

INSECTS OF CAMPBELL ISLAND. DIPTERA<sup>1</sup>

By R. A. Harrison

LINCOLN COLLEGE, UNIVERSITY OF CANTERBURY,  
CHRISTCHURCH, NEW ZEALAND

*Abstract:* This paper presents records of 45 species of 14 families of Campbell Island Diptera. Eight new species are described in 5 families, and several other species are newly recorded. Six species previously recorded from the island are lacking in the new collections.

This report is on the majority of the Diptera collected mainly by Bishop Museum during 1961 and 1963. Families not dealt with here are being reported on by other workers.

All holotypes are deposited in the collection of the Entomology Div., D. S. I. R., Nelson, New Zealand. Paratypes and duplicates are shared, as numbers permit, between the following institutions: B. P. Bishop Museum, Hawaii; Dominion Museum, Wellington, N. Z.; Entomology Div., Nelson, N. Z.; Lincoln Coll., Canterbury, N. Z.; Canterbury Museum, Christchurch, N. Z.; British Museum (Nat. Hist.), London; U. S. National Museum, Washington; C. S. I. R. O., Canberra, Australia; and the California Academy of Sciences. Specimens collected by C. M. Clark and J. Sorensen are Dominion Museum material. Specimens designated with an (\*) in the text are preserved in alcohol.

I wish to thank Dr. Gressitt for giving me the opportunity of examining this large collection and to acknowledge the help of Mr. H. Oldroyd and Dr. P. Freeman, British Mus. (Nat. Hist.), in comparing some specimens with the type material.

## Family SIMULIIDAE

**Austrosimulium vexans** (Mik)

SPECIMENS EXAMINED: Lookout Bay, Perseverance Harbor, sweeping, 3. II. 1963, 4 ex, Wise. Shoal Pt., shore, 7. II. 1963, 7 ex, Wise. Tucker Cove, 4 m, malaise trap, 27. XI-1. XII. 1961, 1 ex; 1-3. XII. 1961, 1 ex; 5-8. XII. 1961, 1 ex; 12-17. XII. 1961, 1 ex; 16-18. XII. 1961, 4 ex; 18-21. XII. 1961, 1 ex, Gressitt; 1-50 m, streamrocks, 1-5. XII. 1961, 1 larva, Gressitt.

## Family MYCETOPHILIDAE

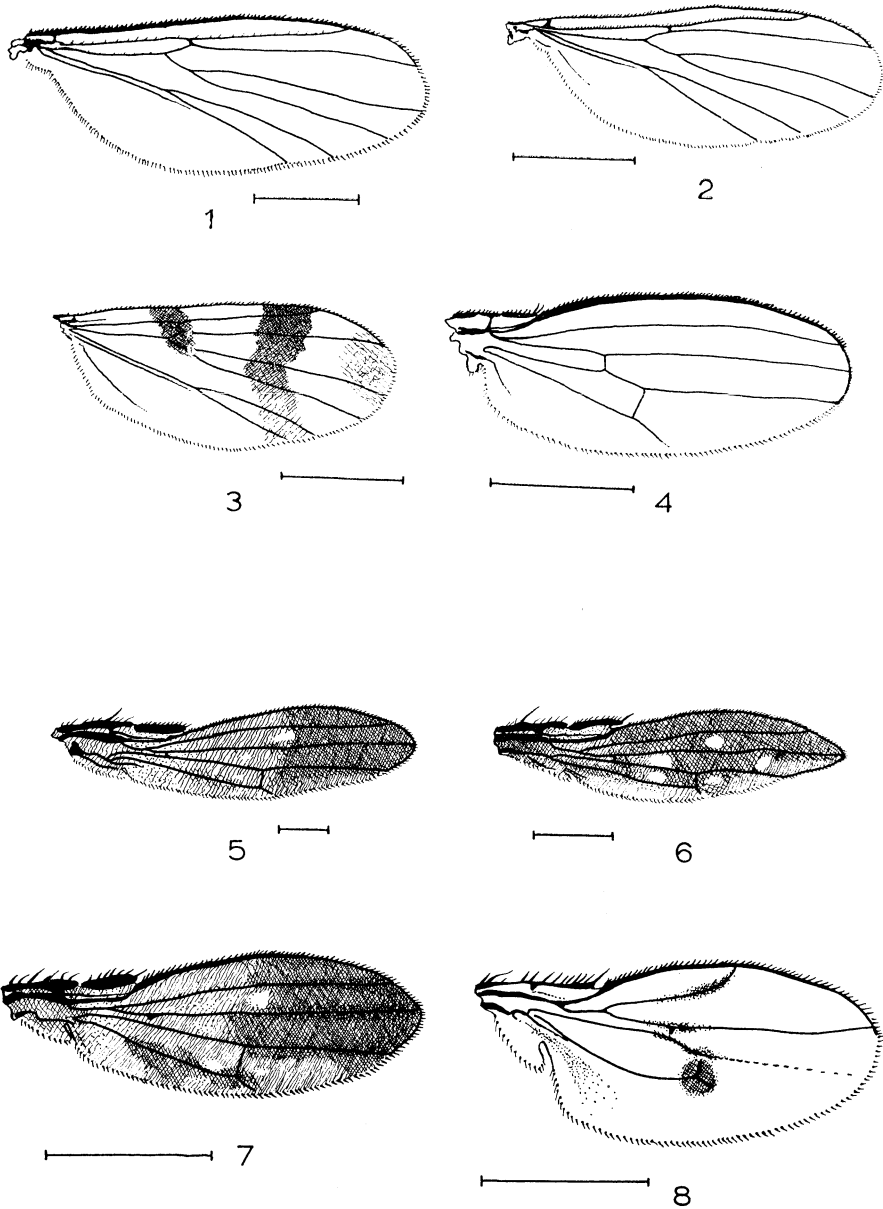
**Allodia antennata** Harrison, n. sp. Figs. 1, 9.

A yellowish brown species with darker brown markings dorsally. Body length about 3.5

1. Results of field work supported by the National Science Foundation grants G-18800 & G-23720 from the U. S. Antarctic Research Program.

mm, wing length about 3.5 mm.

♂, ♀. *Head*: Antenna yellow basally, flagellum brown; about 2.5× length of anterior



Figs. 1-8. Wings. 1, *Allodia antennata*; 2, *A. brunnea*; 3, *Mycetophila campbellensis*; 4, *Heloclusia brevicaudata*; 5, *Scatella brevis*; 6, *S. acutipennis*; 7, *S. nitidifrons*; 8, *Leptocera rennelli*. Scale: figs. 1, 2, 3, 4, 7, 8: 1 mm; figs. 5, 6: 0.2 mm.

coxa. Front dark brown covered with even matt of light brown hairs, about 3 bristles above eye and small bristles along anterior margin of front. Face pale yellow, palpi pale yellow. Eyes covered with short hairs. *Thorax*: Mesonotum and scutellum brown dorsally merging to yellow laterally, lateral pleurites yellow or light brown. Mesonotum covered with matt of short light brown hairs and many short black bristles, 2 stronger bristles at post alar region. Scutellum with matt of hairs and 4 scutellars, the apical pair stronger than basals. Pronotum generally with 2 bristles. Propleuron with 2 strong and 1 or 2 weaker bristles. Metapleuron with 1 fairly strong and a few weak bristles. Cluster of about 2 small bristles ventral to base of haltere. *Legs*: yellow merging to light brown on tarsi. Fore coxa covered with black hairs on anterodorsal surface and often with 1 basal and several apical small bristles; mid coxa bare of hairs and with few small apical bristles; hind coxa with 1 dorsal basal bristle, a few minute hairs along dorsal line and small apical bristles. Tibial spurs strong. *Wings* (fig. 1): Clear membrane. Stem of median fork distinctly longer than cross vein r-m.  $R_5$  curved at apex,  $M_1$  relatively straight making the length of costa between apex of  $R_1$  and  $R_5$  longer than length of wing margin between  $R_5$  and  $M_1$ ; base of cubital fork in line with or usually beyond base of r-m. *Abdomen*: ♂ tergites dark blackish brown dorsally, merging to yellowish brown at lateral margin especially of tergites 1-4, tergite 7 all yellowish brown. ♀ tergites brown, darker dorsally. ♂ genitalia (fig. 9) black; claspers approximately even sized, dorsal one almost quadrangular, ventral one with curved margin, both dark brown and covered with many strong bristles; appendage to claspers distinctly pointed and covered with thick matt of short hairs in a well defined stripe.

Holotype: ♂, Tucker Cove, 4 m, Campbell I., malaise trap, 1-3. XII. 1961, Gressitt (D. S. I. R., Nelson). Paratypes: Same data as holotype: 2♂♂, 27. XI-1. XII. 1961; 1♂, 1♀, 3-5. XII. 1961; 1♂, 1♀, 16-18. XII. 1961, Gressitt. Other specimens examined: Same data as holotype: 1♂, 1♀, 27. XI-1. XII. 1961, 1 ex, 1-3. XII. 1961; 1 ex, 5-8. XII. 1961, Gressitt; 1♂, Shoal Pt., 0-10 m, tussock, 29. VII. 1962, Rennell.

Closely related to *A. quadriseta* Edwards and most readily separated from that species by the characters of the ♂ genitalia. The propleural bristles are usually 2 with up to 2 additional smaller bristles. Other closely related species appear to be *A. brunnea* n. sp. and *A. flava* Marshall. The darker color of the former and the short antenna of the latter are sufficiently distinct characters for separation of this species. This species has been compared with the type of *A. quadriseta* Edw. by Mr. H. Oldroyd and Dr. P. Freeman of the Brit. Mus. (Nat. Hist.) who were able to indicate the distinctions especially in ♂ genitalia.

**Allodia brunnea** Harrison, n. sp. Figs. 2, 10.

A dark brown or black species with pale yellow legs. Body length about 3 mm, wing length about 3 mm.

♂. *Head*: Antenna brown or light brown basally, brown to dark brown on flagellum; length about 2× length of anterior coxa. Front dark grayish black, covered with matt of pale yellow hairs, row of bristles above eye margin. Face brown, palpi light brown. Eyes haired. *Thorax*: Dark brown. Mesonotum with matt of fine pale yellow hairs, small black bristles over most of surface, the 3 or 4 at postalar region strong. Scutellum with few fine pale hairs and 4 scutellar bristles, the basal pair just smaller than apicals. Pro-

notum with 2 fairly strong bristles. Propleuron with usually 3 bristles. Metapleuron with 1 fairly strong bristle and 2 or 3 smaller more dorsal bristles. One or 2 bristles ventral to base of haltere. *Legs*: All coxa brown at extreme basal region; fore coxa with light colored hairs, small black bristles irregularly along posterodorsal margin and at apex; mid coxa with a bristle and few hairs apically; hind coxa with 1 dorsal basal and 1 dorsal apical bristle and few hairs apically and sometimes about dorsal margin. Tibial spurs strong. *Wings* (fig. 2): Clear membrane. Similar to *A. antennata* n. sp. except  $R_5$  not so curved at apex and base of cubital fork in line with or before base of r-m. *Abdomen*: Dull black or dark brown. Segment 7 slightly glossy black. ♂ genitalia (fig. 10): Claspers uneven in size, brown: dorsal clasper about  $1.5\times$  length of ventral and with smooth rounded apex, ventral clasper almost rectangular in shape; both claspers with strong bristles, those on dorsal clasper strongest; clasper appendage rod shaped and rounded at apex.

