

See discussions, stats, and author profiles for this publication at:
<https://www.researchgate.net/publication/304066394>

Psapharochrus jaspideus (Germar) (Coleoptera: Cerambycidae: Lamiinae: Acanthoderini), a New Exotic Longhorn Beetle in...

Article *in* The Coleopterists Bulletin · June 2016

DOI: 10.1649/0010-065X-70.2.391

CITATIONS

0

READS

20

2 authors, including:



José Mondaca

Agriculture and Livestock Service, Chile

43 PUBLICATIONS 23 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Revision of the genus *Luispenaia* Martínez (Scarabaeidae: Melolonthinae: Tanyproctini) with description of two new species of Chile [View project](#)



Revision of the genus *Microogenius* Gutiérrez, with description of a new species from Peru (Scarabaeidae: Rutelinae: Rutelini) [View project](#)

All content following this page was uploaded by [José Mondaca](#) on 23 November 2016.

The user has requested enhancement of the downloaded file. All in-text references [underlined in blue](#) are added to the original document and are linked to publications on ResearchGate, letting you access and read them immediately.

***Psapharochrus jaspideus* (Germar) (Coleoptera: Cerambycidae: Lamiinae: Acanthoderini), a New Exotic Longhorn Beetle in Chile**

Author(s): José Mondaca and Jaime Zavala

Source: The Coleopterists Bulletin, 70(2):391-394.

Published By: The Coleopterists Society

DOI: <http://dx.doi.org/10.1649/0010-065X-70.2.391>

URL: <http://www.bioone.org/doi/full/10.1649/0010-065X-70.2.391>

BioOne (www.bioone.org) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

SCIENTIFIC NOTE

***PSAPHAROCHRUS JASPIDEUS* (GERMAR) (COLEOPTERA: CERAMBYCIDAE: LAMIINAE: ACANTHODERINI), A NEW EXOTIC LONGHORN BEETLE IN CHILE**

JOSÉ MONDACA
Servicio Agrícola y Ganadero
Avenida Portales N° 3.396, Santiago, CHILE
jose.mondaca@sag.gob.cl

AND

JAIME ZAVALA
Sociedad Chilena de Entomología
Casilla 21132 (Moneda), Santiago, CHILE
jzavalab@hotmail.com

Cerambycidae are an economically and ecologically important family of insects found in nearly all parts of the world (Dodds *et al.* 2015). Adults of this family are commonly known as longhorn or timber beetles (Machado *et al.* 2012). Most larvae feed on dead, dying, or decaying wood, but some species feed on living plants and can cause considerable economic harm (Martins 1997). They usually have a long larval period, with some species developing in woody material for several years after the death of the tree. For this reason, they are likely to be transported with solid wood packaging used in international trade, which facilitates their introduction and establishment in new regions (Cocquempot and Lindelöw 2010; Haack *et al.* 2014). Examples of introduced cerambycids that have successfully invaded various countries have been mentioned by Di Iorio (2004), Haack (2006), Cocquempot and Lindelöw (2010), Haack *et al.* (2010, 2014), and Dodds *et al.* (2015), among others.

Currently, seven species of adventive Cerambycidae have been reported in Chile, each of which was apparently accidentally introduced to the country as a result of international trade or other human activity. These species are *Phoracantha semipunctata* Fabricius, *Phoracantha recurva* Newman, *Nathrius brevipennis* (Mulsant), *Lagocheirus obsoletus* (Thomson) [cited as *L. undatus* (Voet)], *Ceresium unicolor unicolor* (Linnaeus), *Xylotrechus rusticus* (Linnaeus) [cited as *Rusticoclytus rusticus* (L.)], and *Ambeodontus tristis* (Fabricius) (González 1989; Cerda 1991; Sandoval 2002; Barriga and Cepeda 2007; Mondaca 2008; SAG 2008).

During examination of the Cerambycidae material housed in the collection of the Museo Nacional

