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The Ephydriidae (Diptera) of the Bahama Islands

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The insect fauna of the Bahama Islands, British West Indies, has been very poorly known until recently, for the islands are rather low and barren compared with the larger and more populous ones of the Greater and Lesser Antilles, and were little explored entomologically. After the establishment in 1947 of the Lerner Marine Laboratory of the American Museum of Natural History on North Bimini Island, a program for the collection and study of the Bahama insects was begun under the leadership of Dr. Mont A. Cazier. Vaurie (1952) has given a very good account of the entomological history, geography, and ecology of the Bahamas, especially the Bimini Group, together with an explanation of the collecting methods used in the American Museum survey.

The Ephydriidae collected during the expeditions by Cazier and Rindge in 1950; Cazier, Gertsch, C. and P. Vaurie in 1951; and the Van Voast-American Museum of Natural History Bahamas Expedition in 1953 form the basis of the present report. Unless otherwise noted, all material studied is in the collections of the American Museum of Natural History. Collectors on the Van Voast-American Museum of Natural History expedition were E. Hayden, L. Giovannoli, and G. Rabb.

The first locality given under Distribution is the type locality; the other localities are from the literature cited or from material in the United States National Museum collection. Types, except as noted, are de-

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posited in the American Museum of Natural History, and paratypes are divided between that institution, the United States National Museum, the British Museum (Natural History), and the Academy of Natural Sciences of Philadelphia.

The only general paper on the Diptera of the Bahamas is that by Johnson (1908), in which four species of Ephydriidae were recorded. Cresson (1945) has recorded two species listed by Johnson and one additional species. The increase in the number of known Bahama species to 42 and the description of seven new species and two new genera in the present paper are indicative of the progress that resulted from the activities of the American Museum staff.

The Bahamas have received faunal elements of Ephydriidae nearly equally from the Nearctic region through Florida and from the Neotropical region through the West Indies. Of the 42 known Bahama species, nine are in common with Florida and the United States, seven in common with the West Indies, 19 are found in both the Nearctic United States and the West Indies, and seven are known only from the Bahamas. One of the last seven is a species of *Hydrellia* which could not be fully determined and thus cannot be said definitely to be endemic. The other six species, however, on the basis of present knowledge, are truly endemic, and the new genus *Paraglenanthe* has been erected for three species and the new genus *Guttiipsilopa* for a fourth species.

The ephydrid flies are commonly known as shore or brine flies, because most of the species breed in mud flats or on the muddy shores of all types of aquatic situations. When competition from other insects is reduced in saline and alkaline habitats, these flies, which have extremely high salt tolerances as larvae, may become very numerous and form a dominant element of the biota. The extensive salt ponds and marshes of the low-lying Bahamas form an ideal environment for these halophiles.

The taxonomic system of the family that I follow is that developed by Cresson (1942, 1944, 1945, 1946, 1947) and revised by Sturtevant and Wheeler (1954). Keys for identification are to be found in these papers.

SUBFAMILY PSILOPINAE

Gymnopa tibialis (Cresson)

Mosillus tibialis CRESSON, 1916, Ent. News, vol. 27, p. 149.

DISTRIBUTION: New Jersey; United States to West Indies and South America.

SPECIMENS EXAMINED: *Turks and Caicos Islands*: Grand Turk

Island, February 19, 1953, one; South Caicos Island, February 11, 1953, one.

Athyroglossa laevis (Cresson)

Ochtheroidea laevis CRESSON, 1918 Trans. Amer. Ent. Soc., vol. 44, p. 61.

DISTRIBUTION: Costa Rica; Central and South America to Brazil and Bolivia; West Indies.

SPECIMENS EXAMINED: *Andros Island*: Mangrove Cay, April 26, 1953, one. *Mayaguana Island*: Near Abraham Bay, March 3, 1953, six.

***Diphuia nasalis*, new species**

DESCRIPTION OF MALE: Length, 1.8 mm.; wing 1.75 mm. long.

Shining black; distal third of each tibia, proximal two tarsomeres on foreleg, and proximal three tarsomeres on mid and hind legs yellowish white; halter yellowish white; wing grayish hyaline, the veins yellowish. Frons sparsely whitish pollinose, lunular area at antennal bases densely white pollinose. Face polished black, with prominent pattern of sharply delimited, narrow, whitish pollinose lines; a narrow margin along each eye, three lines forming a triangle with the short side along oral margin, the other two sides meeting below the antennae, the centers of the sides of the triangle each connected by a short line extending to the middle of face below the facial tubercle; the polished areas on the face thus delimited consisting of a median upper "nose" area, a lower pair of arcuate epistomal areas, and an upper pair of linear subocular lines each extending caudad to cheek. Antenna black, with dense white pollen; palpus black; postbucca densely white pollinose. Thorax with sparse whitish pollen; most of anterior portion of mesopleuron and sternopleuron polished black. Tibiae flattened, both sides of fore and mid tibiae and anterior side of hind tibia densely whitish pollinose.

Frons at vertex 0.46 times as broad as head, slightly narrower towards antennae; chaetotaxy normal except ocellars located slightly in front of level of anterior ocellus and in line with the orbitals; postverticals as long as ocellars, proclinate, not divergent. Arista with four rays. Two long, widely spaced facials, a line of minute hairs along parafacial suture. Face with protruding, median, low, conical tubercle which is bare and polished, becoming the prominent feature of the face. Clypeus well developed and protruding tongue-like below epistomal margin; cheek and postbucca setose. Thorax with chaetotaxy normal, scutellars convergent; mesonotum with short, dense, non-seriate setulae; scutellum with a few larger dorsal setae on caudal portion of disc; notopleuron bare, mesopleuron

with sparse setulae. Fore femur with complete series of fine posteroventral cilia. Second costal section 2.3 times as long as third; apical section of fourth vein 2.7 times as long as preceding section. Fourth abdominal tergum 2.5 times as long as third, strongly tapering distad.

