

LOS INSECTOS DE LAS ISLAS JUAN FERNANDEZ

17. DOLICHOPODIDAE (Diptera)

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Son cuatro las especies de Dolichopodidae presentes en Juan Fernández, una común a Chile continental, dos nuevas para las ciencias y la cuarta incompletamente determinada por falta de ejemplares machos. Todas las especies se relacionan de cerca con la fauna de Chile.

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Flies of the family Dolichopodidae have not heretofore been recorded from the Chilean islands of the Juan Fernández group. For this reason it gave me a great deal of pleasure to study a collection of Dolichopodidae taken by Rev. G. Kuschel in these Islands during 1951 and 1952.

The collection is represented by 182 specimens, and includes four species. Two of these are herein described as new, one represents a species previously described from the Chilean mainland, and one is represented by females only and is not specifically identifiable.

The types, allotypes, and a share of the paratypes are being returned to Rev. Kuschel for deposit in the collection of the Universidad de Chile at Santiago. Paratypes also are being deposited in the insect collection of the U. S. National Museum, and in the collection of the writer.

Hydrophorus kuscheli n. sp.

Male.—Length, 3 mm., wing 3,5 mm. Face and front yellowish-brown, appearing golden when viewed obliquely, the foramen narrowest slightly below the antennae, where its width equals the width of middle tibia, the lower portion slightly wider and with rounded apex. Palpi concolorous with face, the anterior surfaces with delicate pale cilia. Cheeks narrow, barely perceptible below the lower edge of the eyes. Upper postorbital cilia black, descending slightly below the middle of the eye, the lateral cilia and whiskers silvery. Antennae black; third segment slightly longer than wide, the tip rounded. Arista inserted near the middle of third segment.

Dorsum of thorax brownish-black, nearly opaque, lightly dusted with yellowish-brown pollen; scutellum concolorous with metanotum, and with two large marginal bristles. Acrostical bristles small, in a single row; dorsocentrals forming two rows of prominent bristles, each row with six bristles; propleura with a number of delicate pale cilia, and two or three prominent pale bristles inserted above the base of fore coxae. Immediately in front of the halteres the metapleurae bear a few delicate black cilia, and a single prominent, black bristle. Pleurae grayish pollinose. Abdomen concolorous with the metanotum, the lateral portions grayish pollinose. Hypopygium embedded; outer appendages but little exposed, yellow, their surfaces with delicate pale cilia.

Front coxae yellow, their anterior surfaces clothed with pale hairs which are larger and bristle-like along the outer edges. Outer surface of middle concolorous with pleurae; the hind coxae yellow. All femora and tibiae yellow, the upper surface of the front and hind femora slightly infuscated. Fore femora thickened at base, with two rows of prominent black bristles along lower edges, those in the outer row being much longer. Middle and hind femora of plain structure, slender, each with three (some specimens have four) evenly, and widely spaced, preapical bristles, but without prominent hairs or bristles on the lower edges. Fore tibiae beset with numerous short, black bristles on lower surface, a single prominent bristle on anterior surface near basal third, and a slightly longer bristle near the tip on inner edge. Middle and hind tibiae with prominent, evenly-spaced bristles on posterior surfaces. All tarsal segments brownish-black from the tip of first segment. Comparative length of the segments of front tarsi as 13-6-5-2-3; of middle tarsi as 15-8-5-3-3; of hind tarsi as 15-10-6-3-3. Halteres and calypters yellow, the latter with brownish cilia.

Wings grayish hyaline, wholly without markings of any kind; veins brownish, paler near the base of wing; last portion of fifth vein evanescent, slightly less than one-half the length of posterior cross-vein.

Female.—Similar to the male in coloration. The face is about three times wider than that of the male. Bristles on the lower surface of front femora and tibiae longer and more robust than those of the male.

Described from 34 males and 44 females collected at various places on MASATIERRA, by Rev. G. Kuschel, in whose honor this species is named. The specimens were collected during the period from Feb. 20, 1951 to Feb. 6, 1952. Holotype male and allotype female, Bahía Cumberland, Feb. 25, 1951.

This species can readily be distinguished from all known *Hydrophorus* by its yellow legs.

Hydrophorus poliogaster (Phil.)

Five specimens of *H. poliogaster* were among the material submitted for identification. One male, 3 females, SANTA CLARA: Corral, Jan. 6, 1952. One female, MASATIERRA: Quebrada La Laura, March 2, 1952.

Sympycnus fernandezensis n. sp.

Male.—Length, 4 mm. Face and front silvery pollinose, the former narrow, the eyes barely contiguous on upper portion immediately below the antennae. Palpi yellow, elongate, evenly tapering to a rounded apex, equalling the length of the first segment of hind tarsi. Upper postorbital cilia black, the lateral and lower cilia are yellow. Antennae black; third segment as broad as long, obtusely rounded at apex. Arista black, evenly tapering to a sharp point, slightly longer than the first segment of middle tarsi.

