Pacific Insects 4 (4): 963–971 December 15, 1962

INSECTS OF MACQUARIE ISLAND. DIPTERA: COELOPIDAE[1]

By D. Elmo Hardy

CHAIRMAN DEPT. OF ENTOMOLOGY, UNIVERSITY OF HAWAII

A thorough collection of the Macquarie Island Coelopidae has been made by K. C. Watson and John Calaby, Commonwealth Scientific and Industrial Research Organization, Wildlife Survey Section, Canberra, Australia and by Dr. J. L. Gressitt, Bishop Museum, Honolulu. Messrs. Watson and Calaby were members of the 1960–61 Australian National Antarctic Research Expedition and their work was done at the A. N. A. R. E. station. Mr. Watson is preparing a comprehensive report on the terrestrial arthropods of Macquarie Island and his study will contain much valuable biological and ecological information.

The collection made available to me consisted of over 1,200 specimens of adults and larvae and I am grateful to these men for having had the privilege of studying this important series.

Since much of the published information on Coelopidae is quite unreliable, it has been extremely valuable to have an opportunity to work over a large series of specimens. The species concepts in this family have been notoriously confused in the literature due largely to the rather wide range of variation that is often found in the chaetotaxy and in the size of the individuals. It has been demonstrated, at least in species of *Coelopa* Meigen, that the density and extent of development of the body hairs and bristles is often directly dependent upon body size, with the larger individuals being more densely haired and the smaller more sparsely haired. Several of the chaetotaxic characters, such as the size of the humeral and notopleural bristles, which have previously been used as diagnostic characters for separating species have been found to be unreliable.

The family Coelopidae has been treated in detail in the outstanding work of Dr. R. A. Harrison (1959). With some exceptions, this deals rather adequately with the Macquarie Island species. It is necessary, however, to modify some of the names; the key to species of *Coelopa* is not reliable; and a few minor descriptive details need to be corrected. Dr. Harrison recorded the following four species from Macquarie Island: *Apetaenus litoralis* Eaton; *Coelopa curvipes* Hutton; *C. nigrifrons* Lamb; and *Coelopella plebeia* Malloch. I am convinced that only three species occur on this island: *Apetaenus watsoni* n. sp.; *Coelopa* (*Fucomyia*) *nigrifrons* Lamb; and *C.* (*Coelopella*) *curvipes* Hutton. I am treating *Coelopella* Malloch as a subgenus under *Coelopa* Meigen and *Coelopella plebeia* Malloch as a synonym of *C. curvipes* Hutton.

1. Published with the approval of the Director of the University of Hawaii Agriculture Experiment Station as Technical Paper No. 595.

The drawings have been prepared by Mr. Ian Macdonald, University of Hawaii, except for the whole drawing of *Apetaenus watsoni* which was made by Mrs. Paula Exton, with some modifications made by Miss Elizabeth Twigg-Smith.

It has been necessary to have the type of all of the species involved restudied in order to clarify the species concepts. For their most valuable assistance in this regard, I am indebted to the following entomologists: Harold Oldroyd, British Museum (Natural History); George Steyskal, United States Department of Agriculture, Agricultural Research Service, United States National Museum; Dr. R. A. Harrison, Lincoln College, Canterbury, New Zealand; and K. A. J. Wise, Bishop Museum (c/o Canterbury Museum, Christchurch, New Zealand).

Key to adult species oe Coelopidae of Macquarie Island

(Adapted from Harrison, p. 94)

1. Wings normal in development. Mesopleura bare. (**Coelopa** Meigen) 2
   Wings rudimentary, less than 1/2 as long as thorax. Mesopleura haired... **Apetaenus** Eaton
2. Metasternum bare. Both notopleural bristles well developed and approximately equal in length. Lower lateral margin of face with a polished black spot in both sexes (fig. 2b). Middle basitarsus of ♂ with a row of 6–10 short, thick ventral spines which extend nearly 3/4 length of segment (fig. 2a). Male claspers not bilobed, aedeagus short and blunt (fig. 3c) ..... (**Coelopella**) **curvipes** Hutton
   Metasternum haired. Anterior notopleural bristles short in the ♂, less than 1/2 length of posterior notopleurals. Face lacking a polished spot. Middle basitarsus with 2 preapical anteroventral spines (fig. 2f). Male claspers bilobed, aedeagus strap-like (fig. 3a)..... (**Fucomyia**) **nigrifrons** Lamb