TYPE MATERIAL: Holotype male, Long Island, Deadman's Cay, March 11, 1953, E. B. Hayden. Paratypes, five specimens: One male, one specimen sex undetermined, same data as type; one, Turks and Caicos Islands (cays 3.5 miles southwest of North Caicos Island), February 28, 1953; one, Exuma Cays (Staniard Cay), January 13, 1953; one, Crooked Island (Landrail Point), March 5, 1953.

DISCUSSION: There are only two other described species of *Diphuia*: *anomala* Cresson (the type of the genus) from Panama and *nitida* Sturtevant and Wheeler from Long Island, New York. *Diphuia anomala* can readily be distinguished from *nasalis* by its smaller size (length 1.6 mm.), divergent postverticals, the median, sub-nasal, pollinose spot on the face not connected to any of the three lines forming the pollinose facial triangle, arista with five rays, second costal section only 1.8 times as long as third, and the fourth abdominal tergum only 2.0 times as long as the third. *Diphuia nitida* is also smaller (length 1.7 mm.), with divergent postverticals and second costal section 2.0 times the third, the median pruinose area on the face is connected only to the oral pollinose line, and the ocellars arise behind the level of the anterior ocellus and the orbitals.

Pseudohecamede abdominalis (Williston)

Hecamede abdominalis WILLISTON, 1896, Trans. Ent. Soc. London, p. 398.

DISTRIBUTION: St. Vincent; Paraguay to Georgia and southern California.

SPECIMENS EXAMINED: *Andros Island*: Driggs Hills, near South Bight, April 27, 1953, one. *Berry Islands*: Frazier's Hog Cay, April 30, 1953, one. *Cat Island*: Bennett's Harbour, March 24, 1953, one; McQueen, January 23, 1953, 13; The Bight, March 22, 1953, three. *New Providence Island*: Near Windsor Field, April 12, 1953, one. *North Bimini Island*: Alicetown, December 30, 1952, one. *Rum Cay*: Near Port Nelson, March 16, 1953, four. *San Salvador Island*: Near Cockburn Town, March 18, 1953, one.

Pseudohecamede facialis Hendel

Pseudohecamede facialis HENDEL, 1936, Ann. Naturhist. Mus. Wien, vol. 42, p. 105.

DISTRIBUTION: Brazil.

SPECIMENS EXAMINED: *Exuma Cays*: Warderick Wells Cay, January 10, 1953, two. *Fortune Island (or Long Cay)*: Near Albert Town, March 7, 1953, two. *Rum Cay*: Near Port Nelson, March 16, 1953, one.

DISCUSSION: This species closely resembles *abdominalis* (Williston), but the face is entirely brown, the pleuron is entirely brown, lacking the whitish pollinose longitudinal line at the notopleural suture, and the proximal tarsal segments are a bright yellow.

Glenanthe litorea Cresson

Glenanthe litorea CRESSON, 1925, Ent. News, vol. 36, p. 166.

DISTRIBUTION: New Jersey; Massachusetts to Alabama.

SPECIMENS EXAMINED: *Cat Island*: Bennett's Harbour, March 24, 1953, four. *Crooked Island*: Landrail Point, March 5, 1953, nine. *Exuma Cays*: Darby Island, January 18, 1953, one. *Fish Cay*: South of Fortune Island or Long Cay, March 8, 1953, one. *Fortune Island*: Near Albert Town, March 7, 1953, two. *Great Inagua Island*: Matthew Town, January 31, 1953, one. *Long Island*: Clarence Town, March 13, 1953, one; *Deadman's Cay*: March 11, 1953, one. *Mayaguana Island*: Near Abraham Bay, March 3, 1953, two. *Rose Island*: Three miles northeast of New Providence Island, April 5, 1953, one. *Rum Cay*: Near Port Nelson, March 16, 1953, three. *Turks and Caicos Islands*: Grand Turk Island, February 19, 1953, 21; South Caicos Island, February 11, 1953, 27; West Caicos Island, February 4, 1953, two.

Ptilomyia enigma Coquillett

Ptilomyia enigma COQUILLETT, 1900, Proc. U. S. Natl. Mus., vol. 22, p. 262.

DISTRIBUTION: Puerto Rico; United States to Argentina.

SPECIMENS EXAMINED: *South Bimini Island*: April 10-14, 1952, E. Mayr, one.

Ptilomyia pleuriseta (Cresson)

Atissiella pleuriseta CRESSON, 1942, Trans. Amer. Ent. Soc., vol. 68, p. 111.

DISTRIBUTION: New Mexico; California to Texas.

SPECIMENS EXAMINED: *Turks and Caicos Islands*: South Caicos Island, February 11, 1953, one.

Atissa pygmaea (Haliday)

Ephydra pygmaea HALIDAY, 1833, Ent. Mag., vol. 1, p. 174.

DISTRIBUTION: Europe; North America to Panama (Balboa, Canal Zone, September 17, 1942, P. A. Woke) and Chile (Punta Teatinos, Coquimbo, September 16, 1952, P. G. Kuschel).

SPECIMENS EXAMINED: *Cat Island*: The Bight, March 22, 1953, one. *San Salvador Island*: Near Cockburn Town, March 18, 1953, one.

PARAGLENANTHE, NEW GENUS

TYPE SPECIES: *Paraglenanthe bicolor*, new species.

