LOS INSECTOS DE LAS ISLAS JUAN FERNANDEZ

24. NITIDULIDAE (Coleoptera)

L. R. Gillogly
Berkeley, California

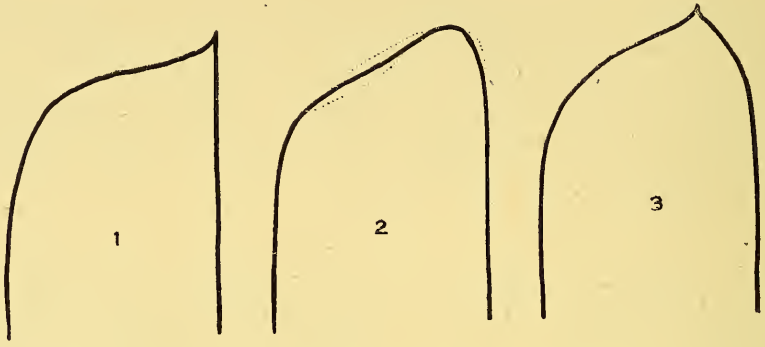
Los Nitidulidae de Juan Fernández, limitados todos a la isla Masatierra, cuentan con cinco especies de *Cnips*. Habría también una especie de *Nitidula*, pero entre el nuevo material no se encuentra este género. Las especies de *Cnips* son abundantes en los arbustos de ramificación dicotómica *Robinsonia*, *Rhetinodendron* y *Rea* en los arbustos simples del género *Phoenicoseris*, todos de la familia de las Compositae. Se encuentran en las inflorescencias y en las rosetas terminales. Estas plantas contienen un jugo lechoso aromático que parece atrae los Nitidulidae. Ocasionalmente se han cogido también en *Eryngium*, Umbelliferae, y *Peperomia*, Piperaceae.

* * *

The Nitidulidae are represented on the Juan Fernández Islands by two genera: *Cnips* and *Nitidula*. Pic (1924) reported one specimen of a new species of *Nitidula* collected on Masatierra by Bäckström but this specimen has never been described and no additional examples have ever been taken. Thus this paper reports five species of *Cnips* which appear to be confined to the island of Masatierra where they have been found chiefly on species of *Robinsonia* and *Rhetinodendron*. The dicotomously branching shrubs are members of the Compositae which produce a quite odorous resin for which reason the people call them incense plants. The beetles are attracted by the odor of the resin and are found in abundance in the terminal rosettes of the branches of these plants and on the flowers of two other genera of Compositae, *Rea* and *Phoenicoseris*. Occasional specimens are taken from the flowers of *Peperomia*, Piperaceae, and *Eryngium*, Umbelliferae. As all of these plants grow only on the crests of the rocky ridges and in thickets on the high portions of the island, it is here that the Nitidulidae are found.

Although considerable collecting was done on the other two islands, no Nitidulidae were encountered. On Santa Clara there is no *Robinsonia* and on Masafuera this plant is very scarce, being found only in the vicinity of Inocentes Bajos at an alitude of 1,000 meters. Thus, while we should not rule out the possibility of the existence of *Cnips* on Masafuera, we can report that they have not been taken on this island. Until the feeding habits of the larvae are worked out the true distribution of these species must remain in doubt.

The specimens used in this study were collected by P. G. Kuschel and were made available for my study through his kindness. I am also greatly indebted to René Malaise of the Naturhistoriska Riksmuseum of Stockholm for sending for my examination the types of *Cnips diversus* Pic and 18 specimens of an undescribed species which I have described with those of Dr. Kuschel as *Cnips fernandezia*. I wish also to express my thanks to A. Descarpentries of the Museum National d'Histoire Naturelle in Paris for the loan of specimens of most of the species of *Cnips* that are found on the mainland of Chile, which specimens were indispensable in determining which species from the islands were truly new.



Tips of elytra. Fig. 1. not dehiscent, acute;
Fig. 2. dehiscent, rounded; Fig. 3. dehiscent, acute.

A Key to the Species of *Cnips*

1. Sutural angle of elytra acute, slightly attenuate; suture slightly or not at all dehiscent (fig. 1)..... 2

   Sutural angle of elytra not attenuate; suture dehiscent at tip (fig. 2-3)..... 4

2. Punctation on head, prothorax, and scutellum dense (separated by less than one diameter)..... 3

   Punctation fine and sparse (punctations separated by more than one diameter)..... *diversa*

3. Pubescence on prothorax and elytra short and black, axillary space on metasternum absent..... *atrata*

   Pubescence long and variegate becoming light over testaceous areas, axillary space narrow and extending about one-sixth of the epimeron..... *acuta*

4. Tip of elytra acute (fig. 3) ..... *mucronis*

Tip of elytra rounded (fig. 2) ..... *fernandezia*

These species are entirely without serial punctation on the elytra and differ in this respect from all of the continental species except *Cnips quadriguttata* Philippi. This species, however, is easily distinguished from those of the islands by the humeral and discal marking on each elytron.

Cnips Philippi

Cnips Philippi, 1864, Anales de la Universidad de Chile, 24, 457.

Small, oblong, pubescent, moderately convex, alutaceous. Head broad, triangular, front somewhat prolonged into a sort of beak. Clypeus very small. Labrum completely hidden. Antennae reaching as far as metasternum, first segment large and swollen, second swollen, thicker than the following segments but a little shorter, segments three to five elongate, about equal in length, sixth to eighth shorter and becoming wider toward tip, club large, segment nine twice as wide as long, ten wider than long, terminal segment as wide as long, bluntly triangular. Antennal grooves short and convergent. Mandibles strongly curved on outside, tip bifid, acute, inner margin bearded and having a prostheca. Lacinia oblong, heavily bearded, shorter than the maxillary palpi which are slender with first segment small, second and third moderately thickened, fourth slender, cylindrical, tapering to the rounded tip. Labrum: ligula broad; paraglossae moderate; palpi slender but more swollen than maxillary palpi, tip truncate. Mentum strongly transverse but not covering the base of the maxillae, emarginate in front. Prothorax wider than long, as wide as elytra. Scutellum small, triangular or rounded. Elytra entire, somewhat longer than wide together, completely covering the pygidium. Prosternal process prolonged behind coxae but seldom reaching past middle of mesosternum. Anterior coxae open behind. Mesosternum moderately large. Metasternum large, with axillary space either small or absent. Abdomen, first ventral segment about equal to combined length of second and third, second to fourth equal, fifth shorter than first. Tibiae slender, somewhat dilated distally, spinous externally. Tarsi dilated, segments one to three wooly beneath. Claws with a more or less angular protuberance. Male supplementary segment visible from above, tip of pygidium truncate. Female pygidium rounded.

