

NEW SPECIES OF CALLIPHORA FROM THE MARQUESAS,  
WITH NOTES ON SARCOPHAGA TAITENSIS SCHINER \*

By

JOHN R. MALLOCH

BUREAU OF BIOLOGICAL SURVEY, U. S. DEPARTMENT OF AGRICULTURE

SUBFAMILY SARCOPHAGINAE

There is but one species of this subfamily before me from the Marquesas, and as there has been considerable uncertainty regarding the identity of it I append a few notes on the species.

Genus SARCOPHAGA Meigen

*Sarcophaga taitensis* Schiner.

This species has been recorded by Buxton<sup>2</sup> as *peltata* Aldrich, and I have revived for the Samoan species the name *taitensis* Schiner.<sup>3</sup> Townsend<sup>4</sup> in a recent paper has refused to accept this decision, stating that the characters cited by me and accepted as sufficient by Aldrich are "too slight to carry specific value." I have examined quite a large number of males from the Orient and South America and can not find any evidence that the peculiar fifth abdominal sternite of *peltata* with its almost straight sides and slightly bilobed apex approaches that of *taitensis*, which has two quite prominent rounded apical central lobes from the base of each of which the lateral outline is carried outward sometimes almost angularly; on both the lobes and on the subangular portions are a number of quite strong black bristles or spines. This was the basis for my separation of the two species and though there are in almost every part of the hypopygium more or less marked distinctions between them, I did not deal with the differences of the anal forceps as stated by Townsend. Aldrich<sup>5</sup> introduced this character, stating that "the forceps in *peltata* are wide in the middle when viewed from behind, while those of *taitensis* are narrow." Figure 2 shows the forceps from the outside and slightly in front.

It is not necessary to deal further with the specific distinctions, as it must be apparent to anyone who has both species before him that they are distinct though closely allied, but two other points raised by Townsend must be considered.

<sup>2</sup> Buxton, P. A., Sarcophagidae, Insects of Samoa, pt. 6, fasc. 3, p. 147, 1929.

<sup>3</sup> Malloch, J. R., Exotic Muscaridae, Diptera, 27, Ann. Mag. Nat. Hist. ser. 10, vol. 4, p. 256, 1929.

<sup>4</sup> Townsend, C. H. T., Notes on American Oestromuscoid types, Rev. de Ent., Brazil, vol. 1, fasc. 1, p. 77, 1931.

<sup>5</sup> Aldrich, J. M., Notes on types of the American two-winged flies of the genus *Sarcophaga* . . . , Proc. U. S. Nat. Mus., vol. 78, art. 12, p. 28, 1931.

\* Pacific Entomological Survey Publication I, article 2.

The name used by Townsend is *obtusifrons* Thomson. This species was described from a female taken in the Galapagos Islands about 500 miles off the coast of south America. Aldrich<sup>6</sup> has reported upon this species represented by both sexes in the collection of the United States National Museum, and I have examined the material. Townsend uses the Thomson name, whereas Aldrich accepts the general custom as correct and gives Schiner's name priority. I agree with Aldrich. Schiner's species is the only one of the genus which I have seen from the Society Islands, removing any chance of error in the identification.

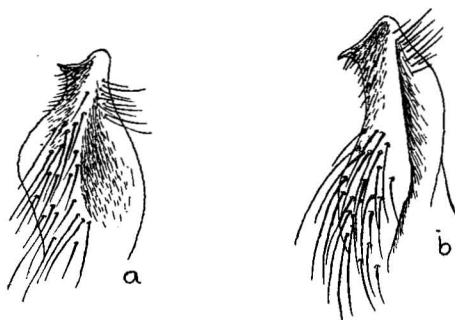


FIGURE 2. Superior hypopygial forceps from the side and slightly in front: *a*, *Sarcophaga peltata*; *b*, *Sarcophaga taitensis*.

