

ART. XIV.—On a Small Collection of Diptera from the Southern Islands of New Zealand.

By Captain F. W. HUTTON, F.R.S.

[Read before the Philosophical Institute of Canterbury, 3rd July, 1901.]

THIS collection was made by myself last January, when, at the invitation of His Excellency the Earl of Ranfurly, I visited the islands in the Government steamer "Hinemoa." The time for collecting was short. I landed once on the Snares, five times on Auckland Islands, once on Campbell Island, and once on Antipodes Island. From what I saw I am convinced that there are many more species to be obtained. I saw spiders on all the islands, and a millepede on Auckland Islands; but, unfortunately, my foot slipped just as I was going to put it in a bottle and I could not find it again. The common house-fly (*Musca domestica*) was common on the steamer, but I did not find it on any of the islands. This may be due to the fact of there being no horses on the islands. Also, *Calliphora quadrimaculata* came freely on board while we were lying at the Auckland Islands, but all left before we got to Campbell Island, only a few hours' steaming, and I did not find the species there at all. These facts show that flies are not so easily spread by steamers as is commonly supposed.

**Simulium vexans.**

*S. vexans*, Mik, Verh. d. zool.-bot. Gesell. in Wien, vol. xxxi., p. 201 (1881).

"Fem.—Nigro-fuscum, polline cinerascenti obtectum, fronte thoracisque dorso orichalceo-pilosulis; halteribus pallidis, pedibus fuscis, geniculis metatarsique posticis pallidis. Alarum venis posterioribus sat crassis. Long. corp. 3 mm., long. alar. 3·3 mm." (Mik).

*Hab.* Auckland Islands. Not very abundant.

This species differs from *S. australiense* in being larger, in the absence of yellow spots from the shoulders, and in the femora and tibiæ being dark; also, the fifth and sixth longitudinal veins are stronger.

There are ten joints in the antennæ.

**Beris micans.**

*B. micans*, Hutton, Trans. N.Z. Inst., vol. xxxiii., p. 6 (1901).

*Hab.* The Snares.

A single specimen. The antennæ are very dark-brown.

**Empis**, sp. ind.

There is in the collection a specimen from the Auckland Islands belonging to this genus, but it is not in a sufficiently good state to allow of description.

**Helophilus campbellicus**, sp. nov.

*Female*.—Vertex blackish olivaceous, with black hairs; face, including a band above the antennæ, fulvous, shining. Antennæ black, the third joint fulvous margined with black. Proboscis black; a few white hairs on the cheeks. Thorax blackish olivaceous, with four broad grey bands and a median narrow grey line. Scutellum tawny, pale at the tip. Abdomen metallic bronzy-green, with a few scattered white hairs, especially at the sides and below. Legs fuscous; the tibiæ inside and the tarsi fulvous. Halteres fuscous, tipped with red. Alulæ white. Wings tinged with brown, the veins black, passing into brown at their insertions. Length, 11 mm.; wing,  $10\frac{1}{2}$  mm.

*Hab.* Campbell Island. A single specimen.

This species differs from *H. chathamensis* and from *H. latifrons* in the colour of the abdomen and in the white hairs with which it is partially clothed. In general appearance it closely resembles *Calliphora eudypiti*, but I do not suppose that this is caused by mimicry.

**Calliphora quadrimaculata**.

Length, 10–11 mm.; wing, 9 mm.

*Hab.* Auckland Islands. Very common.

**Calliphora icela**.

Length, 8 mm.; wing,  $7\frac{1}{2}$  mm.

*Hab.* Auckland Islands. A single specimen.

