

## DIPTERA OF FLORIDA.

BY C. W. JOHNSON.

With Additional Descriptions of New Genera and Species.

BY D. W. COQUILLET.

This paper is based upon material collected during a residence in St. Augustine from 1880-88 (although then not especially interested in Diptera); a visit in March, 1891, and again in May, 1894; a collection made by Mrs. Annie T. Slosson during her winter visits; the collection of Mr. Chas. Robertson, of Carlinville, Ill.; an interesting lot received from Mr. Frank H. Genung of St. Augustine, and the collection of the U. S. National Museum. The trip of May, 1894, was a conchological one, made in company with Prof. H. A. Pilsbry, through the kindness of Mr. Clarence B. Moore, Diptera being an incidental feature. The localities Welaka, Georgetown, Drayton Island, Juniper Creek, Volusia, Astor, and Tick Island are all in the vicinity of Lake George and Lake Woodruff. Considering the few species that have actually been recorded from Florida the following list seems a large one, but there is little doubt that this number (504) can be increased more than three times if collections were made in all sections of the State and at different seasons of the year. A number of West Indian species are here recorded from Florida for the first time as well as the most southern distribution of many northern species. A collection from the Florida Keys would undoubtedly increase the percentage of West Indian species, while the western part of the State would add many more species of the Mississippi Valley, Texas, and Mexico.

While a resident of Florida I was interested in Coleoptera, and the valuable paper, "The Coleoptera of Florida," by Mr. E. A. Schwarz, suggested this list. I only regret that it is not a more complete representation of the fauna, but hope that it will lead to a better knowledge of the Diptera of Florida.

I am under great obligations to Mr. D. W. Coquillett of Washington, D. C. Without his generous aid this list could not have

been made. To Mrs. Slosson for the generous loan of specimens. To Prof. J. M. Aldrich for the determination of the Dolichopodidæ. To Prof. Riley for the privilege of looking over the collection of the U. S. National Museum, and to Mr. Chas. Robertson, Mr. W. A. Snow, Dr. S. W. Williston, Mr. W. D. Hunter, and others, for kind assistance.

DESCRIPTIONS OF NEW SPECIES.

BY C. W. JOHNSON.

*Nemotelus immaculatus* n. sp.

Length 4 mm., ♂. Face and vertical triangle blackish; eyes of a dull brown color (probably much lighter than in the living specimen); antennæ yellow; proboscis red, unusually long, with an acute angle, the two portions thus formed being of almost equal length, the outer half is curved downward and the basal part of the other is somewhat enlarged. Thorax black, with sparse whitish pubescence most prominent on the pleuræ; scutellum black; abdomen greenish white, immaculate. Legs light yellow; wings hyaline, whitish. One specimen, St. Augustine (F. H. Genung).

*Nemotelus slossonæ* n. sp.

Length 3 mm., ♂. Face and vertical triangle black, shining; facial protuberance very prominent, conical; frontal triangle brown. The upper portion of the eye with large facets brown, the lower third with small facets blackish; antennæ dark brown. Thorax and scutellum black, shining; a narrow light yellow lateral line extends from the humerus to the posterior angle. Abdomen yellowish white; a central mark on the first segment below the scutellum, a dorsal triangle and a small spot near the lateral margin of the fourth, and the fifth except a narrow lateral and posterior margin black; in one specimen there is a minute brown dot near the anterior angle of the third segment. Venter whitish. Legs black; tip of the femora, base and tip of the tibiæ, and the tarsi whitish; wings hyaline, whitish; discal cell emits four veins.

Two specimens, Charlotte Harbor, March. To Mrs. Annie T. Slosson, who has done so much to further our knowledge of the Diptera of Florida, this species is dedicated.

*Leptogaster obscuripennis* n. sp.

Length 13 and 14 mm., ♂ ♀. Head brown; face, front, inferior orbits and occiput covered with a dense grayish pubescence; pro-

boscis black, base yellow; antennæ yellow, terminal joint and style black. Thorax brown, dorsum shining; lateral margins, pleuræ, posterior angles, and scutellum covered with a grayish pubescence. Abdomen: first segment blackish with a prominent row of bristles at the posterior margin, second and third segments brown, the remaining segments blackish with more or less brown at the anterior and posterior margins, and covered with a grayish pubescence. Venter brownish. Legs reddish, thickly covered with minute yellow hairs, and dark brown spine-like bristles on the tarsi; claws black, bristles on the tibiæ yellow; wings of a uniform dark brown, veins black. Two specimens, St. Augustine.

*Asilus auratus* n. sp.

Length ♂ 12 ♀ 15 mm. Face and front light yellow pollinose; facial protuberance with long whitish bristles; occiput light yellow pollinose, and long white pile, which in some specimens is brownish near the vertex; a row of black hairs extends along the frontal orbits; ocelli black; proboscis black; antennæ reddish, first and second joint with numerous black hairs, third joint and arista brown. Thorax golden yellow pollinose, with a wide dorsal stripe that is attenuated and obsolete (in certain lights) towards the scutellum, some specimens show an obsolete linear interval of a lighter color, thus dividing the stripe into two parts; the entire dorsum with short black hairs; a few long, black and yellow bristles are arranged as follows: four on the side just before the suture, the others in a lateral and two subdorsal rows on the posterior half of the thorax, scutellum yellow pollinose, with black hairs, and two yellow bristles; pleuræ, and coxæ, yellowish white pollinose. Abdomen yellow pollinose; covered (except at the base of the first, and a wide basal and posterior margin on the second, third and fourth segments) with black hairs; the smooth basal bands on the second, third and fourth, have two transverse rows of punctulate spots, one of the rows is often covered on the third and fourth by the preceding segment; near the posterior margins of the segments is a row of black and yellow bristles; hypopygium red, shining, with whitish hairs, ovipositor black, shining. Legs red; with close-lying whitish hairs and prominent black and yellow bristles, tip of the femora with a spot on each side, tip of the posterior tibiæ, and tip of all the tarsal joints blackish; claws black, pulvilli red. The base, and discal portion of the wing clear hyaline, leaving the tip and a wide posterior border of a

brownish tint. Seven specimens, Palatka, May 19, St. Augustine, May 21, 1894.

*Calobata varipes* n. sp.

Length 14 mm., ♀. Head bluish-black, shining, opaque with black pile above and below the antennæ; vertex, in a depression surrounding the ocelli with dense yellowish pubescence, vertex with eight prominent bristles; occiput with black pile; antennæ red, setæ black, first and second joints covered with short black hairs; proboscis black. Thorax black, posterior angles brownish, dorsum with a grayish pubescence, leaving two narrow black stripes which become obsolete beyond the sutures, pleuræ black, shining, metapleuræ and metanotum covered with whitish pubescence. Scutellum blackish above, brown beneath. Abdomen black, shining. Coxæ and femora red; tip, and a band a little beyond the middle of the posterior and middle femora and the apical third of the anterior femora black, anterior and posterior tibiæ black, middle tibiæ brown, first and second joints of the anterior and posterior tarsi white, the remainder of the anterior and posterior tarsi, and the entire middle tarsi black; the legs are covered throughout with short, black hairs, with some bristles on the tibiæ. Wings tinged with brown, which is more conspicuous along the anterior margin, tip and cross veins.

One specimen, Jacksonville, May 22, 1894.

*Heterochroa ornata* n. sp.

Length  $2\frac{1}{2}$  mm., ♀. Face, front and occiput yellow, with yellow pubescence; a row of black bristles extends from the base of the antennæ along the frontal and vertical orbits and around the occiput, four bristles are arranged in a quadrangle around the ocelli; ocelli whitish; antennæ yellow, aristæ and a prominent row of hairs on the second joint black, aristæ with minute hairs. Thorax and scutellum yellow, with yellow pubescence, and black hairs and bristles. Abdomen brownish black, irregularly mottled with whitish pubescence with a few scattering black hairs, which gives the white portions a punctated appearance. Legs yellow, with black hairs and bristles. The basal portion of the wing, including the costal cell, a small angle of the marginal, submarginal, and half of the basal cell, anal angle, and alar appendage, hyaline; the remainder of the wing clouded with black, and having the following whitish hyaline markings: marginal cell with three spots, the middle one quadrate, and three or four times the size of the others; submarginal cell with three spots,

two below the large quadrate spot of the marginal cell, and one at the end of the second longitudinal vein; first posterior cell with four, one at the posterior cross vein, two smaller ones midway between the first and the large one at the tips of the wing, the latter occupying the entire width of the cell; second posterior cell with four occupying the central portion, the larger ones coalescent; third posterior cell with three spots, the large middle one triangular; discal cell with two, the outer one three or four times the size of the others.

One specimen, Drayton Island, May 9, 1894.

DESCRIPTIONS OF NEW GENERA AND SPECIES.

BY D. W. COQUILLET.

*Platyura elegans* n. sp., ♂ ♀.

Head black, lower part of front and the face yellow; antennæ black, the two basal joints yellow; proboscis yellow, its apex and the palpi black. Dorsum of thorax opaque brownish black, the sides, pleura and scutellum, yellow; metanotum brown, this color extending upon the pleura to the middle coxæ. Abdomen shining brownish-black, the first segment, both ends of the second, apices of the third and fourth, and the whole of the fifth, yellow; first five ventral segments also yellow. Halteres and legs yellow, tibiæ destitute of bristles. Wings grayish hyaline, marked with two irregular brown crossbands and with two brown spots; the first band begins at the first vein before its tip, is interrupted between the branches of the fifth vein, and stops before reaching the hind margin of the wing, its posterior portion scarcely half as wide as the costal part; the second band starts from the tip of the third vein and stops at the anterior branch of the fifth a short distance before its tip, where the band is scarcely one-fifth as wide as at the costa; midway between these two bands is a large brown spot reaching from the anterior branch of the fifth vein to the hind margin of the wing at the tip of the posterior branch; a brown cloud on anterior branch of third vein, this branch terminating at twice its length beyond the tip of the first vein. Length 3.5 mm.

Georgetown, Florida, May 10, 1894 (C. W. Johnson); North Carolina. A single specimen of each sex.

The specimen from the latter locality is from Dr. Riley's collection, now in the National Museum.

*Neoglaphyroptera cincta* n. sp., ♂.

Head, including the mouth parts, yellow, each ocellus situated on a black spot, the median very small; antennæ yellow on the six basal joints, the remainder blackish. Thorax, pleura and scutellum yellow, a large black vitta at base of each wing extending across the metanotum. Abdomen shining black, base of each segment and the whole of the sixth and seventh, yellow. Legs yellow, bristles of front tibiæ minute, those of the others large. Wings yellowish hyaline, unmarked; third vein issuing from the first slightly beyond the forking of the fourth. Length 4.5 mm.

Tick Island, Florida, May 12, 1894. C. W. Johnson. A single specimen.

*Ceratopogon albaria* n. sp., ♀.