This genus is very close to *Cryptarcha* in which the head is more or less rounded on the sides of the front while the sides of the front in *Cnips* are slightly concave, giving it the snout-like appearance. The lacinia is oblong in *Cnips* and considerably shorter than the palpus, while in *Crypt-*

archa it is quite long and strap-like. The whole surface of *Cnips* is finely reticulate but in *Cryptarcha* it is smooth, granular or sometimes alutaceous. In many species of *Cryptarcha* there are two types of setae, the fine pubescence and the long thickened setae which occur scattered, in patches, or serially on the elytra. These setae are completely absent on all species of *Cnips* from the Juan Fernández Islands but are present on several of the species from the mainland. These differences seem hardly to be of generic importance but I propose to retain the name *Cnips* for this group of species which are surely more closely allied to each other than to the species of *Cryptarcha*.

Philippi noted that the sharp pointed mandibles of *Cnips* separated it clearly from *Glischrochilus* (*Ips*) which has blunt mandibles and which he considered to be its nearest ally. Reitter wrote that *Cnips* was remarkably different from *Cryptarcha*, its nearest ally, by the simple tip of its mandible. He also stated that the body of *Cnips* is much more depressed and elongate, the antennal club longer and loosely segmented, the tibiae very slender, and the tarsi much less dilated. He added that the sculpture of the intervals between punctations was similar to but much stronger than that of *Cryptarcha* and *Camptodes* which were covered with very tiny punctures.

The tips of the mandibles in all of the species of *Cnips* that I have examined are definitely bifid. As the tips are so slender and the two parts often lie close against each other this character is not visible without using high magnification and could be easily overlooked if not suspected.

Cnips acuta Gillogly new species

Nearly elliptical, moderately convex, little shining by reason of very pronounced reticulation and dense punctation of the surface; pubescence variegate, becoming pale over reddish areas and black over dark portions. Color piceous with lighter areas on elytra and margins of prothorax. Head closely coarsely punctate, punctations as large as eye facets; two very indistinct depressions on front between eyes. Anterior margin of front truncate, nearly straight. Prothorax with width to length as 1,7 to 1; narrowed anteriorly, anterior margin emarginate, emargination nearly straight, moderately wide; anterior angles distinct, posterior angles obtuse, sides rather narrowly explanate, nearly parallel for posterior half, narrowing anterior to the middle; hind margin evenly arcuate; punctation very dense, not separated by more than one diameter; margins pale. Scutellum small, densely punctate, rounded, somewhat transverse. Elytra narrowing slightly toward tips; each elytron with length to width as 2,4 to 1; suture not dehiscent, margined along posterior half of its length; sutural angle prolonged, acute; tip truncate (fig. 3); punctation dense as on prothorax; irregular transverse reddish bands across base and near middle,

these lighter areas bear pale pubescence making them appear more distinct; sides very narrowly reflexed. Pygidium finely punctate; pubescence short. Submentum rather finely sparsely punctate. Prosternum densely punctate before coxae, becoming impunctate toward sides; prosternal process sides parallel, impunctate, rounded on tip. Mesosternum nearly impunctate; slightly protuberant in front. Metasternum very coarsely, closely punctate; axillary space very small.

Length 3—4 mm. Width 1,4—1,7 mm. Length 2,2 times width.

Holotype male: Juan Fernández, MASATIERRA, Alto Francés, 450 m., March 3, 1951, collected from *Robinsonia gayana* or *Rea micrantha* by P. G. Kuschel. Allotype female: Masatierra, Cerro Alto, 600 m., February 1, 1952, collected from flowers of *Peperomia fernandeziana* by P. G. Kuschel. Paratype (female): Masatierra, La Mona, 500—600 m., February 1951, collected from *Robinsonia gayana* or *Phoenicoseris pinnata* by P. G. Kuschel. The types are in the collection of the University of Chile; paratype is in the author's collection.

Cnips atrata Gillogly new species

Nearly oblong, moderately convex, little shining by reason of close punctation and distinct reticulations on surface; pubescence dark, close-lying, inconspicuous. Color piceous, margins of prothorax and base of elytra reddish. Head densely rugosely punctate, front with two shallow impressions between the eyes; anterior margin of front fairly deeply sinuate. Prothorax with width to length as 1,7 to 1, narrowed anteriorly, anterior margin moderately deeply emarginate, emargination nearly straight and moderately wide; anterior angles rounded; posterior angles distinct, obtuse; sides narrowly explanate, widest at middle, more strongly arcuate in front than behind; hind margin lightly arcuate; punctation very dense, nearly rugulose; color piceous but completely edged by a reddish band. Scutellum densely punctate, semicircular. Elytra parallel, each elytron with width to length as 3 to 1, suture not dehiscent, margined for a little over one-half its length, tip truncate, sutural angle prolonged, acute (fig. 3), punctation a little more coarse and dense than on prothorax, base marked with indistinct transverse reddish band, sides very narrowly margined. Pygidium finely closely punctate, pubescence very short. Submentum finely closely punctate. Prosternum sparsely punctate before the coxae with large shallow punctations, becoming impunctate on sides, prosternal process impunctate, widening just behind coxae then narrowing to rounded tip. Mesosternum protuberant in front. Metasternum closely set with large shallow punctations, axillary space absent.

Length 4,4 mm. Width 1,9 mm. Length 2,3 times width.

Holotype male: Juan Fernández, MASATIERRA, El Camote, 600 m., March 17, 1951, collected from *Robinsonia gayana* or *Robinsonia gracilis* by P. G. Kuschel. The type is in the collection of the University of Chile.

Cnips diversa Pic

Cnips diversa Pic, 1924, Natural History of Juan Fernández and Easter Island, 3 (Zoology), part 3, 379. Types from Masatierra from the foliage of *Robinsonia*, in the Naturhistoriska Riksmuseum, Stockholm.