Small, pollinose species of Psilopinae, closely related to *Glenanthe*. Head higher than broad or long. Eye pubescent, round, not elongated below. Frons 1.5 times as broad as long; ocellar triangle equilateral; two pairs of small proclinate orbitals, the posterior pair in line with anterior ocellus; a pair of lateroclininate orbitals just behind and mesad of posterior proclimates; inner and outer verticals longer than orbitals; mesofrons with five scattered pairs of strong setae, the two lateral pairs as long as proclinate orbitals; ocellar area with five pairs of minute setae. Face prominent, slightly higher than broad, flattened below, with a well-developed carina between eyes; bare medially, with five to eight pairs of very fine facials in a double row along lateral margins next to parafacies, the upper facial longest; epistomal margin slightly concave, the clypeus visible, tongue-like, below. Cheek broad, 0.6 times as broad as eye height, with sparse, fine setae. Antenna with third segment globular, second segment with one small dorsal hair; arista long and slender, minutely pubescent.

Mesonotum with four long bristles (a pair of prescutellar acrosticals and a pair of interalars) in a transverse row in front of scutellum; discal setulae strong and not numerous, seriate; two pairs of humerals, the second pair small; two pairs of notopleurals, the posterior one about twice as far from the suture as the anterior one, notopleuron with one seta above the anterior notopleural; mesopleuron with two posterior bristles and with scattered setae. Scutellum short and pointed; two pairs of convergent scutellars, disc of scutellum with two or three setae.

Legs normal, without macrochaetae. Wing with costa extending to apex of fourth vein; second, third, and fourth veins nearly parallel on distal halves; second costal section about five times length of third; last section of fourth vein 2.5 times length of preceding section.

Abdomen tapered and convex above, with five visible terga, the fourth and fifth each considerably longer than the proximal ones.

Glenanthe Haliday closely resembles this genus, but in all known species of *Glenanthe* the eyes are pear-shaped, strongly narrowed below, with the cheek very narrow, and the ocellar bristles are quite well de-

veloped, as strong as the orbitals, although they have migrated well cephalad of the anterior ocellus to lie upon the setulose mesofrons.

***Paraglenanthe bicolor*, new species**

DESCRIPTION: Length, 1.1 mm.; wing 1.5 mm. long.

Densely whitish pollinose dorsally and on face; frons pinkish on non-setose portion; palpus and third antennal segment brownish; pleuron, including a sharply demarcated portion of notopleuron below a diagonal line from top of humerus to wing base, deep chocolate brown pollinose; a chocolate brown patch on occipital margin of head behind lower half of eye; clypeus shining blackish; legs chocolate brown, narrow knee spots and proximal two-thirds of tarsi yellowish; abdominal venter brown; wing whitish including veins; halter whitish.

Face with five facials in primary row, the secondary row absent; parafacies each with a row of four or five minute hairs halfway between eye margin and antennal base; cheek 0.5 times as broad as ventral diameter of eye; frons broader caudad; two pairs of humerals.

TYPE MATERIAL: Holotype (sex undetermined), Turks and Caicos Islands (West Caicos Island), February 4, 1953, E. B. Hayden and L. Giovannoli. Paratypes, 14 specimens, all from Turks and Caicos Islands: Five, same data as type; seven, Long Cay (south of Caicos Island), February 10, 1953; one, cays 3.5 miles southwest of North Caicos Island, February 28, 1953; one, Long Cay (south of Grand Turk Island), February 25, 1953.

***Paraglenanthe pleuralis*, new species**

DESCRIPTION: Length, 1.7 mm.; wing 1.5 mm. long.

Closely resembling *bicolor*, new species, but brown pleural marking extending ventrad only two-thirds of the way across the mesopleuron and pteropleuron, the pleuron grayish pollinose below; apex of scutellum brown; antenna brownish black, with gray pollen; legs black, with gray pollen, knees and proximal two-thirds of tarsi yellowish. Face slightly longer and head higher than in *bicolor*; cheek 0.6 times as broad as vertical diameter of eye; face with five to seven small hairs in primary row, secondary row absent; parafacies with a row of four to five minute hairs.

TYPE MATERIAL: Holotype male, San Salvador Island (near Cockburn Town), March 18, 1953, E. B. Hayden. Paratypes, 13 specimens: One, same data as type; two, Abaco Cays (Elbow Cay, Hope Town), May 4, 1953; three, Abaco Cays (Great Sale Cay), May 10, 1953; two, Andros Island (Driggs Hill near South Bight), April 27, 1953; one, Exuma Cays (Big Farmers Cay), January 13, 1953; one, North Bimini

Island (Alicetown), December 30, 1952; three, Rum Cay (near Port Nelson), March 16, 1953.

***Paraglenanthe bahamensis*, new species**

DESCRIPTION: Length, 1 mm.; wing 1.4 mm. long.

Closely resembling *bicolor*, new species, but entire body densely white pollinose. Head shorter and broader in comparison with its height, the facial carina thus appearing much more prominent and protuberant; cheek a third as broad as vertical diameter of eye; frons nearly parallel-sided. Face with three bristles in each primary series and five much smaller ones in a secondary lateral row next to parafacial margin; parafacials bare.

TYPE MATERIAL: Holotype (sex undetermined), South Bimini Island, July, 1951, C. and P. Vaurie. Paratypes, 17 specimens: Seven, South Bimini Island, May to August, 1951; two, Fish Cay (south of Fortune Island or Long Cay), March 8, 1953; one, Fortune Island (or Long Cay, near Albert Town), March 7, 1953; two, North Cay (South of Fortune Island or Long Cay), March 8, 1953; one, Turks and Caicos Islands (Grand Turk Island), February 19, 1953; five, Turks and Caicos Islands (South Caicos Island), February 11, 1953; four, Turks and Caicos Islands (West Caicos Island), February 4, 1953.

Discocerina obscurella (Fallén)

Notiphila obscurella FALLÉN, 1813, K. Svenska Vetensk. Akad. Handl., vol. 34, p. 251.

