), *Ogcodes incultus* Osten Sacken (p. 63), and *O. dispar* Macquart (p. 66) recorded from the District of Columbia region.

A revision of the North American two-winged flies of the family Therevidae. Proc. U. S. Nat. Mus. 62, pp. 1-140, Pls. 1-13, 1923.

Six species, one new, represented by specimens of local origin.

¹Synonyms as given in this paper deducted.

CRESSON, EZRA T., JR.—Dipterological notes and descriptions. Proc. Ac. Nat. Sci. Philadelphia, pp. 184–185, Nov. 25, 1919.

Geron digitaria and *G. nivea* new species recorded from our region.

GREENE, CHARLES T.—New species of *Mythicomyia* and its relationship with a new genus (Diptera). Proc. Ent. Soc. Wash. 26, No. 3, March, 1924, pp. 60–64, 3 figs.

Pachyneres crassicornis new genus and species described with Washington, D. C., as the type locality.

JOHNSON, CHARLES W.—Note on the species of the genus *Acrocera*. Psyche, 22, No. 6, Dec., 1915, p. 202.

A. unguicalata Westwood recorded from Fort Washington, Md., May 26, 1895.

A review of the species of the genus *Bombylius* of the eastern United States. Psyche, 14, No. 5, Oct., 1907.

B. mexicanus Wied. Ft. Washington, Md., May 26, p. 97; *B. varius*, Glymont, Md., May 25, 1896, p. 99.

New species of Diptera. Occas. Papers Boston Soc. Nat. Hist. 5, pp. 11–17, Nov. 9, 1921.

Dipalta banksi described from Virginia and Florida.

LOEW, HERMAN.—Diptera Americae septentrionalis indigenae. Compl. Work, Vol. II, 1872.

Acrocera bimaculata described from the District of Columbia (Cent. VI, 24), and *Psilocephala scutellaris* (Cent. IX, 74).

MALLOCH, J. R.—A preliminary classification of the Diptera, exclusive of Pupipara, based upon larval and pupal characters, with keys to imagines in certain families. Part 1. Bul. Ill. State Lab. Nat. Hist. 12, Art. 3, March, 1917.

Pupa of *Spogostylum simson* Fabr. (393–4) described from a local specimen.

SHANNON R. C.—Two new North American Diptera. Insecutor Inscitiae Menstruus, 4, 1916, pp. 71–72.

Bombylius azaleae n. sp. described chiefly from local material.

TOWNSEND, C. H. TYLER.—On the Diptera of Baja California, including some species from adjacent regions. Proc. Calif. Ac. Sci. Ser. 2, Vol. 4 (1893–1894), p. 609, April 8, 1895.

Oncodes pallidipennis Loew., Dixie Landing, Va., May 25; Wash., D. C., June 1.

CHANGE OF PREOCCUPIED NAMES.

BY J. M. ALDRICH AND RAY T. WEBBER.

In the paper on *Phorocera* and Allied Genera by us in Proceedings U. S. N. M., vol. 63, Article 17, issued Feb. 29, 1924, two preoccupied names were used. For *Phorocera tenuiseta* A. & W. (not of Macquart, 1846) we now propose the name *Phorocera victoria*; and for *Phorocera xanthura* A. & W. (not of Van der Wulp, 1890) we propose *Phorocera nitelae*.