Elongate oval, moderately convex, shining, entire surface finely reticulate, pubescence pale and rather inconspicuous. Color dark reddish-brown with disc of elytra usually more pale. Head rather sparsely finely punctate, two depressions between the eyes very shallow and indistinct. Anterior margin of front very lightly sinuate. Prothorax with width to length as 1,8 to 1. Little narrower in front than behind, widest at middle, anterior margin fairly deeply emarginate, the emargination fairly broad and straight on each side making an obtuse angle at the middle pointed anteriorly, anterior angles rounded but distinct, posterior angles rounded and almost absent, sides evenly arcuate, narrowly explanate, hind margin bowed out, evenly arcuate, punctation fine and rather dense. Scutellum small, finely sparsely punctate, nearly semi-circular. Elytra parallel, each elytron with length to width as 2,7 to 1, slightly if at all dehiscent at sutural angles, tips truncate, sutural angle prolonged, acute (fig. 3), punctation more sparse than on prothorax, sides very narrowly reflexed. Pygidium very finely punctate, pubescence short, tip rounded. Submentum sparsely punctate. Prosternum coarsely sparsely punctate, prosternal process sides parallel, tip rounded. Mesosternum coarsely sparsely punctate, only slightly raised in front. Metasternum very coarsely, closely punctate.

Length 2,8—4,2 mm. Width 1—1,7 mm. Length 2,7 times width.

The following material collected by P. G. Kuschel on MASATIERRA was examined and compared with the type: 2 males, Miradero de Selkirk, February 15, 1951, *Robinsonia gayana;* 1 male, Oreja de Conejo, 450 m., February 23, 1951, *Robinsonia gayana;* 3 females, Yunque, 915 m., February 10, 1952, *Eryngium bupleuroides;* 1 female, La Mona, 5-600 m., February 16, 1951 *Robinsonia gayana* or *Phoenicoseris pinnata;* 1 female, Alto Francés, 450 m., March 7, 1951, *Ribinsonia gayana* or *Rea micrantha;* 1 female, Chumacera, February 23, 1951, *Robinsonia gayana;* 1 female, Picacho Central, 600 m., February 4, 1952, *Robinsonia gayana;* 1 female, Alto Inglés, 600 m., February 6, 1952, *Robinsonia gayana.*

Cnips fernandezia Gillogly new species

Nearly elliptical, moderately convex, shining, entire surface finely reticulate, pubescence pale and conspicuous. Color nearly uniformly dark reddish-brown, a few specimens paler. Head rather sparsely coarsely punctate, with two large rather shallow depressions on the front between the eyes. Anterior margin of front distinctly but not deeply sinuate. Prothorax with width to length as 1,7 to 1, strongly narrowed anteriorly, only one-half as wide in front as behind, anterior margin deeply emarginate, emargination not wide, anterior angles distinct, acute, posterior angles rounded, sides evenly arcuate, broadest behind middle, moderately widely explanate with a distinct depression on each side behind the middle, hind margin nearly straight, punctation as on head. Scutellum small, densely punctate, rounded-triangular. Elytra parallel, each elytron with length to width as 2,2 to 1, suture dehiscent near tip, suture margined along posterior two-thirds of elytra, tips rounded, punctation more coarse than on prothorax, sides narrowly margined. Pygidium finely punctate, pubescence short, tip rounded. Submentum very coarsely punctate. Prosternum very coarsely rugosely punctate before coxae, becoming more sparsely punctate toward sides, prosternal process sides parallel, tip rounded. Mesosternum protuberant in front, closely very coarsely punctate. Metasternum deeply coarsely punctate, less densely than mesosternum, axillary space very small.

Length 3,1—3,7 mm. Width 1,5—1,8 mm. Length 2,2 times width.

Holotype male: Juan Fernández, Masatierra, Picacho Central, 600 m., February 4, 1952, collected from *Robinsonia gayana* by P. G. Kuschel. Allotype female: same data as holotype. Types are in the collection of the University of Chile.

Paratypes collected by P. G. Kuschel on Masatierra as follows: 8 males, 3 females, same data as types; 12 males, 8 females, La Mona, 5—600 m., February 16, 1951, *Robinsonia gayana* or *Phoenicoseris pinnata;* 5 males, 6 females, Oreja de Conejo, 450 m., February 23, 1951, *Robinsonia gayana;* 3 males, 5 females, Yunque, 915 m., February 10, 1952, *Robinsonia evenia* or *R. gracilis;* 4 males, 3 females, Villagra, February 21, 1951, *Robinsonia gayana;* 5 males, Alto Francés, 450 m., March 1, 1951, *Robinsonia gayana* or *Rea micrantha;* 4 males, Salsipuedes, 350 m., March 5, 1951, *Robinsonia gayana;* 2 males, 2 females, Chumacera, February 22, 1951, *Robinsonia gayana;* 1 male, 1 female, Miradero de Selkirk, February 15, 1951, *Robinsonia gayana;* 1 male, 1 female, Cerro Alto, 500 m., February 1, 1952, *Robinsonia gayana;* 1 male, Pangal, 400 m., February 18, 1951, *Robinsonia gracilis;* 1 female, Alto Pangal, 600 m., February 8, 1952, *Rhetinodendron berterii;* 1 male, Alto Inglés, 600 m., February 6, 1952,

Robinsonia gayana. 9 males, 9 females, from Masatierra, collected by Bäckström during April and May. Paratypes are in the collections of the University of Chile, Naturhistoriska Riksmuseum, and the author.

Cnips mucronis Gillogly new species

Nearly elliptical, moderately convex, shining, entire surface finely reticulate, pubescence pale, short, inconspicuous. Color dark reddish-brown with elytra paler, occasionally completely testaceous. Head moderately punctate, with two large rather deep impressions on front between the eyes; anterior margin of front fairly deeply sinuate. Prothorax with width to length as 1,7 to 1, anterior emarginate widely, all angles rounded but anterior angles most distinct, sides evenly arcuate, widest at middle, moderately explanate, hind margin bowed out, lightly bisinuate, punctation more dense and more fine than on head, punctures on disc separated by about two diameters. Scutellum small, punctate, rounded-triangular. Elytra parallel, each elytron with length to width as 2,5 to 1, suture dehiscent near tip and margined on posterior half, tips slightly attenuate, acute, punctation finer and more sparse than on prothorax, punctures separated by about three diameters, sides narrowly reflexed. Pygidium sparsely very finely punctate, pubescent, pubescence rather long, tip rounded. Submentum evenly, rather coarsely, densely punctate. Prosternum coarsely punctate before coxae, becoming impunctate toward sides, prosternal process with sides parallel, tip rounded. Mesosternum protuberant in front, impunctate, Metasternum very coarsely punctate, axillary space very small.