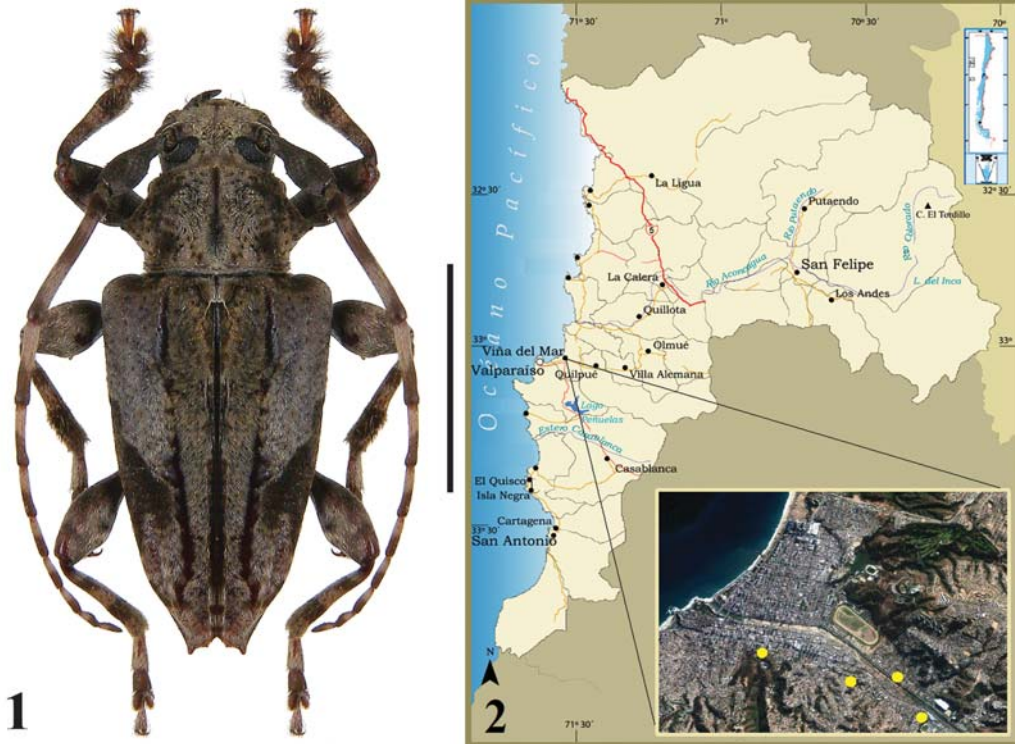
de Historia Natural de Santiago, Chile and two private collections, we found five specimens of *Psapharochrus jaspideus* (Germar) (Fig. 1), some of which were captured over 50 years ago in urban parks of Viña del Mar (Región de Valparaíso) (Fig. 2). As far as we know, *P. jaspideus* had not been reported from Chilean territory. The aim of this note is to provide a new country record, notes on host plants and biology, and remarks about the possible origin of this introduction to Chile.

The Cerambycidae key of Morillo (2007) was used to determine the species. The photograph of the adult was taken with a Canon digital camera SX160 with 16 megapixels.

Material Examined. CHILE: Región de Valparaíso, Viña del Mar, near Colegio Alemán, 8-XI-1964, col. L. Campusano (1 male). Viña del Mar, Parque Quinta Claude, 33°1'50.88"S, 71°32'13.25"W, I-1987, col. J. Zavala B. (1 male). Viña del Mar, Quinta Vergara, 4-I-2006, on *Washingtonia filifera*, col. S. Larrea (1 female). Viña del Mar, Quinta Vergara, 33°1'43.25"S, 71°33'10.54"W, 26-I-2012, on *Washingtonia filifera*, col. J. Zavala B. (1 male). Viña del Mar, Plaza Miraflores, 25-I-2014, col. A. Núñez (1 female). **New country record.**

Distribution. The native range of *P. jaspideus* includes Argentina (Tucumán, Santiago del Estero, Córdoba, Mendoza, Misiones, Chaco, Corrientes, Entre Ríos, Buenos Aires, La Pampa), Bolivia, Brazil (Ceará to Rio Grande do Sul), Paraguay, and Uruguay (Monné 2014). The species is introduced in the Azores Islands (Portugal) (Serrano 1982; Borges *et al.* 2013).

Host Plants. *Psapharochrus jaspideus* is a polyphagous species that infests numerous host



Figs. 1–2. *Psapharochrus jaspideus*. 1) Female, dorsal view; scale bar = 10 mm; 2) Capture localities at Viña del Mar, Chile (yellow dots).

plants in South America, including forest, ornamental, and fruit tree species belonging to 56 genera and 29 families (Monné 2001; Di Iorio and Farina 2009; Machado *et al.* 2012). Moreover, it represents a serious threat to guapuruvu trees (*Schizolobium amazonicum* Huber ex Ducke, Fabaceae) in Brazil (Sousa *et al.* 2005), eucalypt plantations in Brazil and Uruguay (Berti Filho 1985; Monné *et al.* 2002), and avocado orchards in Brazil (Garcia *et al.* 1992). In the Azores Islands, it has been cited attacking chestnut tree (*Castanea sativa* Mill., Fagaceae) (Luna de Calvalho 1984). The more recently collected adults found in Chile were captured from young palms (*Washingtonia filifera* (Lindl.) H. Wendl., Arecaceae) with a beating sheet and flying at lights in urban parks of Viña del Mar (S. Larrea and J. Zavala, personal communication).