Dorsum of thorax greenish, with a median bronze stripe in which the acrostical bristles are inserted, the whole metanotum lightly dusted with gray pollen. Pleurae heavily dusted with gray pollen which obscures the ground color. Scutellum with one pair of prominent marginal bristles, a pair of small, hair-like bristles situated outside the larger ones, and a number of delicate cilia upon the disc. Abdomen with the first to fourth segments yellowish, the remaining segments black. First segment with long black bristles on upper posterior margin, and long yellowish bristles on lateral posterior margins. Hypopygium rather small; outer appendages yellow, finger-like, their length equalling the width of front tibia, their tips with a few delicate brownish hairs which are as long as the appendages.

Coxae, femora and tibiae yellow. Front coxae with yellow hairs on anterior surfaces, and with yellow bristles at tip. Middle coxae with black hairs on anterior surface; hind coxae with a prominent, black bristle on outer surface. Anterior femora and tibiae somewhat thickened. Middle femora thickened on basal third, the remaining portion slender and cylindrical, bearing a short, strong preapical bristle. Middle tibiae very long and slender, bearing a conspicuous black bristle on posterior surface near the basal fifth and a smaller bristle near the middle. Hind femora long and noticeably expanded, with a prominent black preapical bristle. Hind tibiae elongated, bearing a scattering of prominent bristles on posterior surface. Front tarsi short, thickened, black from the tip of first segment which is noticeably expanded toward the tip and bears a flattened, densely-ciliated area on lower apical third; at the tip of the fifth segment projects a transversely-oval plate, borne on a slender stalk, which covers the pulvilli and claws. Middle tarsi with the first four segments slender, cylindrical, and of plain structure, the fifth segment black, flattened, and fringed

on both sides with long black hairs, so that the middle tarsi appear to end in large black discs. Hind tarsi brown from the middle of second segment, all segments fringed on posterior surface with black hair-like bristles which are longer than the width of the short, thickened first segment. Comparative length of the segments of front tarsi as 10-4-2-2-3; of middle tarsi as 16-8-10-3-12; of hind tarsi as 5-9-10-4-3. Halteres and calypters yellow, the latter with brown tips and brownish-yellow cilia.

Wings grayish hyaline, long and slender, the anal angle obsolete, so that the hind margin of the wing tapers gradually and evenly toward the base of wing; third and fourth veins parallel near their tips, the latter ending in the apex of the wing; last portion of fifth vein equal in length to the posterior cross-vein.

Female.—Face wide, silvery pollinose. Palpi black, their anterior surface clothed with black hairs. Front coxae with black hairs on anterior surface, and with black bristles at tip. Legs of plain structure. Wings broader than in the male, the anal angle more prominent, gradually and evenly rounded toward the base of wing.

Described from 19 males and 54 females collected on MASAFUERA, by Rev. G. Kuschel. Holotype male and allotype female, 9 paratype males and 17 paratype females, at Quebrada de las Casas, Jan. 19, 1952. Other paratypes: 20 females, La Correspondencia, Jan. 20, 1952; 7 males, 16 females, Quebrada de las Vacas, Jan. 17, 1952; 1 male, 1 female, Inocentes Bajos, Jan. 23, 1952; 1 male, on MASATIERRA, El Camote, Feb. 5, 1952.

This species closely resembles *S. andicola* (Bigot) in the structure of the front and middle tarsi. It differs, however, in the form of the arista. The arista of *andicola* bears two oval swellings, one slightly beyond the middle and one at tip.

Chrysotus sp.

The material submitted to me by Rev. Kuschel included also 26 female *Chrysotus* which I have been unable to specifically identify.

LOS INSECTOS DE LAS ISLAS JUAN FERNANDEZ

18. SYRPHIDAE (Diptera)

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La familia Syrphidae está representada con seis especies, dos de ellas aparentemente endémicas. Las demás son del continente o cosmopolitas. Una especie descrita de Juan Fernández por Enderlein se pasa a sinonimia.

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The following species of Syrphidae from the Islands of Juan Fernandez were collected by Dr. G. Kuschel and I wish to thank him for the privilege of studying these fine specimens.

Only six species are in the collection, one of which is represented by two females, and the identification of this species (*Melanostoma fenestratum* Macquart) must be considered provisional since the male is essential for positive identification. Two of the species appear to be found only on the Islands, the other four were originally described elsewhere.

Enderlein, 1940, in Skottsberg. The natural history of Juan Fernández and Easter Island, Vol. 3 has covered all of these except *Melanostoma fenestratum* Macq. and *Sterphus aurifrons* Shannon. I believe his *Allograpta skottsbergi* is the same as *A. exotica* Wied.