Key to mature larvae

1. The posterior spiracular plates are large, very densely fringed around margins and not situated on strong prominences. No tubercles present on apical segment and body spiculated only on ventral margins of segments..... **Coelopa** Meigen... 2
   Posterior spiracular plates tiny, not noticeably fringed, and situated on strong prominences (fig. 4j). Two pairs of tubercles situated below spiracular tubes and body densely spiculated as in figure 41..... **Apetaenus watsoni** n. sp.
2. Posterior spiracles scarcely elevated and situated rather close together (fig. 4f). Anterior spiracles consist of about 9 openings in a row (fig. 4g) .... **Coelopa** (**Coelopella**) **curvipes** Hutton
   Posterior spiracles distinctly elevated and widely spaced as in fig. 4b. Anterior spiracles rather stellate in arrangement (fig. 4c) ..... **Coelopa** (**Fucomyia**) **nigrifrons** Lamb

Genus **Apetaenus** Eaton

Apetaenus Eaton, 1875, Ent. Mon. Mag. **12**: 58.

The members of this genus are readily differentiated by the abbreviated wings and by the pilose mesopleura. The arista is also characteristic, the basal portion is minutely pubescent and the apical portion is bare.

Type species: *Apetaenus litoralis* Eaton.

The family position of *Apetaenus* (at least based upon *watsoni*) may be slightly confused since the prosternum is distinctly, though narrowly, joined on each side to the propleuron (fig. 2c). This character was used by Malloch (1933) as the basis for erecting Helcomyzidae as a full family. Harrison (*op. cit.*: 90) follows this classification and states that the propleuron and prosternum are "united as one continuous heavily chitinised plate." In *A. watsoni* the connection is narrow and even though it appears to be distinctive from other Coelopidae in this regard, I would hesitate to change its family position. The postocellar bristles are parallel or divergent in Helcomyzidae, in Coelopidae they are convergent.

Apetaenus watsoni Hardy, n. sp. Figs. 1, 2, c–d, 3, e–f, 4, i–l.

This is the species which was recorded by Womersely (1937 : 75) as *A. litoralis* Eaton from Macquarie I. This record was based upon two specimens which Womersley had studied. The record was repeated by Harrison (1959 : 98–99). From the original description, the specimens from Macquarie seem to agree with *litoralis*. They differ, however, in several important details from the redescription of *litoralis* (based upon the type) made by Harrison (*loc. cit.*). He said that the vertical diameter of the eyes is 1.5 to 2.0× greater than the width of the cheek in the same axis. In *watsoni* the vertical diameter of the eye is slightly greater than the width of the cheek in the same axis (fig. 1). He said the anterior presutural dorsocentral bristles of *litoralis* are almost as strong as the posterior bristles. In *watsoni* only the prescutellar pair of dorsocentral bristles are present. He said the notopleural bristles are small and no humerals are present (the latter was evidently an error although he used the absence of humerals as a generic character in his key (*op. cit.*:

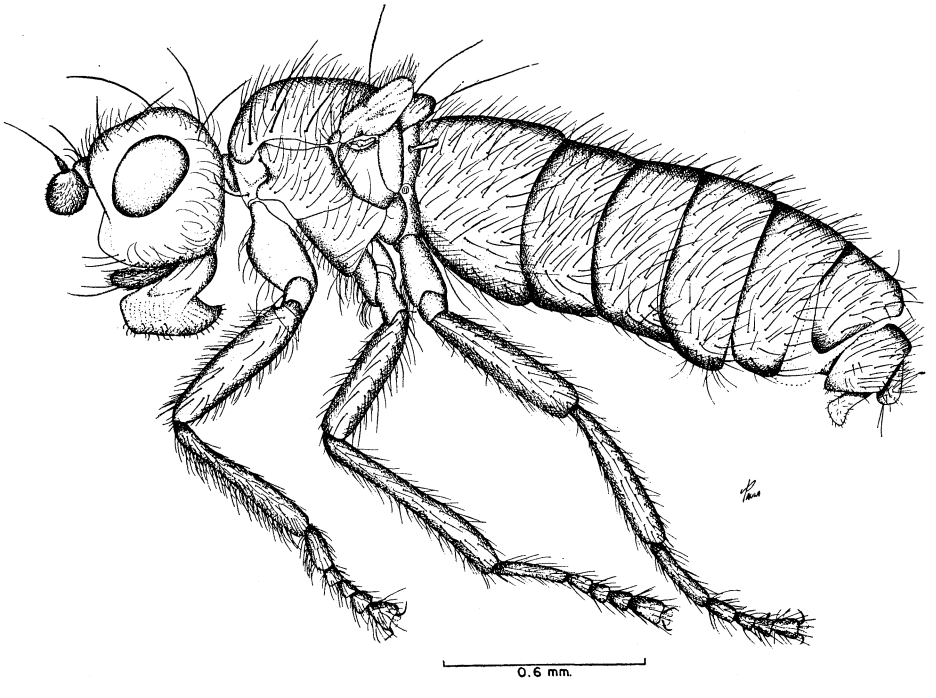

Fig. 1. *Apetaenus watsoni* n. sp.

94), in his description of the genus he said "2 pairs strong humerals." Harold Oldroyd, British Museum, has studied the type and the humerals are present. *A. watsoni* has well-developed notopleurals. Harrison described the thorax and abdomen of *litoralis* as being reddish-brown, lightly gray dusted with strong bristles present on most of the abdominal terga. *A. watsoni* is entirely black, covered with gray pollen. The abdomen is hairy but not bristly. Harold Oldroyd has compared specimens from Macquarie with the type of *litoralis* and reported that he feels that these are not conspecific with *litoralis*. He said, "Eaton's specimen is more bristly than yours. The thoracic bristles are much stronger, and the abdomen has long, strong bristles. In contrast, your specimens look hairy rather than bristly. The stump wings of Eaton's specimen have shorter, softer costal hairs than have your specimens." He also indicated that the eye of the type of *litoralis* is distinctly larger than in specimens from Macquarie. He provided a sketch of the head of the type which fits the characteristics described by Harrison.

A. litoralis Eaton (1875, Ent. Mon. Mag. **12**: 58) was described from Kerguelen Is. which is 3.555 nautical miles or 4,095 statute miles from Macqarie Island.

Entirely dark brown to black species, rather densely gray pollinose.

Male: A densely hairy species (fig. 1). *Head* rather quadrate in shape as seen in direct lateral view, approximately as high as long. Antenna entirely black. Arista microscopically pubescent. Moderately strong dorsal bristle present near base of antennal segment 2. Head bristles moderately strong (fig. 1). Postocellar bristles cruciate. Vertical diameter of eye approximately 1/3 greater than diameter of cheek measured in same axis. Hind portion of head moderately swollen, portion from eye margin to cervix almost equal in length to the longitudinal diameter of eye. Each palpus with 2 small preapical ventral bristles in addition to numerous setae around margin. *Thorax* entirely gray pollinose, or microscopically pubescent, slightly brownish gray on dorsum. Rather densely hairy with a moderately developed humeral bristle (this is scarcely larger than surrounding hairs on some specimens); with well-developed presutural, notopleural, supraalar, dorsocentral and humeral bristles. Prominent bristles also present on following portions of the pleura; 1 at lower margin of propleuron; 1 at upper portion of each sternopleuron; and 1–3 or 4 moderately developed bristles at hind portion of each mesopleuron, scarcely differentiable from the long hairs which extend over this portion. Posterior notopleural bristle slightly smaller than anterior bristle. Prosternum as in fig. 2c. *Wings* approximately 1/2 as long as thorax. Distal break of costa near wing apex. Venation obscured, 2 main veins which fork at their apices (fig. 2d) apear to be developed. Costal margin thickly black setose and 1 rather prominent bristle situated near basal 1/3 (fig. 2d). Halteres yellow and nearly 1/2 as long as wing. *Legs* entirely dark brown to black covered with gray pollen and rather thickly black haired. No distinctive features on legs; front basitarsus slightly less than 1/3 as long as tibia and approximately equal in length to the next 3 tarsal segments. Pretarsus rather broad and flattened dorsoventrally, equal or slightly longer than combined lengths of segments 3+4. Mid basitarsus with several short, black ventral setae near base but no distinct spines. Hind basitarsus with a dense brush of fine setae over venter. *Abdomen* entirely black in ground color, densely gray pollinose and thickly haired but with no distinct bristles present. Abdomen approximately 1/3 longer than the combined lengths of head and thorax. Genitalia distinctive (fig. 3e). Male claspers large, conspicuous, and strongly clavate. Anal plates 2× higher than long and aedeagus short and incon-

