

NEW DOLICHOPODIDAE FROM SOUTHEASTERN UNITED STATES AND CUBA (DIPTERA)

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ABSTRACT

Four new species of Dolichopodidae (Diptera) are described, including 3 species from the southeastern United States and 1 species from Cuba. The new species are *Sciapus floridanus*, *Chrysotus leucosetus*, *Diaphorus longilamellus*, and *Pelastoneurus stentorius*.

This report includes descriptions of several apparently undescribed Dolichopodidae found among specimens submitted to the writer for identification.

Sciapus floridanus n. sp.

Male. Length: body, 4.8 mm; wing, 4.3 mm. Face wide at the antennae, gradually narrowed on lower portion, with a distinct transverse furrow near middle, the lower part bulging outward immediately above the mouth; shining, metallic, greenish violet when viewed from below, densely grayish pollinose when viewed from the front, with narrow, median, grayish pollinose stripe and narrow lateral grayish stripe bordering the eyes when viewed obliquely. Front violet, with greenish reflections when viewed obliquely, lightly grayish pollinose. Antennae yellow; third segment brown on apical half, with dorsal arista. Palpi and proboscis yellow, the former with long white hairs and two prominent black setae on apical margin.

Metanotum metallic green with violet reflections, dulled with gray pollen, the bristles black; scutellum violet, grayish pollinose, with two strong, black, marginal bristles; metepimeron yellow for a short distance above hind coxae, the upper portion green.

First abdominal segment green with anterior portion yellowish; second to fourth segments yellow, each with posterior margin and median dorsal stripe green; remainder of abdomen and hypopygium green with grayish pollen; tergites with black hairs and long black marginal bristles, the first segment laterally and the four basal segments ventrally with pale hairs. Hypopygial lamellae yellow, elongate, rodlike, yellow pilose.

Fore and hind coxae yellow, middle coxae greenish on outer surface, all with pale hairs and bristles. Femora yellow, without prominent hairs or bristles on lower surface. Tibiae yellow; fore pair bowed outward and somewhat flattened on apical half, with two long black bristles inserted close together on anterior side near middle, the outer surface with two rows of prominent black setae extending the length of tibia, leaving a broad glabrous stripe between the rows, the inner surface densely clothed with minute white hairs; middle tibiae somewhat thickened on basal three-

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fourths, the apical fourth tapering gradually to tip which is about equal in diameter to basitarsus, the outer surface with a row of evenly-spaced bristles which are slightly shorter than the diameter of tibia; hind tibiae with a moderately large anterodorsal at basal sixth and several small dorsals. Tarsi yellow, becoming brownish from near the tip of the second segments; fore basitarsi of peculiar structure, the basal half greatly swollen, rounded on upper side and bearing numerous strong, black, curved bristles, the apical half concave, flattened, bearing a row of short clavate spines in the concavity and a pair of long, delicate, curved setae at base of flattened portion; remaining segments of plain structure, densely clothed with black hairs which are about as long as the diameter of segments. Middle tarsi of plain structure, the inner surface of basitarsi densely clothed with hairlike bristles that are longer than diameter of segment and are continued on the other segments, the middle portion of outer surface with a single row of strong black bristles that are longer than the diameter of segment. Hind tarsi of plain structure. Length of segments of fore tarsi in ratio: 15-10-10-5-3; of middle tarsi 35-10-7-5-3; of hind tarsi 23-10-8-5-3. Halteres and calypters yellow, the latter with narrow black tip and pale setae.

Described from 2 males collected in Florida by Dr. H. V. Weems, Jr. Holotype from Middle Cape Sable, Everglades National Park, Monroe County, 7 April 1966, at *Bidens pilosa*; returned to Florida State Collection of Arthropods. Paratype from Plantation Key, Monroe County, 8 April 1968, in collection of the author.

In Steyskal's key (1966) to the species of *Sciapus* found in America north of Mexico, *S. floridanus* would run to number 36, differing from *S. californicus*, however, by the peculiar structure of the fore tarsi, which, in the case of *californicus* are of plain structure.

