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Guillermo Gonzalez F.
Santiago, Chile

Robert D. Gordon
Willow City, ND

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Descriptions of the male of *Heterodiomus marchali* Brèthes and
a new species of Chilean *Heterodiomus* Brèthes
(Coleoptera: Coccinellidae: Scymninae: Diomini)

Guillermo González F.
Sociedad Chilena de Entomología
Nocedal 6455, La Reina
Santiago, Chile
willogonzalez@yahoo.com

Robert D. Gordon
Northern Plains Entomology
P.O. Box 65, Willow
City, ND 58384
rdgordon@utma.com

Abstract. Additions to the classification of South American Diomini are provided. Male genitalia of *Heterodiomus marchali* Brèthes are described and *Diomus brethesi* is newly described.

Introduction

Males of *Heterodiomus marchali* Brèthes were unknown to Gordon (1999) and thus not described or illustrated in the revision of South American Diomini. Subsequently Guillermo Gonzalez F. provided males of *H. marchali* and specimens of a previously unknown species of Chilean *Heterodiomus* Brèthes. We here describe this new species and the male of *H. marchali*.

Specimens examined and illustrated are deposited in the collections of Guillermo Gonzalez F. (GG), Museo Nacional de Historia Natural, Santiago, Chile (MHNS), and U.S. National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM).

Heterodiomus marchali Brèthes

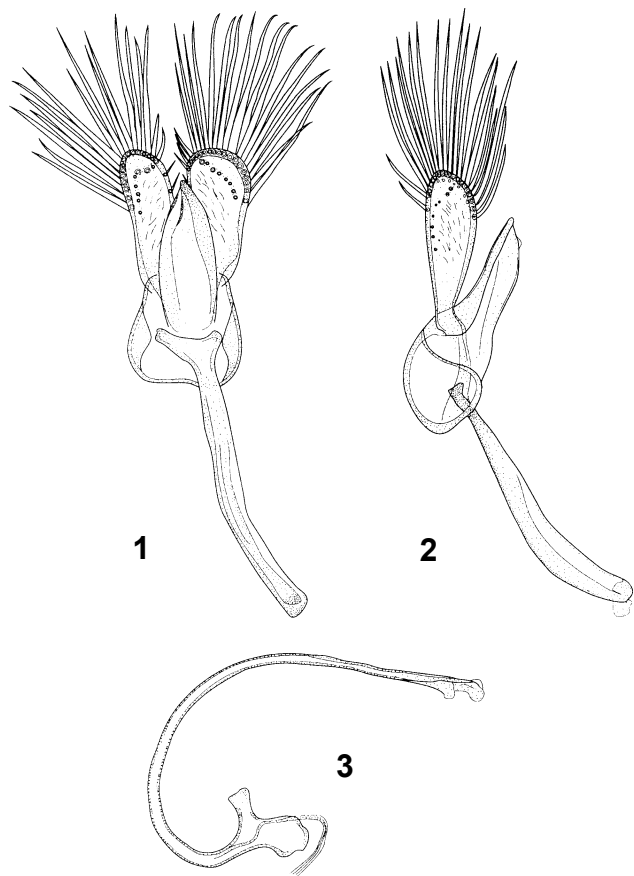
Male: Similar to female except apex of sternum 5 broadly, feebly emarginate medially, apex of sternum 6 abruptly, shallowly emarginate medially. Genitalia with phallobase, short, basal lobe slender, about as long as paramere, without dorsal keel, without dorsal setae, apex with 2 teeth on one side; paramere short, very wide, flat, with fine, sparse internal pubescence, not curved, widened in apical ½, apex rounded (Figs. 1, 2); siphon strongly rounded, apex acute, basal capsule with inner arm short, slender, apically castellated, outer arm elongate, slender, without accessory piece, basal margin rounded (Fig. 3).

Specimens examined: 10. Chile. "Chile" (the holotype). Isla Negra, San Antonio.

Remarks: The male genitalia do not closely resemble those of any other known species of *Heterodiomus*, but the extremely short, wide paramere is similar to that of *H. apparitorius* (Weise).

Heterodiomus brethesi Gonzalez and Gordon, new species

Description: Male, length 1.4 mm., width 0.8 mm. Form elongate, slender, sides slightly rounded. Color pale reddish yellow except elytron with scutellar area obscurely darkened (Fig. 8), mouthparts, propleuron, epipleuron, and legs yellow. Head alutaceous, feebly shiny, punctures extremely fine, nearly invisible, separated by less than to twice a diameter. Pronotal surface slightly alutaceous medially, shiny, strongly alutaceous and dull in lateral 1/3, punctures larger than on head, separated by less than to twice a diameter. Elytral surface alutaceous, feebly shiny, punctures larger than on pronotum, separated by less than to twice a diameter. Eye small, frons 3.0 x width of eye. Abdomen with apex of sternum 5 broadly, feebly emarginate medially, apex of sternum 6 abruptly, shallowly emarginate. Genitalia with phallobase elongate, basal lobe 2/3 length of paramere, without dorsal keel, without dorsal setae, apex with 2 teeth on one side; paramere elongate, without internal pubescence, flat, curved anterior to base, wide from base to apex, slightly wider in apical ½, apex rounded (Figs.



Figures 1-3. Male genitalia of *Heterodiomus marchali*.

4, 5); siphon elongate, slender, apex acute, basal capsule with inner arm slender, outer arm short, wide, apically truncate, without accessory piece (Fig. 6).