spicuous, usually not protruding beyond bases of claspers. Length: Body, 2.75–2.9 mm; wings, 0.3 mm.

Female: Similar to ♂ in most respects. Notopleural bristles somewhat smaller, however; posterior bristle about 2/3 as long as anterior. Characteristics of posterior portion of abdomen as shown in fig. 3f. Length: Body, 2.85–3.0 mm.

The larvae of *A. watsoni* are much smaller, darker in color than those of other Coelopidae which occur on Macquarie Island; the entire integument is densely spiculated (fig. 41). The posterior spiracles are situated on strong prominences and the openings are much smaller than those of other species from Macquarie and lack the conspicuous fringes around the margins (fig. 4j). Also, two pairs of tubercles are present below the spiracular tubes and a row of small bumps extend over each tergum, these are more prominent on the last two or three abdominal segments. The anterior spiracles are protruded, and branched, rather tree-like as in fig. 4k. The cephalo-pharyngeal skeleton is as in fig. 4i.

Holotype ♂, allotype ♀, Hurd Point, Macquarie Island, 17. II. 1961, M/61/In/118 (K. Watson). 138 paratypes (sexes about evenly distributed) from the following localities on Macquarie Island and all collected by K. Watson: same data as type; Aerial Cove, 9. XII. 1960–28. XI. 1961, M/61/In/39, M/61/In/327 and M/61/In/433; East Coast, 9. I. 1961, M/61/In/13; Hasselborough Bay, 14. I. 1961, M/61/In/26; Nuggets Point, 2. III. 1961, M/61/In/138; Garden Cove, 25. III. 1961–18. IX. 1961, M/61/In/168 and M/61/In/343; North Head, 15. XII. 1960–27. VI. 1961, M/61/In/264 and M/61/In/16; Catch-me Point, 13. IV. 1961–8. V. 1961, M/61/In/227 and M/61/In/195; and Buckles Bay, I. XII. 1961.

A large series of adults and larvae are also present in alcohol, from the following localities: Aerial Cove, 9. XII. 1960, M/60/In/4a, (J. H. Calaby); 24. I. 1961, M/61/In/77, *Colobanthus muscoides*; 23. II. 1961, M/61/Z/16, Algae on coastal rocks; Caroline Valley, 17. II. 1961, M/61/In/114 and M/61/In/115, under rookery stones; Hurd Point, 17. II. 1961, M/61/In/118, under rookery stones; North Head, 27. II. 1961, M/61/Z/21, under rookery rocks; 6. X. 1961, M/61/Z/193, under rookery stones; Nuggets Point, 2. III. 1961, M/61/Z/29, coastal rocks; 19. III. 1961, M/61/Z/51, coastal rocks; Garden Cove, 18. IX. 1961, M/61/Z/178 and M/61/Z/179, coastal rocks; 24. XI. 1961, M/61/Z/217, coastal rocks; miscellaneous, M/61/Z/247.

The type, allotype and a large share of the paratypes have been returned to K. C. Watson to be deposited in the collection of the Commonwealth Scientific and Industrial Research Organization, Canberra, Australia. Paratypes are being deposited in the collections of Bishop Museum; United States National Museum; British Museum (Natural History); and the University of Hawaii.