Holotype ♂, Tucker Cove, 4 m, Campbell I., Malaise trap, 1-3. XII. 1961, Gressitt (D. S. I. R.). Paratypes: Same data as holotype, 5♂♂: 27. XI-1. XII. 1961, 4♂♂; 5-8. XII. 1961, 2♂♂; 16-18. XII. 1961, 5♂♂; 18-21. XII. 1961, 1♂, Gressitt. Beeman Camp, 2-50 m, *Poa* by stream, 26-30. XI. 1961, 1♂, Gressitt. Other specimens examined: Shoal Pt., 6. IX. 1962, 1♀ (\*), Clark. Tucker Cove, 4 m, Malaise trap, 27. XI-1. XII. 1961, 2♂♂, 1♀; 1-3. XII. 1961, 1♂, 4♀♀; 3-5. XII. 1961, 1♀; 5-8. XII. 1961, 1♂, 2♀♀; 16-18. XII. 1961, 2♂♂, 4♀♀, Gressitt.

Separated most readily from *A. antennata* n. sp. by the general dark coloration, the relatively shorter antenna and distinct differences in size of clasper and shape of appendage, and from *A. flava* Marshall by the darker color and relatively long antenna. The ♀ of this species has the same dark appearance as the ♂ with brown abdominal segments on posterior margin. From the series of specimens available in the genus *Allodia* it has not always been possible to separate ♀♀ and connect them with appropriate ♂♂ to the degree of certainty required to establish some of them as paratypes of this species.

### *Exechia hiemalis* (Marshall)

**SPECIMENS EXAMINED**: Beeman Camp, 2-50 m, *Poa*, 26-30. XI. 1961, 2♀♀, Gressitt; 15-50 m, sedge, 2. VIII. 1962, 1♂, Rennell. Beeman Hill, swept ex tussock and sedge, 2. II. 1963, 1♂, 1♀, Wise. Beeman Pt., sweeping, 28. II. 1963, 1♂, Wise. Shoal Pt., 0-10 m, tussock, 29. VII. 1962, 1♂, Rennell. Tucker Cove, 1-50 m, 21-25. XI. 1961, 1♂; *Coprosma*, 1-5. XII. 1961, 1♂; in house, 1-5. XII. 1961, 1♂, 1♀; 4 m, Malaise trap, 27. XI. 1961, 23♂♂, 31♀♀; 1-3. XII. 1961, 7♂♂, 26♀♀; 3-5. XII. 1961, 3♂♂, 2♀♀; 5-8. XII. 1961, 4♂♂, 6♀♀; 16-18. XII. 1961, 9♂♂, 12♀♀; 18-21. XII. 1961, 1♂, Gressitt; 0-100 m, sedge, 7. VIII. 1962, 1♂, Rennell.

### *Mycetophila campbellensis* Harrison, n. sp. Fig. 3.

A reddish brown species with yellow and light brown legs and distinct wing pattern. Body length about 2.75 mm, wing length about 2.75 mm.

♂, ♀. *Head*: Antenna yellowish brown basally, browner towards apex, about  $2.25\times$  length of anterior coxa. Front dark brown. Face light brown; palpi light reddish brown. Eyes haired. *Thorax*: Mesonotum and pleurites dark reddish brown. Mesonotum with matt of small light colored hairs, bristles around margin strongest at posterior lateral corners.

Scutellum with a few minute hairs and 4 strong marginal bristles. Two or 3 small bristles on pteropleurite and other very small hairs. *Legs*: Fore coxa with matt of small hairs and a few bristles on posterior margin and at apex. Mid and hind coxa bare and distinctly dark brown at apex. Mid tibia with 2 anterodorsal bristles, 5 posterodorsals, one of these apical, 2 ventral bristles (of these the mid ventral the stronger), hind tibia with strong antero- and postero- dorsals. *Wings* (fig. 3): Dark band from costa to median fork, a brown area at apex and between these 2 areas a dark brown irregular band traversing wing, lighter brown at posterior margin. Halteres pale yellow. *Abdomen*: Dark reddish brown with posterior margin of tergites lighter brown. External ♀ genitalia: genital plates yellow. External ♂ genitalia light brown.

Holotype: ♀, Above Camp cove, Campbell I., sweeping, 6. II. 1963, Wise (D. S. I. R.). Paratype: Campbell I.: Shoal Pt., 0–10 m, tussock, 29. VII. 1962, ♀, Rennell. Other specimens examined: Beeman Camp, 15–50 m, sedge, 3. VIII. 1962, 1 ♀, Rennell. Tucker Cove, 4 m, Malaise trap, 27. XI–1. XII. 1961, 1 ♂, 1 ♀, Gressitt.

Closest to *M. submarshalli* Tonnoir and distinguished most readily from it by the wing pattern. In *M. submarshalli* the central band is much wider than in the present species. The 3 specimens from the malaise trap and Beeman Camp are damaged and do not warrant being made paratypes.

#### **Paradoxa fusca** Marshall

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, 21–25. XI. 1961, 1 ♂, Gressitt. Beeman Hill, 2–50 m, old *Dracophyllum* trunk, 21–25. XI. 1961, 1 ♂, Gressitt. St. Col Ridge, 30. XI. 1961, 1 ♀, Gressitt. Tucker Cove, 4 m, Malaise trap, 27. XI–1. XII. 1961, 3 ♂♂; 1–3. XII. 1961, 2 ♂♂, 2 ♀♀; 3–5. XII. 1961, 2 ♂♂, 1 ♀; 5–8. XII. 1961, 1 ♂, 3 ♀♀; 16–18. XII. 1961, 3 ♂♂, 1 ♀, Gressitt.

A new record for Campbell I.

#### **Platyura brevis** Tonnoir

SPECIMENS EXAMINED: Lookout Bay, beach, 19. XII. 1961, ♀ Gressitt. Tucker Cove, 4 m, Malaise trap, 1–3. XII. 1961, 1 ♀; 16–18. XII. 1961, 3 ♀♀; 18–21. XII. 1961, 2 ♀♀, Gressitt.

Vein R<sub>4</sub> varies to the extent of being present, very weak and not complete, and being absent. These specimens have been compared with the type and agree in all respects except for the above variation. A new record for Campbell I.

#### **Tetragoneura minima** Tonnoir

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, 19. XII. 1961, 1 ♀: *Dracophyllum*, 6–11. XII. 1961, 1 ♀; 12–17. XII. 1961, 1 ♀; 18–21. XII. 1961, 1 ♀: *Bulbinella*, 26–30. XI. 1961, 1 ♀: *Poa*, 1 ♀; 12–17. XII. 1961, 4 ♂♂, 18–21. XII. 1961, 1 ♂, Gressitt: *Dracophyllum*, 23. XII. 1962, 1 ♂, Rennell. Beeman Hill, 100–180 m, *Bulbinella*, 16. XII. 1961, 1 ♂, 3 ♀♀, Gressitt; sweeping, 2. II. 1963, 1 ♂, Wise. Beeman Lookout, 19. XII. 1961, 2 ♂♂, Gressitt. Courrejolles Penin., 200 m, Grey-headed Mollymawk nest, 14. XII. 1961, 3 ♀♀, Gressitt. De la Vivre Pt., 12. XII. 1961, 1 ♂, Rennell. Lookout Bay, Beach, 16–19. XII. 1961, 1 ♂, 1 ♀; *Bulbinella*, 3. XII. 1961, 1 ♂; *Dracophyllum*, 3. XII. 1961, 1 ♂; *Poa*, 19. XII. 1961, 3 ♂♂, 2 ♀♀, Gressitt. Moubray Hill, 200 m, 12. XII. 1961, 1 ♂; *Bulbinella*, 12. XII. 1961, 1 ♂, Gressitt. Mt. Dumas, slope, sedge, 20. XI. 1961, 1 ♂, Gressitt. Mt. Eboulé, 150 m, 17. XII. 1961, 3 ♀♀, Gressitt. St. Col

Ridge, 180–280 m, *Bulbinella*, 7. XII. 1961, 1♂, Gressitt. Tucker Cove: 1–50 m, 1–5. XII. 1961, 1♀; 6–11. XII. 1961, 1♂, 1♀; 12–17. XII. 1961, 2♂♂; *Bulbinella*, 12–17. XII. 1961, 1♀; 18–21. XII. 1961, 1♂; moss, 21–25. XI. 1961, 1♀; under rocks, intertidal zone, 7. XII. 1961, 1♀(\*); 4 m, Malaise trap, 1–3. XII. 1961, 2♂♂; 3–5. XII. 1961, 1♂; 5–8. XII. 1961, 3♂♂; 16–18. XII. 1961, 3♂♂, 2♀♀; 18–21. XII. 1961, 4♂♂, 1♀, Gressitt: 0–100 m, swept above stream, 23. II. 1963, 1♂, Wise. Tucker, sedge, 29. XII. 1961, 1♂, Rennell.

A new record for Campbell I.

#### *Tetragoneura* sp.

SPECIMENS EXAMINED: Tucker Cove, 4 m, 1–3. XII. 1961, 1♂(\*), Gressitt.

This specimen does not key to any known species and could be regarded as a new one. However, it is not a perfect specimen and its occurrence on Campbell I. is recorded as an indication that at least 2 species of *Tetragoneura* occur there.

#### *Zygomia similis* Tonnoir

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, 21–25. XI. 1961, 1♀, Gressitt: 100–150 m, *Coprosma*, 3.VIII.1962, 1♂, 1♀, Rennell. Perseverance Harbor, ex sedge and scrub, 5. VIII. 1962, 1♂, Clark. Tucker Cove, 1–50 m, *Bulbinella*, 21–25. XI. 1961, 1♂: 4 m. Malaise trap, 27. XI–1. XII. 1961, 2♂♂, 1♀; 5–8. XII. 1961, 1♂, Gressitt.

A new record for Campbell I.

#### *Zygomia submarginata* Harrison

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, *Dracophyllum scoparium*, 17–21. XII. 1961, 2♂♂(\*), Gressitt. Beeman Hill, 100–180 m, sooty albatross nest, 11–16. XII. 1961, 1♂, 5♀♀(\*), Gressitt. Lookout Bay, beach, *Bulbinella*, 2. XII. 1961, 2♂♂(\*), Gressitt. Rocky Bay, penguin nest, 20. XII. 1961, 1♂(\*), Gressitt. Shoal Pt., 6.IX.1962, 1♀, Clark. Smooth-water bay, swept above stream, 2. III. 1963, 1♀, Wise. Tucker Cove: 1–50 m, *Dracophyllum*, 1–5. XII. 1961, 1♂(\*), Gressitt: 4 m, 5–8. XII. 1961, 2♂♂: 4 m, Malaise trap, 27. XI–1. XII. 1961, 1♂, 1♂(\*), 1♀; 1–3. XII. 1961, 7♂♂; 3–5. XII. 1961, 3♂♂, 1♀; 16–18. XII. 1961, 5♂♂; 18–21. XII. 1961, 1♂, Gressitt.