Length 3—4,4 mm. Width 1,4—1,8 mm. Length 2,3 times width.

Holôtype male: Juan Fernández, Masatierra, La Mona, 5—600 m., February 16, 1951, collected from *Robinsonia gayana* or *Phoenicoseris pinnata* by P. G. Kuschel. Allotype female: same data as holotype. Types are in the collection of the University of Chile.

Paratypes collected by P. G. Kuschel on Masatierra as follows: 10 males, 13 females, same data as types; 1 male, 2 females, El Camote, 600 m., March 17, 1951, *Robinsonia gayana* or *Robinsonia gracilis;* 3 females, Alto Pangal, 600 m., February 8, 1952, *Rhetinodendron berterii;* 1 male, Oreja de Conejo, 450 m., February 23, 1951, *Robinsonia gayana;* 1 female, Miradero de Selkirk, February 15, 1951, *Robinsonia gayana;* 1 female, Alto Inglés, 600 m., February 6, 1952, *Robinsonia gayana;* 1 female, Yunque, 915 m., February 10, 1952, *Eryngium bupleuroides*. Paratypes are in the collections of the University of Chile and the author.

LOS INSECTOS DE LAS ISLAS JUAN FERNANDEZ

25. COLYDIIDAE (Coleoptera)

R. D. Pope
Commonwealth Institute of Entomology
London

Los Colydiidae están representados en Juan Fernández por cuatro especies. Pertenecen a *Pycnomerus* y *Pycnomerodes*, con una especie de cada género de Masatierra y Masafuera. Con la presencia del hasta ahora género monobásico *Pycnomerodes*, propio de Nueva Zelandia, se establece una nueva relación biogeográfica verdaderamente notable entre dicha isla y Juan Fernández.

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The following account is based largely upon material collected on Masatierra and Masafuera by the Rev. G. Kuschel and loaned to the author for study. The other material included in this paper is part of the collection made by Germain of the fauna of Masatierra and is now in the national collections of the British Museum (Nat. Hist.).

The islands present a most interesting although very limited fauna, four species of Colydiid occurring, all belonging to a single tribe, the Pycnomerini.

In other families it is found that the species of Masatierra are frequently not identical with, although very closely allied to, those of the same genera living on Masafuera and such is the case with the Colydiidae an excellent example of allopatric speciation. All four species have much reduced wing structure and are obviously incapable of flight. A further point which is of extreme interest is that one of the two genera on the islands was previously known solely from New Zealand. The genus is represented in the latter area by a single, fully winged species, different from, but undoubtedly congeneric with, the species of Juan Fernández. Links between the faunas of New Zealand and the west coast of South America are known in other groups but this is the first instance of such a connexion in the Colydiidae. The other genus present on the islands is of world-wide distribution.

Very little is known of the habits of the Pycnomerini; sometimes they are found in humus, but they are more often taken in dead wood in galleries bored by other insects. It seems possible that they may be fungivorous and in 1911 Buysson reported that in his opinion two species

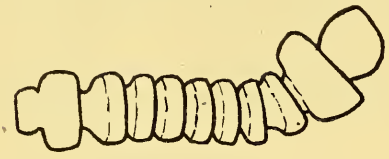
of *Pycnomerus* occurring in Europe were in all probability myrmecophilous. However the Rev. Kuschel informs me that, although ants are present on Masafuera and Masatierra, he did not find them accompanied by Colydiidae.

Through the kindness of the Rev. Kuschel, paratypes of the new species described below are deposited in the British Museum (Nat. Hist.). Holotypes of new species are located as indicated beneath their description.

Pycnomerus insularis Grouvelle

Pycnomerus insularis Grouvelle 1898, Ann. Soc. Ent. Fr. 67: 380.

(18 ♂ 2 ♀) MASATIERRA, Mt. Miradero, 300 m. 13.II.1951 in rotten trunk (Kuschel). (2 ♂ 3 ♀) Masatierra, Mt. Miradero, 500 m. 31.XII.1951 (Kuschel). (1 ♂ 3 ♀) Masatierra, Mt. Miradero, 550 m. 15.II.1951 (Kuschel). (6 ♂ 11 ♀) Masatierra, Picacho Central, 500 m. 4.II.1952 on *Coprosma hookeri* (Kuschel). (5 ♂ 4 ♀) Masatierra, Cerro Alto, 600 m. 1.II.1952 on *Nothomyrcia fernandeziana* (Kuschel). (2 ♀) Masatierra, El Camote, 400 m. 5.II.1952 on *Dicksonia berteroana* (Kuschel). (8 ♂ 3 ♀) Masatierra, El Camote, 400 m. 5.II.1952 on *Drimys confertifolia* (Kuschel). (1 ♀) Masatierra, El Camote, 500 m. 5.II.1952 (Kuschel). (2 ♂) Masatierra, Alto Pangal, 600 m. 8.II.1952 (Kuschel). (1 ♂ 1 ♀) Masatierra, Bahía Cumberland, 19.II.1952 in dry wood (Kuschel). (1 ♀) Masatierra, Q. de las Casas, 19.I.1952 on *Lophosoria quadripinnata* (Kuschel). (2 ♂ 3 ♀) Plazoleta el Yunque, 9.I.1952 (Kuschel).



1.

2.

Fig. 1. *Pycnomerus insularis* Grouvelle, antenna.—Fig. 2. *Pycnomerus germaini* sp. n., antenna.

This species, a typical member of the genus *Pycnomerus*, does not appear to have any particularly close affinites with any one other species. It is obviously related to the central American *P. truquii* Pascoe, but also shows considerable connexion with a group of New Zealand species including *P. depressus* White, *simplex* Broun, and *basalis* Broun.

Pycnomerus germaini sp. n.

Length 3—4,3 mm. Breadth 1—1,25 mm.