Genus **Coelopa** Meigen

Coelopa Meigen, 1830, Syst. Beschr. Zweifl. Insekt. **6**: 8.

The members of this genus are characterized by having well-developed wings; the mesopleura bare; and the stem vein of the wing bare. In the typical subgenus, the ventral surface of vein R1 is haired; in the subgenus *Fucomyia* Haliday it is bare. Typically the metasternum is haired, in the subgenus (genus of other authors) *Coelopella* Malloch it is bare. I am reducing *Coelopella* Malloch to a subgenus of *Coelopa*. This is a new combination.

Type of the genus *Coelopa*, *C. pilipes* Haliday.

Type of the subgenus *Fucomyia*, *C. frigida* (Fabricius).

Type of the subgenus *Coelopella*, *C. curvipes* Hutton (=*Coelopella plebeia* Malloch).

The 2 species of *Coelopa* from Macquarie fit in the subgenera *Fucomyia* and *Coelopella* respectively.

Coelopa (Fucomyia) nigrifrons Lamb Figs. 2, e–f, 3, a–b, 4, a–d.

Coelopa nigrifrons Lamb, 1909, The Subantarctic Islands of New Zealand, **1**: 140.

Harrison's description (*loc. cit.*: 108) is adequate except for some minor details. The species is similar in most respects to *C. (Coelopella) curvipes* Hutton and is best differentiated by the hairy metasternum; by the details of the mid basitarsi and the genitalia of the males; and by the absence of the polished black spot on the anterior lower margins of the face in *nigrifrons*; also, the anterior notopleural bristles are short in the male, less than half the length of the posterior notopleurals. In the male, the middle basitarsus has two preapical anteroventral spines (fig. 2f). The male claspers in *nigrifrons* are distinctly bilobed and the aedeagus is long and strap-like (fig. 3a). The female specimens have well-developed humeral and notopleural bristles and would run to *debilis* Lamb in Harrison's key (1959: 105). The mature larvae are differentiated by having the posterior spiracles distinctly elevated and widely separated (fig. 4b). Also by having the anterior spiracles rather stellate in arrangement (fig. 4c).

The specimens on hand vary in length from 4.0–7.0 mm. Harrison recorded the body length as 3.0–6.0 mm.

Type locality Macquarie Island, 1894. Lectotype in the British Museum (Natural History).

At my request Harold Oldroyd restudied the lectotype male of *nigrifrons* in the British Museum and confirmed that my concept of this species is correct.

Over 500 specimens of adults and larvae are on hand from the following localities on Macquarie Island, unless otherwise indicated they were collected by Keith Watson:

North Head	31. V. 1961	M/61/In/255, M/61/Z/95	larvae under kelp
Hurd Point	9. VIII. 1961 to 26. X. 1961	M/61/In/364, M/61/Z/142, M/61/In/390	larvae under kelp and adults reared from larvae found under beach stones
Radio Beach	26. V. 1961	M/61/In/289, M/61/Z/93	larvae under kelp
Nuggets Point	19. III. – 5. VI. 1961	M/91/Z/131, M/61/Z/51	larvae under kelp
Hasselborough Bay	26. VI. 1961	M/61/In/346	
Aurora Point	18. VII. 1961	M/61/Z/124	larvae under kelp
Gadget Gully	7. III. 1961	M/61/In/360	
Camp Beach	17. V. 1961	M/61/In/291	Adults reared from larvae from elephant seal carcase
Garden Cove	16. XII. 1960		Adults on kelp

Mawson Point	18. VII. 1961 and 18. VIII. 1961	M/61/In/354	Adults reared from larvae in kelp
Isthmus	8. III. 1961 and	M/61/Z/47	larvae in elephant seal carcase (Watson)
	6. XII. 1960		Adults (J. H. Calaby)

The following were collected by J. L. Gressitt: near Isthmus, 10. XII. 1960; Green Gorge, 1–5 m, 4–7. XII. 1960; North Beach, 4–7. XII. 1960; North-east Coast, 1–3 m, 7. XII. 1960; North Head, east side, 4–7. XII. 1960; and #1 Gully, 4–7. XII. 1960.