### Family DOLICHOPODIDAE

#### *Acropsilus borboroides* Oldroyd

SPECIMENS EXAMINED: Beeman Camp, 20–30 m, *Bulbinella*, 12. XII. 1961, 3♂♂, 9♀♀, Rennell. Beeman Hill, 100–180 m, *Pleurophyllum* leaf mold, 2–6. XII. 1961, 1♂(\*), Gressitt. Beeman and Lyall Saddle, *Poa*, 5.XII.1961, 1♀, Gressitt. Courrejolles Penin., 200 m, rocks, moss around mollymawk colony, 14. XII. 1961, 1♀, Gressitt & Rennell. Lookout Bay, 3 m, *Stilbocarpa polaris*, 30. XII. 1961, 3♀♀, Rennell; Perseverance Harbor, roots of *Stilbocarpa*, 3. II. 1963, 1♂, Rennell. Mt. Azimuth, nr. summit, *Bulbinella*, 14.XII.1961, 1♀, Gressitt & Rennell; 350–450 m, *Bulbinella* flowers, 3.XII.1962, 2♂♂, 3♀♀, Rennell. Mt. Dumas, 100 m, west slopes above Middle Bay, *Bulbinella*, 1♀(\*), Rennell. Mt. Lyall, 400 m, 5. XII. 1961, 1♂; 200–400 m, 5. XII. 1961, 1♀, Gressitt. Northwest Bay area, sweeping, 5. II. 1963, 1♀, Wise. Rocky Bay, under rocks, 20.XII.1961, 1♂, Gressitt. Shoal Pt., 0–10 m, tussock, 29. VII. 1962, 1♀(\*), Rennell. St. Col Ridge, 16–260 m, moss on rocks, Berlese funnel, 24,

26, 30. XI. 1961, 1 ♀ (\*), Gressitt. II. 1963, 1 ♀, Rennell.

**Schoenophilus pedestris campbellensis** Harrison, n. subsp.

♂, ♀: Similar in all respects to the nominate subspecies *S. pedestris pedestris* Lamb, 1909, as revised by Kohn (1962), except for the following:

♂ with apex of wings flared out to a small disc; clasper of ♂ hooked apically, slightly more so than in the nominate subspecies.

Holotype ♂, Mt. Lyall, 200–400 m, Campbell I., 3, 5, 12. XII. 1961, Gressitt (D. S. I. R.). Paratypes: All Campbell I., 1 ♀, Courrejolles Penin., tussock above mollymawk colony, 13. II. 1963; 220–230 m, under stones above mollymawk colony, 13. II. 1963, 1 ♀, Rennell; 1 ♀, N. slope, 220 m, under stones mollymawk colony, 12. II. 1963; 1 ♀, 13. II. 1963, K. A. J. Wise. Courrejolles—Azimuth, on boulders, 18. XII. 1963, 2 ♂♂, Gressitt & Rennell. 1 ♂, Mt. Dumas, North spur, 310 m, at top, 6. II. 1963, Wise; 310 m, on exposed peat, 6. II. 1963, 1 ♀ (\*), Rennell; 2 ♀♀, summit, 500 m, among stones, 6. II. 1963, Rennell. Mt. Lyall, 250 m, 5. XII. 1961, 1 ♀, Gressitt; 1 ♂, 2 ♀♀, 390 m, below summit, low plants, 19. II. 1963, Wise. As holotype 1 ♀, Gressitt. 1 ♂, Mt. Puiseux, 400 m, 17. XII. 1961, Gressitt. 1 ♂, Moubray Hill, 200 m, 12. XII. 1961; 200 m, moss, 12. XII. 1961, 1 ♀, Gressitt. St. Col Ridge, 180–280 m, 7. XII. 1961, 2 ♂♂, 2 ♀♀, Gressitt; moss on rocks, 7. XII. 1961, 1 ♀, Gressitt.

There are 9 ♂♂ in the series and the wing shows some variation in that the flared-out apex starts about mid point of wing or about apical 1/3. All ♀♀ have wings without disc. Wing atrophy would appear to have not advanced, as yet, so constantly as in the *Macquarie I.* subspecies, indicating a later arrival of the parent stock into the environment of Campbell I.—favorable for wing reduction. A new record for Campbell I.

Family SYRPHIDAE

**Helophilus antipodus** Schiner

SPECIMENS EXAMINED: Beeman Camp, 15 m, 11. XII. 1962, 1 ♀, Rennell; station, 11. XII. 1963, 1 ♀, Wise. Beeman Hill, 100–180 m, 16. XII. 1961, 1 ♂, Gressitt. Tucker Cove, 4 m, Malaise trap, 1–3. XII. 1961, 1 ♂; 16–18. XII. 1961, 1 ♂, Gressitt.

**Helophilus campbellicus** Hutton

SPECIMENS EXAMINED: Beeman Hill, 100–180 m, 2. XII. 1961, 1 ♂, Gressitt. Lookout Bay, beach, elephant seal wallow, 16. XII. 1961, 2 ♂♂, Gressitt. Monument Harbor, nr. beach, 17. XII. 1961, 1 ♀, Gressitt. Tucker Cove, 1–50 m, *Bulbinella*, 18–21. XII. 1961, 2 ♀♀; on beach, 1–5. XII. 1961, 1 ♀; 4 m, Malaise trap, 27. XI–1. XII. 1961, 6 ♂♂; 1–3. XII. 1961, 1 ♂; 5–8. XII. 1961, 3 ♀♀; 16–18. XII. 1961, 1 ♂, 6 ♀♀; 18–21. XII. 1961, 3 ♀♀, Gressitt; 1–50 m, 21–25. XI. 1961, 1 ♂, Gressitt.

**Syrphus flavofaciens** Miller

SPECIMENS EXAMINED: Tucker Cove, 4 m, Malaise trap, 27. XI–1. XII. 1961, 2 ex; 1–3. XII. 1961, 9 ex; 3–5. XII. 1961, 5 ex; 5–8. XII. 1961, 4 ex; 16–18. XII. 1961, 3 ex, Gressitt; 0–100 m, swept above stream, 6. II. 1963, 1 ex, Wise.

Campbell I. specimens differ slightly from New Zealand mainland specimens in color

characters. The abdomen is very dark blue or almost black and the blue black stripe on oral margin and over cheeks varies in width from as broad as cheek below eye to a stripe about 1/2 as broad. A new record for Campbell I.

**Syrphus novaezealandiae** Macquart

SPECIMENS EXAMINED: Tucker Cove, 4 m, Malaise trap, 3-5. XII. 1961, 1 ♀; 5-8. XII. 1961, 1 ♂; 16-18. XII. 1961, 1 ♀; 1-50 m, *Dracophyllum*, 21-25. XII. 1961, 1 ♀ (\*), Gressitt.

Family SAPROMYZIDAE

**Poecilohetaerella bilineata** (Hutton)

SPECIMENS EXAMINED: Beeman Camp, 2-50 m, *Poa*, 6-11. XII. 1961, 2 ♀ ♀; *Poa*, 12-17. XII. 1961, 4 ♀ ♀; *Bulbinella*, 6-11. XII. 1961, 1 ♂, 1 ♀; 18-21. XII. 1961, 3 ♀ ♀, Gressitt; 15 m, 11. XII. 1962, 1 ♀; 20-30 m, *Bulbinella*, 12. XII. 1962, 1 ♀; *Dracophyllum*, 23. XII. 1962, 1 ♀, Rennell. Beeman Hill, 100-180 m, 11-16. XII. 1961, 1 ♀, Gressitt. Camp Cove, sweeping long grass on edge of stream, 5. II. 1963, 1 ♀, Rennell. Lookout Bay, beach, 3. XII. 1961, 1 ♀; *Bulbinella*, 3. XII. 1961, 2 ♀ ♀, Gressitt. Northwest Bay area, sweeping, 5. II. 1963, 1 ♀, Wise. Shoal Pt., sweeping, 7. II. 1963, 1 ♂, Wise. Six-foot Lake, 2 m, 10. XII. 1961, 1 ♀, Gressitt. Tucker Cove, 1-50 m, 21-25. XI. 1961, 1 ♀; *Bulbinella*, 21-25. XI. 1961, 1 ♂; 1-5. XII. 1961, 1 ♀; *Dracophyllum*, 1-5. XII. 1961, 1 ♀; *Poa*, 1-5. XII. 1961, 1 ♂, on beach, 1-5. XII. 1961, 1 ♂; 6-11. XII. 1961, 1 ♀; 12-17. XII. 1961, 1 ♀; 18-21. XII. 1961, 1 ♀; *Bulbinella*, 18-21. XII. 1961, 4 ♂ ♂, 10 ♀ ♀; 4 m, Malaise trap, 16-18. XII. 1961, 1 ♂, Gressitt. Tucker, sedge, 29. XII. 1961, 2 ♀ ♀, Rennell. Venus Bay, 2. II. 1963, 1 ♀, A. Wright. Venus Cove, tussock, 2. II. 1963, 1 ♂, Anon.

Family HELOMYZIDAE

**Heloclusia (Heluscolia) antipoda** Harrison Fig. 11.

SPECIMENS EXAMINED: Beeman Camp, 2-50 m, *Bulbinella*, 26-30. XII. 1961, 1 ♀, Gressitt. Beeman Lookout, 19. XII. 1961, 1 ♂, Gressitt. Courrejolles Penin., 200 m, grey-headed mollymawk nests, 14. XII. 1961, 1 ♂; 200 m, 14. XII. 1961, 1 ♂, Gressitt. Garden Cove, 25. XI. 1961, 1 ♀, Gressitt. Lookout Bay, beach, 16-19. XII. 1961, 2 ♀ ♀; 3. XII. 1961, 1 ♂, Gressitt. Mt. Azimuth, S. side, 250 m, in nest of royal albatross under dead chick, 12. II. 1963, 1 ♀, Wise. St. Col-Azimuth, 230 m, dead albatross carrion, 12. II. 1963, 2 ♂ ♂, Rennell. Tucker Cove: 1-50 m, *Poa*, 21-25. XI. 1961, 1 ♂, 1 ♀; grass in seal wallow, 21-25. XI. 1961, 1 ♀; 1-5. XII. 1961, 1 ♀; 26-30. XI. 1961, 1 ♂; Malaise trap, 27. XI-1. XII. 1961, 2 ♂ ♂, 2 ♀ ♀; 1-3. XII. 1961, 1 ♂, 2 ♀ ♀; 16-18. XII. 1961, 2 ♂ ♂, 5 ♀ ♀, Gressitt.

♂ ♂ have been collected for the first time. Additional notes on the description of *H. antipoda* are given as follows: External ♂ genitalia (fig. 11). Genital arch very large, anteroventral region slightly produced to an acute angled corner; some few scattered short bristles over surface of arch, a strong one dorsally and cluster of stronger bristles at ventral angle. Anal plate with irregular inner and outer row of hairs, outer row with a strong bristle ventrally. Claspers sinuous, bare and fairly heavily chitinized.



**Heloclusia (Heluscolia) brevicaudata** Harrison, n. sp. Figs. 4, 12.

Dark brown or blackish brown species. Body length about 3 mm, wing length about 2.75 mm.