Derm ferrugineous to piceous, shining, faintly and finely reticulate in part; head with umbilicate-punctures larger than eye facets and separat-

ed by less than one diameter as a rule, eyes moderately well developed but with less facets than the European species, antennae as in fig. 2; depressions over antennal insertions well marked; pronotum trapezoidal, slightly elongate or quadrate, anterior angles scarcely produced, posterior angles well marked, slightly obtuse, lateral borders feebly serrate, convergent near anterior angles, posterior border irregularly raised medially; disc flat or slightly concave, punctate, punctures about as large as those of head but deeper, separated by about one diameter or slightly more, punctures of similar size anteriorly and laterally but more closely set; elytra about twice as long as their combined greatest breadth, lateral borders slightly but distinctly arcuate, very feebly sinuate near apices, then obtusely rounded to apicosutural angles; striatopunctate, striae with elongate, medially constricted punctures separated longitudinally by about one longitudinal diameter, intervals between striae convex, about as broad as longitudinal diameter of strial punctures, very sparsely set with minute elongate punctures, sutural and third intervals joined at basal borders of elytra, second intervals recurved shortly before apices and joined to combined fourth, sixth and eighth intervals, ninth intervals distinct to apical elytral borders; punctures of striae bearing extremely minute, stiff setae; prosternal process raised laterally, anterior coxae more widely separated than mid-coxae; metasternum shallowly foveate mediobasally, its median longitudinal sulcus confined to basal half.

Holotype a male in University of Chile, Santiago.

Masafuera, Inocentes Altos, 1.300 m. 22.I.1952 on *Drimys confertifolia* (Kuschel) Paratypes (7 ♂ 10 ♀) With same data as holotype. (2 ♂ 3 ♀) Masafuera, Inocentes Bajos 1.000 m. 27.I.1952 (Kuschel). (6 ♂ 1 ♀) Masafuera, Q. de las Casas, 19.I.1952 on *Myrceugenia schultzei* (Kuschel). (3 ♂ 1 ♀) Masafuera, La Correspondencia, 1.300 m. 20.I.1952 on *Drimys confertifolia* (Kuschel).

Sexual dimorphism.—In the male there is a median hypostomal fovea from which protrudes a bunch of short, fine setae. This is absent in the female.

Comparative notes.—This species is very closely related *P. insularis* Grouvelle of Masatierra and distinguishable only by the relative thickness of the antennae (figs. 1 and 2) and the carinate basal portion of the third elytral intervals.

Pycnomerodes Broun

Pycnomerodes Broun 1886, Man. Col. New Zeal. p. 954.

This genus, up to the present monobasic, was founded by Broun to include a single New Zealand species, *peregrinus* Broun. It is allied to

Pycnomerus Erichson as its name implies but differs therefrom in several important characters. The posterior and midcoxae are less widely separated. The eyes are divided horizontally by frontal extensions. The elytra have well marked epipleurae and the body as a whole is clearly pubescent.

Pycnomerodes masafuerensis sp. n.

Length 3,6—4,7 mm. Breadth 1,25—1,6 mm.

Derm rufopiceous, matt; head much narrowed to anterior clypeal border, anterior border about one fourth as broad as maximum breadth of head, clypeus coarsely punctate, frons with shallow, irregular, often confluent, flat-topped granules, separated by less than one diameter and each bearing a seta in a minute apical puncture, granules on vertex less strongly raised; antennae as in fig. 3; pronotum (fig. 4) as long as broad, broadest at about middle, narrowed in anterior third to prominent, rectangular anterior angles, slightly less narrowed in basal third to feebly acute posterior angles; anterior border broadly truncate medially, sinuate toward anterior angles, posterior border raised, depressed medially, arcuate, sinuate near posterior angles; disc coarsely setosopunctate medially and basally, punctures separated by about one diameter or less, punctures closer laterally and anteriorly, often confluent, intervals irregularly raised giving a granulose appearance; lateral margins each with a broad impunctate sulcus extending from anterior to posterior angles, lateral borders narrowly and sharply raised; impunctate lateral areas continued along basal margins but obscured medially by a well marked W-shaped lobe formed from the base of the pronotal disc; scutellum small, depressed, transverse; elytra slightly less than twice as long as combined greatest breadth (22: 40), very slightly narrowed to shoulders, evenly rounded to apicosutural angles in apical third, very briefly emarginate at apicosutural angles, basal border of each elytron biarcuate-emarginate, junction of emarginations occurring at level of third intervals; disc and margins striatopunctate, punctures separated longitudinally by somewhat less than one longitudinal diameter, separated transversely by a little more than one transverse diameter, intervals between striae each with a row of more or less evenly spaced, minute punctures, separated by up to six diameters, punctures having raised borders and each bearing a fine outstanding golden seta, intervals between striae subcarinate toward bases, apices and lateral margins, obliterated near apical borders, sutural intervals slightly carinate to basal and apical borders, ninth intervals carinate almost to apical borders, other intervals clearly stopping before reaching apical borders, intervals five and seven joined near beginning of apical declivity, combined interval reaching to about halfway down declivity; lateral elytral

borders bearing outstanding golden setae; elytral epipleurae evenly narrowed from level of hind coxae to apices; pro-, meso-, metasternum and abdominal segments closely and coarsely punctured, punctures usually separated by much less than one diameter and bearing fine golden setae usually shorter than those of the upper surfaces.

Genitalia fig. 5.

Holotype a male in University of Chile, Santiago.

MASAFUERA, Inocentes Altos 1.300 m. 22.I.1952 on *Drimys confertifolia* (Kuschel) Paratypes (1 ♂ 4 ♀) with same data as type. (3 ♂) Masafuera, Las Chozas 700 m. 14.I.1952 (Kuschel). (1 ♂ 1 ♀) Masafuera, La Correspondencia. 1.300 m. 20.I.1952 (Kuschel). (2 ♀) Masafuera, Q. de las Casas, 19.I.1952 (Kuschel).

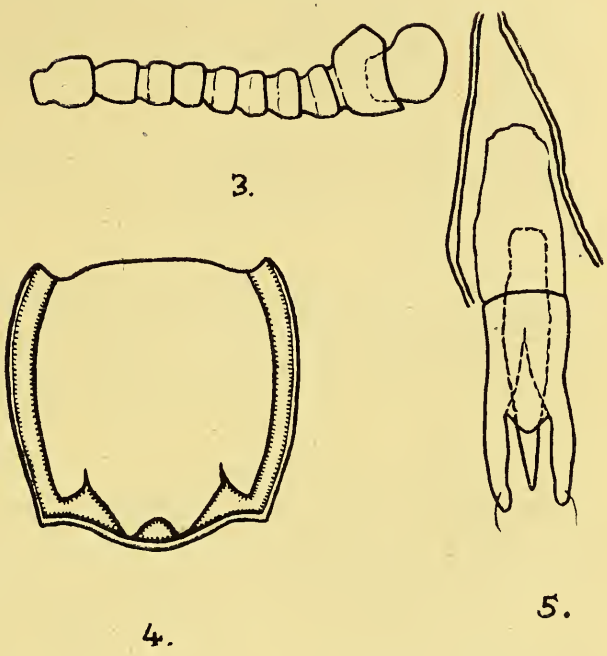


Fig. 3. *Pycnomerodes masafuerensis* sp. n., antenna.—
Fig. 4. *Pycnomerodes masafuerensis* sp. n., pronotum (Diagramatic).
Fig. 5. *Pycnomerodes masafuerensis* sp. n., male genitalia.

