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INSECTA MUNDI

A Journal of World Insect Systematics

0060

South American Melolonthinae (Coleoptera: Scarabaeidae)
classification and nomenclature: some problems and solutions

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Date of Issue: December 5, 2008

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Insecta Mundi 0060: 1-28

Published in 2008 by

Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 U. S. A.
<http://www.centerforsystematicentomology.org/>

Insecta Mundi is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod taxon. Manuscripts considered for publication include, but are not limited to, systematic or taxonomic studies, revisions, nomenclatural changes, faunal studies, book reviews, phylogenetic analyses, biological or behavioral studies, etc. ***Insecta Mundi*** is widely distributed, and referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc.

As of 2007, ***Insecta Mundi*** is published irregularly throughout the year, not as quarterly issues. As manuscripts are completed they are published and given an individual number. Manuscripts must be peer reviewed prior to submission, after which they are again reviewed by the editorial board to insure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Managing editor: Paul E. Skelley, e-mail: insectamundi@gmail.com
Production editor: Michael C. Thomas, e-mail: insectamundi@gmail.com
Editorial board: J. H. Frank, M. J. Paulsen

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Printed Copy	ISSN 0749-6737
On-Line	ISSN 1942-1354
CD-ROM	ISSN 1942-1362

South American Melolonthinae (Coleoptera: Scarabaeidae) classification and nomenclature: some problems and solutions

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Abstract. Classificatory changes are made for some taxa of New World Melolonthinae based on the examination of specimens (including type specimens) and a reevaluation of some of the characters used to justify previous classification decisions. *Blepharotoma angustata* (Blanchard) (**new combination**) is transferred from the genus *Aplodema* Blanchard. The Neotropical members of the genus *Heteronyx* Guérin-Ménéville are transferred to the genus *Blepharotoma* resulting in the following **new combinations**: *Blepharotoma boliviana* (Moser), *Blepharotoma corumbana* (Moser), *Blepharotoma cuyabana* (Moser), *Blepharotoma heynei* (Moser), and *Blepharotoma schencklingi* (Moser). The genus *Blepharotoma* is transferred from the tribe Liparetrini to the tribe Sericoidini. The genus *Aplodema* and the junior synonym *Haplodema* Harold are transferred from the tribe Liparetrini to the tribe Sericoidini and synonymized with the genus *Sericoides* Guérin-Ménéville. *Sericoides magellanica* (Blanchard) (**new combination**) is transferred from the genus *Aplodema* and placed as a senior synonym of *Apterodema acuticollis* Fairmaire (**new synonymy**). *Ampliodactylus* (**new genus**) is described for two southern South American species: *Ampliodactylus marmoratus* (Curtis) (**new combination**) and *Ampliodactylus vestitus* (Philippi) (**new combination**). The genus *Chremastodus* Solier is placed in synonymy with the genus *Macroductylus* Dejean (Macroductylini) and *Chremastodus pubescens* Solier is placed as a junior synonym of *Macroductylus chilensis* Solier (**new synonymy**). *Macroductylus crassipes* Philippi and *Macroductylus nigrinus* Philippi are placed as junior synonyms of *Macroductylus farinosus* Philippi (**new synonymies**). The genus *Astaenosia* Martínez is placed in synonymy with the genus *Pristerophora* Harold (Macroductylini). *Pristerophora longipes* (Philippi) (**new combination**) is transferred from the genus *Astaenosia* and *Schizochelus ursulus* Philippi is placed as a junior synonym of this species (**new synonymy**). *Pristerophora paulseni* (**new species**) is described. *Pristerophora picipennis* (Solier) is placed as a senior synonym of *Schizochelus breviventris* Philippi (**new synonymy**) and *Schizochelus serratus* Philippi (**new synonymy**). *Pusiodactylus* (**new genus**) is described for two southern South American species: *Pusiodactylus mondacai* (**new species**) and *Pusiodactylus flavipennis* (Philippi) (**new combination**). The genus *Paulosawaya* Martínez and D'Andretta is placed in synonymy with the genus *Clavipalpus* Laporte (Macroductylini) resulting in the **new combination** *Clavipalpus ornatissima* (Martínez and D'Andretta). The following replacement names are proposed for three junior secondary homonyms the genus *Plectris* LePeletier and Serville: *Plectris evansi* (**new name**) for *Plectris cinerascens* Moser (junior secondary homonym of *Plectris cinerascens* (Blanchard)), *Plectris katovichii* (**new name**) for *Plectris bonariensis* Frey (junior secondary homonym of *Plectris bonariensis* (Bruch)), and *Plectris tacoma* (**new name**) for *Plectris comata* (Blanchard) (junior secondary homonym of *Plectris comata* (Blanchard)).

Introduction

New World Melolonthinae are a diverse but poorly known group. Through work on cataloguing New World Melolonthinae (Evans 2003, Smith and Evans 2005), conducting a survey and inventory of the Scarabaeoidea of southern South America (for example Smith and Skelley 2007), and curating the Henry and Anne Howden collection at the Canadian Museum of Nature; numerous classification and nomenclatural problems in this group came to light. The purpose of this paper is to correct some of these problems, particularly those at the tribal and generic levels for South American taxa.

Materials and Methods

Specimens

More than 2000 specimens were examined to form the basis of this review. The following 21 institution and private collections listed below (curators in brackets) are cited in the text as depositories for type specimens.

ABTS	Andrew B. T. Smith Collection, Ottawa, ON, Canada
BMNH	The Natural History Museum, London, U.K. (Max Barclay, Malcolm Kerley)
CDFA	California Department of Food and Agriculture, Sacramento, CA, USA (Chuck Bellamy)
CMNC	Canadian Museum of Nature, Ottawa, ON, Canada (François Génier, Robert Anderson)
CNCI	Canadian National Collection of Insects, Ottawa, ON, Canada (Patrice Bouchard)
FMNH	Field Museum of Natural History, Chicago, IL, USA (Alfred Newton)
FSCA	Florida State Collection of Arthropods, Gainesville, FL, USA (Paul Skelley)
HAHC	Henry and Anne Howden Collection, Ottawa, ON, Canada (all of these specimens have been or will be deposited in the CMNC)
IAZA	Instituto Argentino de Investigaciones de Zonas Áridas, Mendoza, Argentina (Federico Ocampo)
JMEC	José Mondaca E. Collection, Santiago, Chile
LEMQ	Lyman Entomological Museum, McGill University, Ste. Anne de Bellevue, PQ, Canada (Terry Wheeler, Stéphanie Boucher)
MEUC	Museo Entomológico Luis Peña, Departamento de Sanidad Vegetal de la Universidad de Chile, Santiago, Chile (Roberto González)
MJPC	M. J. Paulsen Collection, Lincoln, NE, USA
MNHN	Muséum National d'Histoire Naturelle, Paris, France (Olivier Montreuil)
MNNC	Museo Nacional de Historia Natural, Santiago, Chile (Mario Elgueta)
MZLU	Museum of Zoology, Lund University, Lund, Sweden (Roy Danielsson)
NMPC	National Museum of Natural History, Prague, Czech Republic (Jiri Hajek)
TMSA	Transvaal Museum of Natural History, Pretoria, South Africa (James Harrison, Ruth Müller)
UCCC	Museo de Zoología, Universidad de Concepción, Concepción, Chile (Jorge Artigas)
UMCE	Universidad Metropolitana de Ciencias de la Educación, Santiago, Chile (Jaime Solervicens)
UNSM	University of Nebraska State Museum, Lincoln, NE, USA (Brett Ratcliffe)
USNM	United States National Museum of Natural History, Washington, D.C., USA (David Furth)
VMDM	V. Manuel Diéguez M. Collection, Santiago, Chile

Designation of lectotypes and neotypes

Lectotypes are designated for species from South America in order to preserve the stability of nomenclature by selecting one specimen as the sole, name-bearing type of the taxon. Many species of scarabs have been described based on mixed series of specimens later considered to represent separate species. Lectotypes were selected for the following names: *Aplodema angustata* Blanchard (now *Blepharotoma angustata*), *Brachyphylla magellanica* Blanchard (now *Sericoides magellanica*), *Apterodema acuticollis* Fairmaire (now a synonym of *Sericoides magellanica*), *Macroductylus marmoratus* Curtis (now *Ampliodyctylus marmoratus*), *Schizochelus vestitus* Philippi (now *Ampliodyctylus vestitus*), *Macroductylus chilensis* Solier, *Chremastodus pubescens* Solier (now a synonym of *Macroductylus chilensis*), *Schizochelus longipes* Philippi (now *Pristerophora longipes*), *Prionophora picipennis* Solier (now *Pristerophora picipennis*), *Schizochelus breviventris* Philippi (now a synonym of *Pristerophora picipennis*), *Schizochelus serratus* Philippi (now a synonym of *Pristerophora picipennis*).

The rules of zoological nomenclature (International Commission on Zoological Nomenclature 1999) require that a designation of a neotype “is validly designated when there is an exceptional need and only when that need is stated expressly” (Article 75.3). Three neotype designations are made in this work for *Macroductylus farinosus* Philippi, *Macroductylus crassipes* Philippi (now a synonym of *Macroductylus farinosus*), *Macroductylus nigrinus* Philippi (now a synonym of *Macroductylus farinosus*), and *Schizochelus ursulus* Philippi (now a synonym of *Pristerophora longipes*) in order to preserve the stability of nomenclature by selecting one specimen as the sole, name-bearing type of the taxon when the original name-bearing type specimen(s) was lost or destroyed. The neotype specimen serves to tie the published name to an actual specimen and as a reference standard for the taxon. Other qualifying conditions for designating valid neotypes in section 75.3 of the code are satisfied under the species treatment for *Macroductylus*

farinosus Philippi. I consider that a neotype is necessary in these cases due to the history of taxonomic confusion of species and names in this genus. Until thorough revisionary work is conducted on long-neglected taxa such as Neotropical Melolonthinae, and each species is each represented by a sole, name-bearing specimen, the identity of many species, along with the taxonomy and classification of the subfamily will remain in doubt.

Tribe Sericoidini

Diagnosis. The tribe Sericoidini is distinguished from other Melolonthinae using the following combination of characters: labrum beneath clypeus, not on same plane; clypeus and labrum separate (with labrum protruding beyond clypeus in dorsal view) or fused (with a suture distinguishing the parts); antenna with 8-9 antennomeres (including 3-5 antennomere club); mesosternal / metasternal process absent; abdomen with 6 ventral sternites (basal sternite partially hidden by metacoxae), sternites approximately equal in length, evenly convex, separated by distinct sutures; tergite and ventrite of abdominal segments entirely distinct, separated by complete longitudinal suture or ridge (absent in *Ulata*); metatibiae with 2 apical spurs, spurs set below and above the tarsal articulation (tarsus moves between tibial spurs); all claws symmetrical.

Remark. The definition of the tribe Sericoidini is refined above and now includes the following genera: *Apterodemidea* Arrow, *Blepharotoma* Blanchard, *Sericoides* Guérin-Méneville, and *Ulata* Saylor. The tribal status of *Apterodemidea* and *Ulata* is somewhat unclear and warrants further investigation. Sericoidini is endemic to the southern half of South America and shares characters with several Australian tribes including Automoliini, Liparetrini, Maechidiini, Scitalini, etc.

Genus *Blepharotoma* Blanchard

Blepharotoma Blanchard, 1850: 115. Type species *Blepharotoma tarsalis* Blanchard, by monotypy.

Diagnosis. *Blepharotoma* is distinguished from other Melolonthinae using the following combination of characters (see Figs. 1-3): Labrum hidden beneath clypeus in dorsal view, labrum separated from clypeus by suture, clypeal margin reflexed; antenna with 8 antennomeres (including 3 antennomere club); mesosternal / metasternal process absent; abdomen with 6 ventral sternites (basal sternite partially hidden by metacoxae), sternites approximately equal in length and evenly convex; males with protarsomeres 1-4 modified into cup-like pads, pads setose ventrally (females lack this modification); metatibiae with 2 apical spurs, spurs set below and above the tarsal articulation (tarsus moves between tibial spurs); all claws symmetrical, apically toothed.

Remark. Historically, this genus has bounced around between Melolonthini, Sericini, Macroductylini, Liparetrini, and Sericoidini (see Dalla Torre 1913, Frey 1973, Evans 2003, Katovich 2008, etc.). Britton (1980, 1990) and Katovich (2008) provided the most recent definitions and diagnoses of the tribes Liparetrini and Macroductylini, respectively, but using these definitions and characters provides ample reasons for excluding *Blepharotoma* from either of these tribes. Using Melolonthinae diagnostic characters (see above) *Blepharotoma* matches *Sericoides* Guérin-Méneville in most key respects, besides the structure of the labrum (hidden beneath clypeus in *Blepharotoma* and widely protruding beyond clypeus in *Sericoides*). Based on the character set above and the Neotropical distribution of *Blepharotoma*, I am here transferring *Blepharotoma* to the tribe Sericoidini. There is little doubt that *Blepharotoma* and *Sericoides* are more closely related to each other than to any other New World Melolonthinae and are placed together in the same tribe pending a complete and long-overdue overhaul of the tribal classification of the subfamily Melolonthinae.

