



First Record of the Wood-Borer *Hylettus seniculus* (Coleoptera: Cerambycidae) in *Pinus caribaea* var. *Hondrurensis* Plantations in Brazil

Authors: Ferreira-Filho, Pedro J., Wilcken, Carlos F., Guerreiro, Julio C., Lima, Alexandre C. V., Carmo, Janaina B., et al.

Source: Florida Entomologist, 97(4) : 1838-1841

Published By: Florida Entomological Society

URL: <https://doi.org/10.1653/024.097.0462>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete 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.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

FIRST RECORD OF THE WOOD-BORER *HYLETTUS SENICULUS*
(COLEOPTERA: CERAMBYCIDAE) IN *PINUS CARIBAEA* VAR.
HONDRURENSIS PLANTATIONS IN BRAZIL

PEDRO J. FERREIRA-FILHO¹, CARLOS F. WILCKEN², JULIO C. GUERREIRO³, ALEXANDRE C. V. LIMA², JANAINA B. CARMO¹ AND JOSÉ C. ZANUNCIO⁴

¹Departamento de Ciências Ambientais, Universidade Federal de São Carlos, 18052-780, Sorocaba, São Paulo State, Brazil

²Departamento de Proteção Vegetal, Faculdade de Ciências Agrônomicas, 18610-307, Botucatu, São Paulo State, Brazil

³Departamento de Ciências Agrárias, Universidade Estadual de Maringá, 87506-370, Umuarama, Paraná State, Brazil

⁴Departamento de Entomologia, Universidade Federal de Viçosa, 36570-000, Viçosa, Minas Gerais State, Brazil

Corresponding author; E-mail: pedrojf@ufscar.br

Cerambycids commonly affect forest trees and logs in Brazil (Zanuncio et al. 2005, 2010). For example, 13 cerambycid species were collected in a eucalyptus plantation and in the adjacent native cerrado vegetation in Minas Gerais State, Brazil, with 8 of them reported to damage eucalyptus and other Myrtaceae (Santos et al. 2014). *Phoracantha recurva* F., a quarantine pest for Brazil and European countries, damaged *E. citriodora* Hook logs (Wilcken et al. 2002). *Anoplophora glabripennis* Motschulsky damaged the phloem and xylem of *Pinus* spp. trees (Pinaceae) (Cavey et al. 1998). *Oxymerus luteus* Voet and *O. nigricornis* Dupont damaged *E. tereticornis* plants (Berti-Filho 1997). Adults and larvae of *O. basalis* were collected on trunks and branches of eucalypt clone plants (*E. urophylla* x *E. grandis*) (Zanuncio et al. 2009). Here, we report a wood-borer damaging *Pinus caribaea* var. *hondurensis* logs in the municipalities of Prata (S 19° 17' W 48° 54') and Uberlândia (S 18° 54' W 48° 15'), Minas Gerais State, Brazil.

In 2007 and 2008, we sampled five groups of trap trees one group per local; each group was comprised of five plants treated with herbicide (Dodds et al. 2012). These trees were marked with plastic tape, georeferenced, and the CAP (circumference at breast height) measured. The herbicide Roundup NA (glyphosate) was applied at 1.0 mL per 10 cm CAP with a 20 mL syringe in four cuts on each trunk (north, south, east and west) approximately 1.30 m above ground. This herbicide was applied in Dec 18 and 19, 2007 and Dec 16 and 17, 2008. One tree per group was cut in Aug, Sep, Oct, Nov and Dec 2008 and 2009. The tree length was measured

and the middle third selected and sectioned into 0.80 m long logs. Sign of borer infestation such as splatter resin on trunk and holes of adult emergence were evaluated in these logs.

Wood-borers were observed in trap trees starting with the first evaluation in August until the last in Dec 2008 and 2009. Prepupae, pupae, and adults of a Coleoptera were found under the bark of the trunks, and larvae in *P. caribaea* var. *hondurensis* logs cut with a chainsaw (Figs. 1, 2 and 3). Radial galleries of this larva were also observed. All insects found were collected, packed in 70% ethyl alcohol, and sent to the Department of Crop Protection of UNESP in the municipality of Botucatu, São Paulo State, Brazil. Larvae, prepupae, pupae, and adult images were sent to Dr. Antonio Santos Silva of Museum of Zoology of University of São Paulo for species identification. The insect was identified as *Hylettus seniculus* Germar 1824 (Coleoptera: Cerambycidae).