Sexual dimorphism.—The two sexes are very similar in this species but a constant distinguishing character is the presence in the male of a median hypostomal tuft of setae. The female has no such ornament but usually a transverse median punctate depression on the hypostomum.

Comparative notes.—*P. masafuerensis* is closely related to the New Zealand species *P. peregrinus* Broun but may be distinguished as follows: The derm is matt instead of shining and slightly sericeous. The setae in the punctures are distinctly shorter. The elytral epipleurae are evenly narrowed posteriorad instead of broadened behind the hind coxae as in *peregrinus* and the tibial spurs are shorter. In *peregrinus* the wings are fully developed.

Pycnomerodes masatierrensis sp. n.

Length 3,45—4,55 mm. Breatdh 1,2—1,7 mm.

This species is extremely closely related to *masafuerensis* from which it is distinguishable only in the following respects.

The elytra are relatively less elongate and more rounded laterally, the carinate intervals are slightly more strongly raised, especially the basal part of the third intervals; the frontal granulation is more discrete and more strongly raised; the median posterior emargination of the basal lobe of the pronotal disc is more shallow than that usually found in *masafuerensis*. The genitalia of the male do not differ from those of the other species.

Holotype a male in British Museum (Nat. Hist.) «Chili» (sic) (Germain) (actually from Masatierra).

Paratypes (1 ♀) «Chili» (sic), Ils. Juan Fernández (Germain) (actually from Masatierra).

(1 ♀) «Chili» (sic), (Germain) (actually from Masatierra). (1 ♀) Masatierra, Bahia Cumberland, 19.II.1952 in dry wood (Kuschel). (1 ♂) Masatierra, Mt. Miradero, 550 m., 15.II.1951 (Kuschel).

Key to the Colydiidae of Juan Fernández Ils.

1. Eyes entire; coxae more widely separated; elytral epipleurae very narrow behind hind coxae; setae in punctures extremely minute; external apical tibia spurs slightly produced 2

— Eyes almost completely divided horizontally by frontal extensions; coxae less widely separated; body clearly pubescent; external apical tibial spurs strongly produced 3

2. Antennae as in fig. 2; carina of third elytral intervals somewhat more strongly raised at base than carinae of other intervals . (Masafuera) ..... *Pycnomerus germaini* sp. n.

— Antennae as in fig. 1; carina of third elytral intervals not more strongly raised at base than carinae of other intervals (Masatierra)..... *Pycnomerus insularis* Grouvelle

3. Elytra usually more elongate (2,05—1,87.1); frontal granules shallowly raised and somewhat confluent; emargination of basal pronotal lobe usually less obtuse, often rectangular (Masafuera) ..... *Pycnomerodes masafuerensis* sp. n.

— Elytra usually less elongate (1,91—1,68.1); frontal granules more strongly raised, not confluent; emargination of basal pronotal lobe strongly obtuse (Masatierra)..... *Pycnomerodes masatierrensis* sp. n.

LOS INSECTOS DE LAS ISLAS JUAN FERNANDEZ

26. BRACONIDAE (Hymenoptera)

G. E. J. Nixon
Commonwealth Institute of Entomology
London

Seis especies de Braconidae se han recolectado en Juan Fernández, cuatro nuevas para las ciencias y dos conocidas. Pertenecen a los géneros *Opius*, *Apanteles*, *Aphidius* y *Aphaereta*. Las especies de *Opius* son extraordinariamente abundantes en las comunidades de los helechos, sobre todo de *Histiopteris incisa*.

* * *

The following short paper is a response to a request by Dr. Kuschel that I should study a small collection of Braconidae collected by him on the islands of Juan Fernández. Four species are described as new and two others are given provisional identifications.

Opius kuscheli sp. n.

♂ ♀. Virtually entirely black except that the abdomen is sometimes pitchy and the mesoscutum posteriorly and the scutellum occasionally show a reddish suffusion. Legs, including the hind coxae entirely yellow except for the usually slight tarsal infuscation and a faint darkening towards the apex of the hind tibiae. Clypeus yellowish.

♀. Head transverse, of simple form. Clypeus completely closing the mouth. Face smooth, shining, with sparse, rather long, decumbent hairs. Ocelli in a small equilateral triangle. Antenna with 22—25 segments.

Mesoscutum with a few long hairs restricted to the imaginary course of the notaulices; these indicated anteriorly as short, costate furrows; posteriorly the mesoscutum shows a small pit. Propodeum densely punctate-reticulate with a faint overlay of surface sculpture; anteriorly the raised rugosities tend to arrange themselves longitudinally. Mesopleura with a short, rugose furrow; median part of mesopleura sometimes with a fine overlay of reticulate surface sculpture. Fore wing: (fig. 2).

Tergite 1 narrow, petioliform, about 2 ¼ times as long as apically wide, its sculpture consisting of close, parallel, rounded ridges with an excessively faint overlay of surface sculpture; rest of abdomen smooth, the segments with a sparse fringe of hairs. Ovipositor distingly projecting beyond the apex of the abdomen.

♂. Antenna with 25—26 segments. The surface sculpture sometimes occurring on mesopleura of females tends to be better and more frequently developed in the male.

Length: ♂ ♀, 1,6—1,8 mm.

Masafuera, La Correspondencia, 1.300 m., 20.I.1952; Q. de las Casas, 13.I.1952, 19.VII.1952; Inocentes Altos, 1.300 m., 22.I.1952; Q. de las Vacas, 17.I.1952, Q. de la Calavera, 15.I.1952, (G. Kuschel).

Masatierra, B. Cumberland, 1.I.1952; El Rabanal, 27.II.1951 (G. Kuschel). (47 specimens).

Type: ♀, La Correspondencia, 20.I.1952.

Type in the University of Santiago, Chile.

The most significant characteristic of this species seems to lie in the curious and distinctive appearance of the sculpture of the petiole.

Opius scabriventris sp. n.