KEY TO THE SPECIES OF SYRPHIDAE FROM JUAN FERNÁNDEZ

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| 1. | Eyes hairy, third vein deeply looped, length 15 mm..... | |
| | Eyes bare, third vein straight..... | <i>Eristalis tenax</i> Linnaeus |
| 2. | Large species (11 to 15 mm.) abdomen metallic, face and front with golden pubescence..... | 2 |
| | Smaller species, less than 11 mm., face yellow with a black stripe or black with punctate spots..... | <i>Sterphus aurifrons</i> Shannon |
| 3. | Face black with white to brown punctate pubescence, males with a row of curved spines on the front tibiae..... | 3 |
| | Face yellow with a black stripe, legs of males without spines | 4 |
| | | 5 |

4. Face very little protruding, the punctations very fine; front tibiae of male with nine outwardly curved spines.
Melanostoma lundbladi Enderlein
 Face produced well forward, the pubescence whitish with large punctations; male tibiae with 12 to 14 spines.
Melanostoma fenestratum Macquart
5. Scutellum entirely yellow, second and third segments of the abdomen each with a yellow band, thorax shining.
Allograpta exotica Wiedemann
 Scutellum usually brown with a dull yellow border, abdomen with paired yellow spots (often entirely black on the female), thorax semi-shining.
Allograpta robinsoniana Enderlein

Allograpta robinsoniana Enderlein

1940 *Allograpta robinsoniana* Enderlein, in Skottsberg Nat. Hist. Juan Fernández and Easter Island, Zool. 3 (5): 664

This beautiful species has a broad black facial stripe, entirely black antennae, blackish scutellum with a dull yellow border (often absent on the female), pleura of the male without any yellow spots, legs generally black, mesonotal and scutellar pile black, wings smoky, and the abdomen with three pairs of reddish yellow spots, prominent on the male but often obscured or absent on the female.

This species perhaps should be placed in *Stenosyrphus* rather than *Allograpta*. At this time the genitalia have not been examined but the external appearance suggests *Allograpta* and for the present I leave the species there.

Twelve males and 18 females are before me, 20 from MASATIERRA: Plazoleta del Yunque, Bahía Cumberland, Miradero de Selkirk, and El Camote; six from MASAFUERA: Quebrada de la Calavera, Quebrada de las Casas and Quebrada de las Vacas. They were all collected in December, January, and February, 1951-52.

Allograpta exotica (Wiedemann)

1830 *Syrphus exoticus* Wiedemann, Ausser. Zweif. Ins. 2: 136

1877 *Allograpta fracta* Osten Sacken, Bul. U. S. Geol. & Geog. Surv. 3

1940 *Allograpta skottsbergi* Enderlein, in Skottsberg Nat. Hist. Juan Fernández and Easter Island, Zool. 3 (5): 663, new syn.

A very common species over the entire Neotropical region and it is not surprising to find it on the Islands. The face has a narrow black stripe, the scutellum is entirely yellow, the legs yellow except for black rings on the hind tibiae and femora and the darkened tarsi, the fourth segment of the abdomen with two narrow median vittae connected usually with much broader oblique side spots.

19 specimens, all females except one; nine from MASATIERRA: Miradero de Selkirk, Plazoleta del Yunque and Bahía Cumberland; nine from MASAFUERA: Quebrada de la Calavera and Quebrada de las Casas; one from SANTA CLARA: Morro. These were all taken in December, January and February, 1951-52.

I feel that Enderlein's species is the same as Wiedemann's. The narrow shining black stripe on the face is quite characteristic of *exotica*.

Melanostoma (Carpocalis) lundbladi Enderlein

1940 *Carpocalis lundbladi* Enderlein, in Skottsberg Nat. Hist. Juan Fernández and Easter Island, Zool. 3 (5): 665

Related to *punctulatum* and *fenestratum*, the front tibiae of the male with nine outwardly projecting spines and the hind metatarsus greatly swollen. Length 6.5 to 7 mm.

Male.—Face covered with brownish pollen (fine pubescence), only the abbreviated mid stripe and the upper oral edges shining; the pollen is more brownish above, grey below, all very finely punctate. The face much less protruding than related species but the tubercle is quite prominent; pile black, becoming whitish on the broad whitish pollinose cheeks. Front dull, somewhat inflated, thinly brownish pollinose, the pile long and black. Ocellar triangle black with black pile; cilia on the occiput black, the only pale hairs are below near the cheeks. Antennae small, third segment almost as broad as long; first two segments black, the third somewhat reddish underneath.

Thorax black, the mesonotal pollen dark brown giving it a dull appearance; pleura more heavily pollinose but greyish in color; pile of the entire thorax black or dark brown, a few pale hairs anterior to the spiracle. Scutellum of the same general color, fringe of hairs also brownish.