DISTRIBUTION: Europe; common in North and South America.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, seven; Mangrove Cay, April 26, 1953, five. *Berry Islands*: Frazier's Hog Cay, April 30, 1953, seven. *Cat Island*: Bennett's Harbour, March 24, 1953, three; McQueen, January 23, 1953, two; The Bight, March 22, 1953, three. *Crooked Island*: Landrail Point, March 5, 1953, five. *Exuma Cays*: Leaf Cay of Allen Cays, January 7, 1953, five. *Grand Bahama Island*: West End, May 12, 1953, four. *Long Island*: Deadman's Cay, March 11, 1953, six. *Mayaguana Island*: Near Abraham Bay, March 3, 1953, two. *New Providence Island*: Five miles west of Nassau, January 3, April 6, 1953, 68; Nassau, April 16, 1953, two. *Rum Cay*: Near Port Nelson, March 16, 1953, 82. *San Salvador Island*: Near Cockburn Town, March 18, 1953, 19. *Turks and Caicos Islands*: South Caicos Island, February 11, 1953, one.

Paratissa pollinosa (Williston)

Drosophila pollinosa WILLISTON, 1896, Trans. Ent. Soc. London, p. 414.

DISTRIBUTION: St. Vincent Island; West Indies to Florida, Panama.

SPECIMENS EXAMINED: *Abaco Cays*: Elbow Cay, Hope Town, May 4, 1953, one. *Cat Island*: Bennett's Harbour, March 24, 1953, one. *Crooked Island*: Landrail Point, March 5, 1953, 59. *Eleuthera Island*: Governor's Harbour, March 31, 1953, two. *Exuma Cays*: Leaf Cay of Allen Cay, January 7, 1953, 20; Warderick Wells Cay, January 10, 1953, one. *Long Island*: Clarence Town, March 13, 1953, one. *New Providence Island*: Nassau, December 13, 1912, F. Knab (U.S.N.M.), 16; April 5, 1953, five. *Rum Cay*: Near Port Nelson, March 16, 1953, four. *San Salvador Island*: Near Cockburn Town, March 18, 1953, two. *South Bimini Island*: June, July, 1951, M. Cazier, C. and P. Vaurie, 141. *Turks and Caicos Islands*: Long Cay, south of Grand Turk Island, February 25, 1953, one; South Caicos Island, February 11, 1953, one; West Caicos Island, February 4, 1953, three.

Polytrichophora agens Cresson

Polytrichophora agens CRESSON, 1924, Ent. News, vol. 35, p. 161.

DISTRIBUTION: Texas; Gulf and Atlantic states.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, two. *Grand Bahama Island*: West End, May 12, 1953, one. *Rum Cay*: Near Port Nelson, March 16, 1953, three.

GUTTIPSILOPA, NEW GENUS

TYPE SPECIES: *Guttipsilopa haydeni*, new species.

Medium-sized, pollinose species of Psilopinae, intermediate between *Ditrichophora* Cresson and *Actocetor* Becker. Head higher than broad or long. Eye bare, oval, slightly elongated on vertical axis. Frons 1.5 times as broad as long and 0.4 times as broad as total width of head; ocellar triangle equilateral; two pairs of proclinate orbitals, the anterior pair as long as ocellars, the posterior pair a third as long. Reclinate orbital located slightly mesad and behind the anterior proclinate one, about halfway between level of anterior ocellars and lunular margin, longer than ocellars, about as long as the very long inner and outer verticals; ocellars proclinate, located at a point laterad of anterior ocellus and cephalad of lateral ocelli; postverticals lateroocclinate, a third as long as ocellars, arising behind level of posterior ocelli. Face two-thirds as broad as high and a third as broad as head, a very slight median prominence at

mid-length, parafacials linear; two long facials and a row of five to six very small incurved hairs near each parafacial suture, the two hairs just below the lower facial somewhat enlarged. Mouth opening not enlarged; clypeus exposed, small. Antenna with second segment spinose, the dorsal spine scarcely larger than the others; third segment only slightly longer than broad; arista with six dorsal rays.

Thorax pollinose; mesonotum, scutellum, and mesopleuron with numerous non-seriate, strong setulae; notopleuron non-setulose. Thoracic macrochaetae strong: one pair of humerals, two pairs of notopleurals at same distance from notopleural suture, the anterior one slightly closer to the posterior one than to the humeral; one pair of presuturals, two pairs of supra-alars, a pair of interalars, a pair of prescutellar acrosticals at same level with interalars, two pairs of marginal scutellars, two pairs of mesopleurals, and a pair of sternopleurals. Mid coxa with a long bristle; legs otherwise without macrochaetae or special armature. Wing guttate, brown, with rounded white spots; venation normal, costa extending to fourth vein, second costal section subequal to third; third and fourth veins straight and parallel beyond posterior cross vein; last section of fourth vein nearly twice as long as the penultimate section. Abdomen

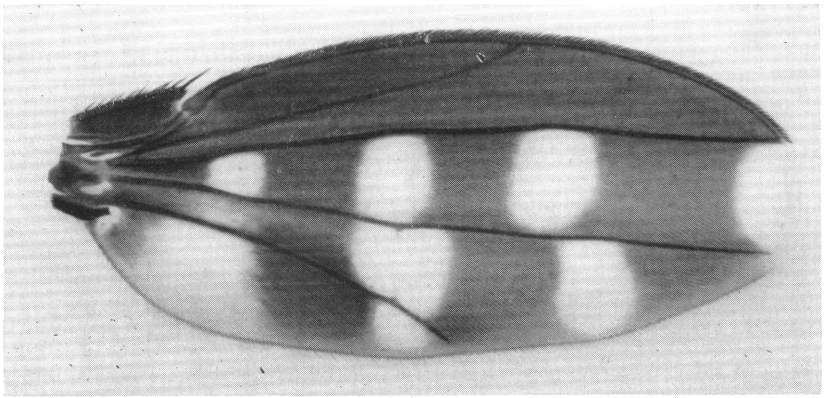


FIG. 1. *Guttipsilopa haydeni*, wing.

shining, slender, with numerous long, semi-appressed hairs, fourth and fifth terga of male subequal, twice as long as third tergum.