♂ ♀. Black with tergite (2+3) sometime suffused with brownish red. Legs somewhat dingy yellow; hind coxae pale; all the tarsi faintly infuscated.

♀. Head smooth and shining, of simple form. Ocelli in a triangle with base very distinctly longer than sides. Clypeus not closing the mouth. Face smooth and shining, very sparsely hairy and without trace of a median keel. Antenna with 22—24 segments.

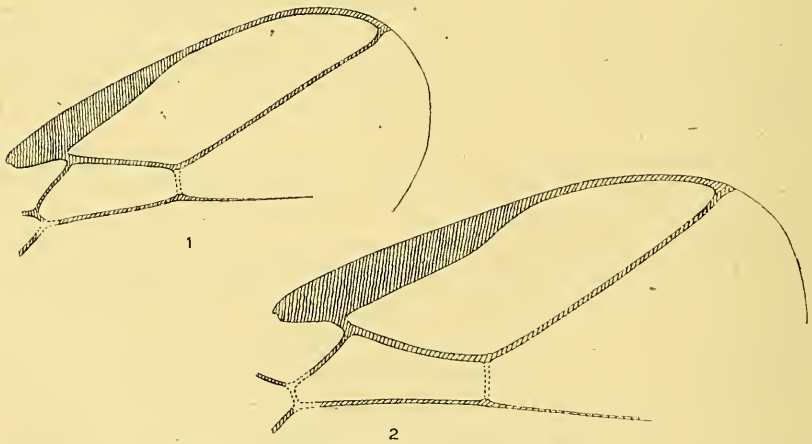


Fig. 1. Forewing of *Opius scabriventris* sp. n.
Fig. 2. Forewing of *Opius kuscheli* sp. n.

Mesoscutum highly polished, almost hairless and with no trace of a posterior fovea; notaulices hardly indicated, even anteriorly. Propodeum evenly convex, smooth, shining and with only the merest trace of sculpture

around the spiracle. Mesopleura highly polished and with a short, rugose furrow. Hind tarsus a little shorter than its tibia, 8: 9. Fore wing (fig. 1).

Tergite 1 triangularly dilated, 1½ times longer than apically wide, rugose reticulate; rather strongly raised in apical half; tergite (2+3) with a well defined second suture in the form of a furrow which is margined in front; the whole of this tergite, and to a much less extent tergite 4, is covered with a vague, rough scaly-reticulation; at the base of tergite (2+3), arising from the mid-point of tergite, there is a short, oblique impression on each side. Ovipositor projecting slightly beyond the apex of the abdomen.

♂. Antenna with 23 segments (only 1 specimen available). Otherwise like the female.

Length: ♂ ♀, 1,4—1,5 mm.

Masatierra, B. Cumberland, 31.XII.1951, 1.I.1952; Q. La Laura, 1.III.1951; Miradero, 30.XII.1951 (G. Kuschel).

Type: ♀, B. Cumberland, 31.XII.1952.

Type in the University of Santiago, Chile.

This species seems to be distinctive on the structure and sculpture of tergite (2+3).

Apanteles morroensis sp. n.

♀. Black. Stigma pale brownish yellow with a darker border. Front femora black but becoming brownish yellow apically; hind femora entirely black; hind tibiae brownish yellow but becoming faintly darker apically.

Head from in front almost circular. Mouth parts not in the least elongated. Face shiny with only the faintest trace of roughness. Antenna shorter than the body, thin, with the two preapical segments about 1⅓ times longer than wide. Frons and vertex almost smooth but faintly dull. Posterior ocelli separated from the eye margin by a distance equal to the longer diameter of one of them.

Mesoscutum with a dull shimmer and with a dense but faint superficial punctation along the notaulic courses; this punctation expands posteriorly into two large full areas in which the punctures are larger and more clearly defined. Scutellum with a dull shimmer similar to that of mesoscutum; towards sides with ill defined punctation. Suture between scutellum and mesoscutum narrow, groove-like and minutely foveate. Propodeum for the most part smooth and shining; without costulae or areola. Hind spurs subequal. Wings: (figs. 3 - 4); metacarp hardly longer than the distance between its tip and the apex of the radial cell.

Tergite 1 turned over in about apical third; its horizontal surface strongly narrowed to apex, strongly shining and with a faint trace of punctation. Enclosed area of tergite (2+3) in the form of a low triangle

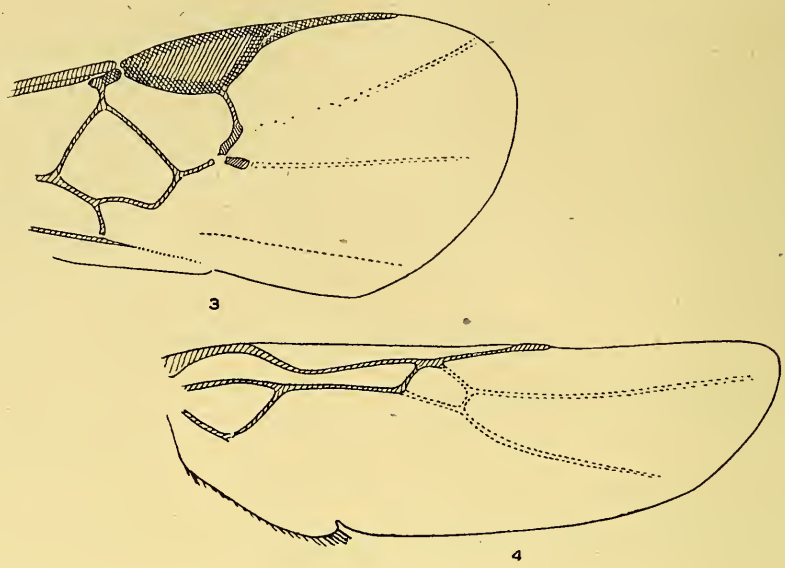


Fig. 3, 4. Wings of *Apanteles morroensis* sp. n.

with base more than twice as long as sides; smooth and shining (fig. 5). Hypopygium sharply pointed and with a small apical area, roughly triangular as seen from the side and delimited afrom the rest of the sternite by being much less heavily sclerotised. Ovipositor sheaths as long as the two basal segments of the hind tarsus.