**Calliphora eudypiti**, sp. nov.

Frontal band of the head blackish-brown, the sides and cheeks brownish-yellow in some lights, brown in others, sometimes yellow, with a brown transverse band. Eyes bare. Antennæ with the first and second joints brown, the third black, sometimes rufous at the base. Proboscis black. Palpi orange or tawny. Thorax bluish-black, with hoary pollen, and three longitudinal black stripes. An oval orange spot on each side of the prothorax, and another on each side of the metathorax. Scutellum bluish-black. Abdomen metallic bronzy-green, with scattered black hairs. Legs tawny or rufous; the fore femora for nearly the whole length, the middle and hind tibiæ on the basal half, black. Halteres rufous-orange. Alulæ brownish, margined with fulvous. Wings colourless; the first posterior cell open, the apical transverse

vein only slightly curved backwards near the bend; posterior transverse vein slightly sinuated. Veins black, becoming bright-rufous at their insertions. Length, 8–10 mm.; wing, 7–8 mm.

*Hab.* Snares, Auckland Islands, and Campbell Island. Especially abundant at the penguin rookeries on the Snares. The Campbell Island specimens have the legs darker, and more black on the femora.

This and the following species are very different from those of New Zealand in the colour of the abdomen, and approach more to the species from Tasmania. Perhaps *C. tibialis* is the nearest ally of *C. eudypiti*; but in that species the abdomen is tessellated with yellow on an olive ground, and the antennæ are fulvous.

#### ***Calliphora antipodea*, sp. nov.**

Head black, with a narrow white band on each side of the face below the insertion of the antennæ. Antennæ black. Thorax and scutellum blackish-blue. Abdomen metallic bronzy-green, with scattered black hairs. Legs black. Halteres rufous-orange. Wings colourless; like those of *C. eudypiti*, except that the apical transverse vein is nearly straight. Length,  $7\frac{1}{2}$  mm.; wing,  $7\frac{1}{2}$  mm.

*Hab.* Antipodes Island.

This species, perhaps, comes nearest to *C. clausa*, of Australia; but there is no grey on the face, the third joint of the antennæ is black, there are no blue reflections on the abdomen, and the first posterior cell is not closed.

#### ***Tricophthicus villosus*, sp. nov.**

Vertex jet-black, face yellowish-white; antennæ and proboscis black. Third joint of the antennæ about one and a half times the length of the second; arista minutely pubescent. Eyes hairy. Palpi long and narrow. Head hairy. Thorax brownish-grey, with three obscure longitudinal black bands, generally broken; a number of short black hairs among the longer ones. Abdomen grey; the second to fourth segments with a pair of triangular black spots, the fifth segment with a central black line. Legs brown; the tibiæ lighter than the femora, which are almost black. Halteres fulvous. Alulæ brownish-white, margined with brown. Wings slightly tinged with brown; the veins dark-brown, almost black. Auxiliary vein distinct from the first longitudinal; the posterior cross-vein nearly straight. Length, 9 mm.; wing, 8 mm.

*Hab.* Auckland Islands.

This species differs from *T. dolosus* in being darker in

colour and more hairy. The abdomen of the male is especially hairy.

**Homalomyia fraxinea**, Hutton.

*Hab.* Auckland Islands and the Antipodes.

**Homalomyia fuliginosa**, Hutton.

*Hab.* The Snares.

**Limnophora aucklandica**, sp. nov.

Eyes wide apart; vertex dark-brown, face yellow. Antennæ dark-brown, the third joint about one and a half times the length of the second; arista pubescent. Eyes naked. Ocellar and vertical cephalic bristles. Thorax reddish-brown, with three obscure black lines. Abdomen brown, with grey spots on each side of the segments. Legs dark-brown; the tibiæ testaceous, the femora with grey pollen. Halteres fulvous. Alulæ white, unequal. Wings without spots; the veins black, passing into fulvous at the insertions. Distance between the cross-veins about one and a half times the length of the posterior cross-vein. The sixth and seventh longitudinals well marked, the seventh rather the longer. Length, 7 mm.; wing, 7 mm.

*Hab.* Auckland Islands.

**Cœlopa littoralis**, Hutton.

Legs rather lighter in colour than in New Zealand specimens.