Head black, the face and mouth parts yellowish; antennæ brown, the basal joints yellow. Thorax, pleura and scutellum black, densely opaque white pollinose. Abdomen black, subshining. Legs yellow, both ends of the femora and tibiæ, apices of first three tarsal joints, and the whole of the last two joints, brown; last tarsal joint ciliate on the under side with rather long setæ, the claws subequal in length, slightly over half as long as the last tarsal joint. Wings whitish hyaline, vein sconscolorous excepting the small cross vein and base of third vein, which are narrowly clouded with brown; submarginal cell divided near its first fourth by a cross vein situated nearly three times its length before the tip of the first vein; fourth vein branching the length of the small cross vein before the latter, at a point slightly beyond the branching of the fifth. Halteres yellow, the knobs each marked with a black spot. Length 3 mm.

Drayton Island, Florida, May 9, 1894. C. W. Johnson. A single specimen.

*Tanypus concinnus* n. sp., ♀.

Light yellow, three vittæ on the thorax reddish yellow, the middle one bordered each side with black, the lateral ones changing into black posteriorly; a dot at each front angle of the scutellum, middle of metanotum, a fascia at base of each abdominal segment except the first, apices of tibiæ, of metatarsi, of the second joint of the middle and hind tarsi, the whole of the remaining joints and the last four of the front tarsi, black. Penultimate joint of hind tarsi obcordate, as broad as long. Wings naked, whitish hyaline, veins

pale yellowish, small cross vein clouded with brown; first vein forked before its apex, the fifth forking slightly beyond the cross vein. Length 3 mm.

Tick Island, Florida, (May 12, 1892; C. W. Johnson). A single specimen in Mr. Johnson's collection.

*Masiphya aurigera* n. sp. ♂.

Black, the second antennal joint, base of the third, the palpi, and fourth abdominal segment except its base, yellow. Front at vertex hardly two-fifths as wide as either eye, vitta next the antennæ nearly as wide as either side of the front, the latter and the face golden pollinose; frontal bristles descending to tip of second antennal joint, four in each row curving backward; antennæ nearly two-thirds as long as the face, the third joint slightly over twice as long as the second; arista thickened on the basal fourth; vibrissæ at a point twice the length of the second antennal joint above the oral margin, ridges bristly on the lower fourth; proboscis robust, the portion between the basal articulation and the large labella scarcely longer than the latter. Thorax gray pollinose, marked with four black vittæ; four postsutural and three mesopleural macrochætæ; scutellum bearing six pairs of long marginal macrochætæ. Abdomen gray pollinose, with brownish reflecting spots, genitalia only slightly protruding; first and second segment bearing a marginal pair of macrochætæ, third with a marginal row, the fourth with scattered macrochætæ on the apical two-thirds. Hind tibiæ not ciliate, destitute of long hairs on the inner side, pulvilli as long as the last tarsal joint. Wings hyaline, slightly tinged with gray basally, third vein bearing four bristles at the base, the others bare; bend of fourth vein destitute of an appendage. Length 11 mm. Florida. Mrs. A. T. Slosson. A single specimen.

#### TACHININÆ.

##### PSEUDOCHÆTA n. gen.

Anterior pair of ocellar bristles wanting, two pairs of backwardly curving orbital bristles in both sexes and an additional pair of forwardly directed ones in the female; the upper pair of frontal bristles is on a line with the backwardly curving orbitals and considerably removed from the other frontals which are much smaller and decussate, extending from the lowest ocellus to the arista; antennæ as long as the face, the third joint in the male five

times, in the female three times as long as the second; arista bare, the penultimate joint not longer than broad; head at insertion of vibrissæ half as long as at base of antennæ, face in profile convex, the sides bare, each at the narrowest part one-eighth as wide as the median depression, ridges bristly on the lower four-fifths; vibrissæ widely separated, inserted on the oral margin; cheeks one-seventh as broad as the eye-height, the lower half covered with short bristly hairs, the usual row of macrochætæ on the lower border; eyes microscopically pubescent; proboscis robust, the portion beyond the basal articulation not half as long as height of head, labella very large; palpi clavate, well-developed. Abdomen oblong-oval, of four segments which are subequal in length. Hind tibiæ outwardly ciliate with short bristles intermixed with two or three longer ones. Third vein bearing a few bristles at the base, the others bare; apical cell open, ending at four-fifths of the distance between the second vein and the extreme wing-tip; bend of fourth vein obtuse, destitute of an appendage; hind cross vein slightly nearer to the bend than to the small cross vein, its posterior end nearer to the wing-margin than to the small cross vein. Type, the following species:

*Pseudochæta argentifrons* n. sp. ♂ ♀.

Black, including the mouth parts. Front at vertex about as wide as either eye, vitta next the antennæ two-thirds as wide as either side of the front, the latter and the face densely silvery pollinose, antennal arista thickened on the basal third. Thorax gray pollinose; marked with four black vittæ; four postsutural and two sternopleural macrochætæ; scutellum bearing three pairs of long marginal and a pair of short apical macrochætæ. Abdomen shining except the grayish pollinose bases of the last three segments; first two segments each with a marginal pair of macrochætæ, third with a marginal row, the fourth with scattered macrochætæ except on the basal fourth; genitalia not projecting. Pulvilli scarcely half as long as the last tarsal joint. Wings hyaline, calypteres grayish white. Length 5 mm. Charlotte Harbor, Florida (Mrs. A. T. Slosson), and Los Angeles, California (D. W. Coquillett). Four males and three females.

*Achætoneura rubentis* n. sp. ♀.

Front at vertex three-fourths as wide as either eye, the vitta blackish, next the antennæ slightly narrower than either side of

front, the latter gray pollinose; frontal bristles descending to base of third antennal joint, three in each row directed backward; two pairs of orbitals; face in profile slightly convex, retreating below, the sides bare; ridges bristly on lower half; antennæ four-fifths as long as the face, black, the base of the third joint yellowish, this joint two and one-half times as long as the second; arista thickened on the basal fourth, its penultimate joint broader than long; proboscis black, palpi yellow. Thorax black, gray pollinose and with four black vittæ; three postsutural and three sternopleural macrochætæ; scutellum grayish black, bearing three long marginal pairs of macrochætæ. Abdomen yellow, base of first segment and a dorsal vitta extending to the third black, the third segment irregularly tinged with blackish; first segment destitute of dorsal macrochætæ, the second with a small discal and marginal pair, the third with a discal pair and marginal row, fourth with a marginal row; venter appearing as if longitudinally incised in the middle, the second and third segments lobately produced, the lobes of the third segment studded with short black spines on their terminal half. Legs black, hind tibiæ rather sparsely ciliate with short bristles, with a longer one at the first fourth and one nearly twice as long at the middle. Wings hyaline, third vein bearing four bristles at its base, the others bare; apical cross vein straight, ending close to the third at last fourth of distance from second to tip of wing; hind cross vein strongly curved. Length 7 mm. Jacksonville, Florida. W. H. Ashmead. A single specimen.

*Acemyia dentata* n. sp. ♀.

Black, the palpi (usually) and labella of proboscis yellow, face and cheeks tinged with yellow. Front at vertex almost as wide as either eye, the sides yellowish or gray pollinose, the vitta black, next the antennæ slightly narrower than either side of the front; three pairs of forwardly directed orbital bristles; frontal bristles descending nearly to middle of second antennal joint, three in each row curving backward; sides of face bare, each at narrowest part one-sixth as wide as the facial depression; two or three bristles above each vibrissa; cheeks less than one-fifth as wide as the eye-height, bare except on the lower half; antennæ two-thirds as long as the face, the third joint nearly twice as long as the second, the apical front angle produced in the form of a tooth; arista thickened on the basal third. Thorax grayish pollinose, marked with four black

vittæ, three postsutural macrochætæ and two sternopleural; scutellum bearing three pairs of long marginal macrochætæ, the posterior pair cruciate. Abdomen gray pollinose and with black reflecting spots, first segment destitute of dorsal macrochætæ, the second with a marginal pair, the third and fourth each with a marginal row. Hind tibia unequally bristly, not ciliate. Wings hyaline, a single bristle at the base of third vein, the others bare; apical crossvein slightly concave, joining the third a short distance before its tip, the bend destitute of a stump or wrinkle; hind cross vein nearly straight. Length 6.5 mm. Georgetown, Florida, May 10, 1894, and Mobile, Alabama, October 22, 1894 (C. W. Johnson); also Los Angeles Co., California, in February and September (D. W. Coquillett). Four specimens.

*Belvosia slossonæ* n. sp. ♀.

Black, the frontal vitta, face, palpi and scutellum yellow. Front at vertex one and one-half times as wide as either eye, frontal vitta next the antennæ subequal in width to either side of the front, the latter shining yellowish gray; two pairs of orbital bristles; frontal bristles descending almost to tip of second antennal joint, the uppermost in each row curving backward, the next one directed backward and inward, the two outside of these curving backward; anterior pair of ocellar bristles wanting; antennæ four-fifths as long as the face, the third joint slightly over twice as long as the second; arista thickened its entire length, the penultimate joint slightly longer than broad; sides of face bare, at the narrowest part one-third as wide as the median depression; ridges bristly on the lower two-thirds, several yellow bristly hairs outside of them on the lower half of the ridges; cheeks one-third as wide as the eye-height, covered with short yellowish bristles. Thorax grayish pollinose, and with four black vittæ; four postsutural macrochætæ, and four sternopleural; scutellum bearing four pairs of long marginal macrochætæ and a short apical pair. Abdomen on bases of last three segments yellowish gray pollinose, most extended on the third and fourth; first and second segments each bearing a marginal pair of macrochætæ, the third and fourth each with a marginal row. Hind tibiæ rather sparsely ciliate with somewhat long bristles. Wings grayish brown, tinged with yellow along the veins of the basal and costal portions; third vein bearing four bristles at its base, the others bare. Length

11 mm. Charlotte Harbor, Florida. Mrs. A. T. Slosson, to whom this fine species is respectfully dedicated. A single specimen.

*Hypostena maculosa* n. sp. ♀.

Black, the front angles of the second and third abdominal segments broadly yellow. Front at vertex two-thirds as wide as either eye, vitta brownish, next the antennæ one and one-fourth times as wide as either side of the front, the latter light gray pollinose; two pairs of orbital bristles; frontal bristles descending to base of third antennal joint; antennæ seven-eighths as long as the face, the third joint nearly three times as long as the second, three times as long as wide; arista thickened on the basal third; sides of face bare, each at the narrowest part one-tenth as wide as the median depression, face in profile convex; ridges bare; cheeks one-seventh as wide as the eye-height. Thorax bearing only three postsutural macrochætæ, two sternopleural; scutellum bearing two pairs of long marginal macrochætæ. Abdomen bearing a marginal pair of macrochætæ on each of the first two segments and a marginal row on the third and fourth. Hind tibiæ not ciliate. Wings hyaline, third vein bearing three bristles at the base, the others bare, small cross vein slightly before the middle of the discal cell, hind cross vein midway between the latter and the bend which is rounded, apical cross vein slightly arcuate, ending close to the third at a point less than the length of the small cross vein before the tip of the wing. Length 3.5 mm. St. Augustine, Florida. C. W. Johnson. A single specimen.