In Brazil, *H. seniculus* Germar (Coleoptera: Cerambycidae) was reported to develop in branches and trunks of citrus plants in Roraima State, causing leaf wilting, drying, and breaking of branches, and tree death (Moreira et al. 2003). This species also was collected in large numbers in mango cultivation in Piauí State (Paz et al. 2008). Bionomic data for species of this genus are scarce, but *H. coenobita* larvae fed on *Brosimum* sp., *Ficus* sp. and *Perebea* sp. (Moraceae) and *H. spilotus* on *Protium* sp. (Burseraceae) (Tavakilian et al. 1997). However, this is the first report of *P. caribaea* being attacked by *H. seniculus* in Brazil.

Larvae and pupae of *H. seniculus* are whitish; adults are about 4.5 cm long, with antennae

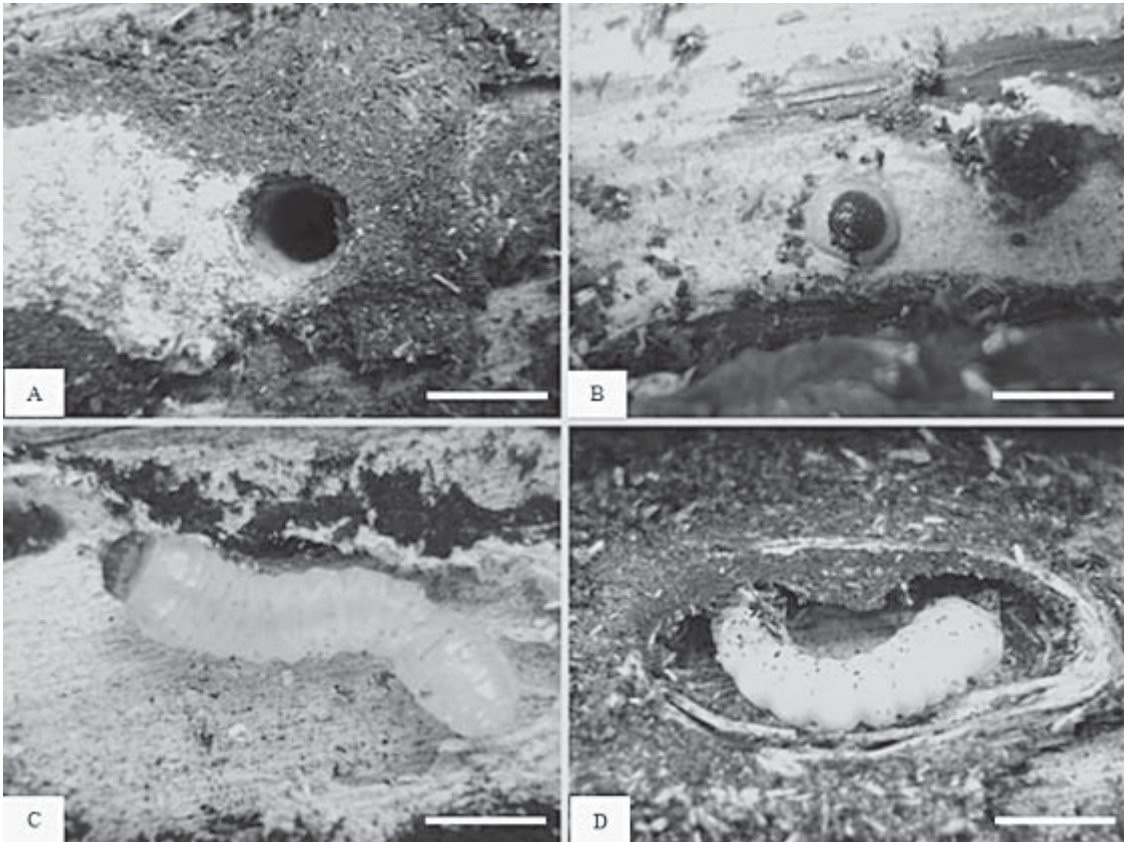


Fig. 1. *Hylettus seniculus* (Coleoptera: Cerambycidae) feeding on *Pinus caribaea* var. *hondurensis* log at Prata, Minas Gerais State, Brazil. Dec 2008 and 2009: A) external view of the hole produced by the larva; B) larva exiting; C and D) prepupa. Scale bar = 5 mm.

reaching half the body length. They nocturnal, and typically found resting on logs or under bark of fallen trees (Costa Lima 1955). Larvae of this species pupate in the cortex region of plants (Moreira et al. 2003).

Forest resources can be maximized if proper management procedures are implemented. Monitoring and understanding the insect fauna and its relationship with forest plantations are important (Moreira et al. 2003). Storage of *P. caribaea* var. *hondurensis* logs should be avoided because of damage by *H. seniculus* can disqualify logs for sawmills.