*Hab.* Auckland Islands and Campbell Island.

In this species and the next there are no oral vibrissæ, and perhaps they would be better placed in *Actora*. But there are no costal bristles either.

**Cœlopa curvipes**, sp. nov.

Vertex reddish-brown, the ocellar triangle and sides of the face grey; a spot between the antennæ rufous, dusted with grey. Antennæ piceous, the arista pubescent. Proboscis and palpi piceous. Thorax and abdomen brown, the former dusted with grey, especially on the sides. Legs fulvous; the tibiæ clouded with fuscous, but very variable. Hind legs elongated, the tibiæ much curved inwards. Halteres pale-brown. Wings colourless, unspotted, the veins brown; no bristles on the costa. Chief cross-vein short; the first posterior cell broadest opposite to the posterior cross-vein. Length, ♂ 4½ mm., ♀ 5½–6½ mm.; wing, ♂ 4 mm., ♀ 7 mm.

*Hab.* Auckland Island. On the sea-shore.

Easily distinguished by its elongated and curved hind legs.

**Cœlopa rufa**, sp. nov.

Vertex dark-brown; the face and two first joints of the antennæ fulvous. Proboscis and palpi piceous. Thorax and abdomen brown, dusted with grey. Legs fulvous, the femora fuscous in the middle for the greater part of their length. Wings colourless; the veins brown, passing into fulvous at their insertions. Length, ♀ 5 mm.; wing, 5 mm.

*Hab.* The Snares.

**Heteromyza laquei**, sp. nov.

Fulvous, paler below than above; the thorax with several narrow dark lines; abdomen brown above. Front broad. Antennæ testaceous, the third joint nearly round, considerably longer than the second; arista bare. Oral vibrissæ present, but no bristles on the face. Three bristles in the median dorsal row of the mesonotum, not including those of the scutellum. Middle tibiæ with strong spurs, all of them with a subapical bristle. Wings pale-tawny, the costal border without any long bristles. Distance between the cross-veins about one and three-quarter times the length of the posterior cross-vein. Length, 5 mm.; wings, 5 mm.

*Hab.* The Snares.

This species is in appearance much like the New Zealand species of *Lera*, but there are no bristles on the costa.

**Lauxania carbonaria**, sp. nov.

Entirely black except the eyes, which are red; the abdomen with greenish submetallic reflections. Apices of the tibiæ and tarsi pale-brown. Third joint of the antennæ linear, its length about three times its breadth; the arista bare. There are two pairs of fronto-orbital bristles, none on the front; and no oral vibrissæ. Tibiæ with a preapical bristle. Wings yellowish, the veins fulvous. Distance between the cross-veins about one and a half times the length of the posterior cross-vein, which is three-quarters of its own length from the margin. Length,  $3\frac{1}{2}$  mm.; wing, 4 mm.

*Hab.* Auckland Islands.

**Lonchæa aucklandica**, sp. nov.

Front broad, blackish-grey, four fronto-orbital bristles in a row. Face with bristles, one pair of which, near the mouth, are longer than the others. Eyes red. Palpi fulvous. Antennæ short; the third joint oval, truncated, its length less than twice its breadth; the arista bare. Thorax and abdomen black. Femora black, the tibiæ and tarsi brown. No preapical bristle. Halteres fulvous. Wings nearly colourless; the veins black, getting brown near the insertion. Distance between the cross-veins one and a half times the length

of the posterior cross-vein, which is about three-quarters of its own length from the margin. Length,  $3\frac{1}{2}$  mm.; wing, 3 mm.

*Hab.* Auckland Islands.