Britton (2000) effectively removed five Neotropical species of Melolonthinae from the (primarily Australian) genus *Heteronyx* Guérin-Méneville when he stated: "The Brazilian species attributed to *Heteronyx* resemble that genus in having a dense, uniform clothing of recumbent setae and bifid claws but differ in

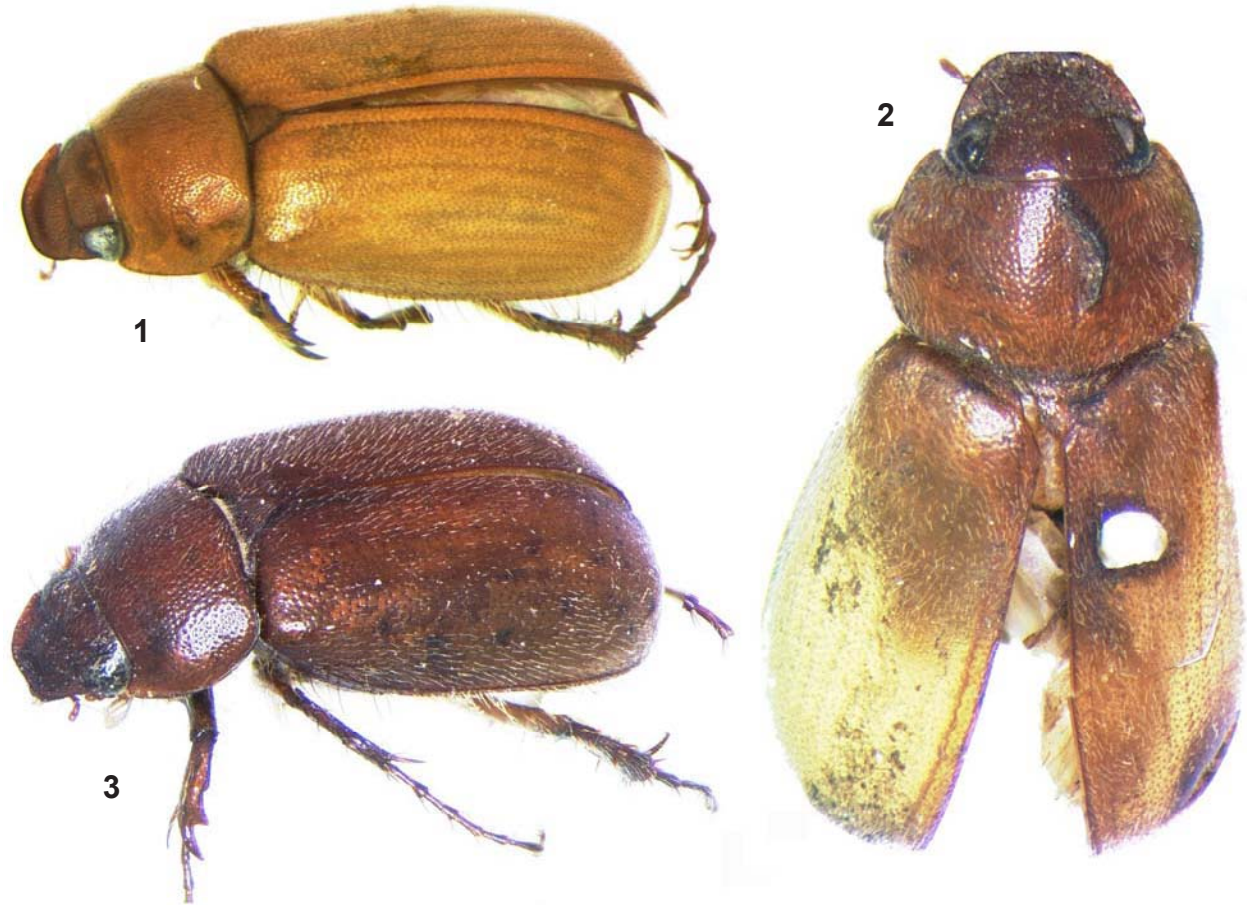


Figure 1-3. *Blepharotoma* spp. habitus. 1) *B. sp.* 2) *B. angustata* lectotype. 3) *B. schencklingi*.

that the anterior faces of the labrum and clypeus are in the same plane, presenting a single, smooth surface. The three lamellae of the antennal club are elongate and the four proximal segments of the anterior tarsi in the male are broadly expanded and densely setose beneath. These species should be referred to a new genus."

All of the Neotropical *Heteronyx* specimens I have examined (for example, Fig. 3) and specimens from the type series of *Aplodema angustata* Blanchard (Fig. 2) have all fallen within the diagnosis given above for *Blepharotoma* (Fig. 1) and I place them in that genus. It is possible that some of these species are synonyms of species already placed in the genus and a thorough review of the type material for all of the species in *Blepharotoma* is needed. The species listed below are here transferred to the genus *Blepharotoma*.

***Blepharotoma angustata* (Blanchard), new combination**

Original combination. *Aplodema angustata* Blanchard, 1850: 115

Type locality. "Santa-Cruz (Bolivie)" (Blanchard 1850).

Type series. Lectotype female (Fig. 2) at MNHN labeled a) "6453/34." (handwritten on white underside of round, green label) b) "MUSEUM PARIS / SANTA-CRUZ / (VALLE GRANDE) / D'ORBIGNY 1834." (typeset), c) "1454" (handwritten), d) "A. angustata. / Cat. Mus. / Santa-Cruz (Bolivie). / M. d'Orbigny." (handwritten on large, green label), e) "APLODEMA / ANGUSTATA / BLANCHARD / LECTOTYPE [female symbol] / A.B.T. SMITH" (red label, handwritten and typeset), e) "BLEPHAROTOMA /

ANGUSTATA / (BLANCHARD) [female symbol] / Det: A.B.T. Smith 2007" (handwritten and typeset). **Lectotype here designated.** Paralectotype female at MNHN labeled a) "6453 / 34." (handwritten on white underside of round, green label) b) "MUSEUM PARIS / Santa Cruz / d'Orbigny" (typeset and handwritten), c) "APLODEMA / ANGUSTATA / BLANCHARD / PARALECTOTYPE [female symbol] / A.B.T. SMITH" (yellow label, handwritten and typeset), d) "BLEPHAROTOMA / ANGUSTATA / (BLANCHARD) [female symbol] / Det: A.B.T. Smith 2007" (handwritten and typeset).

Distribution. Bolivia: Santa Cruz (Blanchard 1850).

Remark. The lectotype and the paralectotype of this species are females and are in poor condition. More specimens and careful comparisons with type specimens of other *Blepharotoma* species will be necessary to determine if this name should be placed in synonymy with any of the other species in this genus.

***Blepharotoma boliviana* (Moser, 1919), new combination**

Original combination. *Heteronyx boliviana* Moser, 1919: 6 (emended from *Heteronyx bolivianus*)

Distribution. Bolivia

***Blepharotoma corumbana* (Moser, 1921), new combination**

Original combination. *Heteronyx corumbana* Moser, 1921: 138 (emended from *Heteronyx corumbanus*)

Distribution. Brazil

***Blepharotoma cuyabana* (Moser, 1919), new combination**

Original combination. *Heteronyx cuyabana* Moser, 1919: 5 (emended from *Heteronyx cuyabanus*)

Distribution. Brazil

***Blepharotoma heynei* (Moser, 1919), new combination**

Original combination. *Heteronyx heynei* Moser, 1919: 5

Distribution. Paraguay

***Blepharotoma schencklingi* (Moser, 1919), new combination**

Original combination. *Heteronyx schencklingi* Moser, 1919: 4

Distribution. Brazil

Genus *Sericoides* Guérin-Ménéville

Sericoides Guérin-Ménéville, 1839: 301. **Type species** *Melolontha glacialis* Fabricius, subsequent designation (Evans 2003: 50).

Synonym. *Macrosoma* Hope, 1837: 109 (junior homonym). **Type species** *Melolontha glacialis* Fabricius, by original designation.

Synonym. *Listronyx* Guérin-Ménéville, 1839: 302. **Type species** *Listronyx nigriceps* Guérin-Ménéville, by monotypy.

Synonym. *Accia* Curtis, 1844: 199. **Type species** *Accia lucida* Curtis, by monotypy.

Synonym. *Aplodema* Blanchard, 1850: 115 (**new synonym**). **Type species** *Brachyphylla magellanica* Blanchard, by subsequent designation (Evans 2003: 58).

Figure 4. *Sericoides magellanica* lectotype.



Synonym. *Maypa* Blanchard, 1850: 115. **Type species** *Maypa chlorosticta* Blanchard, by monotypy.

Synonym. *Haplodema* Harold, 1869a: 1136 (**new synonym**, unjustified emendation of *Aplodema* Blanchard). **Type species** *Brachyphylla magellanica* Blanchard, subsequent designation (Evans 2003: 58).

Synonym. *Apterodema* Fairmaire, 1884: 490. **Type species** *Apterodema acuticollis* Fairmaire, by monotypy.

Synonym. *Paralistrionyx* Brenske, 1906: 30. **Type species** *Listronyx livida* Germain, by original designation.

Synonym. *Paramaypa* Brenske, 1906: 30. **Type species** *Macrosoma osornoana* Brenske, by original designation.

Diagnosis. *Sericoides* is distinguished from other Melolonthinae using the following combination of characters: Labrum protruding well beyond clypeus in dorsal view, labrum oriented roughly parallel to clypeus, clypeal margin reflexed; antenna with 9 antennomeres (including 3-5 antennomere club); mesosternal / metasternal process absent; abdomen with 6 ventral sternites (basal sternite partially hidden by metacoxae), sternites approximately equal in length and evenly convex; males and females with protarsomeres 1-4 not modified into cup-like pads; metatibiae with 2 apical spurs, spurs set below and above the tarsal articulation (tarsus moves between tibial spurs); all claws symmetrical, apically toothed.

Remark. *Sericoides magellanica*, the type species of the genus-group names *Aplodema* and *Haplodema*, is here transferred to the genus *Sericoides*. This places these generic names in synonymy with *Sericoides* being the senior synonym. Although the genus *Sericoides* was divided into subgenera, these groupings are paraphyletic assemblages and therefore have little value. I consider all of the genus-group names above to be junior synonyms of *Sericoides* pending the completion of a monographic revision of this group that I currently have under way. The only species discussed below is *Sericoides magellanica*, because of the generic ramifications.

***Sericoides magellanica* (Blanchard, 1846), new combination**

Original combination. *Brachyphylla magellanica* Blanchard, 1846: plate 8.

Type locality. “port Famine, détroit de Magellan” (Blanchard 1854).

Type series. Lectotype female (Fig. 4) at MNHN labeled a) “37 / 41.” (handwritten on white underside of round, green label), b) “MUSÉUM PARIS / Magellan / Jacquinot” (typeset and handwritten), c) “A. magallanica. / Hombr. et Jacq. / Port-Famine. / M. Jacquinot.” (handwritten on large, green label), d) “BRACHYPHYLLA / MAGELLANICA / BLANCHARD / LECTOTYPE [female symbol] / A.B.T. SMITH” (red label, handwritten and typeset), e) “Southern Neotropical Scarabs / database # AS2606467 / *Sericoides magellanica* / (Blanchard, 1846) [female symbol] / DET: A.B.T.SMITH 2006” (typeset). **Lectotype here designated.**

Synonym. *Apterodema acuticollis* Fairmaire, 1884: 491.

Type locality. “Punta-Arena.”

Type series. Lectotype male at MNHN labeled a) “MUSEUM PARIS / SANTA CRUZ / PATAGONIE / LEBRUN 1883” (typeset), b) “2549 / 83.” (handwritten on white underside of round, green label) c) “Apterodema / acuticollis / n.g. n.sp / Fairm.” (handwritten), d) “APTERODEMA / ACUTICOLLIS / FAIRMAIRE / LECTOTYPE [male symbol] / A.B.T. SMITH” (red label, handwritten and typeset), e) “Southern Neotropical Scarabs / database # AS2606517 / *Sericoides magellanica* / (Blanchard, 1846) [male symbol] / DET: A.B.T.SMITH 2006” (typeset). **Lectotype here designated.**

Diagnosis. *Sericoides magellanica* is distinguished from other species of *Sericoides* using the following characters: body rounded, width approximately half the length; dorsal surface light tan in color, glabrous; wings highly brachypterous, reduced to stub shorter in length than pronotum; pygidium convex; claws simple, inner edge smooth without comb-like teeth; protibial claws symmetrical.

Distribution (Fig. 20). Argentina: Tierra del Fuego; Chile: XII Región de Magallanes.