♂, ♀. *Head*: Arista dark brown, about 6–8× length of antennal segment 3, rays of pubescence greater than diameter of basal segments of arista. Antenna blackish brown; segment 2 with distinct apical bristles, stronger one dorsally and about 4 stronger ones ventrally. Front dark brown with lighter brown anteriorly. Three fronto-orbitals, posterior 1 directed outwards; ratio of lengths, anterior to posterior 3 : 4 : 4. Face light brown. Cheeks light brown or yellowish brown. Vibrissa strong; 2nd oral bristle close to vibrissa and about 1/3 to 1/4 of its length. Occiput black. Eyes bare. Vertical diameter of eye about 1.5× width of cheek in same axis. Proboscis light brown, palpi dark brown. *Thorax*: Blackish brown. Prescutellars distinctly longer than hairs on mesonotum; some enlarged acrostichal hairs near suture; apical scutellars about 1.5× length of basals; 1 sternopleural; 1 inter alar. *Legs* all dark brown. Fore femur with strong bristles on posterodorsal and posteroventral surfaces; fore tibia with small apical, mid tibia with strong apical, hind tibia with small apical. *Wings* clear (fig. 4). Veins light brown. Pair of strong bristles at base of costa and at distal costal break; short stout costal spines ending at apex of vein 2; costa with 2 rows of well separated small spines on dorsal and ventral surfaces. Wing indices: costal about 9; 4th vein about 4.5; 4c about 0.75; 5× about 1.2. Halteres dark brown with light brown stalk. *Abdomen*: Dark brown, genitalia in both sexes darker brown.

External ♂ genitalia (fig. 12). Genital arch broad, dark brown, not very greatly enlarged as in other species of the subgenus; 1 strong dorsal bristle on each side of arch, 1 or 2 smaller bristles on middle of arch and hairs mostly on posterior 1/2 of arch; anal plate with fine hairs; clasper narrow, curved and pointed, with hairs.

Holotype: ♂ (\*), Beeman Camp, 2–50 m, Campbell I., chicken yard, 6–11. XII. 1961, Gressitt (D. S. I. R). Paratypes: Same data as holotype, 2♂♂, 3♀♀(\*).

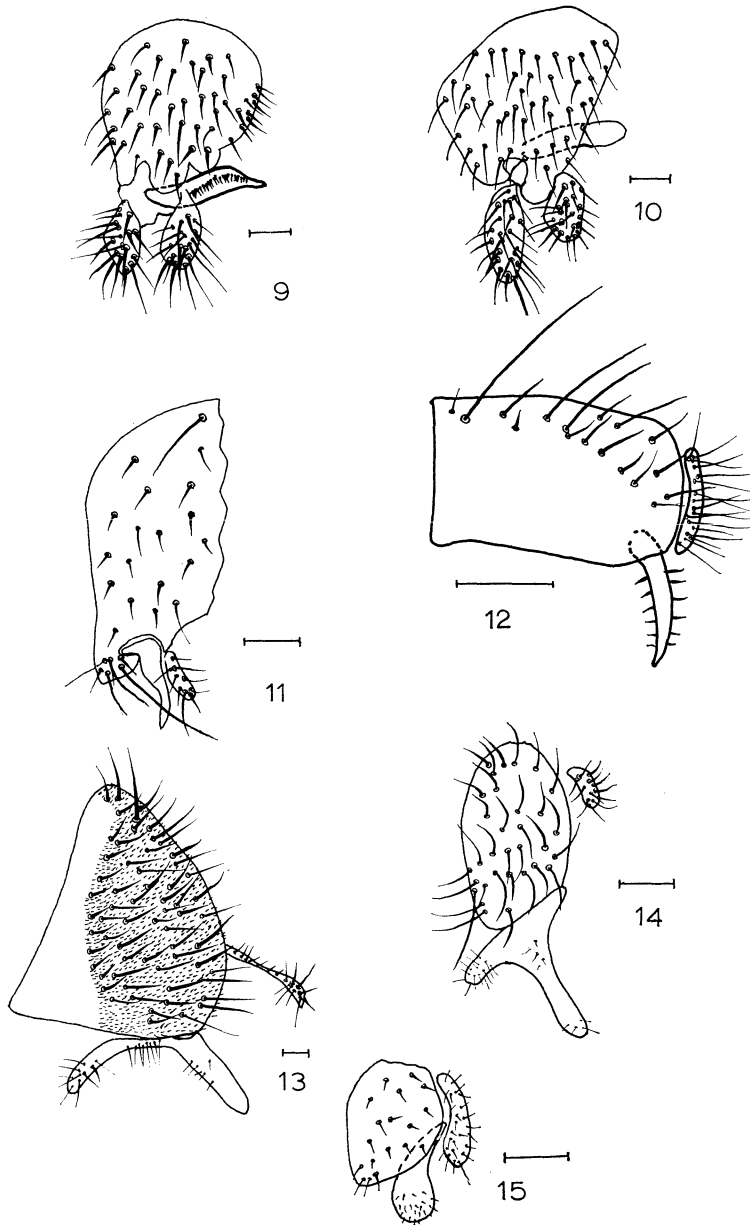
All types are preserved in alcohol. The long pubescent arista shows that there could be some close relationship with *H. aristata* Harrison. Chief distinguishing characters are the wide cheek, and character of genital arch and clasper in ♂♂. This species would appear to belong to the *antipoda* species group.

## Family COELOPIDAE

**Baeopterus robustus** Lamb Fig. 13.

SPECIMENS EXAMINED: Northwest Bay: Middle Cove, under kelp, 5. II. 1963, 1♂; 20. II. 1963, 1♀, Wise: 5 m, among stones on beach, 1 pupa; 30. XII. 1962, 1♀; bred ex pupa, reared 3. II. 1963, Rennell. Rocky Bay: beach, rotting *Durvillea*, 28. XI. 1961, 17♂♂, 26♀♀, Gressitt & Rennell: among rocks on beach, 23. XI. 1962, 4♀♀, Gressitt & Rennell; kelp on beach, 20. XII. 1961, 8♂♂, 11♀♀, Gressitt: beach, under kelp and stones, 18. II. 1963, 1♀, Wise: kelp, 20. XII. 1961, 17♂♂, 24♀♀(\*); 28. XI. 1961, 10♂♂, 18♀♀(\*), Gressitt.

Additional notes on the description of this species are given as follows: ♂ genitalia (fig. 13). Genital arch narrow dorsally, very broad ventrally, anteroventral corner bare of hairs and bristles, elsewhere a thick matt of fine hairs and bristles. Anal plate very



Figs. 9-15. ♂ genitalia. 9, *Allodia antennata*; 10, *A. brunnea*; 11, *Heloclusia antipoda*; 12, *H. brevicaudata*; 13, *Baeopterus robustus*; 14, *Coelopa debilis*; 15, *Macrocanace australis*. Scale: 0.1 mm.

narrow and covered with bristles slightly weaker than those on arch. Posterior clasper straight and rod-like.

*Pupa*: Length 12 mm, greatest breadth 4 mm.

### **Icaridion nasutum** Lamb

**SPECIMENS EXAMINED**: Beemen-Lyall Saddle, *Poa*, XII. 1961, 1 ♀, Gressitt. Beeman beach: 1-2 m, rotting kelp at high tide mark, 20. XI. 1962, 1 ♂, 4 ♀ ♀; 1-2 m, among rocks at high tide level, 1 ♂, Rennell. Beeman Camp, 2-50 m, kelp on beach, 18-21. XII. 1961, 1 ♂, Gressitt. De la Vire Pt., kelp on beach, 18. XI. 1962, 3 ♂ ♂, 5 ♀ ♀, Rennell. Lookout Bay: beach, 2 m, among rocks, 14. XII. 1962, 2 ♂ ♂, 2 ♀ ♀; kelp on beach, 27. VII. 1962, 7 ♂ ♂, 9 ♀ ♀, Rennell. Perseverance Harbor, in rotting kelp on beach, 3. II. 1963, 1 ♀, Wise; beach, 25. VII. 1962, 13 ex(\*), Clark. Middle Bay, beach, kelp on beach, 29. XI. 1961, 1 ♂, Gressitt. Middle Cove, NW Bay, under kelp and stones, 5. II. 1963, 1 ♂, 1 ♀, Wise. Monument Harbor, nr. beach, kelp, 17. XII. 1961, 7 ♂ ♂, 1 ♀, Gressitt. Northwest Bay: beach, 29. XI. 1961, 6 ♂ ♂, 4 ♀ ♀, 1 pupa, Gressitt; 5 m, among rocks and kelp on beach, 30. XII. 1962, 2 ♀ ♀, Rennell. Rocky Bay; beach, rotting *Durvillea*, 28. XI. 1961, 24 ♂ ♂, 7 ♀ ♀, Gressitt & Rennell; kelp on beach, 20. XII. 1961, 29 ♂ ♂, 2 ♀ ♀, 18 ♂ ♂(\*), 8 ♀ ♀(\*); 28. XI. 1961, 10 ♂ ♂, 18 ♀ ♀(\*), Gressitt; 20. XII. 1962, 3 ♂ ♂, 1 ♀, Rennell; beach, under kelp and stones, 18. II. 1963, 3 ♂ ♂, Wise. Shoal Pt., 0-30 m, rotting kelp on beach, 1. XII. 1962, Rennell.

This large series of specimens shows that the species is very common on Campbell I. and is found among rocks and kelp on the shore line.

There is a very great variation in ♂ ♂ especially with the chaetotaxy. In this series there is a graduation in size of ♂ ♂ from about 3.5 mm-8.0 mm. Associated with this size range is a range of general hairiness of abdomen and legs, the larger specimens having in general a thicker matt of hairs and relatively longer hairs. Also associated with size of the specimens is size of the humeral and anterior notopleural bristles. In small individuals these bristles are normal bristles and range from about equal to or 2/3 length of posterior notopleural. In larger specimens, these bristles are reduced and in the largest specimens they tend to be reduced to small thick stumpy bristles while the posterior notopleural remains normal size. Likewise in large individuals, the hairs on anterior of mesonotum tend to be reduced to small stumpy hairs.

The ♀ ♀ do not vary in size as much as ♂ ♂ and their length is mostly between 4-6 mm. The humeral and notopleural bristles are normal and long with the humeral being shorter generally than the 2 notopleurals.

*Pupa*: Length about 9 mm.