*Myiobia depile* n. sp. ♂.

Front at vertex less than half as wide as either eye, the vitta brownish black, next the antennæ two-thirds as wide as either side of the front, the latter golden pollinose; no orbital bristles; frontal bristles descending to base of second antennal joint, only one in each row directed backward; antennæ four-fifths as long as the face, yellow, the third joint, except at base, black, two and one-half times as long as the second; arista short pilose, thickened on its basal fifth; sides of face and the ridges bare; cheeks slightly over one-fourth as wide as the eye-height, bare except on lower half; palpi yellow; clavate, one-fourth longer than the antennæ; proboscis yellow, in the middle brown, slender, rigid, the portion beyond the basal articulation nearly as long as height of head, labella well developed.

Thorax black, yellowish pollinose, not distinctly black vittæ; three postsutural macrochætæ and three sternopleural; scutellum yellow, bearing two long marginal pairs of macrochætæ. Abdomen shining yellow, a black spot below the hind angles of the third and fourth segments; a dorsal vitta and the apex tinged with reddish; first segment destitute of dorsal macrochætæ, the second with a marginal pair, third and fourth each with a marginal row. Legs yellow, tarsi black, pulvilli as long as the last tarsal joint. Wings yellowish hyaline, third vein bearing about five bristles at the base, the others bare; hind cross vein at two-thirds the distance from the small cross-vein to the bend, which is rounded; costal spine minute.

♀ same as the ♂ with these exceptions: Front three-fourths as wide as either eye, vitta scarcely half as wide as either side of the front, two pairs of orbital bristles, three frontal bristles in each row directed backward, antennæ three-fourths as long as the face, the third joint twice as long as the second, palpi nearly one and one-half times as long as the antennæ, pulvilli scarcely half as long as the last tarsal joint.

Length 6.5 mm. Jacksonville (W. H. Ashmead), and Juniper Creek (C. W. Johnson), Florida; and Ithaca, N. Y. (F. H. Chittenden). One male and three females. One of the latter has a dorsal black spot at the apex of the second and third abdominal segments.

*Prosenoides flavipes* n. sp. ♀.

Black, the antennæ except at apex, palpi, femora and tibiae yellow. Front at vertex nearly as broad as either eye, vitta dark brown, next the antennæ yellowish-gray, at this point three-fourths as wide as either side of the front, the latter light gray pollinose; two pairs of orbital bristles; frontal bristles descending to insertion of antennæ, two in each row curving backward; antennæ three-fourths as long as the face, third joint three times as long as the second; sides of face and the ridges bare, keel in middle of the depression one-half higher than width of third antennal joint; cheeks scarcely one-fifth as broad as the eye-height, bare except on lower edge; proboscis slender, rigid, beyond the basal articulation slightly longer than the head and thorax united, labella scarcely thicker than the proboscis, palpi clavate, slightly shorter than the antennæ. Thorax marked with three broad, brownish black vittæ; three postsutural macrochætæ,

and three sternopleural; scutellum bearing two pairs of long marginal macrochaetae and a short cruciate apical pair. Abdomen wholly gray pollinose, with light and olive gray reflections; first segment destitute of dorsal macrochaetae, second with a marginal pair, the third and fourth each with a marginal row. Wings hyaline, third vein with a few bristles at base, the others bare; costal spine minute, bend of fourth vein with a rounded angle, apical cross vein nearly straight, apical cell open. Pulvilli less than half as long as the last tarsal joint.

♂ same as the ♀ with the following exceptions: Entire antennae, sides of first two abdominal segments and front angles of the third, yellow. Front one-third as broad as either eye, no orbital bristles, only one frontal bristle in each row curving backward, antennae three-fifths as long as the face, the third joint two and one-half times as long as the second.

Length 6 to 7.5 mm. Lake Worth and Charlotte Harbor, Florida, Mrs. A. T. Slosson. One male and three females.

*Gymnodoxia zonata* n. sp. ♀.

Black, the antennae, anterior portion of the cheeks, palpi, labella, knees and abdomen, yellowish, the latter on sides of first three segments and a dorsal vitta on the same, black. Front at vertex four-fifths as wide as either eye, vitta next the antennae three-fourths as wide as either side of the front, the latter and the face whitish pollinose; two pairs of orbital bristles; frontal bristles descending almost to insertion of antennae, three in each row curving backward; sides of face bare; vibrissae inserted almost on the oral margin, two or three short bristles above each; antennae six-sevenths as long as the face, the third joint four times as long as the second, arista long plumose; cheeks nearly as broad as the eye-height; proboscis robust, the portion beyond the basal articulation slightly over half as long as height of head. Thorax gray pollinose and marked with four black vittae; three postsatural and two sternopleural macrochaetae; scutellum bearing three long marginal pairs. Abdomen shining except the bases of the last three segments which are gray pollinose, most extended on the second, where it reaches slightly beyond the middle; first segment destitute of dorsal macrochaetae, second with a marginal pair, third with a marginal row, the fourth with scattered macrochaetae. Wings hyaline, slightly smoky along the costa and bordering the veins; third vein bearing four bristles at the base, the

others bare; costal spine minute; calypteres white. Length 9.5 mm. Jacksonville, Florida, May 22, 1894, C. W. Johnson. A single specimen.

### SARCOPHAGIDÆ.

#### JOHNSONIA n. gen.

First, third and fifth veins bristly, hind cross vein perpendicular, at two-fifths the distance from the small cross vein to the bend, the latter rectangular and bearing a long appendage, apical cell short petiolate. Antennæ nearly as long as the face, arista long plumose on the basal three-fifths, the remainder naked; sides of face bearing short bristly hairs, at narrowest part nearly half as wide as the median depression, the latter not carinate; ridges bare, straight, diverging below, vibrissæ strong, widely separated, on the oral margin; cheeks one-sixth as broad as the eye-height, eyes bare; proboscis much shorter than height of head, labella large, palpi well-developed. Type, the following species:

#### *Johnsonia elegans* n. sp. ♀

Head black, gray pollinose; front at vertex slightly wider than either eye; vitta brownish black, next the antennæ half as wide as either side of the front; only one pair of orbital bristles; frontal bristles descending to insertion of antennæ, two in each row curving backward; antennæ dark brown, more than the basal half of the third joint yellow, this joint twice as long as the second; longest hairs of arista over twice as long as its greatest diameter; proboscis brown, the labella and palpi yellow. Thorax black, gray pollinose, marked with two broad, brownish black vittæ; three postsutural and three sternopleural macrochætæ; scutellum grayish-black, bearing two pairs of long marginal macrochætæ. Abdomen shining yellowish, the first three segments tinged in the middle with brown and lightly whitish pollinose; first segment destitute of dorsal macrochætæ, the second with a marginal pair, the third and fourth each with a marginal row; genitalia yellow, withdrawn into the fourth abdominal segment. Legs, including the coxæ, yellow, the tarsi black; pulvilli scarcely half as long as the last tarsal joint, the claws only slightly longer than the pulvilli. Wings grayish hyaline; first vein bristly to beyond the branching of the second and third, the latter bristly to the small cross vein, fifth vein bristly to beyond base of discal cell; costal spine nearly as long as the small cross vein.

Length 6 mm. St. Augustine, Florida. C. W. Johnson, after whom it gives me pleasure to name this interesting genus. Described from a single specimen.

**HELICOBIA** n. gen.

First and third veins bristly, the others bare, apical cell open, ending at three-fifths the distance from second vein to the wing-tip; bend of fourth vein rectangular and bearing a long appendage; hind cross-vein much less oblique than the apical, terminating at last third of distance between the small and the bend, its posterior end much nearer the wing-margin than to the small cross vein. Head at the vibrissæ nearly as long as at insertion of antennæ, its lower margin convex; frontal bristles descending to middle of second antennal joint; sides of face each bearing a row of short macrochaetae; antennæ three-fourths as long as the face, the third joint twice as long as the second; arista long plumose on the basal three-fifths, the remainder bare; vibrissæ inserted slightly above the oral margin, a few short bristles above each; cheeks one-third as broad as the eye-height, the eyes bare. Abdomen oval, consisting of four segments, densely gray pollinose. Type: *Sarcophaga heliciis* Townsend (Psyche, February, 1892, pages 220, 221). Charlotte Harbor, Florida (Mrs. A. T. Slosson). Mississippi (H. E. Weed). Illinois (Dr. W. A. Nason). District of Columbia and Los Angeles, Cal. (D. W. Coquillett). Ohio (H. A. Surface).

**Drosophila maculosa** n. sp. ♂.

Head, including the antennæ and mouth parts, yellow, an ocellar dot and transverse pair of spots above the centre of the occiput, black. Thorax, pleura and scutellum opaque yellow, unmarked. Abdomen shining blackish-brown, the first segment, front corners of the second, and a spot near each front corner of the third and fourth, yellow. Legs, including the tarsi, yellowish white. Wings hyaline, marked with four brown spots, one at tips of the first and second veins and one on the small and hind cross veins, that on the small cross vein less than one-fourth as large as either of the others; the costal vein only reaches the apex of the third. Length 3 mm. Charlotte Harbor (Mrs. A. T. Slosson), and Archer, Florida. Two specimens; the one from the latter locality is contained in the National Museum collection.

*Drosophila vittata* n. sp. ♂.

Head yellowish white, frontal triangle dark yellow, an ocellar dot and spot in center of occiput, black; antennæ and proboscis pale yellow, the palpi black. Thorax and scutellum opaque light grayish yellow, marked with three dark yellow vittæ; pleura brown on nearly the upper half, the remainder yellow; metanotum yellow, a median vitta and the sides brown. Abdomen shining, yellow, gradually passing into dark brown at the tip; a dorsal yellow vitta; hind margin of each segment whitish. Legs, including the coxæ and tarsi, yellow. Wings hyaline; the costal vein reaches the apex of the fourth, first vein ending at first fourth of length of wing, small cross vein before the first third of distance from the branching of the second and third veins to the hind cross vein. Length 1.5 mm. Charlotte Harbor, Florida. Mrs. A. T. Slosson. A single specimen.

*Chlorops abdominalis* n. sp. ♂.