Remark. *Sericoides magellanica* is an easily recognizable, flightless species that occurs in open scrubland habitat on the extreme southern tip of South America and on Tierra del Fuego. When I examined the primary types of *Sericoides magellanica* and *Apterodema acuticollis* it was immediately obvious that they are the same species. Because these taxa are both the type species of generic names and have never been placed in the same genus, I have elected to synonymize them here and am currently conducting a monographic revision of *Sericoides* that will contain numerous other taxonomic and nomenclatural changes within this genus.



Figure 5-7. *Ampliodactylus* spp. 5) *A. marmoratus* habitus. 6) *A. vestitus* habitus. 7) *A. vestitus* parameres.

Tribe Liparetrini

Diagnosis (modified from Britton 1990). Antennae with 8-10 antennomeres, including a 3-7 antennomere club; body color testaceous, castaneous, or black (rarely bicolored), surface usually shining; elytral striae paired or approximately equally spaced; wings fully developed, folded, functional; mesosternal / metasternal process absent; metatibiae with 2 apical spurs, spurs set below and above the tarsal articulation (tarsus moves between tibial spurs); abdominal ventrites without a longitudinal ridge on each side; claws simple, without a tooth on the concave side; metatibiae with an interrupted or complete, obliquely transverse spinose ridge near the middle (sometimes absent).

Remarks. The tribe Liparetrini is endemic to Australia and there is little merit to the previous placement New World taxa in this tribe by some authors (for a definition and detailed treatment of Liparetrini, see Britton [1980, 1990]). Accordingly, the genera *Aplodema*, *Blepharotoma*, and the New World species formerly placed in *Heteronyx* have all been transferred to the tribe Sericoidini (see above under the heading for *Blepharotoma*). Evans (2003) also listed the monotypic genus *Zaburina* Saylor (from Colombia) and the species *Aplodema rufescens* (Saylor) (from Guyana) in the tribe Liparetrini. These taxa are here removed from the tribe Liparetrini and placed in *incertae sedis*, pending a thorough examination of the type material. I will refrain from speculating on the proper classification of these taxa other than to say that their previous placement and possibly the distribution given are highly dubious. I examined the holotype of *Zaburina columbiana* Saylor a few years ago at the California Academy of Sciences and noted that it had a labrum projecting below clypeus, metatibial spurs on either side of tarsus, and propygidial suture evident. These characters suggest that this taxon might either belong in the tribe Sericini or could be a mislabeled Australian specimen.

Tribe Macroductylini (southern South American taxa)

With the recent publication of a generic-level review of the tribe Macroductylini (Katovich 2008), it is now possible to classify all of the described species from southern South America with some proficiency. Southern South America as here defined includes Argentina from Neuquén to Tierra del Fuego and Chile from IV Región de Coquimbo to XII Región de Magallanes. In examining numerous type specimens, it became obvious that several genera had been misidentified in many previous publications. It is also apparent that the genus *Schizochelus* Blanchard has been used as a taxonomic dumping ground for a number of southern South American species that really all belong in different genera.

To supplement and expand on the generic work done by Katovich (2008), a new key to the southern South American genera is given below along with a number of classification changes based on the examination of a large number of specimens (including type specimens).

Key to the Macroductylini genera from southern South America

- | | | |
|-------|---|----------------------------------|
| 1. | Total length greater than 15 mm | 2 |
| — | Total length less than 12 mm | 3 |
| 2(1). | Mesosternal peg evident between mesocoxae; pronotum and head metallic green or brown with green reflections | <i>Pseudodicerania</i> Gutiérrez |
| — | Mesosternal peg absent; pronotum and head brown to black, without green reflections | <i>Issacaris</i> Fairmaire |
| 3(2). | Protibia along outside edge smooth with 1-2 large teeth near apex; protibial spur absent | 4 |
| — | Protibia along outside edge saw-toothed with 2 larger teeth near apex; protibial spur present or absent | <i>Pristerophora</i> Harold |

- 4(3). Pygidium wider than long, convex; sexual dimorphism not extreme: males and females with similar setal patterns, not covered with scale-like setae **5**
- Pygidium longer than wide, greatly convex; sexual dimorphism extreme: males covered with scale-like setae, abdomen flattened ventrally; females covered with fine setae, abdomen bulbous ventrally ***Macroductylus Dejean***
- 5(4). Dorsal surface bicolored with dark areas on pronotum and dark areas or spots on apex and base of elytra (sometimes these dark areas are expanded and can cover almost the entire elytra); dorsal surface with setae evenly distributed ***Pusiodactylus new genus***
- Dorsal surface not bicolored (or weakly bicolored); dorsal surface with obvious setal patterns, setae not evenly distributed ***Ampliodactylus new genus***

Genus ***Ampliodactylus new genus***

Type species. *Macroductylus marmoratus* Curtis, here designated.

Description (Figs. 5-6). Length 7.1-10.3 mm. Dorsal surface unicolored with uneven setal pattern. *Head*: clypeus parabolic. Mentum much longer than wide, with weak longitudinal trough. Antennae with 9 antennomeres. *Pronotum*: widest medially, width greater than length. *Legs*: protibia with two apical teeth on outer margin, without series of small teeth medially and basally. Claws symmetrical, each side split subapically. Protibial spurs absent. Metatibial spurs absent in males, females have 2 metatibial spurs. *Male genitalia*: parameres simple, not curved or split (Fig. 7).

Etymology. *Ampliodactylus* is formed to indicate the similarity of this genus to species in the genus *Macroductylus*. “*Amplio*” is Latin for “to enlarge, increase, magnify” in reference to numerous genera in the tribe Macroductylini. The name is masculine in gender.

Remark. For at least the last century, the species in this genus were placed in the genus *Schizochelus*. However, thorough examination of the type species of *Schizochelus* by Katovich (2008) made it possible to determine that none of the southern South American species currently placed in this genus were correctly classified.

Key to species of ***Ampliodactylus***

1. Pronotum with distinct medial row of thick, white setae; scutellum obscured by thick, white setae (Fig. 5). Total length less than 9 mm ***Ampliodactylus marmoratus* (Curtis)**
- Pronotum without distinct medial row of setae (setae evenly distributed across pronotum); scutellum not obscured by thick setae (Fig. 6). Total length greater than 9 mm ***Ampliodactylus vestitus* (Philippi)**

***Ampliodactylus marmoratus* (Curtis, 1844), new combination**

Original combination. *Macroductylus marmoratus* Curtis, 1844: 200.

Type locality. “Chiloe.”

Type series. Lectotype male at BMNH labeled a) “Type” (round label, red border, typeface), b) “63 / 49” (round label, handwritten), c) “*Macroductylus / marmoratus* Curt.” (handwritten), d) “~~*Ceraspis*~~ / *Macroductylus* / 89 *marmoratus* / Curt” (handwritten), e) “MACRODUCTYLUS / MARMORATUS / CURTIS / LECTOTYPE [male symbol] / A.B.T. SMITH” (red label, handwritten and typeset), f) “Southern Neotro-

pical Scarabs / database # AS2615534 / *Ampliodactylus marmoratus* / (Curtis, 1844) [male symbol] / DET: A.B.T.SMITH 2008" (typeset). **Lectotype here designated.**

Distribution (Fig. 21). Argentina: Neuquén, Río Negro, Chubut; Chile: X Región de Los Lagos.

***Ampliodactylus vestitus* (Philippi, 1864), new combination**

Original combination. *Schizochelus vestitus* Philippi, 1864: 447.

Type locality. "Valdivia."

Type series. Lectotype male at MNNC labeled a) "CHILE / Valdivia" (handwritten), b) "Holótipo" (orange label, typeset), c) "Schizochelus / vestitus / Philippi" (handwritten), d) "vestitus. / (Phil.)" (handwritten), e) "CHILE / M. N. / H. N. / Tipo / No / 2860" (typeset and handwritten), f) "1827" (handwritten), g) "SCHIZOCHELUS / VESTITUS / PHILIPPI, 1864 / LECTOTYPE / A.B.T. SMITH [male symbol]" (red label, handwritten and typeset), h) "Southern Neotropical Scarabs / database # AS2615608 / *Ampliodactylus vestitus* / (Philippi, 1864) [male symbol] / DET: A.B.T. SMITH 2008" (typeset). **Lectotype here designated.**

Distribution (Fig. 22). Chile: XIV Región de Los Ríos.

Genus *Macroductylus* Dejean

Macroductylus Dejean, 1821: 58. **Type species** *Melolontha subspinosus* Fabricius, by subsequent designation (Evans 2003: 290).

Synonym. *Stenothorax* Harris, 1827: 8. **Type species** *Melolontha subspinosus* Fabricius, by monotypy.

Synonym. *Chremastodus* Solier, 1851: 103 (**new synonym**). **Type species** *Chremastodus pubescens* Solier, by subsequent designation (Evans 2003: 248).

Remark. The type species of the genus *Chremastodus* is here transferred to the genus *Macroductylus*. This places the two names in synonymy with the latter being the senior synonym.

Key to Chilean species of *Macroductylus*

Males have no metatibial spurs, a flat or concave abdomen, scales covering the body, and are generally light in color. Females have two metatibial spurs, a convex abdomen, no scales, and are dark to black in color.

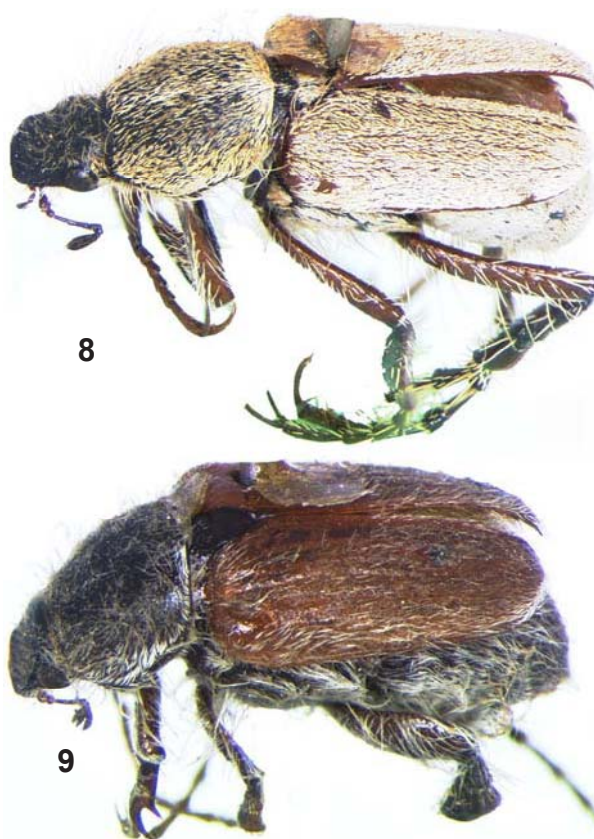


Figure 8-9. *Macroductylus chilensis* habitus. **8)** Lectotype male. **9)** Female (*Chremastodus pubescens* lectotype).

1. Males (Fig. 8) with long, erect setae interspersed with scales on disc of pronotum and abdomen (in two distinct longitudinal lines), dorsal and ventral surface flattened in lateral view. Females (Fig. 9) bicolored with chestnut brown elytra and dark brown body, body covered with light colored setae ***Macrodactylus chilensis* Solier**
- Males (Fig. 10) with long, erect setae along margins of pronotum but generally not on the disc; abdomen with a central patch of erect setae organized more latitudinally, dorsal and ventral surface distinctly convex in lateral view. Females (Fig. 11) black with dark setae covering body ***Macrodactylus farinosus* Philippi**

***Macrodactylus chilensis* Solier**

Original combination. *Macrodactylus chilensis* Solier, 1851: 115

Type locality. “la provincia de Coquimbo.”

Type series. Lectotype male (Fig. 8) at MNHN labeled a) “15 / 43” (handwritten on white underside of round, green label), b) “*Macrodactylus / chilensis* Gay / -Sol.” (handwritten, label pinned sideways), c) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), d) “*M. chilensis / Solier / Chili / M. Gay.*” (green label, handwritten), e) “MACRODACTYLUS / CHILENSIS / SOLIER / LECTOTYPE [male symbol] / A.B.T. SMITH” (red label, handwritten and typeset), f) “Southern Neotropical Scarabs / database # AS2609312 / *Macrodactylus chilensis* / Solier, 1851 [male symbol] / DET: A.B.T.SMITH 2007” (typeset).