Biology. The life cycle of this species has not been studied in detail. *Psapharochrus jaspideus* can affect branches by adult feeding, oviposition, and larval tunneling (Medina *et al.* 1978). Adults oviposit on apparently healthy plants, using their mandibles to make a slit in the bark through which they lay eggs. The foliage on infested branches turns yellow and eventually the affected branch dies

and breaks off, which favors the larvae because it typically develops in dry wood. The larvae complete their development in the dry branch, even if it falls to the ground (Reis and Souza 1982; Peña *et al.* 2013).

Remarks. Repeated collections of *P. jaspideus* for more than 50 years in the coastal locality of central Chile provide strong evidence that a population of *P. jaspideus* has successfully established in Chile. The introduction of this cerambycid into Chile probably occurred from elsewhere in South America where the beetle is native (*e.g.*, Argentina or Brazil). The beetle could have arrived on an international shipment of goods on trucks from overland locations or via marine shipments to the port city of Valparaíso, which is only a few kilometers away from the collection sites, or even in automobiles and baggage associated with tourists who visit and vacation in the city of Viña del Mar.

ACKNOWLEDGMENTS

We are grateful for the collaboration of Mario Elgueta D. (Museo Nacional de Historia Natural de Santiago, Chile) and Sebastian Larrea

(Viña del Mar, Chile) who provided specimens of Cerambycidae for study. We also thank Marcelo Guerrero for the photograph illustrating the adult beetle. We are grateful to Robert A. Haack who edited an earlier version of this paper.