Coelopa (Coelopella) curvipes Hutton, NEW COMBINATION Figs. 2, a–b, 3, c–d, 4, e–h.

Coelopa curvipes Hutton, 1902, New Zealand Inst., Trans. **34**: 172.
Coelopella plebeia Malloch, 1933, Ann. Mag. Nat. Hist. **11** (10): 348. **New Synonymy.**
Coelopa macquariensis Womersely, 1937, Rep. Brit. Aust. N. Z., Antarct. Exped. B **4**: 72.

The type male of *Coelopa curvipes* Hutton has been restudied by K. A. J. Wise, Canterbury Museum, who confirmed that the metasternum is bare and the mid basitarsus has a longitudinal row of ventral spines extending 2/3–3/4 the length of the segment. Specimens of *curvipes* from the Macquarie Islands have been compared with the type of *Coelopella plebeia* Malloch by George Steyskal, Insect Identification and Parasite Introduction Research Branch, United States Department of Agriculture, who confirmed my conclusion that they are conspecific.

In erecting his genus *Coelopella* Malloch indicated that this is very similar "in almost every respect to *Coelopa curvipes*, differing in the generic characters as indicated above [the metasternum bare in *Coelopella*, and apparently haired in *curvipes*:—arista shorter, not noticeably longer than the eye, while in *curvipes* it is very distinctly longer, distinctly but more closely pubescent; thorax usually with three narrow and inconspicuous, brown vittae, which merge posteriorly, the brown colour covering almost all of the scutellum in the male. Mid-metatarsus of the male with a complete series of anteroventral black spines, while in *curvipes* the spines are confined to the apical half or less of that surface. In other respects similar to *curvipes*, though the hairs on the legs are usually short."

I am not sure of the value of some of Malloch's characters. In the large series of specimens (of *curvipes*) on hand the arista is distinctly shorter than the eye. The three narrow inconspicuous brown vittae on the mesonotum appear for the most part to depend on the condition of the specimen. The middle basitarsus of the male appears to vary somewhat in the number of black anteroventral spines having from 6 to 10 on the specimens examined and usually extending over the apical 2/3 of the segment, but sometimes over almost the entire length of the basitarsus. I see nothing significant in the length of the hairs on the legs and find this character for the most part dependent upon the size of the specimen.

Malloch (p. 348) indicated that he had two New Zealand and one Australian species of *Coelopella* but was describing only *plebeia*.

The synonymy of *macquariensis* Womersley under *curvipes* was made by Harrison (1959: 107) who studied the types of both species and stated that "The distinctions made by Womersely (1937) between *C. curvipes* and *C. macquariensis* are not substantiated from an examination of the type material of both species. The holotype of *C. curvipes* has spines

on the whole length of the antero-ventral surface of the basal segment of the mid tarsus. The extent of the spines on this segment was the most important character used by Womersley (1937). All specimens of *C. macquariensis* examined agree with the holotype of *C. curvipes* and the synonymy must be made. Some of the other specimens in the series of *C. curvipes* examined have spines of this tarsal segment on the apical half or apical third and these are regarded here as variants." It is obvious that Womersley's figures of the adult of *C. macquariensis* (figs. 10,a–b, *op. cit.*) are of *curvipes*. I feel certain, however, that the drawings of the larvae (figs. 11,a–g) were actually made from specimens of *nigrifrons* (refer to my figures 4, e–h). Womersley (p. 72) in his description of *C. macquariensis* stated that the metasternum is haired; I feel certain that he was actually confused with the mesosternum and that he overlooked the bare metasternum; the latter character is sometimes very difficult to see.

The description given by Harrison (pp. 107–108) is adequate except that the development of the humeral bristles seems to be extremely variable in this species and is not reliable as a species character. Many of the specimens from Macquarie Island will key to *dubilis* in Harrison's key by having the humeral bristle normal, equal to or just slightly less than the length of the posterior notopleural bristle. Other specimens have the humeral bristle very poorly developed, rudimentary and about 1/4 as long as the posterior notopleural. Also, Harrison failed to mention the bare metasternum and he did not describe or figure the genital characters, or the larvae.