Also, Townsend gives the prosternum of the Thomson type as bare. This is obviously an error of observation. In all examples seen by me there are fine but distinct hairs except on the anterior part of the prosternum as in most species of the genus.

Regarding the recognition of the genus *Oxysarcodexia* Townsend in which fall the two species under discussion, *peltata* being the genotype, it may be pertinent to say that the tibiae of the hind legs are distinctly villose, as pointed out by Aldrich, and that on this account they will not run out to the genus in Townsend's key to genera.<sup>7</sup> The concept appears to me to be merely a species group of much less value than generic rank.

Hivaoa: Mataovau, altitude 400 feet, May 31, 1929; Hanaheka [Tanaeka] Valley, altitude 1500 feet, June 4, 1929; Atuona Valley, altitude 300 feet, June 6, 1929; Teava Uhia i te Kohu, altitude 2100 feet, February 15, 1930; Mount Temetiu, northeast slope, altitude 3200 feet, September 13, 1929, Mumford and Adamson. Tahuata: Hanahevane Valley, seashore, July 16, 1930; Tehue Valley, altitude 650 feet, May 27, 1930; Kiinui Valley, altitude 1200 feet, June 14, 1930, LeBronnec and H. Tauraa. Fatuhiva: Otomahe, Omoa [Oomoa] Valley, altitude 280 feet, August 20, 1930; Hanavave Val-

<sup>6</sup> Op. cit.

<sup>7</sup> Townsend, C. H. T., Genera of the Dipterous Tribes Sarcophagini; Biol. Soc. Wash., Proc., vol. 30, p. 190, 1917.

ley, altitude 50 feet, September 8, 1930, LeBronnec. Nukuhiva: Ooumu, altitude 4000 feet, November 12, 1929, Mumford and Adamson. Uahuka: Putataua, Vaipae Valley, altitude 900 feet, September 20, 1929, Adamson; Hanahoua Valley, altitude 30 feet, March 9, 1931, LeBronnec and H. Tauraa. Eiao: uplands toward north end, east side, altitude 1,800 feet, September 29, 1929, Adamson.

SUBFAMILY CALLIPHORINAE

Genus *CALLIPHORA* Robineau-Desvoidy

There are two species of this genus before me, both of which are apparently undescribed.

*Calliphora mumfordi*, new species.

Male

Head black behind and with grey dusting, becoming orange-yellow in front, the frontal orbits densely greyish white dusted, the dust becoming silvery on the parafacials, interfrontalia blackish above, merging into orange-yellow near middle; jowls fuscous on the raised portion and with yellowish dust, the hairs all black, the parafacials and other parts of jowls and lower part of face orange-yellow, face infuscated above; antennae orange-yellow, third segment slightly browned above; palpi clear orange-yellow; beard yellow. Thorax shining black, with a blue tinge on the scutellum only, the surface with grey dusting, the mesonotum when seen from behind with a very narrow central black vitta, an interrupted linear black vitta along the lines of dorsocentrals, and a broader vitta of same color laterad of the latter which is distinct only in front; hairs and bristles black. Basal abdominal tergite black, the others metallic blue, with green and violet reflections, and the usual checkered white dust, the hairs and bristles black. Legs black, tibiae brownish yellow. Wings greyish hyaline, veins brown, yellow at bases. Calypteres brownish yellow, paler on margin of lower one; thoracic spiracles with orange-yellow flaps. Halteres yellow.