Lectotype here designated. One male paralectotype at MNHN labeled a) “15 / 43” (handwritten on white underside of round, green label), b) “Coquimbo” (handwritten, label pinned sideways), c) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), d) “MACRODACTYLUS / CHILENSIS / SOLIER / PARALECTOTYPE [male symbol] / A.B.T. SMITH” (yellow label, handwritten and typeset), e) “Southern Neotropical Scarabs / database # AS2609313 / *Macrodactylus chilensis* / Solier, 1851 [male symbol] / DET: A.B.T.SMITH 2007” (typeset). One male paralectotype at MNHN labeled a) “15 / 43” (handwritten on white underside of round, green label), b) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), c) “MACRODACTYLUS / CHILENSIS / SOLIER / PARALECTOTYPE [male symbol] / A.B.T. SMITH” (yellow label, handwritten and typeset), d) “Southern Neotropical Scarabs / database # AS2609314 / *Macrodactylus chilensis* / Solier, 1851 [male symbol] / DET: A.B.T.SMITH 2007” (typeset). One male paralectotype at MNHN labeled a) “9 / 45” (handwritten on white underside of round, green label), b) “*Macrodactylus / chilensis / Chili*” (handwritten, label pinned sideways), c) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), d) “MACRODACTYLUS / CHILENSIS / SOLIER / PARALECTOTYPE [male symbol] / A.B.T. SMITH” (yellow label, handwritten and typeset), e) “Southern Neotropical Scarabs / database # AS2609315 / *Macrodactylus chilensis* / Solier, 1851 [male symbol] / DET: A.B.T.SMITH 2007” (typeset).

Synonym. *Chremastodus pubescens* Solier, 1851: 103 (**new synonym**).

Type locality. “la provincia de Coquimbo.”



Figure 10-11. *Macrodactylus farinosus* habitus. 10) Neotype male. 11) Female.

Type series. Lectotype female (Fig. 9) at MNHN labeled a) “25” (handwritten), b) “15 / 43” (handwritten on white underside of round, green label), c) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), d) “TYPE” (red label, typeset), e) “Cremastocheilus / pubescens / Sol. / Coquimbo” (handwritten), f) “CHREMASTODUS / PUBESCENS / SOLIER / LECTOTYPE [female symbol] / A.B.T. SMITH” (red label, handwritten and typeset), g) “Southern Neotropical Scarabs / database # AS2609316 / *Macroductylus chilensis* / Solier, 1851 [female symbol] / DET: A.B.T.SMITH 2007” (typeset). **Lectotype here designated.**

Distribution (Fig. 23). Chile: IV Región de Coquimbo.

Remark. The name *Chremastodus pubescens* has been long regarded a valid name in catalogues and checklists. However, there has never been a thorough analysis of this species since the original description by Solier (1851). When I examined the lectotype of this species, it was obvious that it is a female *Macroductylus*. There is considerable sexual dimorphism in southern South American *Macroductylus* species that apparently lead to confusion by early taxonomists. Since both *Macroductylus chilensis* and *Chremastodus pubescens* were described from specimens from the same collecting event in Coquimbo, Chile, I am here placing these two names in synonymy.

I studied four specimens from NMPC that originated from the Philippi collection (via the Nickerl collection) that were labeled as types of “*Macroductylus vulgaris* Phil.” Because Philippi never described this species or otherwise validated this name, these specimens are not valid type specimens.

The record of *Macroductylus chilensis* from Neuquén, Argentina (Roig-Juñent et al. 2005) was based on a misidentification. This species is known only from IV Región de Coquimbo, Chile (Fig. 23).

***Macroductylus farinosus* Philippi, 1864**

Original combination. *Macroductylus farinosus* Philippi, 1864: 442.

Type locality. Chile: VII Región del Maule: Linares: Estero Leiva (based on the neotype). The original type locality was “Andes prov. de Lineares.”

Type series. Neotype male (Fig. 10) at MNHC labeled a) “Estero Leiva / Prov. Linares / CHILE I 53 Pena” (handwritten), b) “MACRODUCTYLUS / FARINOSUS / PHILIPPI [male symbol] / NEOTYPE / A. B. T. SMITH” (red label, handwritten and typeset), c) “MACRODUCTYLUS / CRASSIPES / PHILIPPI [male symbol] / NEOTYPE / A. B. T. SMITH” (red label, handwritten and typeset), d) “MACRODUCTYLUS / NIGRINUS / PHILIPPI [male symbol] / NEOTYPE / A. B. T. SMITH” (red label, handwritten and typeset), e) “Southern Neotropical Scarabs / database # AS2609408 / *Macroductylus farinosus* / Philippi, 1864 [male symbol] / DET: A.B.T.SMITH 2007” (typeset). **Neotype here designated.**

Synonym. *Macroductylus crassipes* Philippi, 1864: 444 (**new synonym**).



Figure 12-14. *Pristerophora* spp. habitus. 12) *P. longipes*. 13) *P. paulseni* holotype. 14) *P. picipennis*.

Type locality. Chile: VII Región del Maule: Linares: Estero Leiva (based on the neotype). The original type locality was “Chile.”

Type series. Neotype male (Fig. 10) at MNNC, same specimen as the neotype for *Macroductylus farinosus* (see label data above). **Neotype here designated.**

Synonym. *Macroductylus nigrinus* Philippi, 1864: 443 (**new synonym**).

Type locality. Chile: VII Región del Maule: Linares: Estero Leiva (based on the neotype). The original type locality was “Chile.”

Type series. Neotype male (Fig. 10) at MNNC, same specimen as the neotype for *Macroductylus farinosus* (see label data above). **Neotype here designated.**

Distribution (Fig. 24). Chile: IV Región de Coquimbo, Región Metropolitana, VII Región del Maule, VIII Región del Biobío. One specimen examined was labeled from Aysen km 50, Coyhaique. This locality should be considered dubious as it is far outside the known range for this commonly encountered species.

Remark. Color variation, variation in setal pattern, and incomplete specimens seem to have led Philippi (1864) to believe that *Macroductylus farinosus*, *M. crassipes*, and *M. nigrinus* were different species. I have examined over 170 specimens of *Macroductylus farinosus* and found the variation within this species to encompass Philippi's (1864) original descriptions of all three species mentioned above. Because I found no evidence to suggest that more than one species is represented within the series I examined, I here synonymize the three Philippi names. I selected a single specimen as the neotype for each of the three names to make them objective synonyms and avoid further confusion over these names.

Genus *Pristerophora* Harold

Pristerophora Harold, 1869b: 123 (replacement name for *Prionophora* Solier, 1851: 101).

Type species. *Prionophora picipennis* Solier, by monotypy.

Synonym. *Prionophora* Solier, 1851: 101 (junior homonym). **Type species** *Prionophora picipennis* Solier, by monotypy.

Synonym. *Astaenosiagum* Martínez, 1957: 50. **Type species** *Schizochelus longipes* Philippi, by original designation. **New synonym.**

Key to species of *Pristerophora*

Males have metatibial spurs absent and elongate antennal clubs approximately equal in length to remaining basal antennomeres. Females have two metatibial spurs and short antennal clubs that are significantly shorter than remaining basal antennomeres.

1. Protibial spur present. Total length usually greater than 7 mm. Elytra color and setae even, not generally mottled or patchy (Figs. 12-13) **2**
- Protibial spur absent. Total length less than 7 mm. Elytra color and setae uneven, often giving a mottled or patchy appearance (Fig. 14) ***Pristerophora picipennis* (Philippi)**
- 2(1). Total length greater than 9.5 mm. Male with bulbous eyes separated by 1-2 eye-widths ***Pristerophora longipes* (Philippi)**

— Total length less than 9.5 mm. Male with eyes not enlarged, separated by 4 eye-widths
 *Pristerophora paulseni* Smith

Pristerophora longipes (Philippi)

Original combination. *Schizochelus longipes* Philippi, 1861: 738

Type locality. “Valdivia.”

Type series. Lectotype male at MNNC labeled a) “angulicollis / (P.G. ined.)” (handwritten), b) “Schizochelus / longipes / F. Philippi” (handwritten), c) “Holótipo” (orange label), d) “CHILE / Valdivia” (handwritten), d) “CHILE / M. N. / H. N. / Tipo / No / 2858” (typeset and handwritten), e) “1822” (handwritten), f) “SCHIZOCHELUS / LONGIPES / PHILIPPI [male symbol] / LECTOTYPE / A.B.T. SMITH” (red label, handwritten and typeset), g) “SCHIZOCHELUS / URSULUS / PHILIPPI [male symbol] / NEOTYPE A.B.T. SMITH” (red label, handwritten and typeset), h) “Southern Neotropical Scarabs / database # AS2615289 / *Pristerophora longipes* / (Philippi, 1861) [male symbol] / DET: A.B.T.SMITH 2008” (typeset). **Lectotype here designated.** One male paralectotype at NMPC labeled a) “Schizochelus / longipes / Phil. Chili” (handwritten on green label), b) “COLL.NICKERL / MUS.PRAGENSE” (typeset), c) “SCHIZOCHELUS / LONGIPES / PHILIPPI [male symbol] / PARALECTOTYPE / A.B.T. SMITH” (yellow label, handwritten and typeset), d) “Southern Neotropical Scarabs / database # AS2616194 / *Pristerophora longipes* / (Philippi, 1861) [male symbol] / DET: A.B.T.SMITH 2008” (typeset). One male paralectotype at NMPC labeled a) “COLL.NICKERL / MUS.PRAGENSE” (typeset), b) “SCHIZOCHELUS / LONGIPES / PHILIPPI [male symbol] / PARALECTOTYPE / A.B.T. SMITH” (yellow label, handwritten and typeset), c) “Southern Neotropical Scarabs / database # AS2616195 / *Pristerophora longipes* / (Philippi, 1861) [male symbol] / DET: A.B.T.SMITH 2008” (typeset).

Synonym. *Schizochelus ursulus* Philippi, 1864: 446 (**new synonym**).

Type locality. “Valdivia.”

Type series. Neotype male at MNNC, same specimen as the lectotype for *Schizochelus longipes* (see label data above). **Neotype here designated.**

Distribution (Fig. 25). Chile: VIII Región del Biobío, IX Región de la Araucanía, X Región de Los Lagos.

Remark. Since the type specimen of *Schizochelus ursulus* Philippi has been lost and the original description (Philippi 1864) falls within the intraspecific variation of *Pristerophora longipes*, I am designating the lectotype of the latter as the neotype of the former. This makes the two names objective synonyms and will eliminate any further use of *Schizochelus ursulus*.

Martínez (1957) created the genus *Astaenosiagum* for this species when he correctly determined that it belonged in another genus than Brazilian *Schizochelus*. Martínez (1957) did not mention the other two species here placed in *Pristerophora*. Both species share many characteristics with *Pristerophora longipes* that warrant their inclusion in the same genus. Notably, the structure of the male genitalia in all three species is very similar (Figs. 15-17).

Pristerophora paulseni new species

Type locality. “Chile: X Región de Los Lagos: Parque Nacional Vicente Pérez Rosales: Volcán Osorno: 41°08.496' S, 72°32.096' W.

Type series. Holotype male (Fig. 13) at MNNC labeled a) “CHILE: REGIN X (LOS LAGOS) / P.N. Vicente Pérez Rosales / Volcán Osorno, beating & sweeping / S 41°08.496' W 72°32.096', 900 m / 26 January 2006 / A.B.T. Smith, M.J. Paulsen” (typeset), b) “PRISTEROPHORA / PAULSENI / SMITH /