Chrysotus leucosetus n. sp.

Male. Length, 2.4 mm. Face wide, its width immediately above mouth equaling the length of second segment of mid tarsi, densely golden pollinose, the ground color evident only near base of antennae. Front as wide as tip of face, grayish pollinose, the greenish ground color evident. Palpi white, densely clothed with white hairs, about as large as the face, quadrate but with rounded corners. Antennae black; third segment slightly broader than long, covered with fine hairs; arista inserted slightly beyond middle. About three uppermost postocular bristles black, the other setae and the whiskers white.

Metanotum green, densely grayish pollinose, bristles black; pleurae grayish pollinose; scutellum with two large marginal bristles and a pair of setae. Abdomen dark green, hairs on dorsum and sides brownish when viewed from the side, black when viewed from above; venter with long white hairs; hypopygium brown; outer lamellae small, yellow, fringed with pale hairs that are longer at tip of lamellae; capsule without bristles.

Fore coxae yellow, the basal fourth and the mid and hind coxae darkened and concolorous with pleurae; anterior surface of fore and middle coxae with pale hairs and bristles; hind coxae with large brown external bristle. Fore and middle femora yellow, the former with greenish infuscation above on basal half; hind femora dark metallic green, the base

and tip narrowly yellow, a cluster of four long brownish hairlike bristles on inner surface near base. Tibiae yellow; middle tibiae with a strong anterodorsal near base; hind tibiae without bristles except near tip on lower surface, densely clothed on outer surface with hairs as long as diameter of tibia, a dense patch of long, pale cilia on ventral surface slightly before the tip. Tarsi yellow, more brownish distally; fore and middle pairs of plain structure; hind basitarsi laterally compressed, the upper edge with long hairlike bristles, the lower edge with a comb of stiff short bristles, the segment appearing slightly concave on lower edge when viewed from the side. Length of segments of fore tarsi in ratio: 20-10-6-4-3; of middle tarsi 30-10-6-5-5; of hind tarsi 12-12-7-5-5. Pulvilli not elongate. Halteres and calypters white, the latter with white setae.

Wings clear, veins yellow; third and fourth veins parallel beyond the cross-vein, the fourth vein ending in apex of wing; cross-vein at middle of wing; length of cross-vein as 10, last segment of fifth vein as 25.

Holotype male collected in black light trap, U.S. Navy Base, Guantanamo Bay, Cuba, 8-19 February 1965; in Florida State Collection of Arthropods.

In Aldrich's key (1902) to the North American and West Indian species of *Chrysotus*, this species would run to *C. barbatus* (Lw.) in couplet number 1. It differs conspicuously from *barbatus* which has the third segment of antennae greatly elongated, tapering to a sharp point, with short, apical arista.

Diaphorus longilamellus n. sp.

Male. Length 4.2 mm. Face slightly less than twice as high as wide, densely silvery pollinose, the ground color not perceptible; front narrow, its width equaling the diameter of middle basitarsus, concolorous with face. Palpi yellow with black hairs on upper surface and a stronger bristle at tip. Antennae black; third segment about as broad as long, rounded; arista inserted at middle. Upper postocular setae black, lower setae and whiskers white.

Metanotum metallic green, densely silvery pollinose; scutellum with bronze reflections, with two large marginal bristles and a pair of setae; pleurae densely silvery pollinose. Abdomen green with bronze reflections and white pollen; second and third segments yellow except narrowly on posterior portions; sixth segment glabrous, the other segments with hairs and bristles black; hypopygial capsule with 6-8 strong bristles; outer lamellae ribbonlike, as long as fore basitarsus, fringed with long pale hairs, tapering on apical half and ending in a rather sharp point; a pair of protruding, brownish inner organs present, broad on basal half, slender, rodlike on apical half with sharp tip.

