

Holotype ♂ (BISHOP 3610), Cook Islands, Akaiami, Aitutaki, III.1955, N. L. H. Krauss.

This species superficially resembles the Palearctic *C. curvipes* Meigen in having dorso-central bristles on the thoracic disc, but that species has an anterodorsal row of bristles on the hind tibia and the legs are black. *C. phaeoptera* Bezzi (= *obscuripennis*) (1904a: 351; 1904b: 145; 1912: 479) from New Guinea has the hind femora partly black. The cosmopolitan *C. aenescens* Wiedemann has dorsocentrals on the thoracic disc, but the femora of that species are black and the 3rd & 4th veins more strongly convergent at tip.

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SOME AGROMYZIDAE (Diptera) FROM THE JUAN FERNANDEZ ISLAND

By Kenneth A. Spencer

Abstract: Kuschel's collection of Agromyzidae from Juan Fernandez Is. includes 5 species: 2 are described as new, 2 are common in Chile and the other is semi-cosmopolitan.

Prof. G. Kuschel has kindly allowed me to examine 82 Agromyzidae he collected during several visits to the Juan Fernandez Is. during 1951-1955. Five species are represented in

this collection, of which two are described below as new; these two are possibly endemic. Two of the species, *Cerodontha flavifrons* (Philippi) (cf. Spencer, 1963: 332) and *Phytobia* (*Praspedomyza*) *peullae* (Malloch) (cf. Spencer, 1963: 337) are widespread in Chile and the other, *Liriomyza bryoniae* (Kaltenbach) has recently been recorded in Argentina, Brazil and California (cf. Spencer, 1963: 359) and was previously known from Europe.

Genus *Cerodontha* Rondani

Cerodontha flavifrons (Philippi)

MASAFUERA: 1♂, Inocentes Bajos, 27.I.1952; 2♂♂, Inocentes Altas, 22.I.1952; 1♀, Q. de las Vacas, 17. I. 1952; 1♂, 1♀, Q. de las Casas, 13. I. 1952; 1♂, 25.I.1952.

MASATIERRA: 1♂, Bahia Cumberland, 2. XII. 1954; 1♀, 14. I. 1955.

This species is widespread in S. Chile (Spencer, 1963: 332).

Genus *Phytobia* Lioy

Phytobia (*Praspedomyza*) *peullae* (Malloch)

MASAFUERA: 1♂, 15♀♀, Correspondence, 28-29. I. 1955; 1♂, 4♀♀, Quebr. de las Vacas, 17. I. 1952; 1♂, 15. II. 1955; 1♀, Inocentes Bajos, 1000 m, 27. I. 1952; 1♀, 20. II. 1955; 1♂, Inocentes Altas, 1300 m, 22. I. 1952.

MASATIERRA: 2♀♀, Bahia Cumberland, 24. II. 1951; 2♀♀, 4. III. 1951; 2♀♀, 23. XII. 1954; 2♀♀, 7. I. 1955; ♂, ♀, Yungue, 915 m, 10. II. 1952; 1♀, Alto Ingles, 600 m, 6. II. 1952; 1♂, Salto de Pangul, 4. I. 1955.

This species is also widespread in Chile (Spencer, 1963: 337).

The ♂ genitalia (Spencer, 1963: fig. 51) very closely resemble those of the European grass-feeding species, *Liriomyza flaveola* (Fallén). It seems very probable therefore that *peullae* also feeds on Gramineae. It also seems probable that *peullae* will have to be transferred to the genus *Liriomyza* but it is felt desirable to leave this until a comprehensive revision of this genus can be undertaken.

Genus *Liriomyza* Mik

Liriomyza bryoniae (Kaltenbach).

MASATIERRA: 2♂♂, 6♀♀, Bahia Cumberland, 24. II-5. III. 1951; 4♂♂, 1♀, 3. XII. 1954; 4♂♂, 3♀♀, 18. III. 1955.

This species has hitherto been known only in Western Europe and Egypt. Recently Dr. H. Buhr (private comm.) has mentioned seeing its leaf-mines on *Tropaeolum majus* L. and *Nicotiana alata* var. *grandiflora* Comes (= *N. affinis* T. Moore) in Russia at Kiev, Moscow and across Siberia as far east as Irkutsk. I have now shown (Spencer, 1963: 359) that it occurs in Brazil as a pest on potatoes: is known from Argentina (as *decora* Blanchard); and is a common, polyphagous species in California (as *langei* Frick).

Liriomyza kuscheli Spencer, n. sp. Fig. 1.