Structurally, *Guttipsilopa* is most closely allied to some species of the subgenus *Gymnoclasiopa* Hendel of the genus *Ditrichophora* Cresson, which, however, because of the location of the reclinate and (posterior) proclinate frontals at the level of the anterior ocellus, are placed in the tribe Discocerini. The position of the frontals and the guttate wings

ally *Guttipsilopa* therefore more closely to the genera *Actocetor* Becker from the Palearctic and Ethiopian regions and *Trypetomima* Meijere from the Oriental and Australasian regions. In *Actocetor* the ocellars are located behind the level of the anterior ocellus, and the postverticals are in front of the level of the posterior ocelli, the face is fuller and evenly convex, with four pairs of large facials, the antenna is shaped differently, and the prescutellar acrosticals are located far cephalad of the interalars. In *Trypetomima* the ocellars and postverticals are located much as in *Actocetor*, the prescutellar acrosticals are located at the level of the anterior supra-alars, the interalars are lacking, and the second vein is very short, with an abrupt bend and usually an appendage before it enters the costa.

***Guttipsilopa haydeni*, new species**

Figure 1

DESCRIPTION: Length, 2.5 mm.; wing 2.3 mm. long.

Black; frons, mesonotum, and scutellum with coarse brassy pollen, the scutellum appearing blackish when viewed from behind; face densely grayish white pollinose; pleuron and legs brownish black, proximal four tarsomeres yellowish; antenna and palpus yellowish; halter blackish; abdomen polished bluish black. Wing brownish black, with rounded whitish spots forming four transverse bands in posterior cells as figured, costal, marginal, and submarginal cells entirely dark.

TYPE MATERIAL: Holotype male, Andros Island, Fresh Creek, April 23, 1953, E. B. Hayden and L. Giovannoli (pinned; one wing mounted separately on a slide).

Ceropsilopa coquilletti Cresson

Ceropsilopa coquilletti CRESSON, 1922, Ent. News, vol. 33, p. 136.

DISTRIBUTION: California; southern United States from Maryland to California, Central America and West Indies.

SPECIMENS EXAMINED: *Abaco Cays*: Allan's Cay, May 9, 1953, 22; Elbow Cay, Hope Town, May 4, 1953, 29; Great Sale Cay, May 10, 1953, two. *Andros Island*: Driggs Hill, near South Bight, April 27, 1953, 59; Fresh Creek, April 23, 1953, two; Mangrove Cay, April 26, 1953, 38. *Berry Islands*: Frazier's Hog Cay, April 30, 1953, seven. *Cat Island*: The Bight, March 22, 1953, four. *Crooked Island*: Landrail Point, March 5, 1953, one. *Exuma Cay*: Big Farmers Cay, January 13, 1953, four; Darby Island, January 18, 1953, two; Staniard Cay, January 13, 1953, 12. *Grand Bahama Island*: West End, May 12, 1953, three. *Long Island*: Clarence Town, March 13, 1953, one; Deadman's Cay, March 11, 1953,

two. *New Providence*: Five miles west of Nassau, April 6, 1953, one. *North Cay*: South of Fortune Island or Long Cay, March 8, 1953, one. *San Salvador*: Near Cockburn Town, March 18, 1953, four. *Turks and Caicos Islands*: Long Cay, February 18, 25, 1953, 11; West Caicos Island, February 4, 1953, two.

Ceropsilopa staffordi Cresson

Ceropsilopa staffordi CRESSON, 1925, Ent. News, vol. 36, p. 166.

DISTRIBUTION: Louisiana; southeastern United States.

SPECIMENS EXAMINED: *Eleuthera Island*: Governor's Harbour, March 31, 1953, nine. *New Providence Island*: Nassau, April 16, 1953, two; 5 miles west of Nassau, April 6, 1953, 17; 2 miles east of Nassau, April 14, 1953, one. *San Salvador Island*: Near Cockburn Town, March 18, 1953, one.

***Ceropsilopa costalis*, new species**

Figure 2

DESCRIPTION OF MALE AND FEMALE: Length of wing, 1.4 mm.

Closely resembling *Ceropsilopa staffordi* Cresson in having yellow legs, including coxae; grayish pruinose body; narrow, smooth, facial carina with facial bristles very low, near epistomal margin; and facial integument yellow, with silvery pollen. Differing from *staffordi* in having the costal cell deeply infuscated; the head and body densely grayish pollinose and the abdomen yellowish above at base, the distal terga shining black, costal section II as long as section III.

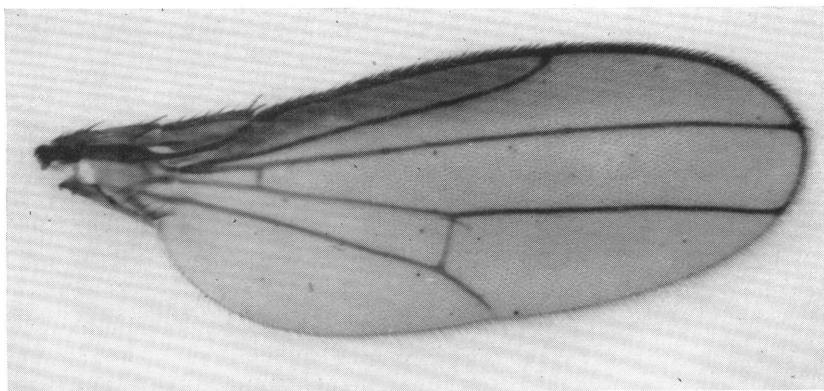


FIG. 2. *Ceropsilopa costalis*, wing.