***Milichia littorea*, sp. nov.**

Brown; sides of the face, ocellar triangle, and four stripes on the thorax darker. Eyes round. Antennæ and palpi piceous; third joint of the antennæ round; the arista bare. Mouth large, oval, the anterior margin thin and sharp, with a pair of small vibrissæ. Legs and lower surface dark-brown, dusted with grey. Abdomen short. Mesonotum with bristles in the middle, four in a row. Halteres fulvous. Wings fuscous, with pale spots, three in the submarginal cell, two in the first posterior cell, one in the second posterior, and one in the discal cell. The costal, exterior part of marginal, and first basal cells are clear. There are three distinct basal cells. Veins very dark-brown. No incision on the costa before the tip of the first longitudinal vein. Posterior cross-vein present, situated nearly in the middle of the wing; not much more than its own length from the margin. The distance between the cross-veins is quite twice the length of the posterior cross-vein. Length,  $3\frac{1}{2}$  mm.; wing,  $4\frac{1}{2}$  mm.

*Hab.* Antipodes Island. On pools between tide-marks.

***Ochthiphila australis*, sp. nov.**

Black, the eyes reddish. Halteres white. Abdomen narrow. Front with long bristles. No oral vibrissæ, but a row of bristles on each side of the mouth. Mesonotum with two rows of five bristles each in the middle. Wings fuscous; basal cells small but distinct. Distance between the cross-veins about twice the length of the posterior cross-vein, which is situated rather more than its own length from the margin. Length, 2 mm.; wing, 3 mm.

*Hab.* Campbell Island.

***Drosophila enderbii*, sp. nov.**

Blackish-brown, the face with yellowish tomentum. A little grey tomentum on the lower surface and the legs. A row of bristles on each side of the face, but none on the mouth. Arista with a row of six bristles. Wings clear, the veins black. Only one basal cell. Distance between the cross-veins about three times the length of the posterior cross-vein, which is situated at about its own length from the margin. Length, 2 mm.; wing, 2 mm.

*Hab.* Enderby Island, Auckland group.

Smaller and darker than any of the described New Zealand species.

*Asteia levis*, sp. nov.

Head fulvous, the eyes black. Antennæ short, the third joint round; arista slender, bare. Front broad. Thorax and abdomen brown above, pale-fulvous below. Legs pale-fulvous. Wings slightly tinged with yellow, the veins fulvous. No posterior cross-vein. Second longitudinal short, nearly attaining to half the length of the wing. Length, 3 mm.; wing,  $3\frac{1}{2}$  mm.

*Hab.* Stewart Island.

This species differs from *A. amœna* in having no hairs on the arista, and in the second longitudinal vein being longer.

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ART. XV.—*The Beetles of the Auckland Islands.*

By Captain F. W. HUTTON, F.R.S., with Descriptions of New Species by Captain T. BROWN, F.E.S.

[Read before the Philosophical Institute of Canterbury, 6th November, 1901.]

LAST January, at the invitation of His Excellency the Earl of Ranfurly, I visited the southern islands of New Zealand in the Government s.s. "Hinemoa," commanded by Captain Bollans. The chief object of our visit, in addition to examining the provision depots, was to make a collection of birds for the British Museum. But, as I had nothing to do with the collection of the specimens, I devoted all the time I could to the *Diptera*. No systematic attempt was made to collect *Coleoptera*, and only five specimens were obtained. These were all new to science, and belong to four new species and one new genus. This is a very good proof that a great deal remains to be done in collecting insects in these islands. Indeed, it is remarkable that after the visits of four scientific expeditions to the Auckland group—two French, one English, and one German—so very little should be known about the insects.

*Lyperobius leviusculus* was captured on the high land of Adam's Island, when the party were going to the albatros nesting-ground. They were feeding, I believe, on *Ligusticum antipodum*. *Inocatoptes incertus* was obtained on the high land at the head of Port Ross, but I do not know on what plant it was feeding. Both specimens of *Euthenarus* were found under stones in Carnley Harbour, near where the "Grafton" was wrecked.

I also saw on the islands, several times, a moth which appeared to be a *Crambus*, of which I did not take specimens;