Head: frons slightly wider than eye viewed from above, not projecting above eye in profile; 2 equal ors; 2 ori, the upper equal to the ors, the lower weaker; orbital setulae sparse, reclinate; jowls $1/5$ vertical height of eye, cheeks forming broad ring below eye; antennal segment 3 round, arista appearing largely bare. **Mesonotum:** 3+1 dc, acrostichals in front normal, in 4 rows, between 2nd and 1st dc limited to 2 rows, entirely incurved. **Wing:** length 2.2 mm, cross-vein 1 just before midpoint of discal cell, last section of m 3+4 less than $2\times$ length of penultimate, in ratio 25:14. **Color:** frons, jowls, antennae bright yellow, face slightly greyish; mesonotum shining black, scutellum almost entirely yellow with small black patches below basal scutellars; mesopleura largely yellow, with black triangle extending along front and lower margins; sternopleura black below with broad yellow upper margin; legs entirely yellow, with exception of hind coxae which are variably black; squamal fringe black. ♂ genitalia: aedeagus as figs. 1a, b; surstyli as in fig. 1c bearing a row of 6 strong bristles and a number of longer hairs; in addition the inner margin of tergite 9 bears some 30 strong bristles.

Holotype ♂, Juan Fernandez Is., Masatierra, Piedra Ag., 27. II. 1951; 4♂♂, 4♀♀ paratypes, Masatierra, Grutas, 17. II. 1951; all G. Kuschel. Holotype and 4 paratypes in Museo Nacional, Santiago de Chile; 2 paratypes in U. S. National Museum, Washington; 2 paratypes in my collection.

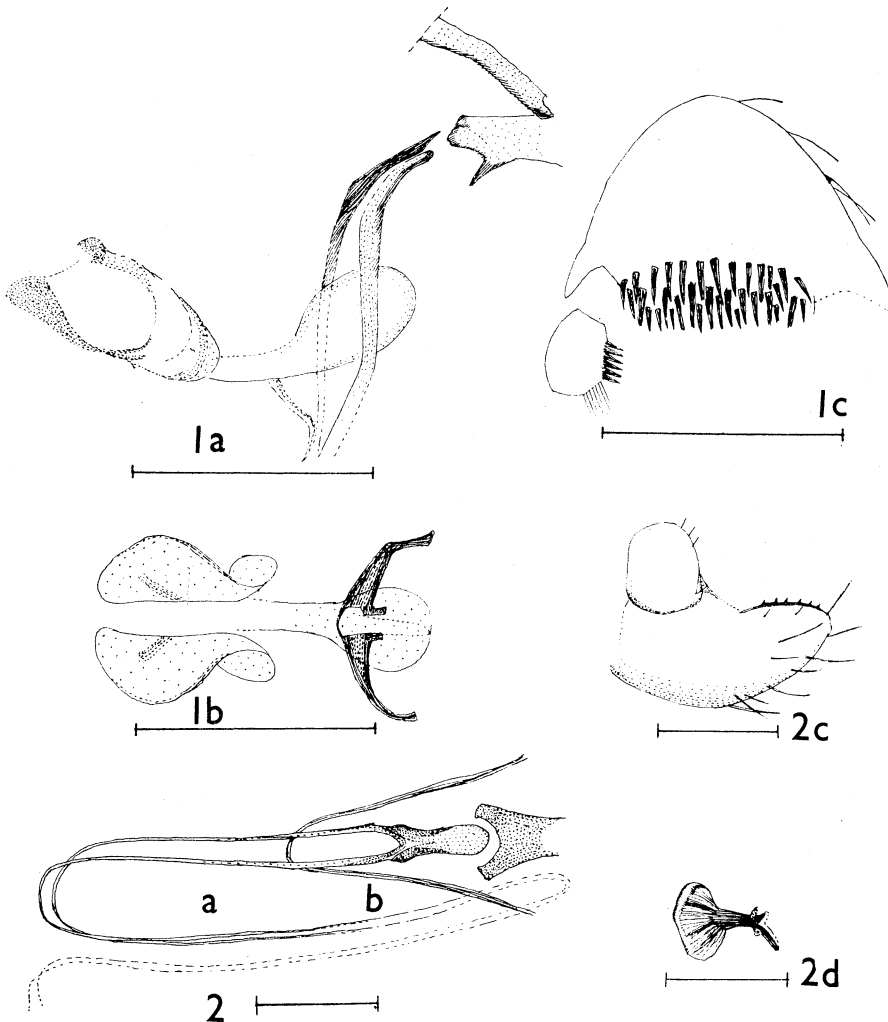
This species runs to *L. cucumifoliae* Blanchard in couplet 29 of the author's key to neotropical *Liriomyza* species (Spencer, 1963: 353). Blanchard (1938) described *cucumifoliae* as a leaf-miner on melon from the district of Buenos Aires. It has unfortunately not been possible to examine Blanchard's species and until the genitalia of *cucumifoliae* can be checked, it has seemed desirable to describe *L. kuscheli* as a new species.