TYPE MATERIAL: Holotype, male, allotype, female, Warsaw, Richmond County, Virginia, July 26, 1952, W. W. Wirth, tidal marsh (U.S.N.M. No. 62955). Paratypes, 63 specimens: *Virginia*: Two, same data as types. *Florida*: Two, Key Largo, July 19, 1939, P. W. Oman. *Bahamas*: One, Abaco Cays (Allans Cay), May 9, 1953; one, Abaco Cays (Elbow Cay), May 4, 1953; five, Abaco Cays (Great Sale Cay), May 10, 1953; one, Andros Island (Fresh Creek), April 23, 1953; two, Andros Island (Mangrove Cay), April 26, 1953; two, Berry Islands (Frazier's Hog Cay), April 30, 1953; 10, Cat Island (The Bight), March 22, 1953; one, Crooked Island (Landrail Point), March 5, 1953; one, Exuma Cays (Darby Island), January 18, 1953; two, Exuma Cays (Staniard Cay), January 13, 1953; four, Fortune Island or Long Cay (near Albert Town), March 7, 1953; one, Grand Bahama Island (West End), May 12, 1953; one, Great Inagua Island (12 miles north of Matthew Town), January 29, 1953; four, New Providence Island (Nassau), April 16, 1953; seven, North Cay (south of Fortune Island or Long Cay), March 8, 1953; 13, Turks and Caicos Islands (Long Cay, south of South Caicos Island), February 10, 1953; three, Turks and Caicos Islands (West Caicos Island), February 4, 1953.

DISCUSSION: *Ceropsilopa lacticella* Cresson from Tanganyika greatly resembles *costalis*, having the costal wing infuscation, yellow legs, and heavy pollinosity, but can be distinguished easily by its blackish antenna, face with dark median stripe ventrad, yellow scutellum paler than the brown mesonotum, and costal section II 1.5 times as long as III.

Psilopa dupla Cresson

Psilopa dupla CRESSON, 1940, Notulae Nat., no. 38, p. 2.

DISTRIBUTION: New Jersey; eastern United States to Florida and Texas.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, one; Mangrove Cay, April 26, 1953, five. *Cat Island*: Bennett's Harbour, March 24, 1953, three. *Crooked Island*: Landrail Point, March 3, 1953, one. *Exuma Cays*: Staniard Cay, January 13, 1953, one. *Long Island*: Deadman's Cay, March 11, 1953, one. *Rum Cay*: Near Port Nelson, March 16, 1953, 57. *San Salvador Island*: Near Cockburn Town, March 18, 1953, one.

Psilopa olga Cresson

Psilopa olga CRESSON, 1922, Ent. News, vol. 33, p. 137.

DISTRIBUTION: Washington; United States.

SPECIMENS EXAMINED: *Andros Island*: Mangrove Cay, April 26, 1953, two. *Long Island*: Deadman's Cay, March 11, 1953, one. *Rum Cay*: Near Port Nelson, March 16, 1953, one.

Leptopsilopa nigrimana (Williston)

Psilopa nigrimana WILLISTON, 1896, Trans. Ent. Soc. London, p. 393.

DISTRIBUTION: St. Vincent; Texas and Bahamas south to Ecuador and Brazil.

SPECIMENS EXAMINED: *Cat Island*: Bennett's Harbour, March 24, 1953, five. *Eleuthera Island*: New Portsmouth, Rock Sound, March 28, 1953, five. *New Providence Island*: Five miles west of Nassau, April 6, 1953, 38; Nassau, June 28, 1904 (U.S.N.M.), one.

Hclaeomyia nigra (Williston)

Psilopa nigra WILLISTON, 1896, Trans. Ent. Soc. London, p. 139.

DISTRIBUTION: St. Vincent Island; West Indies to Gulf states.

SPECIMENS EXAMINED: *Andros Island*: Driggs Hills, near South Bight, April 27, 1953, one; Fresh Creek, April 23, 1953, one; Mangrove Cay, April 26, 1953, one. *Rum Cay*: Near Port Nelson, March 16, 1953, seven.

Rhysophora caeruleiventris (Loew)

Psilopa caeruleiventris LOEW, 1862, Monograph of the Diptera of North America, pt. 1, p. 144.

DISTRIBUTION: Cuba; Bahamas.

SPECIMENS EXAMINED: *Grand Bahama Island*: West End, May 12, 1953, one.

DISCUSSION: This species can be readily distinguished from *umbrosa* (Loew) by its metallic purple abdomen, the sharply demarcated dark costal zone on the wing, and the yellowish posterior wing veins, including the cross vein. In *umbrosa* the abdomen is black, the costal infuscation is more gradually evanescent posteriorly, and all the wing veins are brownish, including the posterior cross vein.

Rhysophora umbrosa (Loew)

Psilopa umbrosa LOEW, 1862, Monograph of the Diptera of North America, pt. 1, p. 143.

DISTRIBUTION: Cuba.

SPECIMENS EXAMINED: *Cat Island*: The Bight, March 22, 1953, one. *Mayaguana Island*: Near Abraham Bay, March 3, 1953, three. *New Providence Island*: Nassau, April 5, 1953, three; Nassau, December 15, 1912, F. Knab (U.S.N.M.), one.

Discomyza maculipennis (Wiedemann)

Notiphila maculipennis WIEDEMANN, 1824, *Analecta entomologica*, p. 57.

DISTRIBUTION: East Indies; West Indies to Surinam.

SPECIMENS EXAMINED: *North Bimini Island*: May, 1951, Cazier and Gertsch, one.

Clanoneurum americanum Cresson

Clanoneurum americanum CRESSON, 1940, *Notulae Nat.*, vol. 38, p. 1.

DISTRIBUTION: California; southern United States to Gulf and Atlantic states.

SPECIMENS EXAMINED: *Abaco Cay*: Elbow Cay, Hope Town, May 4, 1953, one.

SUBFAMILY NOTIPHILINAE

Nostima niveivenosa Cresson

Nostima niveivenosa CRESSON, 1930, *Ent. News*, vol. 41, p. 80.