### **Coelopa debilis** Lamb      Fig. 14.

**SPECIMENS EXAMINED**: Beeman Beach, 1-2 m, 6. IV. 1962, 1 ♀, Rennell; 16. XII. 1961, 1 ♂ (\*), Gressitt. Beeman Camp: 2-50 m, traps, 16. XII. 1961, 1 ♂; 2-50 m, kelp on beach, 6-11. XII. 1961, 1 ♀; 18-21. XII. 1961, 2 ♂ ♂, 3 ♀ ♀; *Poa*, 18-21. XII. 1961, 2 ♀ ♀; 6-11. XII. 1961, 1 ♀, Gressitt; on lighted windows, 6. IV. 1962, 1 ♂, Rennell; area, 1958-59, 1 ♂, Anon. Beeman Cove, 20 m, on windows, 31. VIII. 1962, 1 ♀; at light, 4. VI. 1962, 1 ♂, 2 ♀ ♀, Clark. Beeman Hill, 100-180 m, air nets, 11-16. XII. 1961, 1 ♂, Gressitt. Davis Pt., shore rocks, 1-3 m, 12. XII. 1961, 1 ♂, Gressitt. Garden Cove: on beach, 25. XI. 1961, 1 ♀; sea elephant wallows, 25. XI. 1961, 3 ♂ ♂, Gressitt. Lookout Bay: on kelp, high water level, 30. XII. 1961,

3 ♀♀, Rennell; beach, 16–19. XII. 1961, 2 ♂♂, 32 ♀♀, 1 ♂(\*), Gressitt. Monument Harbor, nr. beach, kelp, 17. XII. 1961, 2 ♀♀, Gressitt. Northwest Bay: beach, rocks, 29. XI. 1961, 1 ♂, 3 ♀♀, Gressitt & Rennell; 5m, among rocks and kelp on beach, 30. XII. 1962, 1 ♀, Rennell. Shoal Pt., bred ex pupa on kelp, coll. 11. II. 1962, emerged 19. II. 1962, 1 ♀, 1 pupal case, Gressitt & Rennell; beach, 7. II. 1963, 2 ♀♀, Wise; 6. IX. 1962, 2 ♀♀, Clark. Smooth-water Bay, shore cliffs, 2. III. 1962, 1 ♀, Wise. Tucker Cove, 4 m, Malaise trap, 1–3. XII. 1961, 1 ♀, 16–18. XII. 1961, 1 ♀, Gressitt. 1943, 1 ♂, J. H. Sorensen. X. 1959–I. 1960, 1 ♂(\*), G. Poppleton.

Most specimens are ♀♀ and key to *C. debilis*. The ♂♂ available give a clue to the great degree of variation possible in the species. As with other species it appears that larger ♂♂ have a tendency to be more thickly and strongly haired and for these specimens to have the bristles and hairs of anterior mesonotum thickened and reduced in length. Thus, the relative lengths of humeral to notopleural is not constant. Chaetotaxy of basal segment of mid tarsus in ♂ appears to have a range of from 1–3 anteroventral spines, the larger number being on larger individuals and these bristles being relatively thicker than those on small individuals.

The ♂ genitalia (fig. 14) has a distinctly bilobed clasper and differs from that for *C. nigrifrons* Lamb as illustrated by Hardy (1962) in the following minor points. Mid dorsal region of genital arch with 2 strong bristles; posterior arm of clasper with distinct hair especially on inner surface and hairs extending whole length of anterior arm of clasper; anal plate with fine hairs evenly over surface and no obvious aggregation ventrally.

The large series of this species has enabled a study of the variations to be made. When large series of related species from other areas become available, it should be possible to make a critical evaluation of the group of species.

#### ***Coelopella plebia* Malloch**

Not represented in the present collection.

#### ***Chaetocoelopa littoralis* (Hutton)**

Not represented in the present collection.

### Family SPHAEROCERIDAE

#### ***Leptocera (Limosina) rennelli* Harrison, n. sp. Fig. 8.**

Chocolate brown species with dark brown spot on wing. Body length about 2.75 mm; wing length about 2.5 mm.

♂, ♀. *Head*: Arista blackish brown; rays of pubescence minute, less than diameter of basal segment. Antenna light yellowish brown; segment 2 with apical black bristles especially on inner margin. Front gray with fairly heavy dusting and a blackish gray "M" shaped mark between vertex and anterior margin and around line of orbital bristles. Two equally strong fronto-orbitals; ocellars and verticals strong; post verticals about 1/2 length of verticals. Face very light brown with light dusting of light gray. Cheeks blackish brown. Vibrissa strong, distinct row of strong hairs along ventral cheek margin. Occiput dark gray brown. Eyes bare. Vertical diameter of eye 2× width of cheek in same axis. Proboscis brown, palpi light reddish brown. *Thorax*: Chocolate brown with some lighter

reddish brown areas on pleura. Pair of enlarged hairs at position of prescutellars; 3 dorsocentrals, anterior 2 pairs short and not much bigger than hairs, posterior bristle strong; basal scutellar about  $3/5$  length of apicals; 1 strong humeral, presutural and notopleural equally strong; interalar equal to basal costal bristles; supra-alar and posterior pair of postalars equally weak, other postalar as strong as posterior dorsocentral; sternopleural bristle strong, few minute hairs on propleuron. *Legs* in ♂: Fore femur with posterodorsal bristles and similar ones on apical  $1/4$  to  $1/2$  of anteroventral surface. Mid femur and curved mid tibia with cluster of short spines at base and apex respectively of ventral surfaces, mid tibia with pair of dorsal bristles at basal  $1/4$  and apical  $1/4$ . *Legs* in ♀: Without cluster of spines on mid leg and a small mid ventral bristle. *Wings* (fig. 8): Shaded light brown with distinct darker brown area about posterior cross vein; veins brown or light brown. Costal index about 1.0. Hairs on basal portion of costa fairly strong. Halteres very light reddish brown. *Abdomen*: Dark chocolate brown.

Holotype. Tucker Cove, 4 m, Campbell I., Malaise trap, 3-5. XII. 1961, ♂, Gressitt (D. S. I. R.). Paratypes: Same data as holotype, 3♂♂, 2♀♀: 27. XI-1. XII. 1961, 1♂, 1♀; 1-3. XII. 1961, 1♂, 2♀; 5-8. XII. 1961, 1♂; 16-18. XII. 1961, 1♂, 1♀, Gressitt. Garden Cove, 25. XI. 1961, 1♀, Gressitt. Lookout Bay, beach, elephant seal wallow, 16-19. XII. 1961, 1♂, Gressitt. Tucker Cove: 1-50 m, *Poa*, 21-25. XI. 1961, 2♂♂, 1♀; *Bulbinella*, 21-25. XII. 1961, 1♀; elephant seal wallow, 12-17. XII. 1961, 1♂, Gressitt. Other specimens examined: Beeman Camp, rat, 27. XI. 1961, 1♂(\*), Gressitt. Lookout Bay, *Poa*, 19. XII. 1961, 1♀, Gressitt. Smoothwater Bay, leaf mold under sedge, Berlese funnel, 16. II. 1963, 1♂, 1♀(\*), Wise. Tucker Cove, 4 m, Malaise trap, 1-3. XII. 1961, 2♂♂, 1♀; 3-5. XII. 1961, 1♀; 16-18. XII. 1961, 1♀; 1-50 m, 21-25. XI. 1961, 1♂(\*), Gressitt.

Named for Mr. K. P. Rennell who has made many interesting collections of insects during his stay on Campbell I.

Closely related to *L. thomasi* and perhaps *L. empirica*, but distinguished from both these species by the distinctive shading on the wing. Although close to being a member of the *plumosula* species group, it, like *L. thomasi* is not placed in this group yet until more is known of the New Zealand and Southern Hemisphere sphaerocerids.

#### **Leptocera (Limosina) thomasi** Harrison

SPECIMENS EXAMINED: Tucker Cove: 1-50 m, 12-17. XII. 1961, 1♂; 1-50 m, *Poa*, 21-25. XI. 1961, 1♂; 4 m, Malaise trap, 27. XI-1. XII. 1961, 1♂; 1-3. XII. 1961, 3♂, 1♀; 16-18. XII. 1961, 2♂♂, Gressitt.

A new record for Campbell I.

#### **Leptocera pectinifera** (Villeneuve)

Not represented in the present collection.

### Family CANACEIDAE

#### **Macrocanace australis** (Hutton) Fig. 15.

SPECIMENS EXAMINED: Beeman Beach, 1-2 m, 6. IV. 1962, 1♂, 2♀♀, Rennell; 16. XII. 1961, 1♀(\*), Gressitt. Beeman Camp, 2-50 m, kelp on beach, 18-21. XII. 1961, 2♂♂, 2♀♀,

Gressitt. Davis Pt., shore rocks, 1-3 m, 12. XII. 1961, 5 ♀ ♀, Gressitt. Garden Cove, sea elephant wallows, 25. XI. 1961, 1 ♂, 4 ♀ ♀, Gressitt. Lookout Bay: beach, 16-19. XII. 1961, 2 ♂ ♂, 4 ♀ ♀; kelp on beach, 16. XII. 1961, 1 ♀, Gressitt; on kelp, high water level, 30. XII. 1961, 21 ♂ ♂, 25 ♀ ♀, Gressitt & Rennell; *Hebe* by shore, 16-19. XII. 1961, 1 ♂ (\*), Gressitt. Mt. Lyall, 390 m, below summit, low plants, 19. II. 1963, 1 ♀, Wise. Monument Harbor, nr. beach, 17. XII. 1961, 4 ♂, 1 ♀, Gressitt; tussock, 9. II. 1963, 1 ♂, Wise. Northwest Bay, beach, rocks, 29. XI. 1961, 33 ♂, 39 ♀ ♀, Gressitt. Rocky Bay, rockhopper penguin rookery, 20. XII. 1961, 3 ♂ ♂, 1 ♀: *Colobanthus*, 20. XII. 1961, 1 ♂, Rennell; beach, swept ex shore, 18. II. 1963, 1 ♂, Wise. Shoal Pt., 7. II. 1963, 1 ♂, Wise. Six-foot Lake, 2 m, 10. XII. 1961, 5 ♂ ♂, 1 ♀, Rennell. Smoothwater Bay, shore cliffs, 7. III. 1963, 1 ♀, Wise. St. Col-Azimuth, 250 m, albatross carrion, 12. II. 1963, 1 ♂, Rennell. Tucker Cove, 1-50 m, sweeping cliff along shore in rain, 21-25. XI. 1961, 1 ♂, 1 ♀, Rennell.

Additional notes on the description of this species are as follows: Wings often with fairly distinct but irregular darker shaded area at proximal area of posterior cell 1.

External ♂ genitalia (fig. 15). Genital arch shield-shaped on each side of mid dorsal line, with scattered small bristles on surface and a cluster of about 10 bristles at ventral corner. Anal plate with fine hairs over most of surface and small fine bristles stronger ventrally. Clasper strong club-like with a few fine hairs scattered over distal area.