Eyes bare; frons at narrowest point as wide as third antennal segment, gradually widened to anterior margin, the inner verticals long, outer pair practically indistinguishable, ocellar and frontal bristles subequal in length; parafacials very finely and rather sparsely haired, as wide as third antennal segment, which is three times as long as second and normal in structure; arista long, plumose on basal half; palpi slender; jowls about one-third of the eye height. Thorax with the usual hairs and bristles, posterior sublateral bristle lacking, two pairs of presutural acrostichals present which are about as long and strong as the presutural dorsocentrals, postsutural dorsocentrals and acrostichals three pairs, anterior intra-alar strong; sternopleurals 2 + 1. Abdomen ovate, apical bristles present on central portion of all tergites but first visible one, fine on second and fourth, stronger on third; fifth sternite with the lobes rounded and without exceptional armature. Fore tibia with one submedian posterior bristle, mid tibia with one ventral, one anterodorsal, and two posterior bristles; hind tibiae lacking in the type specimen. Hairs on third vein confined to extreme base above and below. Length, 7 mm.

Nukuhiva: Ooumu, altitude 4000 feet, September 13, 1929, holotype male, Mumford and Adamson.

The pale face and antennae, reddish tibia, pale calypteres, and strong presutural acrostichal bristles will distinguish this species from any other in the genus.

Named in honor of the Director of the Pacific Entomological Survey.

**Calliphora simulata**, new species.

## Male and Female

Head black, frontal orbits, parafacials, and occiput with grey to yellowish-grey dusting, the postocular orbits more distinctly white dusted, interfrontalia of female black or blackish brown, paler anteriorly; basal two segments of antennae and usually the extreme base of third reddish, remainder of third black; palpi testaceous yellow, in greasy specimens brownish yellow; hairs and bristles black, a few of the hairs in center of lower margin of back of head brownish. Thorax black, greasy in all specimens before me, but apparently with an aeneous tinge, slightly grey dusted, and without conspicuous vittae, the prothoracic and metathoracic spiracular coverings orange-yellow. Abdomen metallic blackish blue, fourth segment more distinctly blue, the dorsum without evident dusting. Legs black. Wings greyish hyaline, brown at bases to beyond humeral cross vein and to furcation of second and third, the cross veins not clouded. Squamae dark brown, the fringes of same color. Halteres fuscous.

Frons of male at narrowest point not nearly as wide as third antennal segment, the interfrontalia obliterated in part, the outer verticals lacking, inner pair long, ocellars undeveloped, orbits with fine hairs above, becoming longer and stronger anteriorly; frons of female about one-third of the head width, orbits narrow, with the usual bristles well developed, all four verticals and the ocellars present; parafacials not as wide as third antennal segment, finely haired; epistome projecting beyond outer margin of antennae when the latter are in normal position; vibrissae long, with several setulae above them extending to about middle of face; jowls black, slightly dusted, and with black hairs; palpi almost linear; third antennal segment about four times as long as second; arista plumose, bare on apical third. Mesonotum with the usual bristles, the posterior sublateral bristle present, the presutural acrostichals in two pairs, sometimes with a weaker anterior third pair present; otherwise as the preceding species. Abdomen as in the preceding species, but the apical bristles on the third visible tergite longer and stronger. Length, 7.5-8.5 mm.

Uapou: Hakahetau Valley, altitude 1000-2000 feet, January 31, 1930, holotype male, allotype female, and 1 paratype male, Whitten; same locality, December 6, 1929, 1 paratype male, Adamson.

Besides the above specimens there are four females that differ from the allotype in being larger, 9.5 mm. in length, and in having the abdomen bronzy instead of bluish. Three of them have the frons more conspicuously reddish yellow in front, and the dust on the orbits and parafacials more pronouncedly yellow. It is possible that these represent a distinct species, but in the absence of males for dissection it is not possible definitely to decide this.

The three specimens that diverge most from type are from Hivaoa: two from Matauuna, one 3760 feet, August 1, 1929, the other 3800 feet, March 2, 1930; and one, Mount Temetiu, 3620 feet, July 24, 1929, Mumford and Adamson. The other specimen which does not agree absolutely with either lot is from Uapou: Teava Uhia i te Kohu, 3000 feet, December 8, 1929, Mumford and Adamson.

This species in the typical form closely resembles *Lucilia nosocomiorum* Doleschall, of which I believe *inducta* Walker is a synonym.