DISTRIBUTION: Puerto Rico; West Indies and Central America to Argentina.

SPECIMENS EXAMINED: *Long Island*: Deadman's Cay, March 11, 1953, one. *Turks and Caicos Islands*: South Caicos Island, February 11, 1953, one.

***Nostima giovannolii*, new species**

DESCRIPTION OF MALE AND FEMALE: Length, 1.4 mm.; wing 1.4 mm. long.

A species with white cross veins closely related to *niveivenosa* Cresson and *spilogaster* Cresson. Frons, mesonotum, and scutellum coarsely brown pollinose, with irregular, faintly whitish pollinose areas, areas at insertion of bristles darker brown, mesonotum with whitish areas forming four faint vittae anteriorly; frontal orbits, parafacies, and cheeks whitish pollinose; face and antenna yellowish, antenna brownish above; pleuron dark brown, with whitish pollen. Legs yellowish, femora brown-

ish, hind tibia with two broad brownish bands, fifth tarsomeres blackish. Abdomen dark brown, with pattern of niveous spots: In male, a median and two lateral small spots on hind margin of second tergum, two spots on extreme hind lateral corners of third tergum, a pair of lateral and a larger pair of sublateral spots on hind margin of fourth tergum; a median line the full length and two sublateral spots, the three connected along hind margin of fifth tergum; fifth tergum as long as third and fourth combined, not shining, expanded dorsoventrally with a pair of niveous spots on posterolateral corners. In female, the spots are the same as in the male on second to fourth segments, but the fifth, sixth, and seventh terga are greatly shortened and entirely yellowish, with niveous pollen in a broad median area. Wing hyaline, veins brownish, cross veins whitish; second and third costal sections subequal. Halter whitish.

TYPE MATERIAL: Holotype male, Cat Island, McQueen, January 23, 1953, E. B. Hayden. Paratypes, four males, three females: One male, same data as type; two males, Crooked Island (Landrail Point), March 5, 1953; one male, one female, Exuma Cays (Darby Island), January 18, 1953; one female, Mayaguana Island (Near Abraham Bay), March 3, 1953.

DISCUSSION: *Niveivenosa* Cresson and *spilogaster* Cresson differ in their smaller size (wing 1.0 mm. long), more uniformly brown pollinose frons and mesonotum, paler legs, different abdominal pattern, and in *niveivenosa* the male fifth tergum is polished black.

Zeros fenestralis (Cresson)

Ilythea fenestralis CRESSON, 1918, Trans. Amer. Ent. Soc., vol. 44, p. 51.

DISTRIBUTION: Costa Rica; Argentina to Florida and Central America.

SPECIMENS EXAMINED: *Long Island*: Deadman's Cay, March 11, 1953, one.

Hydrellia sp.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, one. *New Providence Island*: Nassau, Staniard Creek Lake, August, 1942, A. Dean Peggs (U.S.N.M.), one.

DISCUSSION: This genus is in a very unsatisfactory state and badly needs taxonomic revision. The Bahama specimens run to couplet 19 in Cresson's key (1944, Trans. Amer. Ent. Soc. vol. 70, p. 172) but differ from *cruralis* and *atroglanca* in having the arista with only four branches

and the fore coxae and all tibiae pale and the mid and hind tibiae with only faint median infuscation.

Typopsilopa flavitarsis Cresson

Typopsilopa flavitarsis CRESSON, 1916, Ent. News, vol. 27, p. 147.

DISTRIBUTION: Arizona; southern United States to Georgia and Florida, Central America and South America to Paraguay.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, one; Mangrove Cay, April 26, 1953, 19. *Crooked Island*: Landrail Point, March 5, 1953, one. *Eleuthera Island*: New Portsmouth, Rock Sound, March 28, 1953, three. *Long Island*: Deadman's Cay, March 11, 1953, three. *San Salvador Island*: Near Cockburn Town, March 18, 1953, four.

Notiphila furcata (Coquillett)

Dichaeta furcata COQUILLET, 1902, Jour. New York Ent. Soc., vol. 10, p. 182.

DISTRIBUTION: Florida; Atlantic and Gulf coasts from Delaware to Texas, Puerto Rico.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, one; Mangrove Cay, April 26, 1953, one. *Cat Island*: Bennett's Harbour, March 24, 1953, one. *Crooked Island*: Landrail Point, March 5, 1953, 16. *Eleuthera Island*: Governor's Harbour, March 31, 1953, two; James Cistern, April 1, 1953, two. *Exuma Cays*: Staniard Cay, January 13, 1953, one. *Long Island*: Deadman's Cay, March 11, 1953, seven. *New Providence Island*: Nassau, January 3, 1953, one. *San Salvador Island*: Near Cockburn Town, March 18, 1953, 18.

Paralimna multipunctata Williston

Paralimna multipunctata WILLISTON, 1896, Trans. Ent. Soc. London, p. 390.

DISTRIBUTION: St. Vincent Island; Venezuela through Mexico to Texas and California and West Indies to Florida.

SPECIMENS EXAMINED: *Crooked Island*: Landrail Point, March 5, 1953, one. *Eleuthera Island*: Hatchet Bay, near Alicetown, April 2, 1953, one. *Exuma Cays*: Staniard Cay, January 13, 1953, one. *Long Island*: Deadman's Cay, March 11, 1953, 18. *New Providence Island*: Five miles west of Nassau, April 6, 1953, one. *San Salvador Island*: Near Cockburn Town, March 18, 1953, seven.

Paralimna decipiens Loew

Paralimna decipiens LOEW, 1878, Zeitschr. Gesam. Naturw., vol. 51, p. 195.