REFERENCES CITED

- Barriga, J. E., and D. E. Cepeda. 2007.** Nuevas sinonimias en Cerambycidae de Chile (Coleoptera). *Revista Chilena de Entomología* 33: 5–13.
- Berti Filho, E. 1985.** Insects associated to eucalypt plantations in Brazil. *In: IUFRO WP. S2.07.07. Protection of Forest in the Tropics. Noxious Insects to Pine and Eucalypt Plantations in the Tropics.* Universidade Federal do Paraná, Curitiba, Brazil.
- Borges, P. A. V., M. Reut, N. B. da Ponte, J. A. Quartau, M. Fletcher, A. B. Sousa, M. Pollet, A. O. Soares, J. A. P. Marcelino, C. Rego, and P. Cardoso. 2013.** New records of exotic spiders and insects to the Azores, and new data on recently introduced species. *Arquipélago. Life and Marine Sciences* 30: 57–70.
- Cerda, M. 1991.** Presencia de *Ceresium unicolor unicolor* (Fabr.) en Isla de Pascua (Coleoptera: Cerambycidae). *Acta Entomológica Chilena* 16: 271–272.
- Cocquemot, C., and A. Lindelöw. 2010.** Longhorn beetles (Coleoptera, Cerambycidae). Chapter 8.1. *BioRisk* 4(1): 193–218.
- Di Iorio, O. R. 2004.** Especies exóticas de Cerambycidae (Coleoptera) introducidas en Argentina. Parte 2. Nuevos registros, plantas huéspedes, periodos de emergencia, y estado actual. *Agrociencia* 38(6): 663–678.
- Di Iorio, O., and J. Farina. 2009.** Plantas hospedadoras de Cerambycidae (Coleoptera) de la provincia de Buenos Aires, Argentina. *Revista del Museo Argentino de Ciencias Naturales* 11: 77–99.
- Dodds, J. K., J. D. Allison, R. D. Miller, R. P. Hanavan, and J. Sweeney. 2015.** Considering species richness and rarity when selecting optimal survey traps: comparisons of semiochemical baited flight intercept traps for Cerambycidae in eastern North America. *Agricultural and Forest Entomology* 17: 36–47.
- Garcia, A. H., V. L. Silva, and E. A. Pereira. 1992.** Flutuação populacional de *Acanthoderes jaspidea* (Germar, 1824) (Cerambycidae-Coleoptera) em pomar de abacateiro (*Persea americana* Mill). *Anais das Escolas de Agronomia e Veterinária (Brasil)* 21/22(1): 16–23.
- González, R. H. 1989.** Insectos y ácaros de importancia agrícola y cuarentenaria en Chile. Editorial Ograma, Santiago, Chile.
- Haack, R. A. 2006.** Exotic bark- and wood-boring Coleoptera in the United States: recent establishments and interceptions. *Canadian Journal of Forest Research* 36: 269–288.
- Haack, R. A., F. Hérard, J. Sun, and J. J. Turgeon. 2010.** Managing invasive populations of Asian longhorned beetle and citrus longhorned beetle: a worldwide perspective. *Annual Review of Entomology* 55: 521–546.
- Haack, R. A., K. O. Britton, E. G. Brockerhoff, J. F. Cavey, L. J. Garrett, M. Kimberley, F. Lowenstein, A. Nuding, L. J. Olson, J. Turner, and K. N. Vasilaky. 2014.** Effectiveness of the International Phytosanitary Standard ISPM No. 15 on reducing wood borer infestation rates in wood packaging material entering the United States. *PLOS ONE* 9(5): e96611. doi:10.1371/journal.pone.0096611.
- Luna de Carvalho, E. 1984.** Coleópteros colhidos nos Açores pelo maior Bivar de Sousa, entre julho de 1978 e agosto de 1979 (incluindo alguns apanhados por Dalberto Teixeira Pombo na ilha de Santa Maria) (Insecta, Coleoptera). *Boletim da Sociedade Portuguesa de Entomologia (II-19)* 49: 205–224.
- Machado, V. S., J. P. Botero, A. Carelli, M. Cupello, H. Y. Quintino, and M. V. P. Simões. 2012.** Host plants of Cerambycidae and Vesperidae (Coleoptera, Chrysomeloidea) from South America. *Revista Brasileira de Entomologia* 56(2): 186–198.
- Martins, U. R. 1997.** Cerambycidae Sul-Americanos (Coleoptera). *Taxonomia.* São Paulo, Sociedade Brasileira de Entomologia 1: 1–217.
- Medina, J., E. Bleinroth, J. Tango, and W. Leitido Canto. 1978.** Abacate. Instituto de Tecnologias de Alimentos. Governo de São Paulo, Campinas, Brasil.
- Mondaca, J. 2008.** Primer registro de *Lagocheirus undatus* (Voet) (Coleoptera: Cerambycidae: Acanthocinini) en Isla de Pascua, Chile. *Revista Chilena de Entomología* 34: 63–68.
- Monné, M. A. 2001.** Catalogue of the Neotropical Cerambycidae (Coleoptera) with known host plant - Part III: Subfamily Lamiinae, tribes Acanthocinini to Apomecynini. *Publicações Avulsas do Museu Nacional* 92: 1–94.
- Monné, M. A. 2014.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. www.cerambyxcat.com/Parte2_Lamiinae.pdf (accessed 5 July 2015).
- Monné, M., M. Bianchi, A. Sánchez, and R. Escudero. 2002.** Cerambycoides (Coleoptera) que atacan *Eucalyptus globulus* y *Eucalyptus grandis* en Uruguay. *Agrociencia* 6(1): 63–68.
- Morillo, S. I. E. 2007.** Biodiversidade e análise faunística de Cerambycidae (Insecta: Coleoptera) em reserva de Mata Atlântica, Viçosa, MG. MSc thesis. Universidade Federal de Viçosa, Brazil.
- Peña, J. E., M. S. Hoddle, M. Aluja, E. Palevsky, R. Ripa, and M. W. Wysoki. 2013.** Insect and mite pests [pp. 423–488]. *In: The Avocado: Botany, Production and Uses* (B. Schaffer, B. N. Wolstenholme, and A. W. Whaley, editors.). CAB International, Oxfordshire, UK.
- Reis, P. R., and J. C. de Souza. 1982.** Pragas do abacateiro. *Informe Agropecuario, Belo Horizonte* 8(86): 77–79.
- SAG [Servicio Agrícola y Ganadero]. 2008.** *Rusticochlytus rusticus* (Linnaeus) (Coleoptera, Cerambycidae) en Chile. Ficha técnica N°5. Servicio Agrícola y Ganadero, Santiago, Chile.
- Sandoval, A. 2002.** Control biológico en Chile [p. 103]. *In: Plagas Forestales Neotropicales* (J. Macías,

M. Arguedas and L. Hilje, editors.). Manejo Integrado de Plagas y Agroecología 64. Costa Rica.

Serrano, A. R. M. 1982. Contribuição para o conhecimento do povoamento, distribuição e origem dos coleópteros do arquipélago das Açores (Insecta, Coleoptera). Boletim do Museu Municipal do Funchal (Portugal) 34(147): 67–104.

Sousa, D. B., G. S. Carvalho, and E. J. A. Ramos. 2005. Paricá *Schizolobium amazonicum* Huber ex Ducke. Informativo Técnico N°13. Rede de Sementes da Amazônia, Manaus, Brazil.

(Received 8 September 2015; accepted 2 February 2016. Publication date 18 June 2016.)