Head yellow, face and cheeks usually a lighter yellow, an ocellar dot and two large spots on upper part of the occiput, black; frontal triangle at vertex almost in contact with each eye, the sides converging to lower end of front, indications of a longitudinal median sulcus; antennæ reddish yellow, the third joint orbicular, black, except at its base; arista black; clypeus unmarked; proboscis yellow, palpi black. Thorax subshining black, unmarked; pleura reddish yellow, marked with four black spots; scutellum black, convex; metanotum black medially, the sides broadly reddish yellow. Abdomen shining reddish yellow, indications of a black dot near each front corner of the second segment. Legs, including the coxæ and tarsi, reddish yellow. Halteres bright yellow, the peduncles dusky. Wings hyaline, hind cross vein nearly twice its length beyond the small cross vein. Length 2.4 to 3 mm. Charlotte Harbor, Florida. Mrs. A. T. Slosson. Two specimens.

*Agromyza terminalis* n. sp. ♂.

Head black, the broad frontal vitta opaque velvety, a silvery white dot above the antennæ, the latter and the palpi black, proboscis yellow. Thorax subshining black, no dorsal macrochætæ in front of the suture; a narrow yellow vitta in front of and below each wing; pleura and scutellum black. Abdomen black, the fifth and following segments, and sometimes the sides and hind margin of the

fourth, grayish yellow. Legs black, the knees narrowly yellow. Halteres light yellow. Wings hyaline, third and fourth veins slightly diverging toward their apices. Length 2.4 mm. Welaka, Florida, May 9, 1894; and Delaware County, Pa., July 23, 1893. C. W. Johnson. Two specimens.

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LIST OF SPECIES.

BY C. W. JOHNSON.

**CECIDOMYIDÆ.**

- DIPLOSIIS sp. On Oak, Georgiana, Jan. 24.  
 DIPLOSIIS sp. Charlotte Harbor (Mrs. Slosson).

**MYCETOPHILIDÆ.**

- PLATYURA ELEGANS Coq. Georgetown, May 9.  
 NEOGLAPHYROPTERA CINCTA Coq. Tick Island, May 12.  
 SCIARA sp. (U. S. Nat. Mus.)

**BIBIONIDÆ.**

- BIBIO RUFITHORAX Wied. St. Augustine. The thorax of the ♂ is black.  
 BIBIO THORACICA Say. East Florida (Say).  
 DILOPHUS ORBATUS Say. St. Augustine; Juniper Co., May 15; Inverness, Mar. 27 (Robertson); Charlotte Harbor—exceedingly common from February to the end of March (Mrs. Slosson).  
 PLECIA RUFICOLLIS Fabr. St. Augustine; Charlotte Harbor, Mar. (Mrs. Slosson); Lake Harney (Messrs. Hubbard and Schwarz).  
 PLECIA sp. St. Augustine; Drayton Island, May 9.

**CULICIDÆ.**

- CULEX TENIORHYNCHUS Wied. St. Augustine; Tick Island, Volusia Co., May 12; Charlotte Harbor (Mrs. Slosson).  
 CULEX CILIATUS, Fabr. St. Augustine.  
 CULEX FASCIATUS, Fabr. Charlotte Harbor, Mar. (Mrs. Slosson).  
 ANOPHELES CRUCIANS Wied. Troublesome, Tick Island, May 12.

## CHIRONOMIDÆ.

- CHIRONOMUS NIVEIPENNIS, Fabr. Charlotte Harbor (Mrs. Slosson).  
 CHIRONOMUS RIPARIUS Macq. Charlotte Harbor (Mrs. Slosson).  
 CHIRONOMUS VIRIDIS Macq. Charlotte Harbor (Mrs. Slosson).  
 CHIRONOMUS sp. Georgiana (Whitfeld). U. S. Nat. Mus.  
 TANYPUS THORACICUS Loew. Tick Island, May 12.  
 TANYPUS SCAPULARIS Loew. Tick Island, May 12.  
 TANYPUS CONCINNUS Coq. Tick Island, May 12.  
 CERATOPOGON ARGENTATUS Loew. Welaka, May 9.  
 CERATOPOGON ALBLARIA Coq. Drayton Island, May 9.

## TIPULIDÆ.

- DICRANOMYIA FLORIDANA O. S. Spring of 1858 (Osten Sacken).  
 DICRANOMYIA DISTANS O. S. March, 1858 (Osten Sacken).  
 RHIPIDIA DOMESTICA O. S. Drayton Island, May 10; Ormond  
 (Mrs. Slosson).  
 ERIOPTERA VESPERTINA O. S.  
 GNOPHOMYIA LUCTUOSA O. S. March (Osten Sacken); Jackson-  
 ville, May 22.  
 LIMNOPHILA LUTEIPENNIS O. S. March (Osten Sacken).  
 LIMNOPHILA MACROCERA Say. March (Osten Sacken).  
 LIMNOPHILA sp. (Mrs. Slosson.)  
 BITTACOMORPHA CLAVIPES Fabr. March (Osten Sacken).  
 TIPULA COSTALIS Say. Charlotte Harbor, January (Mrs. Slosson).  
 TIPULA FILIPES Walk. Jacksonville, May 22; Tick Island, May  
 12; Charlotte Harbor (Mrs. Slosson).  
 PACHYRRHINA FERRUGINEA Fabr. St. Augustine, March; Char-  
 lotte Harbor (Mrs. Slosson).  
 PACHYRRHINA NOBILIS Loew. Jacksonville, May 22.  
 PACHYRRHINA SUTURALIS Loew.

## XYLOPHAGIDÆ.

- RHACHICERUS FULVICOLLIS Haliday. Tick Island, May 12.

## STRATIOMYIDÆ.

- SARGUS DECORUS Say. St. Augustine, March 15-  
 SARGUS TRICOLOR Loew. St. Augustine; Tick Island, March 15.  
 SARGUS ELEGANS Loew.  
 PTECTICUS SACKENII Williston. (Pergande.)

- HERMETIA ILLUCENS* Linné. St. Augustine; Fernandina, pupa, March 23, imago issued May 23 (U. S. Nat. Mus.); Lake Worth (Mrs. Slosson).
- HERMETIA SEXMACULATA* Macq. (Mus. Comp. Zool.)
- ODONTOMYIA CINCTA* Oliv. St. Augustine, March 15.
- ODONTOMYIA TRIVITTATA* Say. St. Augustine (F. H. Genung); Astor, May 11; Ormond, April (Mrs. Slosson).
- ODONTOMYIA OBSCURA* Oliv. St. Augustine; Charlotte Harbor (Mrs. Slosson).
- ODONTOMYIA FLAVICORNIS* Oliv. (U. S. Nat. Mus.)
- STRATIOMYIA SENARIA* Loew. St. Augustine.
- NEMOTELUS ACUTIROSTRIS* Loew. St. Augustine (F. H. Genung).
- NEMOTELUS CARBONARIUS* Loew. St. Augustine, March; Charlotte Harbor (Mrs. Slosson).
- NEMOTELUS IMMACULATUS* Johnson. St. Augustine (F. H. Genung).
- NEMOTELUS SLOSSONÆ* Johnson. Charlotte Harbor, March (Mrs. Slosson).

#### TABANIDÆ.

- CHRYSOPS ATROPOS* O. S. St. Augustine; Crescent City (Hubbard); Eagle Lake (U. S. Nat. Mus.)
- CHRYSOPS CALLIDUS* O. S. St. Augustine.
- CHRYSOPS FLAVIDUS* Wied. St. Augustine; Putnam Co., June (U. S. Nat. Mus.); Georgiana (Whitfeld).
- CHRYSOPS MOROSUS* O. S. Common St. Augustine, March 15; Georgiana (Whitfeld), July 17.
- CHRYSOPS UNIVITTATUS* Macq. (U. S. Nat. Mus.)
- CHRYSOPS PLANGENS* Wied. (Osten Sacken.)
- CHRYSOPS VITTATUS* Wied. Palatka, May 19; Horse Landing, St. John's River, May 17.
- DIACHLORUS FERRUGATUS*, Fabr. St. Augustine; Horse Landing, St. John's River, May 17; Biscayne; Enterprise, May 25 (Schwarz), U. S. Nat. Mus.
- TABANUS AMERICANUS* Forster. St. Augustine; Astor, May 11; Indian River (U. S. Nat. Mus.); Tick Island, May 13; Ormond, April (Mrs. Slosson).
- TABANUS ATRATUS* Fabr. St. Augustine; Key West, February 7; Ft. Capron, July 9. (U. S. Nat. Mus.)
- TABANUS NIGROVITTATUS* Macq. St. Augustine.

- TABANUS FUSCOPUNCTATUS Macq. St. Augustine, March; Tick Island, May 12; Georgiana; Sand Point, March 21. (U. S. Nat. Mus.)
- TABANUS FRONTO, O. S. St. Augustine; Charlotte Harbor, March (Mrs. Slosson).
- TABANUS LINEOLA Fabr. St. Augustine; Georgiana; Alachua Co. (U. S. Nat. Mus.); Ormond (Mrs. Slosson).
- TABANUS WIEDEMANNI O. S. St. Augustine; Ormond (Mrs. Slosson); Enterprise, May 17 (Schwarz & Hubbard).
- TABANUS MEGERLEI Wied. St. Augustine; Eagle Lake (U. S. Nat. Mus.); Palatka (Mrs. Slosson).
- TABANUS MELANOCERUS Wied. St. Augustine.
- TABANUS MEXICANUS Linn. St. Augustine; Georgetown, May 16; Tick Island, May 13; Indian River (Whitfeld); Ormond (Mrs. Slosson).
- TABANUS PUMILUS Macq. St. Augustine; Ormond (Mrs. Slosson). Enterprise, May 11-13 (Schwarz & Hubbard).
- TABANUS RUFUS Pal.-Beauv. St. Augustine; Tick Island May 12; Lake Harney, May 4 (Schwarz & Hubbard).
- TABANUS TENER O. S. Ormond (Mrs. Slosson). Indian River (E. Palmer).
- TABANUS TRIJUNCTUS Walker. St. Augustine; Ft. Capron, April 24; Georgiana (Whitfeld). U. S. Nat. Mus.
- TABANUS COSTALIS Wied. (Mrs. Slosson). Lake Harney, May 5 (Schwarz & Hubbard).
- TABANUS MOLESTUS, Say. Tick Island, May 12; Juniper Creek, May 15.
- TABANUS GIGANTEUS Degeer. (Williston).
- TABANUS FUR Will. (Williston).
- TABANUS PROXIMUS Walk. "Probably described from an unrecognizable specimen of some well known species" (Osten Sacken).
- TABANUS GRACILIS Wied. (Williston.)
- TABANUS TURBIDUS Wied. = ? *T. fusconervosus* Macq. Walker records the latter from Florida.
- TABANUS PYGMEUS Will. (Williston).
- TABANUS COFFEATUS Macq. Waldo, June 2 (Messrs. Schwarz & Hubbard).
- TABANUS RECEDENS Walker.