DISTRIBUTION: Texas; United States from New Jersey to California, ranging to Honduras and Puerto Rico.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, one; Mangrove Cay, April 26, 1953, two. *Exuma Cays*: Staniard Cay, January 13, 1953, seven. *Rum Cay*: Near Port Nelson, March 16, 1953, three. *San Salvador Island*: Near Cockburn Town, March 18, 1953, seven. *Turks and Caicos Islands*: Grand Turk Island, February 19, 1953, two; South Caicos Island, February 11, 1953, seven.

SUBFAMILY PARYDRINAE

Lipochaeta slossonae Coquillett

Lipochaeta slossonae COQUILLET, 1896, Ent. News, vol. 7, p. 221.

DISTRIBUTION: Florida; coasts from Massachusetts to Mexico and California.

SPECIMENS EXAMINED: *Great Inagua Island*: Matthew Town, January 31, 1953, one. *Turks and Caicos Islands*: Grand Turk Island, February 19, 1953, eight; South Caicos Island, February 11, 1953, 11.

Brachydeutera argentata (Walker)

Notiphila argentata WALKER, 1856, Insecta Saundersiana, vol. 5, p. 407.

DISTRIBUTION: United States; North and South America, Europe, and Canary Islands.

SPECIMENS EXAMINED: *New Providence Island*: Nassau, January 3, 1953, one.

Ochthera exsculpta Loew

Ochthera exsculpta LOEW, 1862, Monograph of the Diptera of North America, pt. 1, p. 160.

DISTRIBUTION: Cuba; Florida, North Carolina; Jamaica; Guatemala.

SPECIMENS EXAMINED: *Andros Island*: Fresh Creek, April 23, 1953, eight; Mangrove Cay, April 26, 1953, one. *Crooked Island*: Landrail Point, March 5, 1953, seven. *Long Island*: Deadman's Cay, March 11, 1953, two. *New Providence Island*: Five miles west of Nassau, April 6, 1953, two. *San Salvador Island*: Near Cockburn Town, March 18, 1953, one.

Ochthera loreta Cresson

Ochthera loreta CRESSON, 1931, Ent. News, vol. 42, p. 168.

DISTRIBUTION: Baja California, Mexico, Jamaica.

SPECIMENS EXAMINED: *Andros Island*: Mangrove Cay, April 26, 1953, three. *Cat Island*: Bennett's Harbour, March 24, 1953, one. *Crooked Island*: Landrail Point, March 5, 1953, 30. *Exuma Cays*: Staniard Cay, January 13, 1953, one. *Grand Bahama Island*: West End, May 12, 1953, six. *Turks and Caicos Islands*: Cays 3.5 miles southwest of North Caicos Island, February 28, 1953, one; South Caicos Island, February 11, 1953, two.

Lytogaster pallipes Cresson

Lytogaster pallipes CRESSON, 1914, Ent. News, vol. 25, p. 248.

Lytogaster angustata CRESSON, 1934, Trans. Amer. Ent. Soc., vol. 60, p. 206. New synonymy.

Hyadina angustata STURTEVANT AND WHEELER, 1954, Trans. Amer. Ent. Soc., vol. 79, p. 210.

DISTRIBUTION: Costa Rica (*pallipes*); Cuba (*angustata*); Georgia and Florida to Cuba and Costa Rica.

SPECIMENS EXAMINED: *Cat Island*: McQueen, January 23, 1953, one. *Long Island*: Deadman's Cay, March 11, 1953, one.

DISCUSSION: Sturtevant and Wheeler suspected the synonymy of *angustata* but had not seen authentic specimens of *pallipes*. I have examined a series of *pallipes* in the United States National Museum collection from La Caja, San Jose, Costa Rica, 1930, H. Schmidt, in which the variation in leg color noted by Sturtevant and Wheeler is obvious. The whitish halteres, yellowish brown legs, and broad third antennal segment will distinguish this species.

SUBFAMILY EPHYDRINAE

Ephydra cinerea Jones

?*Ephydra gracilis* PACKARD, 1871, Amer. Jour. Arts Sci., vol. 1, p. 104. *Species dubium*.

Ephydra cinerea JONES, 1906, Univ. California Publ. Ent., vol. 1, p. 159. STURTEVANT AND WHEELER, 1954, Trans. Amer. Ent. Soc., vol. 79, p. 168.

DISTRIBUTION: Great Salt Lake; western North America from Utah and California to Texas and Mexico; Puerto Rico.

SPECIMENS EXAMINED: *Andros Island*: Mangrove Cay, April 26, 1953, two. *Cat Island*: Bennett's Harbour, March 24, 1953, one.

Crooked Island: Landrail Point, March 5, 1953, one. *Eleuthera Island*: New Portsmouth, Rock Sound, March 28, 1953. *Exuma Cays*: Staniard Cay, January 13, 1953, 419. *Long Island*: Clarence Town, March 13, 1953, three. *New Providence Island*: Nassau, April 5, 16, 1953, six. *Turks and Caicos Islands*: Grand Turk Island, February 19, 1953, 10; cays 3.5 miles southwest of North Caicos Island, February 28, 1953, two; West Caicos Island, February 4, 1953, three. *Cay Sal Bank*: June 17, 1930, H. S. Peters (U.S.N.M.), four.

Scatella stagnalis (Fallén)

Ephydra stagnalis FALLÉN, 1813, Handl. K. Svensk. Vetensk. Akad., vol. 34, p. 248.

DISTRIBUTION: Europe; world-wide.

SPECIMENS EXAMINED: *Berry Islands*: Frazier's Hog Cay, April 30, 1953, one. *Cat Island*: The Bight, March 22, 1953, one. *Exuma Cays*: Darby Island, January 18, 1953, one. *North Bimini Island*: Alicetown, December 30, 1952, three. *Rum Cay*: Near Port Nelson, March 16, 1953, six. *San Salvador Island*: Near Cockburn Town, March 18, 1953, 27. *South Bimini Island*: June, 1951, one.

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