HOLOTYPE [male symbol]" (red label, handwritten and typeset), c) "Southern Neotropical Scarabs / database # AS2615776 / *Pristerophora paulseni* / Smith, 2008 [male symbol] / DET: A.B.T.SMITH 2008" (typeset). Eight male paratypes at HAHC labeled "CHILE / Prov. Llanquihue / Rio Muerto / G. Kuschel-leg / Coll. Martinez / 25-1-950" (handwritten). One male paratype at HAHC labeled "CHILE / Concepción / Cekalovik-leg. / Coll. Martínez / Dic.-984" (handwritten). Two male paratypes at HAHC labeled "ARGENTINA / NEUQUEN / Curruhe'Chico / Margen Este / Coll. Martínez / Feb.-967" (handwritten). Four male paratypes at HAHC labeled "ARGENTINA / NEUQUEN / Curruhe'Chico / Coll. Martínez / Feb.-967" (handwritten). Three male paratypes at HAHC labeled "ARGENTINA / NEUQUEN / S.M. de los Andes / Gaii-leg. / Coll. Martínez / Dic.-957" (handwritten). One male paratype at HAHC labeled "ARGENTINA / NEUQUEN / P. N. LANIN / S. M. de los Andes / Molinari-leg. / Feb.-958" (handwritten). One male paratype at HAHC labeled "ARGENTINA / NEUQUEN / NAHUEL HUAPI / Isla Victoria / Monrós-legit / Ene.-943" (handwritten). One male paratype at HAHC labeled "ARGENTINA / Rio Negro / Bariloche / M. A. [illegible]-leg / Coll. Martínez" (handwritten). Three male paratypes at HAHC labeled "Km.No 50 / Coyhaique-Aysen / Prov. Aysen / 24-Enero-1961 / Coll: L.E. Pena" (typeset). One male paratype at FMNH labeled a) "Km.No 50 / Coyhaique-Aysen / Prov. Aysen" (typeset), b) "24-Enero-1961 / Coll: L.E. Pena" (typeset). Two male paratypes at BMNH labeled a) "CHILE: Reg. XI / Queulat N.P. / P.M. Hammond" (typeset), b) "Base area / 21.xi-12.xii.03" (typeset). One male paratype at BMNH labeled a) "CHILE: Reg. XI / Queulat N.P. / P.M. Hammond" (typeset), b) "Below base / 1-10.xii.03 / shrub flowers" (typeset). One male paratype at BMNH labeled a) "CHILE: Reg. XI / Queulat N.P. / P.M. Hammond" (typeset), b) "6 km SW / Base" (handwritten). Two male paratypes at FMNH (1) and HAHC (1) labeled "CHERQUENCO / Ener.-Feb.1954 / T. Ramirez, leg-" (typeset). One male paratype at FMNH labeled "PICHINAHUEL / 12-20.Feb.1953 / Coll. L. E. PENA" (typeset). One male paratype at HAHC labeled "Prov. AYSÉN / Aysen Km.50. / Coyhaique / 24 Enero-1961 / Coll: L.E. Pena" (typeset). Three male paratypes at FMNH labeled a) "Prov. AYSÉN / Aysen Km.50. / Coyhaique" (typeset), b) "24 Enero-1961 / Coll: L.E. Pena" (typeset). One male paratype at HAHC labeled "X-1950 / Pucará / P. Nac. Lanín / I. Schajovskoi" (typeset). One male paratype at USNM labeled "CHILE: Prov. Osorno / Rio Blanco ca. 5 km / NW Las Cascadas / 41°03'S, 72°39'W / 26 Jan 1998 / N. E. Woodley" (typeset). One male paratype at HAHC labeled "CHILE: Region IX / Pucon / 39°16'S 71°58'W / 3.XII.2002, L. Masner" (typeset). One male paratype at HAHC labeled a) "ARGENTINA: pr. Rio Negro / Lago Mascaradi / 41°21'S, 71°32'W / S. Rubulis, Dec.-Jan. 1985" (typeset), b) "in water tank" (typeset). Five male paratypes at FMNH labeled "Rio Ventisquero / Lo. Yelcho Chiloe / Chile 5-9-XII-85 / Coll. L. E. Pena" (typeset). Three male paratypes at LEMQ labeled "CHILE: Aysén / Puerto Aysén / XI.1985, L. Peña" (typeset). One male paratype at MNNC labeled "P.N. Vicente Perez R / Co Santo Domingo / 26-I-1973 / Col. C. Vivar T." (typeset and handwritten). Seven male paratypes at MNNC labeled "P.N. Vicente Perez R / Co Santo Domingo / 28-I-1973 / J. Solervicens" (typeset and handwritten). Six male paratypes at MNNC labeled "P.N. Vicente Perez R / Co Santo Domingo / 29-I-1973 / Col. C. Vivar T." (typeset and handwritten). One male paratype at MNNC labeled "P.N. Vicente Perez R / Co Santo Domingo / 19 / Col. C. Vivar T." (typeset and handwritten). Two male paratypes at ABTS (1) and MJPC (1) labeled "CHILE: REGIÓN X (LOS LAGOS) / P.N. Vicente Perez Rosales / Volcán Osorno, chicken carrion pitfall / S41°07.908' W72°32.248', 1035 m / 26-28 January 2006 / A.B.T. Smith & M.J. Paulsen" (typeset). Four male paratypes at CDFA labeled "ARGENTINA: Neuquen Prov. / Parque Nacional Lanin, 2km S / Paso Tromen Mamuil Malal / I-3-2006, 1400 m / 39°36.49'S W71°21.70'W / Fred G. Andrews" (typeset). One male paratype at CMNC labeled "ARGENTINA: NEUQUÉN / RP 65, pasando Arroyo Pedregoso / Bosque de Coihue en matriz de /



Figure 15-17. *Pristerophora* spp. parameres. 15) *P. longipes*. 16) *P. paulseni*. 17) *P. picipennis*.

ñire con caña viva; 852 m / 40.6224613°S, 71.5959355°W / January 2005; P. Sackmann / LT3S2E5C10" (typeset). One male paratype at IAZA labeled "ARGENTINA: NEUQUÉN / RN 231, "Muelle de Piedra"; 833 m / Bosque de Coihue, con ciprés / 40.82456131°S, 71.56471769°W / January 2005; P. Sackmann / LT4S4E5C8" (typeset). One male paratype at IAZA labeled "ARGENTINA: RÍO NEGRO / RN 258, divisoria de Aguas, antes / de la casa del guardaparques; Bosque / mixto de Coihue, Ciprés y Radal; 849 m / 41.26894986°S, 71.49535988°W / January 2005; P. Sackmann / LT5S4E5C5" (typeset). Two male paratypes at CMNC (1) and IAZA (1) labeled "ARGENTINA: NEUQUÉN / RP 62, Termas de Lahuen-Có / Bosque de Coihue (algo de ñire) / y caña seca; 938 m / 39.82749922°S, 71.62877723°W / January 2005; P. Sackmann / LT1S1E5C7" (typeset). One male paratype at CDFA labeled "ARGENTINA: Neuquen Province / Dept Collon Cura, 27km S La / Rinconada; 640m; / 40°10.99'S / W70°39.86'W; 25-27.XII.2005; ME / Irwin; Ex: malaise on cliffside dune" (typeset). One male paratype at MZLU labeled a) "Chile, Laguna San / Rafael. / Brattström-Dahl." (handwritten), b) "LUND UNIV. CHILE EXP. 1948-49. / No.T35 Ins 4 13/2 1949. / St. no. T22 leg." (typeset and handwritten), c) "T22 13.II 1949 / Ins. 4 / T35" (handwritten). One male paratype at HAHC labeled a) "4496." (handwritten), b) "Colección / R. Gutiérrez / 1958" (typeset). One male paratype at BMNH labeled a) "CHILE: Soler V. / Laguna San Rafael N.P. / Jan-Feb. 1999" (typeset), b) "P.M. Hammond / K.A. Jackson / BM-1999-107" (typeset). One female paratype at CMNC labeled "ARGENTINA: NEUQUÉN / RP 62, Termas de Lahuen-Có / Bosque de Coihue (algo de ñire) / y caña seca; 938 m / 39.82749922°S, 71.62877723°W / January 2005; P. Sackmann / LT1S1E5C6" (typeset). Four male paratypes at CMNC labeled "CHILE: REGIÓN X (LOS LAGOS) / P.N. Vincente Pérez Rosales / Volcán Osorno, beating & sweeping / S 41°08.496' W72°32.096', 900 m / 26 January 2006 / A.B.T. Smith, M.J. Paulsen" (typeset). Four male paratypes at CMNC labeled "CHILE: REGIN X (LOS LAGOS) / P.N. Vincente Pérez Rosales / Volcán Osorno / S 41°08.496' W72°32.096', 900 m / 26 January 2006, UV/MV light / A.B.T. Smith, M.J. Paulsen" (typeset). One male paratype at CMNC labeled "CHILE: REGIN X (LOS LAGOS) / P.N. Vincente Pérez Rosales / Volcán Osorno / S 41°08.496' W72°32.096', 900 m / 26 January 2006 / A.B.T. Smith, M.J. Paulsen, J. Mondaca" (typeset). One male paratype at FSCA labeled a) "CHILE: IX Reg: Araucania / Malleco; P. N. Malalcahuello / V. Lonquimay, -38.427 -71.531 / 2-4-II-2006; J. Heppner, A. / Angulo, J. Brambila, B. Sutton" (typeset), b) "1450m; araucania / forest to treeline; 6m / malaise trap 100m / below treeline" (typeset). All paratypes listed above also bear a yellow paratype label and a Southern Neotropical Scarabs database label.

Description of holotype (Fig. 13). Male. Length 7.9 mm, width 4.0 mm. Dorsal and ventral color dark brown; abdomen ventrally with lateral striped pattern, sternites with light tan apical strip contrasting with dark basal and medial color. Dorsal surface entirely setose; setae with thick, recumbent, white setae intermixed with thin, erect, tan setae. *Head*: surface densely punctate and setose. Clypeus concave with bisinuate; apex reflexed with well-defined, upturned border. Eyes prominent by not bulbous. Antennae with 9 antennomeres; antennal club with 3 antennomeres, club approximately equal in length to antennomeres 1-6 combined. Labrum reduced, hidden below clypeus. Maxillary robust, triangular, basal width approximately equal to width of mentum; maxillary palpus with 4 palpomeres, apical palpomere extending beyond clypeus in dorsal view. Mentum approximately twice as long as wide, with weak longitudinal trough; labial palpus greatly reduced. *Pronotum*: surface densely punctate and setose. Pronotum widest medially with smooth margins. *Elytra*: moderately punctate with microsculpturing, striae weakly defined; surface densely setose. *Venter*: punctation and setae similar to dorsal surface. Pygidium weakly convex; surface densely to moderately punctate and setose, with microsculpturing. *Legs*: protibia with two apical teeth on outer margin, remainder of protibial margin with 8 smaller teeth in a saw-tooth configuration. Claws widely separated by at least a 60 angle, symmetrical, each side split subapically. Protibial spur present, metatibial spurs absent. *Genitalia*: Fig. 16.

Variation. Length 6.1-9.3 mm. Color variable; dorsal color light brown to dark brown. Females with antennal club length distinctly shorter than length of antennomeres 1-6 combined (approximately equal in males); with 2 metatibial spurs (both absent in males), spurs on one side of tarsal insertion.

Etymology. I am very pleased to name this species in honor of M. J. Paulsen, who has been an excellent collaborator and field companion for the Scarab Biodiversity of Southern South America project.

Distribution (Fig. 26). Argentina: Neuquén, Río Negro; Chile: VIII-XI Región.

Temporal data. January (48), February (9), March (7), October (1), November (7), December (12).

Remark. Specimens of this new species were collected flying around *Nothofagus* trees at dusk and at mercury vapor lights after dark near Volcán Osorno in Chile.

***Pristerophora picipennis* (Solier, 1851)**

Original combination. *Prionophora picipennis* Solier, 1851: 102

Type locality. “la provincia de Coquimbo.”

Type series. Lectotype male at MNHN labeled a) “15 / 43” (handwritten on white underside of round, green label), b) “Prionolobus / picipennis / Sol. Copioyio” (handwritten, somewhat illegible, label pinned sideways), c) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), d) “PRIONOPHORA / PICIPENNIS / SOLIER / LECTOTYPE [male symbol] / A.B.T. SMITH” (red label, handwritten and typeset), e) “Southern Neotropical Scarabs / database # AS2615329 / *Pristerophora picipennis* / (Solier, 1851) [male symbol] / DET: A.B.T.SMITH 2008” (typeset). **Lectotype here designated.** One female paralectotype at MNHN labeled a) “15 / 43” (handwritten on white underside of round, green label), b) “MUSEUM PARIS / Chili / Gay” (typeset and handwritten), c) “PRIONOPHORA / PICIPENNIS / SOLIER / PARALECTOTYPE [female symbol] / A.B.T. SMITH” (yellow label, handwritten and typeset), d) “Southern Neotropical Scarabs / database # AS2615378 / *Pristerophora picipennis* / (Solier, 1851) [female symbol] / DET: A.B.T.SMITH 2008” (typeset).

Synonym. *Schizochelus breviventris* Philippi, 1864: 445. **New synonym.**

Type locality. “Chile.”

Type series. Lectotype male at MNNC labeled a) “CHILE” (handwritten), b) “Holótipo” (orange label, typeset), c) “Schizochelus ? / breviventris / Philippi” (handwritten), d) “1820” (handwritten), e) “fragilis / (P. G. ined.” (handwritten), f) “CHILE / M N. / H. N. / Tipo / No / 2859” (typeset and handwritten), g) “SCHIZOCHELUS / BREVIVENTRIS / PHILIPPI [male symbol] / LECTOTYPE / A.B.T. SMITH” (red label, handwritten and typeset), h) “Southern Neotropical Scarabs / database # AS2615328 / *Pristerophora picipennis* / (Solier, 1851) [male symbol] / DET: A.B.T.SMITH 2008” (typeset). **Lectotype here designated.**

Synonym. *Schizochelus serratus* Philippi, 1864: 444. **New synonym.**

Type locality. “Chile.”