Fore and hind coxae yellow; middle coxae dark on outside; fore coxae with pale or brownish hairs on anterior surface, long black bristles at tip and along outer margin of apical half; middle coxae with black hairs and bristles; hind coxae with strong black external bristle. Femora, tibiae, and tarsi yellow, the latter gradually more brownish beyond tip of first segments. Fore and middle femora with long slender setae ventrally and along lower outer edge; hind femora somewhat bowed outward and slightly compressed near middle, the apical portion noticeably swollen,

inner surface clothed with delicate pale hairs that have crinkly tips, the apical swollen portion densely clothed with strong, dark, crinkly hairlike bristles on inner, ventral, and outer surfaces; middle tibiae with small anterodorsal near base and a similar bristle near middle; hind tibiae with small anterodorsal near base, and about six widely spaced dorsals; tarsi of plain structure; pulvilli of all tarsi greatly elongated; length of segments of fore tarsi in ratio 16-6-6-5-3; of middle tarsi 20-9-5-4-2; of hind tarsi 13-12-8-5-3; halteres and calypters yellow, the latter with black setae.

Wings clear, veins yellow, broad on basal portion; cross vein as 8, last segment of fifth vein as 20.

Described from 3 males collected at Oatland Island, Georgia, 31 August 1968, by Julian M. Harmston. Holotype male in Florida Collection of Arthropods; paratype males in U.S. National Museum and in collection of the author.

This species is closely related to *D. lamellatus* Loew and *D. basalis* Van Duzee; it is readily separated from both species by the greatly elongate, ribbonlike hypopygial lamellae and the yellow legs. In Robinson's (1964) key to the genus *Diaphorus*, it would form a new combination under couplet number five as follows: Fore coxae yellow; hypopygial lamellae equaling the length of fore basitarsus; posterior femora densely clothed with long hairlike setae ventrally on apical third.

Pelastoneurus stentorius n. sp.

Male. Length, 4 mm. Face silvery pollinose, its width equaling the length of second segment of fore tarsi, with deep transverse furrow slightly above middle, the lower portion bulging forward. Front metallic, dark blue, lightly dusted with brownish pollen. Palpi concolorous with face, the hairs black. Postocular setae black. Antennae brown; third segment darker on apical half, about as broad as long, rounded at tip; arista with long hairs.

Metanotum dark brown, metallic violet on posterior half, lightly dusted with brown pollen; sutural depression in front of wing, and a small spot on metanotum above base of wing silvery pollinose; a black pollinose area laterally at base of scutellum; pleurae dull greenish, with dense white pollen. Abdomen dark green, the incisures more bronze. Hypopygium dulled with thick gray pollen, reaching forward to hind margin of third abdominal segment; lamellae black, elongate-oval, nearly as long as hind basitarsus, outer surface and margins with long black setae; inner organs pronglike with long, whitish, bristly hairs.

Fore coxae concolorous with pleurae on basal half, the apical half yellowish; middle and hind coxae concolorous with pleurae; all coxae with black hairs and bristles. Femora, tibiae, and tarsi yellow, the latter more brownish toward apices; fore femora with short black hairs on lower surface; middle femora with about six long, strong, black bristles on lower edge at middle and a strong anterior preapical bristle; hind femora with abundant black hairlike bristles on lower edge which begin near basal fifth and become much longer apically, those on apical third of femora being fully as long as the middle basitarsus and with their tips curved backwards; tibiae and tarsi of plain structure. Lengths of segments of fore tarsi in ratio 11-5-4-3-3; of middle tarsi 14-7-5 (apical 2 segments miss-

ing); of hind tarsi 14 (last 4 segments missing). Halteres and calypters yellow, the latter with black setae.

Wings clear, without spots, tinged with brown in front of fourth vein; last portion of fourth vein from about its middle gently arched forward toward tip of third vein.

Described from 1 male collected by Julian M. Harmston at Oatland Island, Georgia, 31 August 1968. Holotype male in Florida State Collection of Arthropods.

This new species is readily identified and separated from other species of *Pelastoneurus* by the extremely long and abundant curved setae on lower apical third of hind femora. In Robinson's (1964) key to the genus *Pelastoneurus*, it would run to couplet number 13, where it would form a new combination as follows: First and second segments of antennae yellow; apical third of hind femora densely clothed ventrally with long curved setae.

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