Legs blackish, the anterior and mid tibiae and apical half of their femora reddish; pile all black, yellowish brown beneath the tarsi; the hind metatarsus greatly swollen as viewed either from the side or top. Front tibiae with nine outwardly curved spines, similar to *punctulatum* Wied., mid tibiae with usually four long bristle-like hairs near the apex on the outer margin.

Wings delicately tinged smoky; squamae brown with black fringe, halteres blackish, plumule white.

Abdomen black, mostly dull, third and fourth tergites with a small pair each of basal metallic, pollinose spots; these spots appear to be entirely absent on the second tergite; pile black, longer and paler along the sides; venter grey pollinose.

Female.—Dissimilar; paler and the pile everywhere much shorter and usually pale in color, reduced to very short pale hairs on the face and

mesonotum. Front quite wide, brownish pollinose and the pile black, becoming pale on the occiput. Legs reddish, the tarsi only darkened and the pile mostly whitish; hind metatarsus very little swollen. Abdominal spots somewhat larger.

This species resembles somewhat *punctulatum* Wied. and *fenestratum* Macq. but it is much darker and the face is non-protruding. Since curved spines are found on the front tibiae it indicates the unstable position of Enderlein's genus *Carposcalis*, which however was based on the swollen hind basitarsus. Enderlein described the species from the female only but his description of the brownish pollen on the face indicates these are his species.

At hand are two males, MASATIERRA, Alto Inglés, 600 meters, February, 1952; one female, Miradero de Selkirk, 550 meters, February 15, 1951; and one headless female, Plazoleta del Yunque, 200 meters, February 12, 1951.

Melanostoma (Carposcalis) fenestratum (Macquart)

1842 *Syrphus fenestratus* Macquart, Dipt. Exot. 2 (2): 103

1865 *Syrphus fenestratus* Philippi, Verh. Zool.-Bot. Gessel. Wien 15: 746

Two females from MASATIERRA, Bahía Cumberland, January 4, 1952 and Plazoleta del Yunque, February 12, 1951, I identify provisionally. The face is protruding and covered with large punctate spots in the white pollen. The abdominal spots are entirely metallic. Males can be told easily as they have 12 to 14 curved spines on the outside of the front tibiae. Since this species is quite common along the western coastal region of South America, especially Chile, the identification is probably correct.

Sterphus aurifrons Shannon

1926 *Sterphus aurifrons* Shannon, Proc. U. S. Nat. Mus. 69: 46

1933 *Sterphus aurifrons* Shannon and Aubertin, Dipt. Patagonia and S. Chile, Part 6, fasc. 3: 156

The holotype male from Chile is in the British Museum. While I have not seen the type Shannon's description leaves no doubt about the identification of the specimens from the Juan Fernández Islands. There are a dozen males and one female before me and I have seen in addition three other males from the same place. Since the female has never been recorded before I give here a brief description of it even tho the specimen is somewhat teneral.

Female.—General color less intense, abdomen more bluish but this may be due to its immaturity. Antennae black, the arista more than two times as long as the antenna. Front entirely brownish pollinose, only the

rim at the base of the antennae shining; pile all golden with some black hairs across the ocelli. Thoracic pile similar to the male, but a paler golden color, many long hairs with shorter ones intermixed. At the posterior edge of the mesonotum immediately in front of the scutellum there is an oval ridge, a sort of flared apex to the mesonotum (this is also present on the male). I believe this structure is of generic value. The scutellum of both sexes has a depression in the middle and one at the apex. The female before me is considerably smaller than the male, being only 11 mm. long.

All the specimens were collected on MASATIERRA: two from Bahía Cumberland, one from Miradero de Selkirk, five from El Camote, and four males and female from Plazoleta del Yunque. The dates are December, January and February, 1951-52. The Miradero specimens were taken at an altitude of 300 or 550 meters.

Eristalis tenax (Linnaeus)

1758 *Musca tenax* Linnaeus, Syst. Naturae 591

1930 *Eristalis tenax campestris* Curran, Amer. Mus. Novitates No. 411: 25

1940 *Eristalomyia tenax* Enderlein, in Skottsberg Nat. Hist. Juan Fernández and Easter Island, Zool. 3 (5): 662

The only *Eristalis* taken on the Islands. An easily recognized species with its band of pile on the eyes and reddish brown smudge on the middle of the anterior margin of the wings. Five specimens from MASATIERRA: Bahía Cumberland and Plazoleta del Yunque; and one from MASAFUERA: Quebrada de las Casas. This is a world wide species and the variety *campestris* (Meigen) has been recorded from Chile. One of the specimens represented in the collection appears to be this variety.