Type series. Lectotype male at MNNC labeled a) “CHILE” (handwritten), b) “Holótipo” (orange label, typeset), c) “Schizochelus ? / serratus / Philippi” (handwritten), d) “1817” (handwritten), e) “serratus / Phil.” (handwritten), f) “CHILE / M N. / H. N. / Tipo / No / 2857” (typeset and handwritten), g) “SCHIZOCHELUS / SERRATUS / PHILIPPI [female symbol] / LECTOTYPE / A.B.T. SMITH” (red label, handwritten and typeset), h) “Southern Neotropical Scarabs / database # AS2615379 / *Pristerophora*

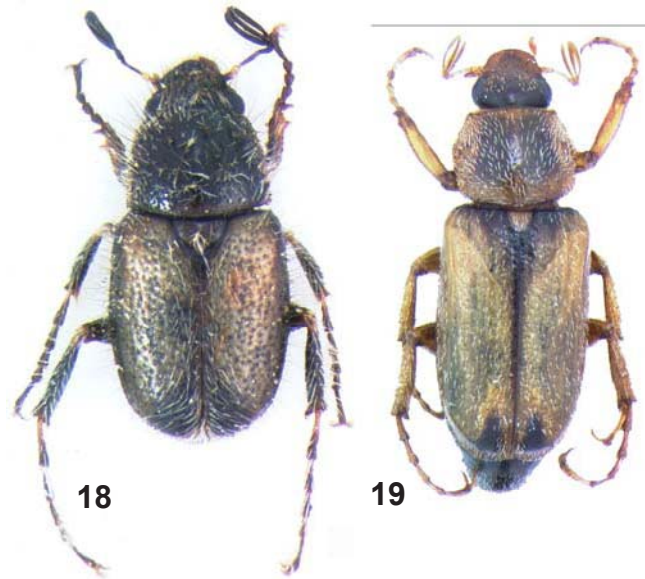


Figure 18-19. *Pusiodyctylus* spp. male habitus. 18) *P. flavipennis*. 19) *Pusiodyctylus mondacai* male.

picipennis / (Solier, 1851) [male symbol] / DET: A.B.T.SMITH 2008" (typeset). **Lectotype here designated.**

Distribution (Fig. 27). Argentina: Neuquén, Río Negro; Chile: VII Región del Maule, VIII Región del Biobío, IX Región de la Araucanía, X Región de Los Lagos.

Remark. All identified specimens of this species I observed in collections (except for the lectotype) were misidentified *Pusiodactylus mondacai*. Contrary to the locality of Coquimbo given in the original description (Solier 1851), this species is not known from IV Región de Coquimbo, Chile. The label on the lectotype is somewhat illegible but seems to say "Copioyio" not Coquimbo. Many of the localities cited by Solier (1851) were erroneous and this appears to be another example.

Cisternas and Carrillo (1989) discussed the univoltine life cycle of this species under the name *Schizochelus serratus*. I was able to confirm the identification of their species as *Pristerophora picipennis* using voucher specimens from MNNC.

Genus *Pusiodactylus* new genus

Type species *Pusiodactylus mondacai* Smith, here designated.

Description (Figs. 18-19). Length 4.6-7.8 mm. Dorsal surface bicolored with even setal pattern. *Head*: mentum approximately 4x longer than wide, with weak longitudinal trough in *P. mondacai*. *Pronotum*: widest medially, width approximately equal to length. *Legs*: protibia with two apical teeth on outer margin, without series of small teeth medially and basally. Claws symmetrical, each side split apically. Protibial spurs absent. Metatibial spurs absent in males, females have 1-2 metatibial spurs (1 in *P. flavipennis* and 2 in *P. mondacai*).

Etymology. *Pusiodactylus* is formed to indicate the similarity of this genus to species in the genus *Macroductylus*. "*Pusio*" is Latin for "a small boy" in reference to the very small size of the two species in this genus relative to other melolonthine species. The name is masculine in gender.

Remark. Until now, this genus erroneously went under the name *Pristerophora* Harold. This was based on a long-standing misidentification of the type species of *Pristerophora*. Now that this nomenclatural problem has been corrected (see under *Pristerophora*), it is necessary to create a new generic name for this taxon.

Key to species of *Pusiodactylus*

1. Dorsal setae thick, recumbent (Fig. 19). Scutellum width $1/6^{\text{th}}$ that of total body width. Metatarsomere 1 slightly longer than metatarsomere 2. Total length greater than 5 mm ***Pusiodactylus mondacai* Smith**
- Dorsal setae thin, erect (Fig. 18). Scutellum width $1/3^{\text{rd}}$ that of total body width. Metatarsomere 1 twice as long as metatarsomere 2. Total length less than 5 mm ***Pusiodactylus flavipennis* (Philippi)**

Pusiodactylus flavipennis (Philippi), new combination

Original combination. *Prionophora flavipennis* Philippi, 1864: 436

Type locality. "E provintia Valdivia?"

Type series. Holotype male at MNNC labeled a) “HOLOTIPO” (red label, handwritten), b) “Prionophora / flavipennis / Ph. P. 1059 / Valdivia” (handwritten), c) “Holotipo / Pristerophora flavipenni / Ph. 4859. Valdivia” (handwritten), d) “CHILE / M. N. / H. N. / Tipo / No / 2869” (typeset and handwritten), e) “PRIONOPHORA / FLAVIPENNIS / PHILIPPI [male symbol] / HOLOTYPE” (handwritten and typeset), f) “Southern Neotropical Scarabs / database # AS2610007 / *Pusiodactylus flavipennis* / (Philippi, 1864 [male symbol] / DET: A.B.T.SMITH 2007” (typeset).

Distribution (Fig. 28). Chile: IX Región de la Araucanía, X Región de Los Lagos.

Pusiodactylus mondacai new species

Type locality. “Chile: IX Región de la Araucanía: Parque Nacional Villarrica: Puesto: 39°31'59.6" S, 71°33'19.6" W.

Type series. Holotype male at MNNC labeled a) “CHILE: Reg. IX (ARAUCANA) / P.N. Villarrica; Puesto, 732 m / S 39°31'59.6" W 71°33'19.6" / 8 DEC 2004 / M.J. Paulsen & J. Mondaca” (typeset), b) “PUSIODACTYLUS / MONDACAI / SMITH [male symbol] / HOLOTYPE” (red label, handwritten and typeset), c) “Southern Neotropical Scarabs / database # AS2610171 / *Pusiodactylus mondacai* / Smith, 2007 [male symbol] / DET: A.B.T.SMITH 2007” (typeset). Allotype female at MNNC and 308 paratypes (290 males, 18 females) at ABTS (24), CMNC (74), CNCI (8), FSCA (8), JMEC (22), MEUC (8), MJPC (14), MNNC (87), UCCC (8), UMCE (8), UNSM (39), USMN (8) labeled with an identical locality label to the holotype (see above). Thirty-three paratypes (29 males, 4 females) at ABTS (7), CMNC (8), JMEC (4), MJPC (4), MNNC (10) labeled “CHILE: Reg. IX (ARAUCANA) / R.N. Lago Gualletue; 1170 m / S 38°41'45.2" W 71°14'52.7" / nirre (*Nothofagus antarctica*) / BL/MV light; 9 DEC 2004 / M.J. Paulsen & J. Mondaca.” Fifty-four paratypes (34 males, 20 females) at MNNC (8), TMSA (46) labeled a) “CHILE; Reg. Araucana / Volc.Lonquimay, 1000m / 38.29 S - 71.32 W” (typeset), b) “26.11.1990; CHI-163 / beating / leg. Endrödy-Younga” (typeset). Twenty-five paratypes (4 males, 21 females) at MNNC (4), TMSA (21) labeled a) “CHILE; Reg. Araucania / Volc.Lonquimay, 1000m / 38.29 S - 71.32 W” (typeset), b) “23.11.1990; CHI-156 / dusk flight / leg. Endrödy-Younga” (typeset). Twenty-eight paratypes (1 male, 27 females) at MNNC (4), TMSA (24) labeled a) “CHILE; Reg. Biobio / Term. Chillan, 1230m / 36.52 S - 71.39 W” (typeset), b) “4.12.1990; CHI-182 / dusk flight / leg. Endrödy-Younga” (typeset). Two male paratypes at UMCE labeled “Chile, Curicó / Parque Inglés / 1/12/1999 / J. Solervicens” (typeset). Two male paratypes at UMCE a) “Chile, Curicó / Radal / 22.XI.86 / J. Solervicens” (typeset), b) “atraídos / a la luz” (typeset). One male paratype at UMCE a) “Chile, Curicó / Radal / 22.XI.86 / J. Cofré” (typeset), b) “atraídos / a la luz” (typeset). One male paratype at UMCE “Chile, Curicó / Radal / 22.XI.86 / J. Cofré” (typeset). One male paratype at UMCE “Chile, Curicó / Radal / 22.XI.86 / I. Mellado” (typeset). One male paratype at UMCE labeled “Chile-Curicó / Radal Siete / Tazas / 24/11/1986 / J. Solervicens” (typeset). One male paratype at UMCE labeled “Chile, Curicó / Pte. El Costillar / a 7 Tazas / 22.XI.86 / J. Solervicens” (typeset). Two paratypes (1 male, 1 female) at UMCE labeled “Chile, Malleco / Galletué La Fusta / 19/11/96 / I. Mellado H.” (typeset). Four paratypes (3 male, 1 female) at USNM labeled “CHILE: Prov. Malleco, / Arroyo Pehuenco, trib. Rio / Biobio, ca. Marimenuco. / 12-XII-63 G.F. Edmunds” (typeset). Two male paratypes at USNM labeled “Chile / EC Reed” (typeset). Four paratypes (3 male, 1 female) at USNM labeled “Valparaiso / Chile / E.P. Reed” (handwritten). Four male paratypes (two of these paratypes are pointed on the same pin) at CMNC (1) and HAHC (3) labeled “Prov. NUBLE / Cord. Chillan / Las Trancas / 10, 15 Dic. 1951 / Coll: L.E. Pena” (typeset). Three male paratypes at HAHC labeled “Prov. NUBLE / Cord. Chillan / Las Trancas / 10, 15 Dic. 1960 / Coll: M. Rivera” (typeset). One male paratype at HAHC labeled “CHILE: Alto de Vilches / 70kmE Talca / 5.XII.84-20.II.85 / S&J Peck, Nothofagus / for.FIT, 1300m” (typeset). Seven paratypes (2 male, 5 female) at HAHC labeled “CHILE, Talca Prov. / AltoVilches, 1100m. / 10-12.XII.1976 / H. F. Howden, night” (typeset and handwritten). One male paratype at HAHC labeled “CHILE, Talca Prov. / AltoVilches, 1100m. / 10-12.XII.1976 / H. F. Howden” (typeset). One male paratype at HAHC labeled “CHILE / Nuble / Las Trancas / CHILLAN / Peña-leg. / Marz.991” (handwritten). Two male paratypes at HAHC labeled “CHILE / Nuble / Chillan / Las Trancas / Peña-leg. / Marz.991” (handwritten). One male paratype at HAHC labeled “Las Trancas / Chillán / Ñuble, March 91” (typeset). Three male paratypes at