#### Family EPHYDRIDAE

##### **Hydrellia enderbii** (Hutton)

SPECIMENS EXAMINED: Beeman Camp, 2-50 m, *Bulbinella*, 6-11. XII. 1961, 1 ♂, Gressitt; 20-30 m, *Bulbinella*, 12. XII. 1962, 1 ♂, Rennell. Beeman Cove, 4. III. 1962, 17 ex(\*), Clark. Beeman Hill, 100-180 m, 2. XII. 1961, 1 ♀; 11-16. XII. 1961, 5 ♂ ♂, 2 ♀ ♀, Gressitt. Beeman Lookout, 19. XII. 1961, 3 ♂ ♂, 7 ♀ ♀, Gressitt. Beeman Pt., sweeping, 28. II. 1963, 1 ♂, Wise. Camp Cove, sweeping long grass on edge of stream, 5. II. 1963, 2 ♂ ♂, 10 ♀ ♀, Wise. Garden Cove, 25. XI. 1961, 7 ♂ ♂, 17 ♀ ♀; on beach, 25. XI. 1961, 24 ♂ ♂, 17 ♀ ♀, Gressitt. Lookout Bay, Perseverance Harbor, sweeping, 3. II. 1963, 5 ♂ ♂, 3 ♀ ♀, Wise. Middle Cove, NW Bay, sweeping, 5. II. 1963, 1 ♀, 1 ♀, Wise. Monument Harbor, sweeping tussock above beach, 9. II. 1963, 1 ♀, Rennell. Moubray Hill, N. slopes, 16. II. 1963, 1 ♂, Wise. Mt. Dumas, lower slopes, sweeping, 6. II. 1963, 1 ♂, 1 ♀, Wise. Northwest Bay, beach, rocks, 29. XI. 1961, 4 ♀ ♀, Gressitt & Rennell; sweeping, 5. II. 1963, 3 ♀ ♀, Wise; sweeping, 30. XII. 1962, 1 ♀, Rennell. Shoal Pt., sedge and tussock about elephant seal wallow, 7. II. 1963, 1 ♂, Wise. St. Col Ridge, 180-280 m, 7. XII. 1961, 1 ♂, Gressitt; 210-250 m, 23. II. 1963, 2 ♀ ♀, Wise. Tucker Cove: 1-50 m, 21-29. XI. 1961, 2 ♀ ♀; grass in seal wallow, 21-25. XI. 1961, 1 ♂, 1 ♀; 4 m, Malaise trap, 27. XII. 1961, 1 ♂, 6 ♀ ♀; 1-50 m, elephant seal wallow, 12-17. XII. 1961, 21 ♂ ♂, 40 ♀ ♀; 1-50 m, 18-21. XII. 1961, 1 ♀; *Poa*, 18-21. XII. 1961, 1 ♀; 1-50 m, *Bulbinella*, 12-17. XII. 1961, 2 ♂ ♂, 3 ♀ ♀, Gressitt; sedge, 29. XII. 1961, 4 ♂ ♂, 2 ♀ ♀, Rennell; 0-100 m, swept above stream, 23. II. 1963, 2 ♂ ♂, Wise. Tussock by Six-foot Lake, Monument Harbor, 9. II. 1963, 1 ♀ (\*), Wise. Venus Bay, tussock, 2. II. 1963, 1 ♂ (\*), H. Wright; 2. II. 1963, 1 ♂, 1 ♀, Wise.

A new record for Campbell I.

**Scatella acutipennis** Harrison, n. sp. Fig. 6.

A blackish brown species with reduced wings. Body length about 2.0 mm; wing length about 1.0 mm long and 0.3 mm wide.

♂, ♀ *Head*: Arista black, pubescence minute. Antenna blackish brown, basal 2 segments blacker; segment 2 with distinct dorsal bristle. Front with large ocellar triangle and orbits shining blackish brown, areas between triangle and orbits dull black. Verticals, ocellars and fronto-orbitals all approximately equally strong. Face heavily dusted, parafacials silvery gray with tinge of green, median haired area of face often more golden dusted, this distinction in face coloration more marked in ♀♀. Vertical diameter of eye 4× width of cheek in same axis. Palpi blackish gray. *Thorax*: Blackish brown mesonotum with faint black vittae on median longitudinal axis, and on dorsocentral lines. One pair of acrostichals just anterior to transverse suture about 1/2 length of posterior dorsocentral. Short bristle on scutellum about 1/3 length of strong apical scutellars. Propleuron with few fine hairs ventrally. Prosternum bare. *Legs* grayish black with fore coxa gray. Fore femur with bristles on posteroventral surface, mid femur with bristles on apical 1/2 of anterior surface. Mid tibia with very weak preapical and slightly stronger apical. *Wings* (fig. 6): Shaded with distinct blackish brown and with unshaded areas as follows: middle of submarginal cell, apical 1/3 and basal 1/4 of 1st posterior cell, near base of 2nd posterior cell and at apical 1/4 of discal cell. Veins blackish brown and tendency to undulate about the clear areas of membrane. Costal breaks distinct, with distal break very deep. Costa ends at tip of 4th vein. Wing indices: costal about 6.6; 4th vein about 1.3; 4c about 0.4; 5× about 1.0. Halteres yellowish brown. *Abdomen*: Blackish brown. ♂ with tergite 5 enlarged, genital arch narrow dorsally, both genital arch and anal plate bare.

Holotype: ♂, Beeman Camp, 2–50 m, Campbell I., moss by beach, 18–21. XII. 1961, Gressitt (D. S. I. R.). Paratypes: All Campbell I. Courrejolles Penin.: 200 m, ground rocks moss around mollymawk colony, 14. XII. 1961, 3♂♂, 2♀♀, Gressitt; 220–230 m, cushion plant, mollymawk colony, 12. II. 1963, 1♂, Rennell; 19. X. 1962, 1♀, Rennell. Rocky Bay, beach, on seepage, 18. II. 1963, 1♂, 1♀, Wise. Beeman Beach, 1–2 m, among rocks at high tide level, 19. XII. 1962, 1♂, Rennell. Lookout Bay, beach, rocks and kelp on beach, 16–19. XII. 1961, 1♀, Gressitt. Other specimens examined: Courrejolles Penin.: 200 m, ground, rock moss around mollymawk nests, 14. XII. 1961, 1♀, Gressitt & Rennell; North slope, 220 m, under stones, mollymawk colony, 12. II. 1963, 1♀, Wise; 200 m, 3. XII. 1962, 1♀, Rennell. Rocky Bay, under weed on top big rock among rockhopper penguins, 20. I. 1962, 1♂, 1♀, Rennell.

Distinguished from all other New Zealand species except *S. brevis* n. sp. by having reduced wings. It differs from this latter species most markedly in the ♂ by the different wing shading and in the ♀ by the coloration of the face.

**Scatella brevis** Harrison, n. sp. Fig. 5.

A blackish brown species with slight greenish coloration and with reduced wings. Body length about 2.5 mm, wing length about 1.5 mm, wing width about 0.4 mm.

♂, ♀. *Head*: Arista blackish brown, pubescence minute. Antenna blackish brown, segment 3 lighter brown basally, segment 2 with several dorsal apicals, 1 larger than others. Front slightly dusted, orbits more heavily dusted. Verticals, orbitals and ocellars all equal-

ly strong. Face all heavily dusted with golden brown. Vertical diameter of eye about  $5\times$  width of cheek in same axis. Palpi black. *Thorax*: Dark brown, usually a pair of lighter colored vittae anteriorly on mesonotum. Pair of acrostichals just anterior to suture about  $3/5$  length of anterior dorsocentrals; basal scutellars just under  $1/2$  length of apical scutellars. Propleuron with few minute hairs. *Legs* blackish brown. Fore femur with strong bristles on posteroventral surface; mid femur with much shorter bristles on apical  $1/2$  of anterior surface; mid tibia with very weak dorsal preapical and strong ventral apical. *Wings* (fig. 5): ♂♂ with wings shaded over whole of surface, this shading distinctly darker on distal  $1/2$  of wing, a small area at middle of submarginal cell clearer than elsewhere on wing. ♀♀ with wing evenly shaded over whole surface and with clear white areas as follows: middle of submarginal cell, proximal  $1/4$  and distal  $1/3$  of 1st posterior cell, discal cell near cross vein and 2nd posterior cell near cross vein. Costal breaks distinct, with distal one very deep. Costa ends at 4th vein. Wing indices: costal about 8; 4th vein about 1.6; 4c about 0.3; 5x about 1.0. Halteres yellowish brown. *Abdomen*: Blackish brown. ♂ with tergite 5 enlarged. Genital arch and anal plates with only fine hairs.

Holotype: ♂, Courrejolles Penin., 200 m, Campbell I., rocks, moss around mollymawk nests, 14. XII. 1961, Gressitt (D. S. I. R.). Paratypes: Same data as holotype, 6♂♂, 6♀♀. Other specimens examined: Same data as holotype, 2♀♀.

Separated from all other New Zealand species except *S. acutipennis* n. sp. by the reduced wings and from this latter species by the dark distal shading in wing of ♂ and the golden dusting on face of ♀♀. Wings of ♀♀ are very similar to *S. acutipennis*. The sexual dimorphism in wing pattern parallels that described in this paper for *S. nitidifrons* and it appears that this reduced wing species—*S. brevis* has evolved from *S. nitidifrons*.

#### **Scatella nitidifrons** Tonnoir and Malloch Fig. 7.

**SPECIMENS EXAMINED:** Beeman Camp, 2–50 m, *Poa*, 6–11. XII. 1961, 1♀, Gressitt. Beeman Hill, 100–180 m, 6. XII. 1961, 1♀, Gressitt. Garden Cove, 25. XI. 1961, 2♀♀; beach, 25. XI. 1961, 2♂♂, 1♀, Gressitt. Lookout Bay, beach, elephant seal wallow, 16–19. XII. 1961, 1♂, Gressitt. Monument Harbor, nr. beach, 9. II. 1963, 1♀(\*), Wise. Moubray Hill, 200 m, 12. XII. 1961, 1♂, Gressitt. Northwest Bay, beach, 29. XI. 1961, 1♀; rocks, 29. XI. 1961, 1♂, Gressitt & Rennell. St. Col-Azimuth, 250 m, albatross carrion, 12. II. 1963, 1♀, Rennell. St. Col Ridge, 21–25. XI. 1961, 2♀♀; 26–30. XI. 1961, 2♀♀; 30. XI. 1961, 1♀; 1–50 m, 6–11. XII. 1961, 3♀♀, Gressitt. Tucker Cove, 4 m, Malaise trap, 27. XI–1. XII. 1961, 20♂♂, 30♀♀, Gressitt. Venus Cove, tussock, 2. II. 1963, 1♂, Rennell.

A new record for Campbell I. Also it is the first time that ♂♂ have been collected and the following is the description of the ♂.

♂: As in ♀ (Harrison, 1959) except: Wing (fig. 7) shaded with brownish gray, and darker on apical  $1/2$  of wing, veins dark brown. Small clear or white spots, not distinctly defined, near middle of submarginal cell, at basal  $1/4$  of 1st posterior cell, at apical  $1/5$  of discal cell and near base of 2nd posterior cell. No spots in apical  $1/2$  of 1st posterior cell.

Abdomen with tergite 5 nearly  $2\times$  length of 4. Genital arch narrow dorsally, anal plate with small bristles visible *in situ*.

There appears to be no doubt that, from the collecting data of this series, ♂♂ and ♀♀ are of the same species. There is thus sexual dimorphism present to an extent which is



greater than in other species of *Scatella* from the New Zealand subregion. Apart from sexual characters the main difference is in the shading of the wings. The ♂ has shading of the wing that is reminiscent of *S. nubeculosa* with its dark apical 1/2 of wing, but the differences are distinct and constant in the series available for study.

**Scatella nelsoni** Tonnoir and Malloch

Not represented in the present collection.