- TABANUS PSAMMOPHILUS O. S. Lake Worth (Mrs. Slosson). Ft. Capron, April 10 (Messrs. Schwarz & Hubbard).  
 TABANUS LONGUS O. S. Georgiana (Whitfeld). U. S. Nat. Mus.; Ft. Capron, March 26 (Messrs. Schwarz & Hubbard).  
 TABANUS STYGIUS, Say. Georgiana, July (Whitfeld). U. S. Nat. Mus.  
 TABANUS SPARUS Whitney. Inverness, March 18-24 (Robertson).  
 TABANUS ABDOMINALIS Fabr. St. Augustine.  
 TABANUS sp. St. Augustine (F. H. Genung).  
 TABANUS sp. Georgiana (Whitfeld). U. S. Nat. Mus.  
 HAEMATOPOTA AMERICANA O. S.? Crescent City, June (Hubbard). U. S. Nat. Mus.

## LEPTIDÆ.

- CHRYSOPILA VELUTINA Loew. St. Augustine, March 15.  
 CHRYSOPILA BASALARIS Say. St. Augustine, March 15; Charlotte Harbor (Mrs. Slosson).  
 LEPTIS ALBICORNIS Say. St. Augustine, March 15.  
 LEPTIS VERTEBRATA Say.

## ASILIDÆ.

- LEPTOGASTER OBSCURIPENNIS Johnson. St. Augustine.  
 CERATURGUS CRUCIATUS Say. Ormond, April (Mrs. Slosson).  
 DIZONIAS TRISTIS Walker. (*D. bicincta* Loew.) St. Augustine; Georgiana (Whitfeld); Enterprise, May 15. (U. S. Nat. Mus.)  
 ANISOPOGON SENILIS Bigot. (Morrison). Coquillett.  
 LAPHYSTIA SEXFASCIATA Say. St. Augustine. Common along the seashore, June, July.  
 CYRTOPOGON CHRYSOPOGON Loew. (Morrison). Coquillett.  
 HOLCOCEPHALA ABDOMINALIS Say. Common St. Augustine; Juniper Creek, May 15.  
 HOLCOCEPHALA CALVA Loew. Seven specimens. Juniper Creek, May 15.  
 TARACTICUS OCTOPUNCTATUS Say. (Morrison). Coquillett.  
 HOLOPOGON PHILADELPHICUS Schin. Ormond, April (Mrs. Slosson).  
 NICOCLES PICTUS Loew. St. Augustine.  
 ATOMOSIA PUELLA Wied. Palatka, May 19.  
 DEROMYIA TERNATUS Loew. St. Augustine.

- DEROMYIA BIGOTII Bellardi. St. Augustine; Ormond, June (Mrs Slosson).
- DEROMYIA WINTHEMI Wied. (*D. misellus* Loew.) (U. S. Nat. Mus.)
- DEROMYIA sp. (U. S. Nat. Mus.)
- DEROMYIA sp. (U. S. Nat. Mus.)
- DASYLLIS TERGISSA Say. Tampa, March (Mrs. Slosson).
- DASYLLIS POSTICATA Say. Jacksonville, April (Mrs. Slosson).
- LAPHRIA SAFFRANA Fabr. St. Augustine; Sand Point, May 3. (U. S. Nat. Mus.) Charlotte Harbor, March, and Pensacola, April (Mrs. Slosson).
- LAMPRIA BICOLOR Wied. Ormond (Mrs. Slosson).
- PROMACHUS FITCHII O. S. St. Augustine.
- ANDRENOSOMA PYRRHACRA Wied. (U. S. Nat. Mus.) Georgiana (Whitfeld); Ormond, June (Mrs. Slosson).
- MALLOPHORA BOMBOIDES. St. Augustine.
- MALLOPHORA NIGRA Will. St. Augustine.
- MALLOPHORA ORCINA Wied. St. Augustine, May 20; Palatka, May 19; Crescent City (Hubbard).
- MALLOPHORA LAPIROIDES Wied. St. Augustine (F. H. Genung).
- ERAX CINERASCENS Bell. St. Augustine. Lake Worth, on the white sand of the ocean beach (Mrs. Slosson).
- ERAX LATERALIS Macq. St. Augustine, May 20; Volusia, May 11 and 14.
- ERAX BASTARDI Macq. (U. S. Nat. Mus.)
- ERAX sp. St. Augustine.
- PROCTACANTHUS IEROS Wied. St. Augustine; Georgiana (Whitfeld) U. S. Nat. Mus.
- PROCTACANTHUS BREVIPENNIS Wied. Common St. Augustine; Ormond, Charlotte Harbor and Pensacola (Mrs. Slosson); Cedar Keys, June 7 (U. S. Nat. Mus.)
- PROCTACANTHUS FULVIVENTRIS Macq. Georgiana (U. S. Nat. Mus.)
- PROCTACANTHUS PHILADELPHICUS Macq. Georgiana (U. S. Nat. Mus.)
- ASILUS NOVÆ-SCOTIÆ Macq. Charlotte Harbor (Mrs. Slosson.)
- ASILUS AURATUS Johnson. St. Augustine, May 21; Palatka, May 19.
- OMMATIUS TIBIALIS Say. St. Augustine, May 21; Georgetown, May 15; Georgiana, July 15 (Whitfeld.)

## MIDAIDÆ.

- MIDAS CLAVATUS Drury. St. Augustine; Astor, May 11.  
 MIDAS INCISUS Macq. St. Augustine (♂), Crescent City (Hubbard), U. S. Nat. Mus.  
 MIDAS PACHYGASTER Westwood. St. Augustine (♀). This is probably the ♀ of *M. incisus*.  
 MIDAS PARVULUS Westwood. Georgia (Westwood), Florida (Walker).  
 MIDAS sp. (U. S. Nat. Museum.)  
 DOLICHOGASTER BREVICORNIS Wied., var. IOPTERUS (Wied.) O. S. "St. John's Bluff, Doubleday" (Walker.)

## NEMESTRINIDÆ.

- RHYNCHOCEPHALUS VOLATICUS Williston. St. Augustine.  
 HIRMONEURA FLAVIPES Williston.

## BOMBYLIDÆ.

- EXOPROSOPA EREMITA O. S. St. Augustine (F. H. Genung); Lake Worth (Mrs. Slosson.)  
 EXOPROSOPA FASCIPENNIS Say. St. Augustine; Mt. Royal, May 17; Lake Worth (Mrs. Slosson.)  
 EXOPROSOPA FASCIATA Macq. St. Augustine; Ormond, June (Mrs. Slosson.)  
 EXOPROSOPA EMARGINATA Macq. Lake Worth (Mrs. Slosson.)  
 ARGYRAMŒBA ANALIS Say. St. Augustine, May 21.  
 ARGYRAMŒBA CEPHUS Fabr. Two specimens, St. Augustine.  
 ARGYRAMŒBA SIMSON Fabr. St. Augustine (F. H. Genung.)  
 ARGYRAMŒBA LIMATULA Say. Lake Worth (Mrs. Slosson.)  
 ARGYRAMŒBA ALBOFASCIATA Macq. Lake Worth (Mrs. Slosson.)  
 ARGYRAMŒBA LATILIMBATA Bigot. St. Augustine.  
 ARGYRAMŒBA ŒDIPUS Fabr. (U. S. Nat. Mus.); (Mrs. Slosson); Orlando, March 20 (Robertson.)  
 ARGYRAMŒBA ARGYROPYGA Wied. (U. S. Nat. Mus.)  
 ANTHRAX (DIPALTA) SERPENTINA O. S; St. Augustine.  
 ANTHRAX (HEMIPENTHES) SINUOSA Wied. St. Augustine.  
 ANTHRAX (HEMIPENTHES) MORIO Linné. Suwannee (Mrs. Slosson.)

- ANTHRAX ALTERNATA Say. (Mrs. Slosson.)
- ANTHRAX LATERALIS Say. St. Augustine: Inverness, February 11-March 31 (Robertson.)
- ANTHRAX AGRIPPINA O. S. Suwannee (Mrs. Slosson.)
- ANTHRAX FAUNUS Fabr. St. Augustine.
- ANTHRAX TEGMINIPENNIS Say. Ormond; Jacksonville, April (Mrs. Slosson.)
- ANTHRAX DISPAR Coq. St. Augustine (F. H. Genung.)
- ANTHRAX FULVOHIRTA Wied. St. Augustine, May 20; Lake Worth (Mrs. Slosson.)
- ANTHRAX CELER Wied. St. Augustine. Syn., *A. floridana* Macq. (Coquillett.)
- ANTHRAX LUCIFER Fabr. Suwannee (Mrs. Slosson); Key West (U. S. Nat. Mus.); Inverness, March 2-April 4 (Robertson.)
- ANTHRAX MIRA Coq. St. Augustine (F. H. Genung.)
- ANTHRAX CEYX Loew. (Syn.? *A. demogorgon* Walker.)
- ONCODOCERA LEUCOPROCTA Wied. Suwannee (Mrs. Slosson.)
- BOMBYLIUS MEXICANUS Wied. (Mrs. Slosson.)
- BOMBYLIUS VARIUS Fabr. (Morrison) Coquillett.
- BOMBYLIUS ATRICEPS Loew. Charlotte Harbor (Mrs. Slosson); Inverness, March 10-27 (Robertson.)
- BOMBYLIUS LANCIFER O. S. (Morrison) Coquillett.
- BOMBYLIUS FRATELLUS Wied. (*B. major* Linné) (U. S. Nat. Mus.)
- BOMBYLIUS PYGMAEUS Fabr. (Morrison) Coquillett.
- SYSTÆCHUS SOLITUS Walk. St. Augustine, common, May 21; Suwannee, April; Lake Worth (Mrs. Slosson.)
- TOXOPHORA AMPHITEA Walker. St. Augustine; Ormond (Mrs. Slosson); Georgiana, July (Whitfeld); Inverness, March 5-26; Orlando, February 17 (Robertson.)
- TOXOPHORA FULVA O. S. (U. S. Nat. Mus.)
- TOXOPHORA VIRGATA O. S. Inverness, March 22 (Robertson.)
- PHTHIRIA PUNCTIPENNIS Walker. St. Augustine.
- PHTHIRIA SULPHUREA Loew. St. Augustine (F. H. Genung); Georgetown, May 16; Crescent City (Hubbard.)
- SYSTROPUS MACER Loew. Georgiana (Whitfeld.)
- GERON sp. (U. S. Nat. Mus.)
- LEPIDOPHORA ÆGERIIFORMIS Westw. Georgiana (Whitfeld) U. S. Nat. Mus.