The bristles on the inner margin of tergite 9 are unusual in *Liriomyza* but a similar structure has been noted in 2 neotropical species, *L. braziliae* Spencer (1963: 356) and *L. grandis* Spencer (1963: 361) and also in several European species.

Genus **Phytoliriomyza** Hendel**Phytoliriomyza longipenis** Spencer, n. sp. Fig. 2.

Head: frons broad, almost $2\times$ width of eye viewed from above; orbits strongly differentiated, 2 upper orbital bristles, 1 lower which is distinctly nearer eye margin; lunule large, slightly higher than semicircle; eye large, conspicuously slanting, as in all species of this genus, slightly pilose above. **Mesonotum:** 3-1 well-developed dorso-centrals, acrostichals in 2 irregular rows. **Wing:** length 2.4 mm, last section of vein m 3+4, $2\times$ length of penultimate. **Color:** frons brownish yellow, orbits and lunule conspicuously paler, yellow; antennal segment 3 largely yellowish brown, segments 1 & 2 slightly darker; mesonotum and scutellum entirely matt blackish, with a brownish tinge, without any trace of yellow; pleura largely black below, variably yellowish above; coxae and femora largely yellow, tibiae and tarsi darker, brown; squamal fringe dark, halteres entirely yellow.

♂ genitalia: aedeagus as in fig. 2a, mesophallus distinctly dividing at end, the 2 tubules of distiphallus relatively broad initially but becoming very fine, extremely long; sternite 9 elongated, with narrow side-arms (fig. 2b); surstyli oval, with a few slight hairs on inner



Figs. 1-2. 1, *Liriomyza kuscheli*: a, aedeagus, side view; b, same, ventral view; c, surstylus. 2, a, *Phytoliriomyza longipenis*: a, aedeagus; b, sternite 9; c, surstylus; d, ejaculatory apodeme (Scale line=0.1 mm).

corner (fig. 2c); ejaculatory apodeme broad, bulb distinct (fig. 2d).

Holotype ♂, Juan Fernandez Is., Masafuera, Quebr. de las Vacas, 17. I. 1952. Paratypes: 2 ♀♀, Inocentes Bajas, 1000 m, 27. I. 1952; all G. Kuschel. Holotype and 1 paratype in Museo Nacional, Santiago de Chile; 1 paratype in author's collection.

The form of genitalia suggest this species is most closely related to the widespread *P. arctica* (Lundbeck). Speciation has possibly occurred as a result of isolation in the Juan Fernandez Is. Apart from the obvious genitalial differences this species appears to be distinguishable from the other species known to occur in Chile, *P. imperfecta* (Malloch) (cf. Spencer, 1963: 379) as follows:

	<i>P. imperfecta</i>	<i>P. longipennis</i>
Wing length	1.9 mm	2.4 mm
Orbits	scarcely differentiated	broad, strongly differentiated
Mesonotum	matt grey	darker, matt black
Sternopleura	black below, broadly yellow above	entirely black
Halteres	knob darkened	knob yellow

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PACIFIC INSECTS MONOGRAPH 7

Insects of Campbell Island

By J. Linsley Gressitt and Collaborators

This is a faunal and zoogeographic study of the land arthropods of subantarctic Campbell Island (52°30' S. Lat.), south of New Zealand. This small island has proven of great interest because it has a much larger fauna than has previously been known from any subantarctic island. A total of 381 species have been collected on the island, and 300 of these are identified and treated in this volume. Also, over 60 additional species from nearby subantarctic islands, particularly Macquarie and the Aucklands, are recorded or described in the volume. There are 54 taxonomic papers by 47 authors, besides several articles, partly by two additional authors, treating in more or less detail of the environment, climate, peat insects, ecology, zoogeography, dispersal and evolution. Special emphasis is given to zoogeography and dispersal. An extensive dispersal experiment of over 11 months duration is reported in detail. There is a bibliography and an index.

Of the 300 identified species from Campbell alone, 47% appear to be endemic; 19 genera are recorded as endemic. There is a high degree of wing reduction, and 40% of the species of normally winged groups appear to be flightless. Many of the others were not observed in flight, or taken in the air nets. About 115 species, 31 genera and one sub-family are described as new in the volume. The fauna is closely related to those of the Auckland Islands and New Zealand, but is very different from that of Macquarie Island.

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