♂. Almost certainly correctly associated with the single female. Like the female but the antenna longer than the body, very thin. As in

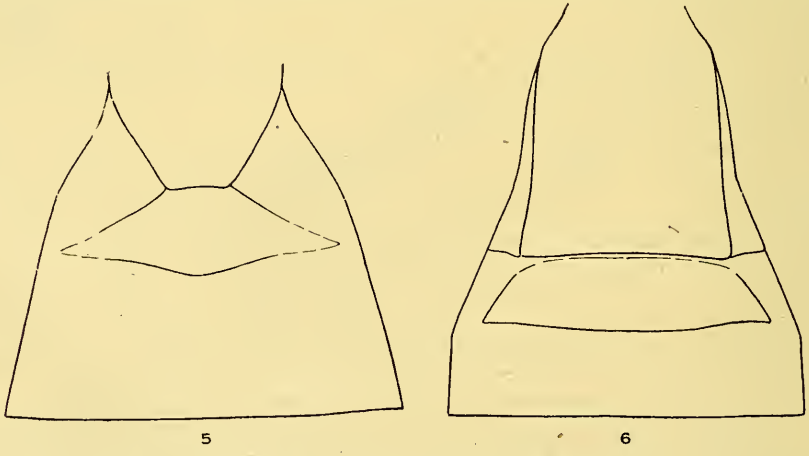


Fig. 5. Tergites 1 and (2+3) of *Apanteles morroensis* sp. n.
Fig. 6. Tergites 1 and (2+3) of *Apanteles evadne* sp. n.

the female, the pale hind tibiae contrast rather sharply with the blackened hind femora.

Length: ♂ ♀, ca. 3 mm. without ovipositor of female.

Santa Clara, El Morro, 6.I.1952, 1 ♀, the type, 7 ♂♂ (G. Kuschel).

Type in the University of Santiago, Chile.

This species seems to be closely related to the European *metacarpalis* Thomson. But Thomson's species has the sculpture of the mesoscutum finer and quite even, the base of the triangular area of tergite (2+3) shorter in proportion to the length of its sides and the ovipositor sheaths slightly shorter.

In Muesebeck's key to the North American species of *Apanteles*, *morroensis* runs to *scutellaris* Muesebeck, a paratype of which has been available for examination in the British Museum. Muesebeck's species has the propodeum considerably roughened; tergite 1 is less narrowed to apex and the enclosed area of tergite (2+3) is more transverse and much less obviously triangular. Although this species has a short metacarp like *morroensis*, I do not think the two species are very closely related.

Apanteles evadne sp. n.

♀. Black but not intensely so. Tegulae pale (Cerro Alto) to dark (Inocentes Altos). Wings faintly yellowish; stigma pale fuscous with a faint, paler cloud at base. Legs variable in colour but the hind coxae entirely black; hind femora varying from entirely black (Inocentes Altos) to blackish with reddish suffusions along each side (Cerro Alto).

Head of simple form; transverse seen from in front and without any approach to a triangular shape as thus seen. Mouth parts not in the least elongated. Preapical segment of the antenna varying from as long as wide to 1 ⅓ times longer than wide. Posterior ocelli separated from the eye-margin by twice the diameter of one of them.

Mesoscutum strongly shining, rather sparsely and superficially punctate, the punctures tending to fade out posteriorly. Scutellum polished and virtually impunctate. Propodeum without a trace of costulae and with a vague U-shaped depression medially within which the surface is rather densely rugose; outside, the surface shows vague rugulosities more especially towards the postero-lateral corners but elsewhere it becomes smoother, more shiny and shows traces of punctation. Wings: metacarp much longer than the stigma; a well defined angle between the 1st abscissa of the radius and the transverse cubitus; cubitellan cell of the hind wing very distinctly longer than wide, the veins delimiting it brownish. Hind spurs subequal.

Horizontal part of tergite 1 slightly longer than wide at apex, parallel-sided or imperceptibly widened towards apex, dull, finely and densely rugose; towards sides and apex the sculpture consists of fine broken aci-

culation while the surface towards the posterior hump becomes more or less shagreened. Tergite (2+3) with the enclosed area dull and finely rugose (fig. 6). Ovipositor sheaths narrow, slightly downcurved towards apex abd about as long as the hind tibia plus half the length of the basal segment of the hind tarsus.

♂. The single male that I confidently associate with the two females has the hind tibiae entirely black except for a paler basal ring, as in the female from Inocentes Altos, and the hind femora black with a touch of testaceous at apex.

The flagellum is very slender but the apical segments are broken off. Tergite 1 narrower than in the female, the apical horizontal part being 1½ times as long as apically wide; the enclosed area of tergite (2+3) shows much the same proportions as the female.

Length: ♂ ♀, 3 mm., without ovipositor of female.

Masatierra, Cerro Alto, 600 m., 1.II.1952, 1 ♀ (the type); Miradero, 31.XII.1951, 1 ♂.

Masafuera, Inocentes Altos, 1.300 m., 22.I.1952, 1 ♀ (G. Kuschel).

Type in the University of Santiago, Chile.

I have examined a female that I doubtfully refer to this species (Masatierra, Villagra, 21.II.1951). It differs from the typical species as follows: Hind femora entirely reddish yellow with at most a faint darkening along the upper surface. Stigma evenly yellowish fuscous without a paler basal cloud. Apical antennal segments shorter, the two preapical segments slightly transverse. Tergite 1 slightly more rugose and without the shagreened sculpture midbasally that is characteristic of the two typical females.

Apanteles evadne falls within the late D. S. Wilkinson's group U. Comparing it with what American material is in the British Museum I find it to be related fairly closely to *clavatus* Prov. (det. Muesebeck) and *bushnelli* Muesebeck (det. Muesebeck). Both these species have the spurious veins of the hind wing quite colourless and the cubitellan cell not longer than wide; in both these species, too, the 1st abscissa of the radius and the transverse cubitus do not meet at a distinct angle. Both the North American species have more affinity with the European *laevigatus* Ratz., than either has with *evadne*.

Aphidius sp. (? **matricariae** Haliday).

Masatierra, B. Cumberland, 31.XII.1951, 2 ♂♂; Miradero, 30.XII.1951, 1 ♂ (G. Kuschel).

It is well known that the males of *Aphidius* are extremely difficult to separate. Nevertheless, in the colour, sculpture and shape of petiole, the venation and the number of antennal segments, I can find no difference between these specimens and European males of *matricariae* Hal.

Aphaereta minuta (Ns.)

Masatierra, Plazoleta del Yunque, 20.II.1951, 1 ♀; B. Cumberland, 1.I.1952, 1 ♀ (G. Kuschel).

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