**THEREVIDÆ.**

- PSILOCEPHALA HÆMORRHODALIS* Macq. Ormond, April (Mrs. Slosson.)
- PSILOCEPHALA FESTINA* Coq. St. Augustine, March 15; Drayton Island, May 9; Ormond (Mrs. Slosson); Georgiana, July (Whitfeld.)
- PSILOCEPHALA NOTATA* Wied. St. Augustine, March 14; Ormond, April (Mrs. Slosson.)
- PSILOCEPHALA TERGISSA* Say. St. Augustine, March 15; Ormond, April (Mrs. Slosson.)
- PSILOCEPHALA JOHNSONI* Coq. St. Augustine, March 15; Ormond, April (Mrs. Slosson.)
- PSILOCEPHALA OBSCURA* Coq. Key West, February 5 (U. S. Nat. Mus.)
- PSILOCEPHALA PICTIPENNIS* Wied. St. Augustine; Drayton, Island and Welaka, May 9; Crescent City (Hubbard) U. S. Nat. Mus.
- PSILOCEPHALA PLACIDA* Coq. (U. S. Nat. Mus.)
- PSILOCEPHALA MARMORATA* Coq. St. Augustine.
- PSILOCEPHALA MARCIDA* Coq. (U. S. Nat. Mus.)
- THEREVA DIVERSA* Coq. (U. S. Nat. Mus.)

**SCENOPINIDÆ.**

- SCENOPINUS NUBILIPES* Say. (Loew.)

**EMPIDÆ.**

- HYBOS TRIPLEX* Walker. Charlotte Harbor, March (Mrs. Slosson.)
- EUHYBUS SUBJECTUS* Walker. St. Augustine; Charlotte Harbor (Mrs. Slosson.)
- SYNECHES SIMPLEX* Walker. Charlotte Harbor (Mrs. Slosson.)
- SYNECHES PUSILLUS* Loew. Charlotte Harbor (Mrs. Slosson.)
- HILARA LEUCOPTERA* Loew. Charlotte Harbor (Mrs. Slosson.)
- HEMERODROMIA SUPERSTITIOSA* Say. Drayton Island, May 9.

**DOLICHOPODIDÆ.\***

- DOLICHOPUS LONGIPENNIS* Loew. (Aldrich.)
- DOLICHOPUS IRRASUS* Walker.

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\* The new and undetermined species of this family will be described later by Prof. J. M. Aldrich.

- DOLICHOPUS LATICORNIS Loew. Lake Worth, March (Mrs. Slosson.)
- DOLICHOPUS sp. ♀ St. Augustine (Aldrich, Kan. Univ. Quarterly, II, 8.)
- GYMNOPTERNUS DEBILIS Loew. (Aldrich.)
- GYMNOPTERNUS DIFFICILIS Loew. St. Augustine.
- PARACLINUS sp. Lake Worth (Mrs. Slosson.)
- PARACLINUS sp. Charlotte Harbor (Mrs. Slosson.)
- PELASTONEURUS COGNATUS Loew. St. Augustine, March 14.
- PELASTONEURUS ABBREVIATUS Loew. St. Augustine, March.
- PELASTONEURUS n. sp. St. Augustine, March 15.
- PELASTONEURUS sp. St. Augustine; Ormond (Mrs. Slosson.)
- PELASTONEURUS sp. St. Augustine; Charlotte Harbor (Mrs. Slosson.)
- TACHYTRECHUS n. sp. (Aldrich.)
- DIOSTRACUS sp. St. Augustine, May 21.
- ARGYRA n. sp. (Aldrich.)
- DIAPHORUS MUNDUS Loew. Drayton Island, May 10; Charlotte Harbor (Mrs. Slosson.)
- DIAPHORUS LEUCOSTOMUS Loew. Charlotte Harbor, February (Mrs. Slosson.)
- ASYNDETUS n. sp. Charlotte Harbor (Mrs. Slosson.)
- CHRYSOTUS COSTALIS Loew. (Loew.)
- CHRYSOTUS sp. Juniper Creek, May 15.
- CHRYSOTUS sp. Juniper Creek, May 15.
- CAMPSICNEMUS HIRTIPES Loew. St. Augustine.
- PLAGIONEURUS UNIVITTATUS Loew. Lake Worth (Mrs. Slosson.)
- MEDETERUS NIGRIPES Loew. Charlotte Harbor (Mrs. Slosson.)
- MEDETERUS VELES Loew. (Loew.)
- SAUCROPUS DIMIDIATUS Loew. (Loew.)
- SAUCROPUS SUPERBIENS Loew. (Loew.)
- PSILOPUS CILIATUS Loew. St. Augustine; Lake Worth and Charlotte Harbor (Mrs. Slosson.)
- PSILOPUS CHRYSOPRASIVS Walker. Charlotte Harbor (Mrs. Slosson.)
- PSILOPUS CAUDATULUS Loew. Volusia, May 11, Palatka, May 15. Charlotte Harbor (Mrs. Slosson.)
- PSILOPUS COMATUS Loew. Volusia, May 11.
- PSILOPUS SIPHO Say. Volusia, May 11; Palatka, May 19.

- PSILOPUS* n. sp. Lake Worth (Mrs. Slosson.)  
*GNAMPTOSILOPUS VARIEGATUS* Loew. St. Augustine; Welaka,  
 May 9; Palatka, May 19.  
*GNAMPTOSILOPUS PSITTACINUS* Loew. St. Augustine; Lake  
 Worth, January (Mrs. Slosson.)  
*DACTYLOMYIA GRACILIPES* Aldr.

## SYRPHIDÆ.

- MICRODON PACHYSTYLUM* Will. St. Augustine.  
*MICRODON FULGENS* Wied. St. Augustine, pupæ found in decayed  
 pine logs; Suwannee (Mrs. Slosson).  
*MICRODON FUSCIPENNIS* Macq. Georgiana, July 17 (Whitfeld).  
*MICRODON LIMBUS* Will. (U. S. Nat. Mus.)  
*MICRODON SCITULUS* Will. (U. S. Nat. Mus.)  
*OMEGASYRPHUS BALIOPTERUS* Loew. Charlotte Harbor (Mrs.  
 Slosson).  
*OMEGASYRPHUS COARCTATUS* Loew. Orlando, March 16 (Robert-  
 son).  
*PARAGUS TIBIALIS* Fallen. St. Augustine, May 21; Palatka,  
 May 19.  
*PIPIZA PULCHELLA* Will. St. Augustine, March 15; Lake Worth  
 (Mrs. Slosson).  
*PSILOTA BACCATA* Macq. Inverness, Feb. 8-12 (Robertson).  
*CHRYSOGASTER NITIDA* Wied. St. Augustine; Tick Island, May  
 12; Orlando, May 16; Inverness, Feb. 14 (Robertson).  
*MESOGRAMMA POLITUM* Say. St. Augustine.  
*MESOGRAMMA PARVULA* Loew. St. Augustine, May 20.  
*MESOGRAMMA MARGINATUM* Say. St. Augustine, May 2; Orlando,  
 Feb. 21; Inverness, March 9 (Robertson).  
*MESOGRAMMA BOSCHI* Macq. St. Augustine; Charlotte Harbor, Feb.  
 (Mrs. Slosson); Orlando, March 15; Inverness, Feb. 29  
 (Robertson).  
*MESOGRAMMA PLANIVENTRIS* Loew. St. Augustine, May 20.  
*ALLOGRAPTA OBLIQUA* Say. Inverness, Feb. 12, March 12  
 (Robertson).  
*XANTHOGRAMMA EMARGINATA* Say.  
*SYRPHUS AMERICANUS* Wied. Lake Worth (Mrs. Slosson);  
 Orlando, Feb. 21; Inverness, Feb. 12 (Robertson).

- BACCHA CLAVATA Fabr. St. Augustine, May 21; Lake Worth (Mrs. Slosson); Crescent City (Hubbard); Orlando, Feb. 17 (Robertson).
- BACCHA NOTATA Loew. Charlotte Harbor (Mrs. Slosson).
- BACCHA TARCHETIUS Walker. Orlando, March 16; Inverness, March 26 (Robertson).
- BACCHA LUGENS Loew. Crescent City (Hubbard). U. S. Nat. Mus.
- OCCYPTAMUS FUSCIPENNIS Say. St. Augustine, March 15, May 20; Palatka and Crescent City (U. S. Nat. Mus.).
- VOLUCELLA ESURIANS Fabr. St. Augustine; Georgiana (Whitfeld); Lake Worth and Charlotte Harbor, Feb.-Apr. (Mrs. Slosson); Key West, Feb. 7 (U. S. Nat. Mus.).
- VOLUCELLA PALLENS Wied. (*V. sexpunctata* Lw.) St. Augustine, March 15; Georgiana, July (Whitfeld); Lake Worth (U. S. Nat. Mus.); Charlotte Harbor (Mrs. Slosson); Inverness, February 12 (Robertson).
- VOLUCELLA PUSILLA Macq. Common, St. Augustine, March 15, May 21; Georgiana, July (Whitfeld).
- VOLUCELLA FASCIATA Macq. (Mrs. Slosson), Inverness, February 3, March 24 (Robertson).
- VOLUCELLA EUGENIA Will. (Williston).
- VOLUCELLA VESICULOSA Fabr. (Williston). Inverness, March 19 (Robertson).
- VOLUCELLA OBESA Fabr. (Osten Sacken.)
- ERISTALIS DIMIDIATUS Wied. St. Augustine.
- ERISTALIS TRANSVERSUS Wied. St. Augustine, March 15; Inverness, March 14 (Robertson).
- ERISTALIS VINETORUM Fabr. St. Augustine; Lake Worth (Mrs. Slosson).
- ERISTALIS ALBIFRONS Wied. (*E. albiceps* Macq.) St. Augustine. (F. H. Genung); Orlando, February 21 (Robertson); Lake Worth and Charlotte Harbor (Mrs. Slosson); Georgiana (Whitfeld).
- MEROMACRUS CRUCIGERUS Wied. St. Augustine; Juniper Creek, May 15; Charlotte Harbor (Mrs. Slosson).
- MALLOTA CIMBICIFORMIS Fall. Inverness, February 12 (Robertson).
- HELOPHILUS SIMILIS Macq. St. Augustine; Inverness, February 12 (Robertson).

- HELOPHILUS DIVISUS Loew. Orlando, February 22 (Robertson).  
 TROPIDIA ALBISTYLUM Macq. Lake Worth and Charlotte Harbor  
 (Mrs. Slosson); Inverness, February 5 (Robertson).  
 XYLOTA EJUNCIDA Say. St. Augustine; Charlotte Harbor, March  
 (Mrs. Slosson).  
 XYLOTA PIGRA Fabr. (Mrs. Slosson); Inverness, February 8,  
 March 25 (Robertson).  
 SPILOMYIA HAMIFERA Loew. St. Augustine; Inverness, March 5  
 (Robertson).  
 MILESA ORNATA Fabr. St. Augustine; Jacksonville, May 22;  
 Juniper Creek, May 15; Inverness, March 12, April 5  
 (Robertson); Ormond (Mrs. Slosson); Georgiana (Whitfield).  
 CERIA ABBREVIATA Loew.  
 CERIA SIGNIFERA Loew. Inverness, February 12, 14 (Robertson).