Family MILICHIIDAE

**Australimyza anisotomae** Harrison

SPECIMENS EXAMINED: Beeman Beach: 1–2 m, 6. IV. 1962, 1 ♂, Rennell; 16. XII. 1961, 1 ♂ (\*); 2–5 m, *Dracophyllum scoparium*, 12–17. XII. 1961, 1 ♂ (\*), Gressitt. Beeman Camp: 2–50 m, 26–30. XI. 1961, 1 ♀; *Coprosma*, 26–30. XI. 1961, 1 ♂; *Dracophyllum*, 12–17. XII. 1961, 3 ♂♂, 5 ♀♀; *Poa*, 6–11. XII. 1961, 1 ♀, Gressitt; 100 m, *Poa*, 3. VIII. 1962, 2 ♀♀; 30 m, sedge, 27. VII. 1962, 1 ♀; 40 m, *Dracophyllum*, 27. VII. 1962, 1 ♀; 20–30 m, *Bulbinella*, 12. XII. 1962, 1 ♀, Rennell; at light, 15. II. 1963, 1 ♂, Rennell. Beeman Cove, *Coprosma*, 25. VIII. 1962, 5 ♀♀ (\*), Clark. Beeman Hill, 100–180 m, *Anisotome*, 2. XII. 1961, 11 ♂♂, 18 ♀♀; *Bulbinella rossi*, 11. XII. 1961, 10 ♂♂, 7 ♀♀; *Dracophyllum*, 2. XII. 1961, 1 ♀; moss, Berlese funnel, 2–6. XII. 1961, 4 ♂♂, 7 ♀♀ (\*); 7 ex (\*), Gressitt. Beeman Lookout, 19. XII. 1961, 1 ♂, Gressitt; Courrejolles-Azimuth, *Bulbinella*, 14. XII. 1961, 1 ♂, Rennell. Garden Cove, elephant seal wallow, 25. XI. 1961, 2 ♂♂, 2 ♀♀; beach, 25. XI. 1961, 1 ♀; *Dracophyllum*, 25. XI. 1961, 1 ♀, Gressitt. Lookout Bay, beach, *Hebe* by shore, 16–19. XII. 1961, 2 ♂♂ (\*); *Dracophyllum*, 3. XII. 1961, 1 ♀; 16–19. XII. 1961, 7 ♂♂, 5 ♀♀, Gressitt; *Stilbocarpa polaris*, 4 pupae coll., 10. II. 1962, adults 7. III. 1962, 1 ♂, 1 ♀ (\*), Rennell; sweeping, 3. II. 1963, 1 ♂, Wise. Monument Harbor, nr. beach, 9. II. 1963, 1 ♂ (\*), Wise. Moubray Hill, 200 m, 12. XII. 1961, 1 ♂, 5 ♀♀, Gressitt. Mt. Eboulé, 150 m, 17. XII. 1961, 1 ♂, 1 ♀, Gressitt. Mt. Lyall, 350 m, 5. XII. 1961, 1 ♂, Gressitt. Northwest Bay, beach, rocks, 29. XI. 1961, 6 ♂♂, 1 ♀, Gressitt & Rennell; 5 m, tussock, 30. XII. 1962, 5 ♂♂, 10 ♀♀, 2 ♀♀ (\*), Rennell; sweeping, 5. II. 1963, 1 ♂, Wise. Perseverance Harbor, ex sedge scrub, 5. VIII. 1962, 2 ♂♂, 5 ♀♀, Clark. Rocky Bay, beach, rotting *Durvillea*, 28. XI. 1961, 1 ♀, Gressitt & Rennell. Shoal Pt., 0–10 m, tussock, 21. X. 1962, 1 ♂, 7 ♀♀; 0–30 m, tussock, 1. VII. 1962, 1 ♂, 3 ♀♀; 0–10 m, tussock, 29. VII. 1962, 13 ♂♂, 25 ♀♀, Rennell; 6. IX. 1962, 11 ♂♂, 7 ♀♀, Clark. Six-foot Lake, 2m, 10. XII. 1961, 1 ♂, Gressitt. St. Col Ridge, 180–280 m, *Bulbinella*, 7. XII. 1961, 7 ♂♂, 1 ♀; *Coprosma*, 4–7. XII. 1961, 5 ♂♂, 2 ♀♀, Gressitt. Tucker Cove, 1–50 m, *Dracophyllum*, 21–25. XI. 1961, 2 ♀♀ (\*); *Poa*, 21–25. XI. 1961, 1 ex (\*); 21–25. XI. 1961, 2 ♂♂, 2 ♀♀; 1–5. XII. 1961, 1 ♂, 1 ♀; 12–17. XII. 1961, 1 ♀; on rocks, 1–5. XII. 1961, 1 ♂, 1 ♀, Gressitt; 0–30 m, *Dracophyllum*, 7. VIII. 1962, 1 ♂, Rennell; 1–50 m, fern 6–11. XII. 1961, 1 ♀ Gressitt; sedge, 7. VIII. 1962, 1 ♂, 13. VIII. 1962, 1 ♂, Clark; 4 m, Malaise trap, 27. XI–1. XII. 1961, 1 ♂, 4 ♀♀; 1–3. XII. 1961, 4 ♂♂, 1 ♀; 3–5. XII. 1961, 1 ♀; 5–8. XII. 1961, 2 ♀♀; 16–18. XII. 1961, 2 ♂♂, Gressitt. Venus Cove, tussock, 2. II. 1963, 1 ♂, Rennell.

Family CALLIPHORIDAE

**Calliphora icela** (Walker)

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, ex fresh human excrement, 12–17. XII.

1961, 2♂♂, 1♀, Gressitt. Lookout Bay, beach, *Bulbinella*, 3. XII. 1961, 1♂, Gressitt. Northwest Bay, beach, rocks, 29. XI. 1961, 1♀, Gressitt & Rennell. Tucker Cove, 4 m, Malaise trap, 27. XI-1. XII. 1961, 1♂, 5♀♀; 5-8. XII. 1961, 4♂♂, 1♀; 16-18. XII. 1961, 2♂♂, 3♀♀, Gressitt.

A new record for Campbell I.

#### **Calliphora quadrimaculata** Swederus

**SPECIMENS EXAMINED:** Beeman Camp: 11. II. 1962, 1♀, Rennell; 2-5 m, 1-5. XII. 1961, 1♂; ex fresh human excrement, 12-17. XII. 1961, 4♀♀; 18-21. XII. 1961, 1♀, Gressitt. Garden Cove, 25. XI. 1961, 1♀; on elephant seal, 25. XI. 1961, 1♂, Gressitt. Tucker Cove: 1-5. XII. 1961, 1♀; 4 m, Malaise trap, 27. XI-1. XII. 1961, 1♂, 2♀♀; 1-3. XII. 1961, 1♂, 1♀; 3-5. XII. 1961, 1♀; 5-8. XII. 1961, 4♂♂, 6♀♀; 16-18. XII. 1961, 1♂, Gressitt; 2m, 6. VIII. 1962, caught as larvae and pupae, emerged 2-6. IX. 1962, 3♂♂, 2♀♀, 7 pupal cases, Rennell. Ex rat burrow, 5. IX. 1962, 2♀♀, Clark.

#### **Calliphora viridiventris** (Malloch)

**SPECIMENS EXAMINED:** Beeman Camp: 15 m, 15. X. 1962, 1♂, Wise; 2-50 m, 12-17. XII. 1961, 4♂♂, 2♀♀; ex fresh human excrement, 12-17. XI. 1961, 1♀, Gressitt. Beeman Cove, 18 m, 12. IX. 1962, 1♂; 20 m, 2. X. 1962, 1♂, Clark. Beeman Hill, 100-180 m, 2. XII. 1961, 3♂♂, 1♀, Gressitt; sweeping, 2. II. 1963, 1♀, Wise. Davis Pt., shore rocks, 1-3 m, 12. XII. 1961, 1♀, Gressitt. Middle Cove, NW Bay, sweeping, 5. II. 1963, 1♂, Wise. Mt. Azimuth, 350-450 m, 14. XII. 1961, 1♀, Gressitt & Rennell. St. Col Ridge, 180-280 m, 4-7. XII. 1961, 1♀, Gressitt. Tucker Cove: 1-50 m, 21-25. XI. 1961, 1♂, 1♀; 30. XI. 1961, 1♀; on beach, 1-5. XII. 1961, 1♂; 4 m, Malaise trap, 27. XI-1. XII. 1961, 10♂♂, 11♀♀; 1-3. XII. 1961, 1♂; 3-5. XII. 1961, 3♂♂, 3♀♀; 5-8. XII. 1961, 9♂♂, 14♀♀; 16-18. XII. 1961, 9♂♂, 5♀♀, Gressitt.

Additional characters are as follows: Eyes with widely separated fine hairs visible under high magnification. (Previously the eyes of this species were described as bare.) Eyes separated by about 1/3 or little over 1/3 width of head at vertex. Cheeks about 1/3 height of head. Ptilinal suture terminates below level of eye. Palps have black bristles. Arista just longer than antennal segment 3 and reddish brown. Legs bluish gray with tibiae, tarsi, and tip of femora yellowish orange. Six to 10 frontal bristles. Four humerals; 2 sternopleurals, anterior of pair slightly shorter than posterior.

### Family MUSCIDAE

#### **Coenosia filipennis** Lamb

**SPECIMENS EXAMINED:** Beeman Beach, *Hebe*, 31. XII. 1961, 1♂, Rennell. Beeman Camp, 30 m, flowering *Dracophyllum*, 3. VIII. 1962, 1♂, Wise. Beeman Cove, 18 m, 12. IX. 1962, 1♀, Clark. Beeman Hill, swept ex tussock and sedge, 2. II. 1963, 1♀, Wise; 190 m, 11. II. 1963, 1♂, Wise. Courrejolles Penin., tussock above mollymawk colony, 13. II. 1963, 1♀, Rennell. Garden Cove, 12 m, 6. IX. 1962, 3♂♂, 1♀, Clark. Mt. Dumas, W. slopes above Middle Bay, 100 m, *Bulbinella*, 31. VIII. 1962, 1♂, Clark. Rocky Bay, slope near, under rocks, 29. XI. 1961, 1♀, 1 pupa(\*), Gressitt. Perseverance Harbor, tussock sedge and scrub, 5. VIII. 1962, 1♂, Rennell. Shoal Pt., 0-100 m, tussock, 29. VII. 1962, 1♂, Rennell. Tucker

Cove, 0–100 m, sedge, 7. VIII. 1962, 1♂, 2♀♀, Rennell. 1943, 1♂, 1♀, J. H. Sorensen.

**Coenosia fumipennis** Lamb

Not represented in the present collection.

**Paralimnophora antipoda** Harrison

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, *Poa*, 6–11. XII. 1961, 1♂; 2–50 m, *Poa* by stream, 26–30. XI. 1961, 1♂, 1♀; *Bulbinella*, 26–30. XI. 1961, 2♀♀, Gressitt. Beeman Hill, 100–180 m, sooty albatross nest, 11–16. XII. 1961, 1♀(\*), Gressitt. Courrejolles Penin., 200 m, ground rocks, moss, around mollymawk nests, 14. XII. 1961, 1♀, Rennell. Lookout Bay, beach, rock and kelp on beach, 16–19. XII. 1961, 1♀, Gressitt. Mt. Lyall, 200–400 m, 3. XII. 1961, 1♂, Gressitt. Rocky Bay, *Anisotome*, 20. XII. 1961, 1♂; under rocks, 20. XII. 1961, 1♀, Gressitt. Shoal Pt., beach, 7. II. 1963, 1♀, Wise; 0–30 m, tussock, 1. XII. 1962, 1♀, Rennell. Tucker Cove: 1–50 m, 21–25. XI. 1961, 2♂♂, 1♀; 6–11. XII. 1961, 3♀♀; 4 m, Malaise trap, 27. XI–1. XII. 1961, 4♂♂; 18–21. XII. 1961, 1♀; 1–50 m, *Poa*, 26–30. XII. 1961, 1♀, Gressitt.