HAHC labeled "CHILE / Nuble / Chillan / Peña-leg. / Coll. Martínez / Marz.991" (handwritten). Two male paratypes at HAHC labeled "Las Trancas ' CHILE L.P. / Dec 15, 1951" (handwritten). One male paratype at HAHC labeled a) "CHILE Las / Trancas / -CHILLAN / 2500 mts. / 15 XII 51" (handwritten), b) "*Pristerophora / picipennis* / (Solier) / Det. K. Katovich 02" (orange label, typeset). One male paratype at HAHC labeled a) "4705" (handwritten), b) "Colección / R. Gutiérrez / 1958" (typeset). One male paratype at HAHC labeled "CHILE / MALAHUE / M. A. Fritz-leg. / Coll. Martínez / 20.XI.65" (handwritten). One male paratype at USNM labeled "CHILE: Maule Prov. / Paso Garcia, 300m / ca. 23km NW. Cauquenes / 29-30 Nov. 1981 / D. R. Davis" (typeset). One male paratype at MNHN labeled a) "n. g. / ceraspide / Chili" (handwritten), b) "543" (handwritten), c) "MUSEUM PARIS / 1906 / Coll. Léon FAIRMAIRE" (typeset). One male paratype at MNHN labeled a) "Chili / [illegible]" (handwritten), b) "MUSEUM PARIS / 1906 / Coll. Léon FAIRMAIRE" (typeset). Two male paratypes (mounted on the same pin) at MNHN labeled a) "Chile. XII. / Las Trancas / Chillán" (handwritten), b) "*Pristerophora* [male symbol] / *flavipennis* (Phil) / R. Gutiérrez-Det. 46" (handwritten and typeset). Four male paratypes at MNNC labeled a) "Curicó / Rad. 7 Tazas / 26.11.1994 / G. Cerda B." (handwritten), b) "COLL. CERDA / MNHN CHILE" (typeset). Two male paratypes at MNNC labeled a) "Chillán / P. Comadres / 19.1.1994 / S. Roitman" (handwritten), b) "COLL. CERDA / MNHN CHILE" (typeset). One male paratype at MNNC labeled a) "CHILE / CHILLAN / Germain, 1899. / Coll. Martínez" (handwritten), b) "*Pristerophora / picipennis* / (Sol.) / A. MARTINEZ-DET. 1948" (handwritten and typeset). One male paratype at MNNC labeled a) "Cord. Chillan / Germain 1899" (typeset), b) "*Prionophora / picipennis* / [male symbol] Sol. / (det por P.G.)" (handwritten). Nine paratypes (4 male, 5 female) (two males are mounted on the same pin and three females are mounted on the same pin) at MNNC labeled "Cord. Chillan / Germain 1899" (typeset). Four paratypes (3 male, 1 female) at MNNC labeled "Chile Curicó / R.N. Radal Siete Tazas / 23 Nov. 1988" (typeset). One male paratype at MNNC labeled a) "CHILE ÑUBLE PROV. / Las Trancas / 11-I-2005 / leg. Sergio Ocares" (typeset), b) "*Pristerophora / picipennis* (Solier, 1851) / Det. J. Mondaca E. 2005" (typeset). Four male paratypes at MNNC labeled "CHILE ÑUBLE PROV. / Las Trancas / 11-I-2005 / leg. Sergio Ocares" (typeset). Two male paratypes (mounted on the same pin) at MNNC labeled a) "CHILE / Cord. CHILLAN / Germain-leg. / En. coll. Gutierrez / Coll. Martinez" (handwritten), b) "Cord. Chillan / Germain 1899" (typeset), c) "*Pristerophora / flavipennis* / (Phil.) / A. MARTINEZ-DET.1947" (handwritten and typeset). One male paratype at MNNC labeled "Chile VII Región / sector Los Ruiles / 26.NOV.2004 / Col. A. Vera" (typeset and handwritten). One male paratype at MNNC labeled "CHILE VII REGION / R. N. Altos de Lircay / 6-8-Dic-2002 / Col. Alejandro Vera" (typeset and handwritten). One male paratype at MNNC labeled "Chile Talca / Altos de Vilches / 17/23-XII-1976 / Coll. G. Arriagada" (typeset). One male paratype at MNNC labeled "Altos de Vilches / Talca 1280 mts / 25-26-XI-1970 / J. Solervicens" (handwritten). Eight paratypes (6 male, 2 female) at FMNH labeled a) "CHILE: Talca Pr.: R.N. / Altos de Lircay, vic. / Centro de Visitantes to / Piedras Tacitas, 1210m. / 35°36.39'S, 71°04.23'W." (typeset), b) "2-3.xii.2002, *Nothofagus* / spp. forest; FMHD #2002- / 030, UV light trap, Thayer, / Clarke, Newton 1073 / FIELD MUS. NAT. HIST." (typeset). One male paratype at FMNH labeled "CHILE: Malleco Prov. / 6.5km E Malalcahuello / 1080m, trap site 651 / 13-31.xii.1982 *Noth.* / *dombeyi* with *Chusquea* / A. Newton & M. Thayer" (typeset). One male paratype at FMNH labeled a) "CHILE: Malleco Prov. / 6.5kmE Malalcahuello / 1080m, site 651 13-31 / Dec. 1982 *N. dombeyi* / with *Chusquea* / A. Newton, M. Thayer" (typeset), b) "flight intercept / window/trough / trap" (typeset). Four male paratypes at FMNH labeled a) "Las Trancas / CHILE L.P. / Dec 15, 1951" (handwritten), b) "CNHM / Purchase ex. / L.O. Howden" (typeset). One male paratype at FMNH labeled a) "CHILE. Las / Trancas / -Chillan / 2500 mts. / 15 XII 51" (handwritten), b) "CNHM / Purchase ex. / L.O. Howden" (typeset). Two male paratypes at FMNH labeled a) "Prov. MALLECO / La Fusta 800Mt. / Lonquimay" (typeset), b) "9. Dic. 1959 / Coll. L. E. Pena" (typeset). One male paratype at FMNH labeled "FUNDO MALCHO / Pre-Cord. Parral / Noviembre, 1956 / Leg: M. Rivera" (typeset). One male paratype at FMNH labeled a) "LAS CABRAS / Cord. Chillan / 1100,1480 m" (typeset), b) "10,23.Dic.54 / Coll: L.E. Pena" (typeset). One male paratype at FMNH labeled "Prov. Talca / Los Cipreses / 25 Enero-1951 / Coll: L.E. Pena" (typeset). Three male paratypes at FMNH labeled a) "Prov. NUBLE / Cord. Chillan / Las Trancas" (typeset), b) "10,15 Dic.1951 / Coll: L.E. Pena" (typeset). One male paratype at FMNH labeled a) "CHILE;NUBLE / Cord. Chillan / Las Trancas" (typeset), b) "10-15.XII.1960 / M. Rivera leg" (typeset). Two male paratypes at FMNH labeled a) "LOS CIPRESES / Rio Diguillin / Cord. Chillan" (typeset), b) "20,25-Nov-1951 / Coll. L.E. Pena" (typeset). Three paratypes (2 male, 1 female) at FMNH labeled a) "EL RADAL / Cord. Talca / 900,1100 m" (typeset), b) "23,30-Nov-1957 / Coll: L.E. Pena"

(typeset). Two male paratypes at ABTS (1) and FMNH (1) labeled “Tregualemu / Maule Chile / 1/4-XI-81 / Coll. L.E. Peña” (handwritten). Two male paratypes at ABTS (1) and FMNH (1) labeled a) “CARAMAVIDA / Nahuelbuta (W)” (typeset), b) “(Arauco 750 m / 25,31-Dic-53 / Coll: L. E. Pena)” (typeset). One male paratype at ABTS labeled a) “TREGUALEMU / Costa Nuble / 300,500 m” (typeset), b) “9,10-Dic-1953 / Coll: L.E. Pena” (typeset). Six female paratypes at FMNH labeled a) “CHILE: Talca Pr.: R.N. / Altos de Lircay, vic. / Centro de Visitantes to / Piedras Tacitas, 1210m. / 35°36.39'S, 71°04.23'W. / 2.xii.2002.” (typeset), b) “*Nothofagus* spp. forest; / on ground & trees at / night, Thayer, Newton, / Solodovnikov, Clarke / 1073 / FIELD MUS. NAT. HIST.” (typeset). Three female paratypes at FMNH labeled a) “CHILE: Talca Pr.: R.N. / Altos de Lircay, vic. / Centro de Visitantes to / Piedras Tacitas, 1210m.” (typeset), b) “35°36.39'S, 71°04.23'W. / 2-3.xii.2002, *Nothofagus* / spp. forest, Clarke 1073 / FIELD MUS. NAT. HIST.” (typeset). One female paratype at FMNH labeled a) “Prov. NUBLE / Cord. Chillan / Las Trancas” (typeset), b) “10, 15 Dic. 1960 / Coll: M. Rivera” (typeset). Two female paratypes at FMNH labeled a) “Prov. MALLECO / Pehuenco / Cord. Lonquimay” (typeset), b) “13, 16 Dic 1963 / Coll. L.E. Pena” (typeset). One female paratype at HAHC labeled a) “Prov. MALLECO / Pehuenco / Cord. Lonquimay / 13, 16 Dic 1963 / Coll. L.E. Pena” (typeset). One female paratype at FMNH labeled “LAS TRANCAS / Cord. Nuble / 5, 16-Dic-51 / Coll: L.E. Pena” (typeset). One female paratype at HAHC labeled “CHILE, Talca Prov. / Alto Vilches, 1100m. / 10-12.XII.1976(P.M.) / H. F. Howden” (typeset and handwritten). One female paratype at HAHC labeled “ALTO DE VILCHES / Cord. Talca / 21,25-XI-1964 / Coll. L.E. Pena” (typeset). Two female paratypes at MNNC labeled “CHILE ÑUBLE / Las Trancas / XII-1983 / Leg. G. Carrasco” (typeset). One female paratype at MNNC labeled a) “Chillán / Las Comadres / 7.1.1996 / S. Roitman” (handwritten), b) “COLL. CERDA / MNHN CHILE” (typeset). One female paratype at MNNC labeled a) “Chile / Chillan / Nuble / 11.40” (handwritten), b) “*Pristerophora / picipennis* (Sol) / [female symbol] R Gutiérrez-Det52” (handwritten and typeset). Two paratypes (1 male, 1 female mounted on the same pin) at MNNC labeled a) “Cord. Chillan / Germain 189” (typeset), b) “*Prionophora / picipennis* / [female symbol] Sol. / (det por P.G.)” (handwritten). One female paratype at VMDM labeled “Chile Chillán / Piedras Comadres / Enero 2005 / leg. S. Roitman” (typeset). One male paratype at CDFA labeled “CHILE: Region VIII / Termas de Chillan Road / Refugio Andino / 36°54.947S/071°27.417W / XI-30-2001, 4175' / Fred G. Andrews” (typeset). One male paratype at CDFA labeled “CHILE: Region VIII / Termas de Chillan Road / Refugio Andino / 36°54.947S/071°27.417W / XI-30-2001, 4175'” (typeset). Four male paratypes at CDFA labeled “CHILE: Region VIII / Termas de Chillan Road / Puente Marchant, 3350' / 36°54.388S/071°32.111W / XII-2-2001, 3350'” (typeset). One female paratype at CDFA labeled “CHILE: Region VIII / Termas de Chillan Road / Puente Aserradero / 36°54.987S/071°27.106W / XII-1-2001, 4250' / fogging *Nothofagus*” (typeset). Two female paratypes at CDFA labeled “CHILE: Region VIII / Termas de Chillan Road / Puente Aserradero / 36°55.028S/071°27.069W / XII-3-2001, 4300'” (typeset). One female paratype at CDFA labeled “CHILE: Region VIII / Mt. Lonquimay Road / 38°26.533S/071°30.879W / XII-19-2001, 3964' / Fred G. Andrews” (typeset). One female paratype at CDFA labeled “CHILE: Region VIII / Termas de Chillan Road / South Las Trancas / 36°53.672S/071°28.811W / XI-29-2001, 4375' / Fred G. Andrews” (typeset). One female paratype at CDFA labeled “CHILE: Region IX / Parque Nacionales Nahuelbuta / 37°49.46'S/73°00.53'W / XI-29-2003, F. G. Andrews” (typeset). One male paratype at CMNC labeled “LAS CABRAS / Cord. Chillan / 1100,1480 m / 10,23-Dic.54 / Coll: L.E. Pena” (typeset). Two male paratypes at CMNC (pointed on the same pin) labeled “Curacautin / (Malleco) 521m / 8-Dic-1950 / Coll: L.E. Pena” (typeset). Three male paratypes at CNMC labeled “CHILE: Prov. Malleco / Entrance to P. N. Nahuelbuta / 17 Dec 2001 / 37°49'20.1" S, 72°57'26.4" W / Whiting, Ogden, Terry” (typeset). One male paratype at CMNC labeled “CHILE: Region VII (MAULE) / Cordillera Parral, Fundo Malcho / S36°14'46.6" W 71°19'57.5" / 757 m; 27-28 NOV 2004 / at BL/ML light/in flight / M.J. Paulsen & J. Mondaca” (typeset). Eleven male paratypes at MNNC labeled “CHILE: REGION VIII (BÍO-BÍO) / Ñuble Prov., Las Trancas, 2000m / 11 January 2005; J. Mondaca” (typeset). Seventeen paratypes (16 male, 1 female) at BMNH labeled a) “CHILE: / Las Trancas. / 10-15.xii.1951” (typeset), b) “L.E. Pena. / B.M.1963-664.” (typeset). One male paratype at BMNH labeled a) “31351” (handwritten), b) “Germain” (handwritten), c) “Chili” (handwritten), d) “Fry Coll. / 1905-100.” (typeset). One male paratype at BMNH labeled a) “Chili.” (typeset), b) “Chili / G.” (handwritten), c) “Nevinson Coll. / 1918-14.” (typeset), d) “175” (handwritten), e) “N. G.” (handwritten), f) “*Pristerophora / luteipes* Chevr.” (handwritten). One male paratype at BMNH labeled a) “19868” (handwritten), b) “Chili” (handwritten), c) “Fry Coll. / 1905-100.” (typeset). One male paratype at BMNH labeled a) “Germain” (handwritten), b) “Chili” (handwritten), c) “Fry Coll. / 1905-100.” (typeset). One male paratype at BMNH

labeled a) "Chili." (handwritten), b) "703" (typeset). One male paratype at BMNH labeled a) "Chillan. / Chili / 1947.426" (handwritten), b) "Pristerophora / picipennis (Sol.)" (handwritten). One female paratype at BMNH labeled a) "19867" (handwritten), b) "Chili" (handwritten), c) "Fry Coll. / 1905-100." (typeset). All paratypes listed above also bear a yellow paratype label and a Southern Neotropical Scarabs database label.