#### CONOPIDÆ.

- CONOPS BULBIROSTRIS Loew. St. Augustine.  
 CONOPS BRACHYRHYNCHUS Macq. (*C. obscuripennis* Will.) St.  
 Augustine.  
 PHYSOCEPHALA EXCISUS Wied. St. Augustine; Crescent City, July  
 2 (Hubbard); Inverness, March 18 (Robertson); Charlotte  
 Harbor and Pensacola, March and April (Mrs. Slosson).  
 PHYSOCEPHALA CASTANOPTERA Loew. St. Augustine.  
 PHYSOCEPHALA SAGITTARIA Say. (U. S. Nat. Mus.); Inverness,  
 February 8 (Robertson).  
 PHYSOCEPHALA TIBIALIS Say. (Morrison) Coquillett.  
 ZODION FULVIFRONS Say. Lake Worth and Ormond, March (Mrs.  
 Slosson).  
 ZODION NANELLUM Loew. Inverness, February 9 (Robertson).  
 DALMANIA VITIOSA Coq. Inverness, March 25 (Robertson).

#### PIPUNCULIDÆ.

- PROTHECHUS LATERALIS Walk. St. Augustine.

#### OESTRIDÆ.

- CUTEREBRA BUCCATA Fabr. St. Augustine.  
 CUTEREBRA CUNICULI Clark? St. Augustine.

#### TACHINIDÆ.

- TRICHOPODA CILIATA Fabr. (*T. pennipes* Fabr. ♂) St. Augustine;  
 Charlotte Harbor (Mrs. Slosson).

- TRICHOPODA FORMOSA Wied. St. Augustine.  
 TRICHOPODA LANIPES Fabr. St. Augustine.  
 TRICHOPODA PYRRHOGASTER Wied. Georgiana, July (Whitfeld).  
 TRICHOPODA HISTRIO Walker. (*T. trifasciata* Loew.) Inverness,  
 March 18 (Robertson).  
 XANTHOMELANA ATRIPENNIS Say. St. Augustine; Inverness,  
 February 11 (Robertson).  
 OCYPTERA EUCHENOR Walker. Inverness, March 18 (Robertson).  
 JURINIA SMARAGDINA Macq. Lake Worth (Mrs. Slosson); Inver-  
 ness, February 8, March 22 (Robertson).  
 JURINIA FLAVIFRONS Jænnick. (Mrs. Slosson).  
 JURINIA HYSTRIX Fabr. Lake Worth (Mrs. Slosson).  
 ARCHYTTAS BOSCHII Desv. St. Augustine.  
 ARCHYTTAS ATERRIMA Desv. St. Augustine.  
 BELVOSIA BIFASCIATA Fabr. St. Augustine.  
 BELVOSIA SLOSSONÆ Coq. Charlotte Harbor (Mrs. Slosson).  
 THYSANOMYIA INERMIS Bigot. Charlotte Harbor (Mrs. Slosson).  
 GONIA sp. Inverness, March 9-29 (Robertson).  
 MILTOGRAMMA CINERASCENS Town. ? Inverness, March 20  
 (Robertson).  
 MILTOGRAMMA DECISA Town. Inverness, March 10-16 (Robert-  
 son).  
 MILTOGRAMMA ARGENTIFRONS Town. Orlando, March 16; Inver-  
 ness, March 18 (Robertson).  
 MILTOGRAMMA TRILINEATA v. d. Wulp. Inverness, February 16,  
 March 10 (Robertson).  
 MASICERA PROTOPARCIS Town. ? Inverness, March 20 (Robertson).  
 MASICERA SODALIS v. d. Wulp. Ormond (Mrs. Slosson).  
 MASICERA DEMYLUS Walk. (Mrs. Slosson).  
 GYMNOPROSOPA POLITA Town. Inverness, March 1-22 (Robert-  
 son).  
 GYMNOPROSOPA ARGENTIFRONS Town. Inverness, March 1-22  
 (Robertson).  
 BRACHYCOMA sp. Inverness, February 12, March 24 (Robertson).  
 PHOROCERA EDWARDSII Will. Inverness, March 13 (Robertson).  
 PHOROCERA sp. Inverness, March 24 (Robertson).  
 PLAGIOPROSPHERYSA FLORIDENSIS Town. Inverness, February 12,  
 March 21 (Robertson).  
 EXORISTA sp. Orlando, March 16 (Robertson).

- CLISTO AMERICANA Town. St. Augustine, May 21.
- CARCELIA LEUCANLÆ Kirk. St. Augustine; Georgetown, May 10.
- CESTROPHILASIA CLAUSA B. & B. Ormond (Mrs. Slosson).
- PHASIOPTERYX BILIMEKI B. & B. Georgiana (U. S. Nat. Mus.).
- PSEUDOCILETA ARGENTIFRONS Coq. Charlotte Harbor (Mrs. Slosson).
- TACHINA ORGYLÆ Town. (Mrs. Slosson.)
- TACHINA MELOBOSIS Walk. (Walker.)
- MASIPHIA AURIGERA Coq. (Mrs. Slosson.)
- CLYTIOMYIA PUNCTATA Coq. Charlotte Harbor (Mrs. Slosson).
- ACHÆTONEURA RUBENTIS Coq. Jacksonville (W. H. Ashmead).
- ACHÆTONEURA ARMIGERA Coq. Ormond (Mrs. Slosson.)
- CHÆTOGLOSSA VIOLÆ Town. Inverness, February 16 to March 26 (Robertson).
- CHÆTOGLOSSA PICTICORNIS Town. Inverness, February 16 to April 4 (Robertson).
- CHÆTOGLOSSA NIGRIPALPIS Town. Inverness, February 23 (Robertson).
- ACROGLOSSA HESPERIDARUM Will. Inverness, March 10, 22 (Robertson).
- SIPHONA ILLINOENSIS Town. Inverness, February 12, March 22 (Robertson).
- PHASIOCLISTA METALLICA Town. Orlando, Inverness, March 15-22 (Robertson).
- SIPHOCLYTIA ROBERTSONII Town. Inverness, March 13-27 (Robertson).
- ATROPHOPODA SINGULARIS Town. Inverness, March 1 (Robertson).
- LOEWIA GLOBOSA Town. Inverness, March 3-20 (Robertson).
- SIPHOPHYTO FLORIDENSIS Town. Inverness, March 1-29 (Robertson).
- TACHINOPHYTO FLORIDENSIS Town. Inverness, March 1-27 (Robertson).
- ATROPHOPALPUS ANGUSTICORNIS Town. Inverness, March 3-19 (Robertson).
- PSEUDOMYOTHYRIA INDECISA Town. Inverness, March 3-to 5 (Robertson).
- MYOTHYRIA VANDERWULPI Town. Inverness, February 12 (Robertson).

- PACHYOPHTHALMUS FLORIDENSIS Town. (Robertson).  
 PACHYOPHTHALMUS TRYPOXYLONIS Town. Ormond (Mrs. Slosson).  
 TACHINOMYIA FLORIDENSIS Town. St. Augustine.  
 PTILOCHLETA sp. (Mrs. Slosson.)  
 SARCO-TACHINELLA INTERMEDIA Town. Charlotte Harbor (Mrs. Slosson).  
 SPALLANZANIA PANSA Snow. St. Augustine.  
 DEGEERIA LEUCOCYCLA v. d. Wulp. St. Augustine; Tick Island, May 12.  
 ACEMYIA DENTATA Coq. Georgetown, May 10.  
 SARCOMACRONYCHIA FLORIDENSIS Town. Inverness, March 1-19 (Robertson).  
 HYPOSTENA MACULOSA Coq. St. Augustine.

## DEXIDÆ.

- GYMNODEXIA TRIANGULARIS v. d. Wulp. Juniper Cr., May 15.  
 GYMNODEXIA ZONATA Coq. Jacksonville, May 22.  
 LEPTODA VERTEBRATA Say. Ormond; Tampa (Mrs. Slosson).  
 EUANTHA DIVES Wied. St. Augustine.  
 PROSENOIDES FLAVIPES Coq. Lake Worth; Charlotte Harbor (Mrs. Slosson).  
 MYOBIA DEPILE Coq. Juniper Creek, May 15; Jacksonville (Ashmead).

## SARCOPHAGIDÆ.

- SARCOPHAGA FULVIPES Walker. St. Augustine.  
 SARCOPHAGA ÆGRA Walker. Lake Worth (Mrs. Slosson).  
 SARCOPHAGA ANXIA Walker. (Mrs. Slosson.)  
 SARCOPHAGA CIMBICIS Town. Lake Worth (Mrs. Slosson).  
 SARCOPHAGA SARRACENIÆ Riley. Ormond; Charlotte Harbor (Mrs. Slosson).  
 SARCOPHAGA ASSIDUA Walker. St. Augustine, March; Palatka May 19.  
 SARCOPHAGA, sp. Charlotte Harbor (Mrs. Slosson).  
 SAROTHIROMYIA FEMORALIS Schin. Lake Worth.  
 JOHNSONIA ELEGANS Coq. St. Augustine.  
 MICROCHLETINA CINEREA v. d. Wulp. Ormond (Mrs. Slosson).  
 HELICOBIA HELICIS, Town. Charlotte Harbor (Mrs. Slosson).  
 HELICOBIA sp. Charlotte Harbor (Mrs. Slosson).

## MUSCIDÆ.

- STOMOXYS CALCITRANS Linné. St. Augustine; Lake Worth (Mrs. Slosson).
- CALLIPHORA ERYTHROCEPHALA Meig. St. Augustine.
- CALLIPHORA VIRIDESCENS R. Desv. (Walker.)
- MUSCA DOMESTICA Linné. St. Augustine; Inverness (Robertson).
- LUCILIA CÆSAR Linné. St. Augustine; Ormond, March, April (Mrs. Slosson).
- LUCILIA CORNICINA Fabr. St. Augustine; Ormond, March, April (Mrs. Slosson); Orlando, March 15 (Robertson).
- LUCILIA SERICATA Meig. Orlando, March 16 (Robertson).
- CHRYSOMYIA CERTIMA Walker.
- COMPSOMYIA MACELLARIA Fabr. St. Augustine; Orlando and Inverness, March 10-16 (Robertson).
- SYNTHESIOMYIA BRASILIANA B. & B. In a cave, Citrus Co. (H. G. Hubbard).

## ANTHOMYIDÆ.

- OPHYRA AENESCENS Wied. St. Augustine, March; Charlotte Harbor (Mrs. Slosson); Volusia and Juniper Creek, May 14, 15.
- LEUCOMELINA GARRULA Giglio-Tos. St. Augustine, March; Inverness, February 29 (Robertson); Charlotte Harbor (Mrs. Slosson).
- LIMNIPHORA sp. Orlando, March 15 (Robertson).
- HOMALOMYIA FEMORATA Loew. St. John's River, May. These were bred in large numbers from the dead fresh water shells after my return home.
- LISPE ULIGINOSA Fallen. St. Augustine, March; Georgetown, May 9; Ormond (Mrs. Slosson).
- CARICEA ANTICA Walk. St. Augustine, March; Drayton Island, May 9; Inverness, February (Robertson).
- CARICEA SOLITA Walk. St. Augustine, March. Ormond (Mrs. Slosson).
- CARICEA FUSCOPUNCTATA Macq. St. Augustine, March; Inverness, February (Robertson); St. John's River, May 17; Charlotte Harbor (Mrs. Slosson).
- CARICEA NIVEA Loew. St. Augustine, March; Inverness, February (Robertson).
- CENOSIA LATA Walk. (Mrs. Slosson).