Female: Similar to male except apex of sternum 5 truncate; apex of sternum 6 arcuate; spermathecal capsule short, bent in apical $\frac{1}{2}$, base bulbous; ramus with small beak; infundibulum long, thornlike; bursal apex with elongate plate (Fig. 7).

Variation: Length 1.4 to 1.5 mm; dorsal color varies from that described above to entirely pale yellow in teneral specimens.

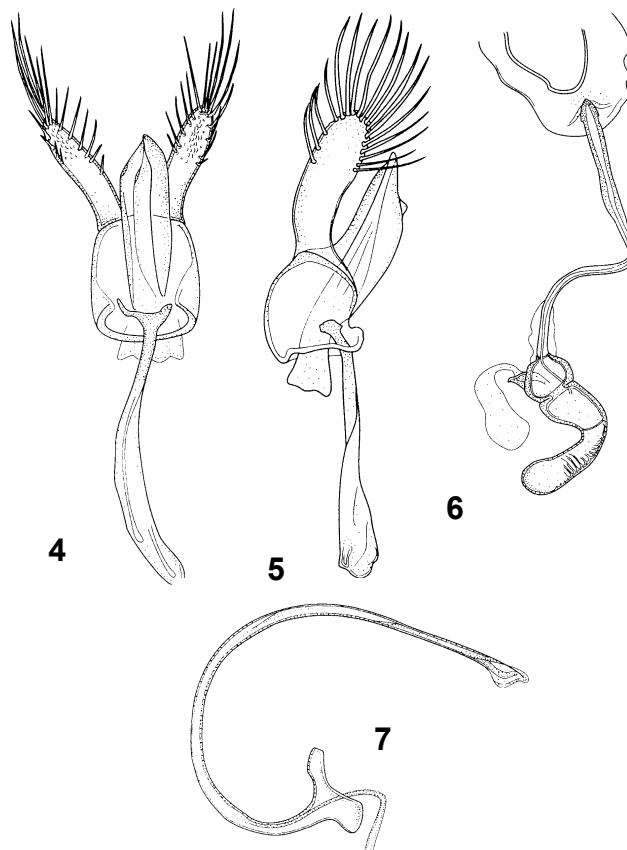
Type material: Holotype male, Chile, Vallenar, Prov. Huasco, 16.I.1993, G. Gonzalez (MHNS). Allotype; same data as holotype (MHNS). Paratypes: 16, 6, same data as holotype; 1, Chile, Azapa, Km.1, Arica, I. Reg., 27.IV.1991, F. Gonzalez F.; 6, Chile, La Chimba, Antofagasta, 20.VII.1992, G. Gonzalez F.; 2, Chile, Las Condes, Santiago, 23.Dic.78, G. Gonzalez F.; 1, Chile, Peñuelas. Elqui, IV. Reg., 27.IV.1991, G. Gonzalez F. (MHNS) (USNM).

Etymology: The species is named for Jean Brèthes, the author of *Heterodiomus* and a significant figure in the classification of South American Coccinellidae.

Remarks: This Chilean species is superficially very similar to the North American *Diomus debilis* (LeConte) but has quite different male genitalia. Among South American *Heterodiomus*, it most closely resembles the Argentine *H. celestine* Gordon from which it is distinguished by male genitalia. Genitalia of *H. brethesi* have an elongate phallobase with slender basal lobe; genitalia of *H. celestine* have a short phallobase with wide basal lobe.

In the existing key to *Heterodiomus* species (Gordon 1999, p. 9), *H. brethesi* will go to couplet 4, which is modified as follows:

- 4(3) Form elongate, tapered from basal $\frac{1}{4}$ of elytra to apex; elytron reddish brown becoming gradually paler from discal area to apex; dorsal surface very dull *canisius* Gordon



Figures 4-7. *Heterodiomus brethesi*. 4-6) male genitalia; 7) female genitalia.

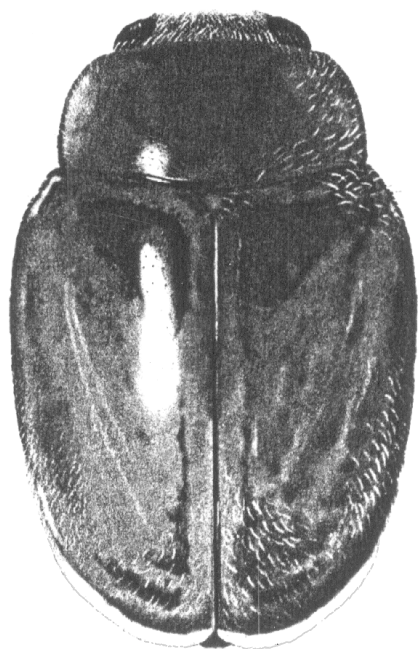


Figure 8. *Heterodiomus brethesi*, habitus.

- Form elongate-oval; elytron uniformly pale or with obscurely darkened scutellar area 5
- 5(4). Frons 2.0 x width of eye; male abdominal sternum 6 barely perceptibly emarginate apically
..... *celestine* Gordon
- Frons 3.0 x width of eye; male abdominal sternum 6 abruptly, shallowly emarginate
..... *brethesi*, n. sp.

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Reference cited

- Gordon, R. D.** 1999. South American Coccinellidae (Coleoptera), Part VI: A systematic revision of the South American Diomini, new tribe (Scymninae). *Annales Zoologici (Warsaw)* 49 (Supplement 1): 1-219.