**Paralimnophora depressa** Lamb

SPECIMENS EXAMINED: Beeman Camp, 2–50 m, *Bulbinella*, 26–30. XI. 1961, 5♂♂, 2♀♀; sedge, 26–30. XI. 1961, 1♂; *Poa*, 12–17. XII. 1961, 1♂; *Dracophyllum*, 18–21. XII. 1961, 1♀; nr. Camp, 2. XII. 1961, bred ex pupa, 1♀, 1 pupal case, Gressitt. Courrejolles Penin., 200 m, ground rocks, moss around mollymawk nests, 1♂, 1♀, Gressitt & Rennell; 200 m, gray-headed mollymawk, 14. XII. 1961, 2♀♀, Gressitt. Lookout Bay, beach, rock and kelp, 16–19. XII. 1961, 7♂♂, 11♀♀; *Hebe*, 16–19. XII. 1961, 1♀; on kelp high water level, 30. XII. 1961, 1♀, Rennell; 3. XII. 1961, 2♂♂, 1♀, Gressitt. Mt. Azimuth, 350–450 m, 14. XII. 1961, 1♂, 1♀, Rennell. Mt. Eboulé, 150 m, 17. XII. 1961, 1♂, 1♀, Gressitt. Monument Harbor, nr. beach, kelp, 17. XII. 1961, 1♂, 4♀♀, Gressitt; 9. II. 1963, 1♀(\*); shore rocks, 9. II. 1963, 1♀, Wise. Northwest Bay, tussock, 30. XII. 1962, 2♀♀, Rennell; beach, rocks, 29. XI. 1961, 10♂♂, 7♀♀, Gressitt; sweeping, 5. II. 1963, 1♂, Wise. Rocky Bay, 10 m, penguin rookery, 18. II. 1963, 1♂, Wise; *Anisotome*, 20. XII. 1961, 2♂♂, Gressitt. Shoal Pt., 0–10 m, tussock, 21. X. 1962, 1♂, 1♀, Rennell. Tucker Cove: beach, 4. XII. 1961, 4♂♂, 2♀♀; 1–50 m, *Poa*, 18–21. XII. 1961, 1♂; 1–50 m, 21–25. XI. 1961, 4♂♂, 1–5. XII. 1961, 4♀♀; 6–11. XII. 1961, 4♂♂, 12–17. XII. 1961, 5♂♂, 2♀♀; 4 m, Malaise trap, 27. XI–1. XII. 1961, 10♂♂, 7♀♀; 3–5. XII. 1961, 1♀; 16–18. XII. 1961, 1♀, Gressitt. Venus Cove, tussock, 2. II. 1963, 1♂; swept shore, 18. II. 1963, 1♂, Wise.

From this series of specimens the following additional notes on the species are made. Palps normally light yellow but sometimes brown. Four postsutural dorsocentrals normally, one specimen of each sex has 3 such bristles on one side and the normal 4 on the other; several specimens have the 2nd bristle, posterior to suture, weaker than the others.

**Limnophora aureifacies** (Malloch)

SPECIMENS EXAMINED: Beeman Cove, 4. III. 1962, 17 ex(\*), Clark. Beeman Hill, sweeping, 11. II. 1963, 3♀♀, Wise. Garden Cove, beach, 29. XI. 1961, 1♂, Rennell; Lookout Bay, beach, 3. XII. 1961, 1♀, Gressitt. St. Col Ridge, 180–280 m, *Coprosma*, 7. XII. 1961, 1♂, Gressitt. Tucker Cove: 4 m, Malaise trap, 27. XI–1. XII. 1961, 7♂♂, 9♀♀; 1–3. XII.

1961, 11 ♂♂, 6 ♀♀; 3-5. XII. 1961, 7 ♂♂; 5-8. XII. 1961, 3 ♂♂; 16-18. XII. 1961, 29 ♂♂, 13 ♀♀; 18-21. XII. 1961, 16 ♂♂, 9 ♀♀; 1-50 m, *Coprosma*, 1-5. XII. 1961, 1 ♂; on beach, 1-5. XII. 1961, 1 ♀; 1-5. XII. 1961, 1 ♂, Gressitt. Tucker Cove—St. Col Ridge, 30. XI. 1961, 1 ♂, Gressitt.

A new record for Campbell I.

#### *Limnophora brunneivittata* Harrison

SPECIMENS EXAMINED: Beeman Camp, 2-50 m, *Dracophyllum*, 18-21. XII. 1961, 1 ♀, Gressitt. Beeman Cove, 20 m, 2. X. 1962, 1 ♂, Clark. Courrejolles Pen., 19. X. 1962, 1 ♂, 1 ♀, Clark. Garden Cove, 25. XI. 1961, 1 ♂, Gressitt. Lookout Bay, beach, 3. XII. 1961, 2 ♀♀, Gressitt. Mt. Lyall, 200-400 m, 3. XII. 1961, 1 ♂, 1 ♀, Gressitt. Moubray Hill, 200 m, 12. XII. 1961, 1 ♂; *Coprosma*, 12. XII. 1961, 1 ♀, Rennell. Northwest Bay, beach, rocks, 29. XI. 1961, 1 ♀, Gressitt & Rennell. Rocky Bay, 20. XII. 1961, 1 ♀, Gressitt. Six-foot Lake, 2 m, *Anisotome*, 10. XII. 1961, 1 ♀, Gressitt. Tucker Cove: beach, 21. XII. 1961, 1 ♀; 1-50 m, *Bulbinella*, 1-5. XII. 1961, 1 ♂; 18-21. XII. 1961, 1 ♀; 1-50 m, 21-25. XII. 1961, 1 ♂, 2 ♀♀; 6-11. XII. 1961, 1 ♂, 1 ♀; 2-50 m, 26-30. XI. 1961, 3 ♀♀, *Poa*, 26-30. XI. 1961, 1 ♂; 1-50 m, beach, 1-5. XII. 1961, 1 ♀, Gressitt; 6-30 m, fern, 6. VIII. 1962, 1 ♂, Rennell; 4 m, Malaise trap, 27. XI-1. XII. 1961, 4 ♂♂; 1-3. XII. 1961, 1 ♂, 1 ♀; 16-18. XII. 1961, 1 ♀, Gressitt. 1943, 1 ♀, J. H. Sorensen.

This series shows a variation in general color and distinctness of vittae which could broaden the original description.

#### *Limnophora brunneinota* Harrison

SPECIMENS EXAMINED: Beeman Beach, 2-50 m, *Bulbinella*, 26-30. XI. 1961, 1 ♂, Gressitt. Beeman Hill, 100-180 m, 11-16. XII. 1961, 1 ♀, Gressitt. Courrejolles, E. slope, 240 m, 13. II. 1963, 1 ♂, Wise. Garden Cove, 25. XI. 1961, 2 ♂♂, elephant seal wallows, 25. XI. 1961, 1 ♀, Gressitt. Lookout Bay: beach, 3. XII. 1961, 3 ♂♂; *Bulbinella*, 3. XII. 1961, 2 ♂♂; elephant seal wallow, 1. XII. 1961, 1 ♀; kelp on beach, 16. XII. 1961, 1 ♀, Gressitt; 3. II. 1963, 1 ♂; 2. III. 1963, 1 ♂, Wise. Mt. Lyall, 200-400 m, 3. XII. 1961, 3 ♂♂, 2 ♀♀, Gressitt. Moubray Hill, 200 m, 12. XII. 1961, 2 ♂♂, 1 ♀; *Bulbinella*, 12. XII. 1961, 1 ♂, Gressitt. Northwest Bay, beach, 29. XI. 1961, 1 ♂, Gressitt & Rennell. Shoal Pt., sedge and tussock about elephant seal wallows, 7. II. 1963, 1 ♂, Wise. Rocky Bay, 20. XII. 1961, 1 ♀, Gressitt. Six-foot Lake, 2 m, *Anisotome*, 10. XII. 1961, 3 ♂♂, 1 ♀, Gressitt. St. Col Ridge, 180-280 m, moss, 10. XII. 1961, 1 ♀, Gressitt; 150-200, 10. X. 1962, 1 ♀, Rennell. Tucker Cove: 1-50 m, grass nr. seal wallow, 21-25. XI. 1961, 1 ♂, 1 ♀; *Poa*, 21-25. XI. 1961, 1 ♀; 26-30. XI. 1961, 4 ♂♂; 1-5. XII. 1961, 3 ♂♂, 1 ♀; St. Col Ridge, 30. XI. 1961, 1 ♀; 0-100 m, sedge, 7. VII. 1962, 3 ♂♂, 1 ♀; 4 m, Malaise trap, 1-3. XII. 1961, 1 ♂; 3-5. XII. 1961, 1 ♂; 5-8. XII. 1961, 1 ♂; 16-18. XII. 1961, 1 ♂, 1 ♀, Gressitt.

This large series has been tentatively determined as this species. It shows that the variation in the species is very wide and should serve as a most useful basis for any revision of the genus *Limnophora* in New Zealand.

#### *Limnophora minuta* Harrison

Not represented in the present collection.

**Limnophora sorenseni** Harrison

Not represented in the present collection.

*Undetermined species* :

The following specimens are at present undetermined as to species because they are either damaged or the series is too small.

**Limnophora sp. A.**

SPECIMENS EXAMINED : Northwest Bay, beach, rocks, 29.XI.1961, 3♂♂, Gressitt & Rennell.

**Limnophora sp. B**

SPECIMENS EXAMINED : Rock Bay, rockhopper penguin nests, 20. XII. 1961, 1♂, Rennell.

**Limnophora sp. C**

SPECIMENS EXAMINED : Middle Bay, beach, 29. XI. 1961, 1♀, Gressitt.

## Family HIPPOBOSCIDAE

**Melophagus ovinus** (Linnaeus)

SPECIMENS EXAMINED : Camp Cove, sheep, 25.XI.1961, 13 ex, Gressitt ; Monument Harbor, sheep, 10. XII. 1961, 2 ex, Gressitt.

## REFERENCES

- Hardy, D. Elmo. 1962. Insects of Macquarie Island. Diptera : Coelopidae. Pacific Ins. 4 (4) : 963-71.
- Harrison, R. A. 1955. Report on the Diptera of Auckland and Campbell Islands. (Part of Cape Exped. No. 20). Rec. Dominion Mus. 2 (4) : 205-31.
- 1959. Acalypterate Diptera of New Zealand. N. Z. Dept. Sci. Indust. Res. Bull. 128, 382 pp. Wellington.
- Kohn, M. H. 1962. Insects of Macquarie Island. Diptera : Dolichopodidae. Pacific Ins. 4 (4) : 959-62.
- Oldroyd, H. 1955. A wingless dolichopodid (Diptera) from Campbell Island. (part of Cape Exped. No. 20). Rec. Dominion Mus. 2 (4) : 243-46.
- Richards, O. W. 1955. A species of Sphaeroceridae (Diptera) from Campbell Island. (part of Cape Exped. No. 20). *Ibid.* 2 (4) : 241.