- CÆNOSIA sp. Charlotte Harbor (Mrs. Slosson).  
 CHORTOPHILA sp. Inverness, February 14 (Robertson).  
 CHORTOPHILA sp. Inverness, February 12 (Robertson).  
 PHORBIA FUSCICEPS Zett. St. Augustine; Orlando, March (Robertson).  
 ANTHOMYIA NARONA Walk.

#### CORDYLURIDÆ.

- CLEIGASTRA CAPILLATA Loew. St. Augustine.  
 FUCELLIA FUCORUM Fallen. St. Augustine, March; Charlotte Harbor, February (Mrs. Slosson).

#### SCIOMYZIDÆ.

- SCIOMYZA NANA Fallen. St. Augustine; Ormond, January (Mrs. Slosson).  
 SCIOMYZA HUMILIS Loew. St. Augustine, March 15.  
 TETANOCERA SPINICORNIS Loew. St. Augustine, March 15; Ormond, January (Mrs. Slosson).

#### MICROPEZIDÆ.

- CALOBATA NEBULOSA Loew. St. Augustine; Juniper Creek, May 15; Charlotte Harbor, February (Mrs. Slosson).  
 CALOBATA LASCIVA Fabr. St. Augustine, March 15; Juniper Creek, May 15; Jacksonville, April (Mrs. Slosson); Crescent City (Hubbard).  
 CALOBATA FASCIATA Fabr. February 7 (U. S. Nat. Mus.).  
 CALOBATA VARIPES Johnson. Jacksonville, May 22.

#### ORTALIDÆ.<sup>1</sup>

- PYRGOTA FILIOLA Loew. Ormond, April (Mrs. Slosson).  
 PYRGOTA sp. Jacksonville (Ashmead).  
 AMPHICNEPHES PULLA Wied. (*A. pertusus* Loew.) Georgetown, May 15; Ormond (Mrs. Slosson).  
 RIVELLIA PALLIDA Loew. St. Augustine, May 20; Georgiana, July (Whitfeld).  
 RIVELLIA VARIABILIS, Loew. Volusia; Drayton Island and Juniper Creek, May; Ormond (Mrs. Slosson).

<sup>1</sup> The new genus and species of this family will be described by Mr. W. A. Snow in a paper in course of preparation.

- RIVELLIA QUADRIFASCIATA Macq. Volusia and Drayton Island, May; Ormond, March (Mrs. Slosson).  
 RIVELLIA n. sp. Drayton Island, May 9.  
 STENOPTERINA n. sp. St. Augustine.  
 CAMPTONEURA PICTA Fabr. St. Augustine, May 20; Cedar Keys, February 14 (U. S. Nat. Mus.); Lake Worth (Mrs. Slosson).  
 TEPHIRONOTA HUMILIS Loew. St. Augustine, March 15; Orlando, March 16 (Robertson).  
 ACROSTICTA n. sp. Charlotte Harbor (Mrs. Slosson).  
 EUXESTA NOTATA Wied. Inverness, February 10 (Robertson).  
 EUXESTA QUATERNARIA Loew. Lake Worth, March, on cocoanut palm (Mrs. Slosson).  
 EUXESTA SCORIACEA Loew. Charlotte Harbor (Mrs. Slosson).  
 EUXESTA NITIDIVENTRIS Loew. Charlotte Harbor, March (Mrs. Slosson).  
 EUXESTA ANNONÆ Fabr. St. Augustine, March 15.  
 CHLETOPSIS JENEA Wied. St. Augustine.  
 CHLETOPSIS n. sp. St. Augustine, March; Ormond (Mrs. Slosson).  
 GEN. NOV. n. sp. St. Augustine, March 15.

#### TRYPETIDÆ.

- ACROTOXA? ACIDUSA (Walker) Loew.  
 SPILOGRAPHA ELECTA Say.  
 ACIURA INSECTA Loew. Lake Worth, January (Mrs. Slosson).  
 CARPHOTRICHIA CULTA Wied. St. Augustine, May, on Thistle; Ormond, April (Mrs. Slosson).  
 EUROSTA SOLIDAGINIS Fitch. Charlotte Harbor, March (Mrs. Slosson).  
 NEOSPILOTA VERNONIÆ Loew. Inverness, March 19 (Robertson).  
 ENSINA HUMILIS Loew. Key West, January 29 (U. S. Nat. Mus.).  
 TEPHRITIS FUCATA Fabr. St. Augustine.  
 EUARESTA BELLA Loew. Drayton Island, May 9; Tick Island May 12.  
 URELLIA ABSTERSA Loew. Key West, February 3 (U. S. Nat. Mus.).  
 URELLIA SOLARIS Loew. Lake Worth, March (Mrs. Slosson); Inverness, March 9-22 (Robertson).

URELLIA MEVARNA (Walker) Loew. "The specimen in the British Museum seems very like *T. solaris*. *Trypeta narytia* Walker. There are four specimens in the British Museum, two of them are *Chetopsis aenea*, and one of these bears Walker's label 'narytia,' the two other marked 'Florida Doubleday' seem to be *Tephronota humilis*." Osten Sacken.

#### LONCHÆIDÆ.

LONCHÆA GLABERRIMA Wied. Lake Worth (Mrs. Slosson).

#### SAPROMYZIDÆ.

SAPROMYZA RESINOSA Wied. Collected by Mrs. Slosson (Coquillet).

SAPROMYZA UMBROSA Loew. Ormond (Mrs. Slosson).

PACHY CERINA VERTICALIS Loew. St. Augustine March; Lake Worth, January (Mrs. Slosson); Inverness, March (Robertson).

LAUXANIA OPACA Loew. St. Augustine; Palatka, May 19; Juniper Creek, May 15.

LAUXANIA TRIVITTATA Loew. Georgetown, May 16.

#### SEPSIDÆ.

SEPSIS VICARIA Walker. St. Augustine; Inverness, February 10 (Robertson).

#### PIOPHILIDÆ.

PIOPHILA CASEI Linné. Charlotte Harbor (Mrs. Slosson).

#### EPHYDRIDÆ.

DICHLÆTA BREVICAUDA Loew. St. Augustine.

NOTIPHILA sp. Orlando, February 23 (Robertson).

NOTIPHILA sp. Inverness, April 6 (Robertson).

PARALIMNA APPENDICULATA Loew. St. Augustine.

PSILOPA sp. Charlotte Harbor (Mrs. Slosson).

HYDRELLIA sp. St. Augustine, March.

OCHTHERA TUBERCULATA Loew. St. Augustine, March.

OCHTHERA EXCULPTA Loew. St. Augustine; Inverness, March (Robertson).

BRACHYDEUTERA DIMIDIATA Loew. Charlotte Harbor (Mrs. Slosson).

PARYDRA QUADRITUBERCULATA Loew. Ormond, January (Mrs. Slosson).

PARYDRA sp. Charlotte Harbor (Mrs. Slosson).

EPHYDRA SUBOPACA Loew. Charlotte Harbor, February (Mrs. Slosson).

EPHYDRA NANA Walk. Ormond (Mrs. Slosson).

SCATELLA LUGENS Loew. Ormond (Mrs. Slosson).

CÆNIA SPINOSA Loew. St. Augustine.

#### GEOMYSIDÆ.

HETEROCHROA ORNATA Johnson. Drayton Island, May 9.

#### DROSOPHILIDÆ.

DROSOPHILA AMPELOPHILA Loew. St. Augustine; Ormond; Charlotte Harbor (Mrs. Slosson).

DROSOPHILA QUADRIMACULATA Walk. Charlotte Harbor (Mrs. Slosson).

DROSOPHILA PUNCTULATA Loew. St. Augustine, March.

DROSOPHILA MACULOSA Coq. Charlotte Harbor (Mrs. Slosson).

DROSOPHILA VITTATA Coq. Charlotte Harbor (Mrs. Slosson).

DROSOPHILA GUTTIFERA Walk. (Walker.)

#### OSCINIDÆ.

CRASSISETA FORMOSA Loew. Ormond (Mrs. Slosson).

CRASSISETA COSTATA Loew. St. Augustine, March.

HIPPELATES CONVEXUS Loew. St. Augustine, March.

OSCINIS, sp. Charlotte Harbor (Mrs. Slosson).

MEROMYZA AMERICANA Fitch. St. Augustine.

SIPHONELLA CINEREA Loew. Charlotte Harbor (Mrs. Slosson).

CHLOROPS PUBESCENS Loew. St. Augustine; Orlando, March 16 (Robertson).

CHLOROPS GRATA Loew. St. Augustine.

CHLOROPS TRIVIALIS Loew. St. Augustine.

CHLOROPS ABDOMINALIS Coq. Charlotte Harbor (Mrs. Slosson).

#### AGROMYZIDÆ.

LOBIOPTERA ARCUATA Loew. (Robertson); Ormond (Mrs. Slosson).

LOBIOPTERA INDECORA Loew. (Robertson).

LOBIOPTERA LACTEIPENNIS Loew. Charlotte Harbor (Mrs. Slosson).

LEUCOPIS BELLA Loew. Horse Landing, St. John's River, May 17; Crescent City (Hubbard).

AGROMYZA JUCUNDA v. d. Wulp. Georgetown, May 9.

AGROMYZA SETOSA Loew. Palatka, May 19.

AGROMYZA TERMINALIS Coq. Welaka, May 9.

#### BORBORIDÆ.

LIMOSINA FONTINALIS Fall. St. Augustine, March.

#### PHORIDÆ.

PHORA INSCISURALIS Loew. ♀ "Loew described the ♂ the sexes vary in the color of the thorax, which is black dorsally in the ♂ and wholly yellow in the ♀ as in the European *bicolor*." (Coquillett.) Charlotte Harbor (Mrs. Slosson). Tick Island, May 12.

PHORA FASCIATA Fall. Charlotte Harbor (Mrs. Slosson.)

#### HIPPOBOSCIDÆ.

OLFERSIA AMERICANA Leach. St. Augustine, on the Screech Owl.

OLFERSIA sp. St. Augustine, on the White Heron, November 8.

OLFERSIA sp. St. Augustine, on the Fish Hawk (F. H. Genung).

OLFERSIA sp. St. Augustine, on the Chuck Will's Widow (F. H. Genung).

OLFERSIA sp. St. Augustine.