Description of holotype. Male. Length 5.5 mm, width 2.9 mm. Dorsal color tan with black areas on elytra at base, laterally near base, adjacent to apex, along suture. Ventral color tan with dark brown to black abdomen. Dorsal surface sparsely to moderately setose; setae thick, recumbent, white. *Head*: frons weakly concave, surface densely to moderately punctate and setose, setae thick, recumbent, white. Clypeus concave with rounded, reflexed apex; clypeal surface densely punctate and setose, setae thin, erect, tan. Eyes bulbous, separated by approximately 3.5 eye-widths dorsally. Antennae with 9 antennomeres; antennal club with 3 antennomeres, club subequal in length to antennomeres 1-6 combined. Labrum absent (perhaps completely fused with clypeus). Maxillary robust, basal width subequal to width of mentum; maxillary palpus with 4 palpomeres, apical palpomere extending beyond clypeus in dorsal view. Mentum twice as long as wide, with weak longitudinal trough; labial palpus greatly reduced, palpi projecting apically from apex of mentum, almost touching at base. *Pronotum*: moderately punctate with irregular punctures and setose, setae thick, recumbent, white. Pronotum widest medially with smooth margins. *Elytra*: moderately punctate with weakly defined striae; setose, setae thick, recumbent, white. *Venter*: punctation and setae similar to dorsal surface. Pygidium flat, moderately punctate and setose; setae longer and denser at apex. *Legs*: protibia with two apical teeth on outer margin, remainder of protibial margin smooth. Claws widely separated by at least a 60° angle, symmetrical, each side split apically. Protibial and metatibial spurs absent.

Variation. Length 5.0-7.8 mm, width 2.2-3.5 mm. Color variable; most individuals tan with variable black patches on elytra, pronotum, and head; some individuals entirely tan (except abdomen) or black. Females with antennal club length approximately equal to eye width, significantly shorter than antennomeres 1-6 combined. Males with antennal club length significantly larger than eye width, subequal to antennomeres 1-6 combined. Females with 2 metatibial spurs (both absent in males), spurs on one side of tarsal insertion.

Etymology. I am very pleased to name this species in honor of José Mondaca, who has been an excellent collaborator and field companion for the Scarab Biodiversity of Southern South America project. He is also a compatriot of this species.

Distribution (Fig. 29). VII Región del Maule, VIII Región del Biobío, IX Región de la Araucanía. Four specimens were labeled "Valparaiso" but these records should be considered dubious.

Temporal data. January (35), March (7), November (115), December (468).

Tribe Macroductylini (non-southern South American taxa)

Genus *Clavipalpus* Laporte

Clavipalpus Laporte, 1832: 406. **Type species** *Clavipalpus dejeani* Laporte, by monotypy.

Synonym. *Amphicrania* Burmeister, 1855: 26. Type species *Amphicrania ursina* Burmeister, by subsequent designation (Evans 2003: 249).

Synonym. *Paulosawaya* Martínez and D'Andretta, 1956: 346 (**new synonym**). **Type species** *Paulosawaya ornatissima* Martínez and D'Andretta, by original designation.

Remark. The genus *Paulosawaya* was originally placed in the tribe Pachydemini by Martínez and D'Andretta (1956). Later it was transferred to the tribe Macroductylini (Martínez 1975), but was considered *incertae sedis* by Katovich (2008). When I examined four paratypes of *Paulosawaya ornatissima* from the HAHC, it was immediately obvious that this species belongs in the genus *Clavipalpus*. These specimens match the latest definition of the genus *Clavipalpus* by Katovich (2008). The transfer is here made, placing the generic name *Paulosawaya* in synonymy with *Clavipalpus*.

***Clavipalpus ornatissimus* (Martínez and D'Andretta), new combination**

Original combination. *Paulosawaya ornatissima* Martínez and D'Andretta, 1956: 348

Distribution. Miraflores, Quito, Ecuador.

Remark. This species is likely a synonym of one of the other species of *Clavipalpus*. A taxonomic revision of this genus, or at least an examination of the type material of the described species, will be necessary to resolve the true identity of this species and others in the genus. Martínez was evidently unfamiliar with *Clavipalpus* species (there were no identified *Clavipalpus* specimens in his collection other than the type series of this species). This undoubtedly caused him to conclude that this species was new and assign it to a new genus.

Genus *Plectris* LePeletier and Serville

Plectris LePeletier and Serville, 1828: 369. **Type species** *Plectris tomentosa* LePeletier and Serville, by monotypy.

Synonym. *Pseudoserica* Guérin-Méneville, 1838: 86. **Type species** *Pseudoserica marmorea* Guérin-Méneville, by monotypy.

Synonym. *Demodema* Blanchard, 1850: 121. **Type species** *Demodema fallax* Blanchard, by subsequent designation (Lacordaire, 1856: 258).

Synonym. *Euryaspis* Blanchard, 1851: 130. **Type species** *Euryaspis gaudichaudii* Blanchard, by monotypy.

Synonym. *Trichoderma* Nonfried, 1894: 11 (preoccupied). **Type species** *Trichoderma ceylanica* Nonfried, by monotypy.

Synonym. *Junkia* Dalla Torre, 1913: 310 (replacement name for *Trichoderma* Nonfried, 1894). **Type species** *Trichoderma ceylanica* Nonfried, by monotypy.

Remark. When Katovich (2008) synonymized *Demodema* Blanchard with *Plectris* LePeletier and Serville, three junior secondary homonyms were created. Replacement names are proposed for these three species.

***Plectris evansi* new replacement name**

Plectris evansi is a replacement name for *Plectris cinerascens* Moser, 1918: 161 (a junior secondary homonym of *Plectris cinerascens* [Blanchard, 1850: 121]). This name is in honor of Art Evans, who has spearheaded the charge to catalog New World melolonthines.

***Plectris katovich* new replacement name**

Plectris katovich is a replacement name for *Plectris bonariensis* Frey, 1967: 92 (a junior secondary homonym of *Plectris bonariensis* [Bruch, 1909: 350]). This name is in honor of Kerry Katovich, who recently reviewed the Macroductylini genera.

***Plectris tacoma* new replacement name**

Plectris tacoma is a replacement name for *Plectris comata* (Blanchard, 1851: 140) (a junior secondary homonym of *Plectris comata* [Blanchard, 1850: 122]). This name is an anagram of the name it is replacing.

Acknowledgments

I thank Art Evans for his help over the years with my coming to terms with the biodiversity juggernaut known as the Melolonthinae. I greatly appreciate the field work by José Mondaca, M. J. Paulsen, and other collaborators on the “Scarabs of Southern South America” project that resulted in many more specimens of the taxa covered in this paper being available for study. Thanks to Pam Horsley for immense help with specimen preparation, databasing, and imaging. Art Evans, Kerry Katovich, and José Mondaca graciously provided critical reviews of earlier manuscript versions of this paper. This research was supported by an NSF/BS&I grant (DEB-0342189) and an NSERC-PDF award to the author.

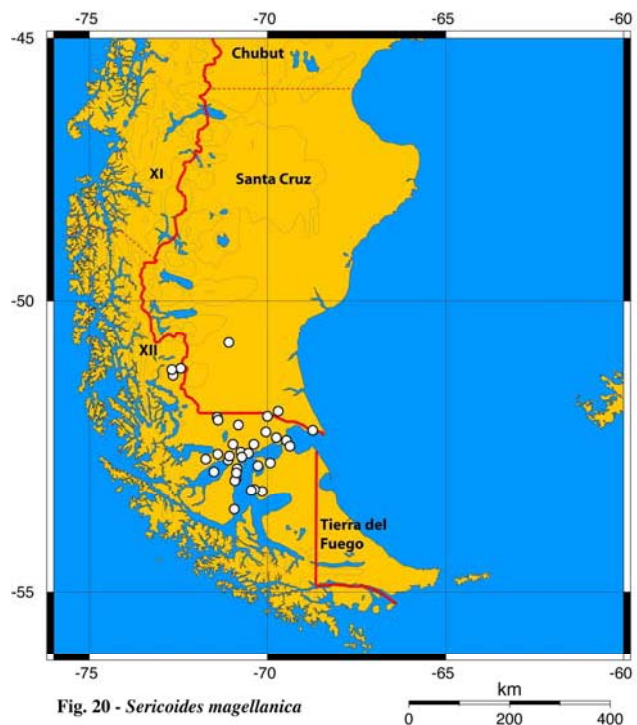
Literature Cited

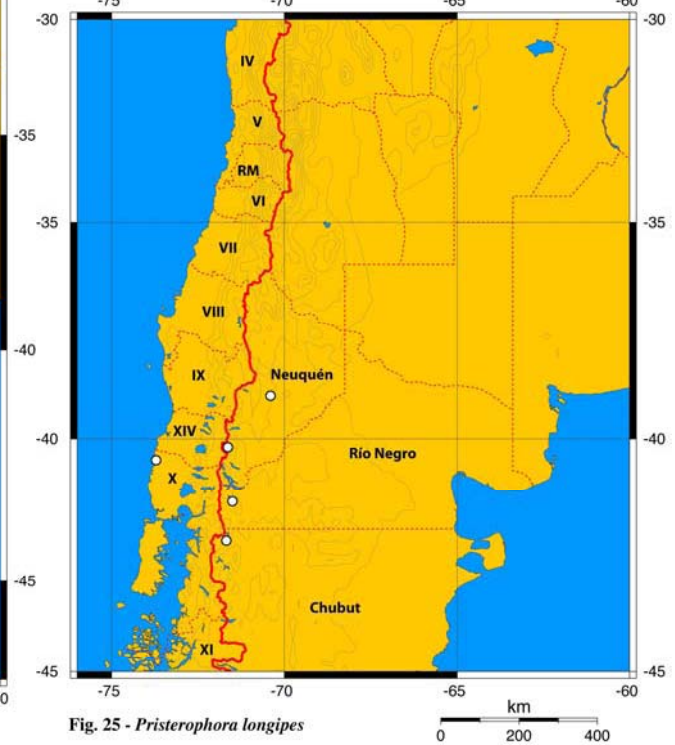
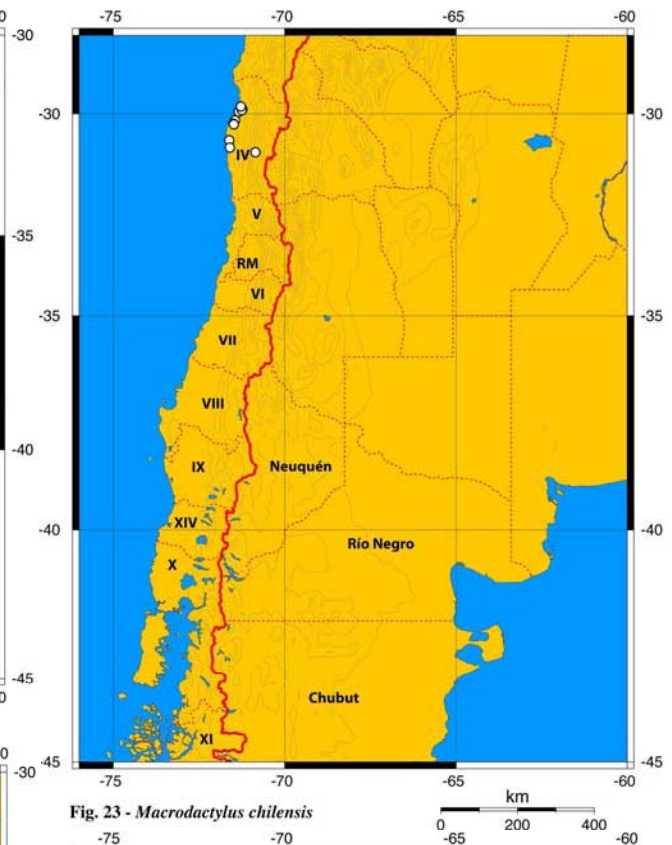
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Received November 11, 2008; accepted November 27, 2008.





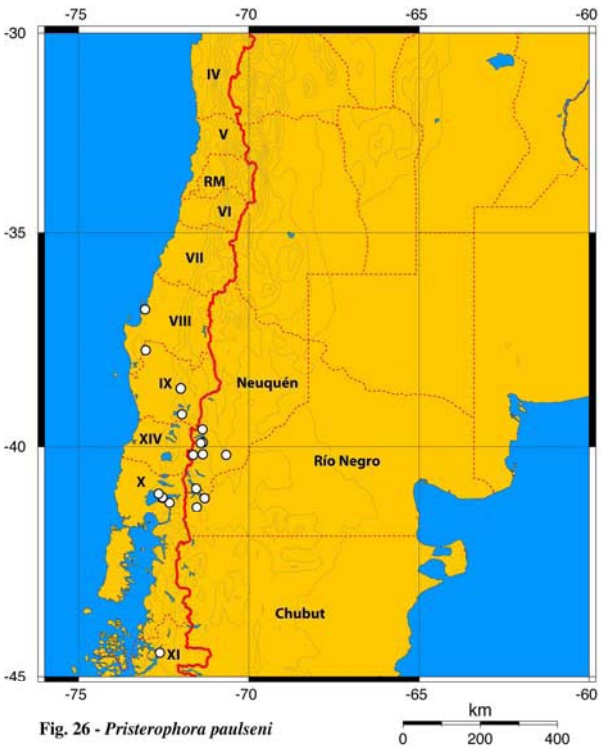


Fig. 26 - *Pristerophora paulseni*



Fig. 27 - *Pristerophora picipennis*



Fig. 28 - *Pusiodactylus flavipennis*



Fig. 29 - *Pusiodactylus mondacai*