The shining black spot at the lower lateral margin of the face (vibrissal angles) appears to be distinctive for *curvipes* (fig. 2b). This character is especially useful in separating specimens from those of *nigrifrons* Lamb, especially females and specimens where the metasternum cannot be clearly seen. The middle basitarsus of the male is distinctive because of the presence of a row of six to ten strong black anteroventral spines extending at least 3/4 the length of the segment. The male genitalia are distinctive as shown in fig. 3c. The clasping structures are slender, rather strongly curved on the posterior margin. The aedeagus is short and thick, scarcely protruded beyond the genital chamber. The females are much like those of *nigrifrons*. I see no reliable differences in the bristling and the easiest way to separate them is by the bare metasternum and the shining black spot on each side of the lower portion of the face. The apex of the abdomen of the female of *curvipes* is as in fig. 3d.

In the specimens at hand, the male specimens vary in length from 3.6 to 7.0 mm for the body and 4.0–8.0 for the wings.

The posterior spiracles of the larvae are scarcely raised and each has a dense fringe around the margin (fig. 4f). The anterior spiracles have about nine openings arranged in a straight row (fig. 4g).

The type locality of *curvipes* is Auckland Island. The type is in the Canterbury Museum.

The type of *plebeia* Malloch is from Invercargill and is in the United States National Museum.

C. macquariensis Womersley was described from the Macquarie Islands and the type is in the British Museum (Natural History).

Over 500 specimens of adults and larvae are present from the following localities on Macquarie Island. Unless otherwise indicated they were collected by Keith Watson:

Camp Beach	10. IX. 1961	M/61/In/406
	17. V. 1961 to	M/61/In/320,
	3. XI. 1961	M/61/In/349, and
		M/61/In/427
Garden Cove	16. XII. 1960	
Middle Beach	18. V. 1961	M/61/In/318
Radio Beach	26. V. 1961	M/61/In/314
Bauer Bay	17. VII. 1961	M/61/In/310
Buckles Bay	1. XII. 1961	M/61/In/486
Isthmus	6. XII. 1960	(J. H. Calaby)
Macquarie Island	IV. 1953	(K. G. Brown)

The following were collected by J. L. Gressitt: Green Gorge, 1–5 m, 4. XII. 1960; Northeast Coast, 1–3 m, 4–7. XII. 1960; East Beach, North end, 4–7. XII. 1960; North end to Isthmus, 4–10. XII. 1960; North end, beach, 4–7. XII. 1960; and Hurd Point, 4. XII. 1960.

REFERENCES CITED

Harrison, R. A. 1959. Acalypterate Diptera of New Zealand. N. Z. Dept. Sci. Indust. Res. Bull. **128**: 1–382.

Malloch, J. R. 1933. Acalyptrata. In "Diptera of Patagonia and South Chile." Part 6, Fasc. **4**: 177–391.

Womersley, H. 1937. Diptera. In: Rep. Brit. Austr. N. Z. Antarctic Res. Exped. 1929–1931, ser. B, **4** (3): 59–79.

INSECTS OF MACQUARIE ISLAND.

DIPTERA: EPHYDRIDAE

By W. W. Wirth

U. S. DEPARTMEMT OF AGRICULTURE, WASHINGTON 25, D. C.

The following material was collected by K. C. Watson of the Antarctic Division, Dept. of External Affairs, Australia, during the Australian National Antarctic Research Expeditions, 1961.

Ephydrella macquariensis (Womersley), 1937, NEW COMBINATION (*Ephydra*)

Bauer Bay, 4. I. 1961; Plateau, 8. I. 61; Halfmoon Bay, 8. I. 61, 19. I. 61; Langdon Pt., 19. I. 61; Langdon Bay, 19. VII. 61; Gadget Gully, 26. I. 61; Green Gorge, 14. II. 61; Aerial Cove, 3. III. 61, 29. XI. 61; Hasselborough Bay, 5. XII. 61; all adults. Larvae and pupae were taken at Halfmoon Bay, 14. I. 61, 19. I. 61; Green Gorge, 8. VIII. 61; Hasselborough Bay, 5. IX. 61, 28.XI.61; Isthmus, 1. XII. 61.