SUMMARY

Here we report for the first time the occurrence of *Hylettus seniculus* Germar 1824 (Coleoptera: Cerambycidae) boring *Pinus caribaea* var. *hondurensis* Morelet (Pinaceae) trunks. Damage by this insect were evaluated from August to Dec 2008 and 2009 by cutting a tree per month from 5 groups of trap trees (5 plants per

group) stressed with systemic herbicide. The damage by *H. seniculus* on trap trees *P. caribaea* var. *hondurensis* indicates that prolonged storage of pine logs in the field should be avoided.

Key Words: biological control, forest pest management, long-horned beetles, monitoring

RESUMO

Este trabalho registra, pela primeira vez, a ocorrência de *Hylettus seniculus* Germar 1824 (Coleoptera: Cerambycidae) broqueando plantas de *Pinus caribaea* var. *hondurensis* Morelet (Pinaceae). As avaliações foram realizadas, de agosto a dezembro de 2008 e 2009, com corte de uma árvore por mês de cinco grupos de árvores-armadilha (5 plantas/grupo) estressadas com herbicida sistêmico. Os danos por *H. seniculus* indicam que não se deve armazenar toras de pinus no campo.

Palavras-Chave: controle biológico, manejo de pragas florestais, serra-paus, monitoramento

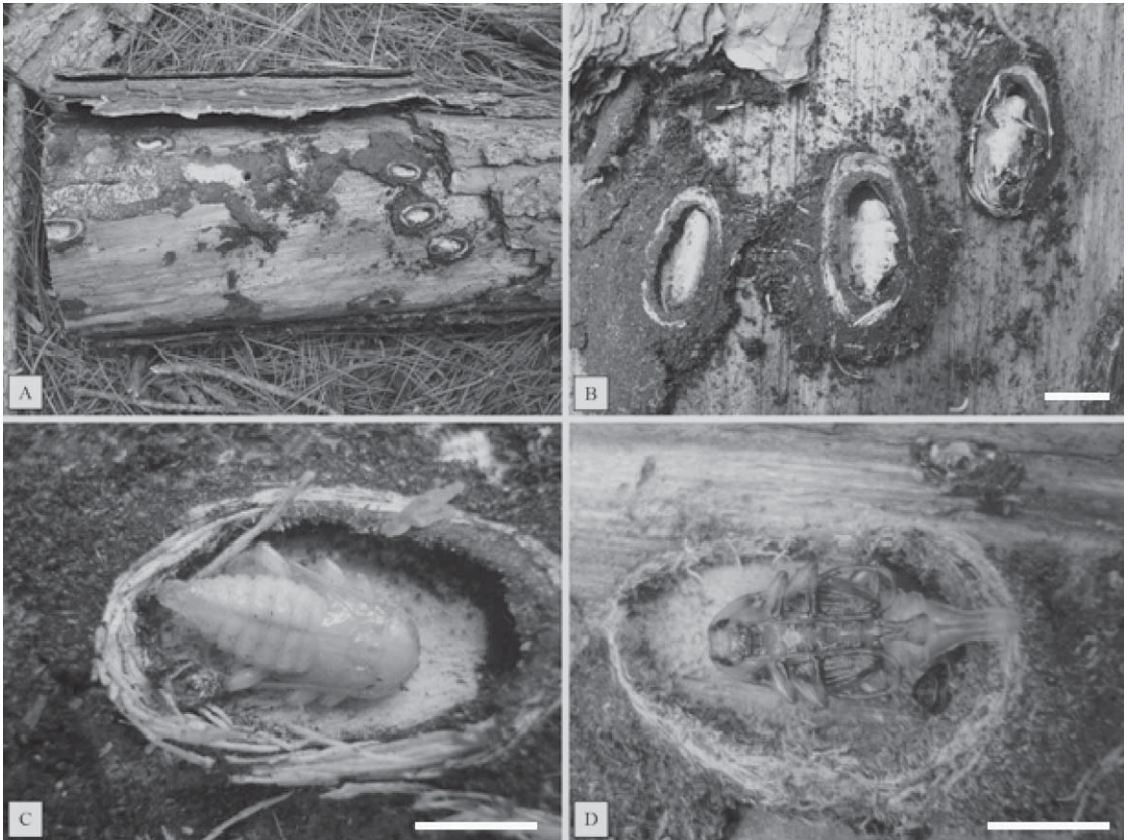


Fig. 2. A) and B) *Hylettus seniculus* (Coleoptera: Cerambycidae) pupae and cocoons in a log; C) dorsal view of pupa within the cocoon; D) ventral view of the pupa within the cocoon in a *Pinus caribaea* var. *hondurensis* log at Prata, Minas Gerais State, Brazil, Dec 2008 and 2009. Scale bars = 10 mm.

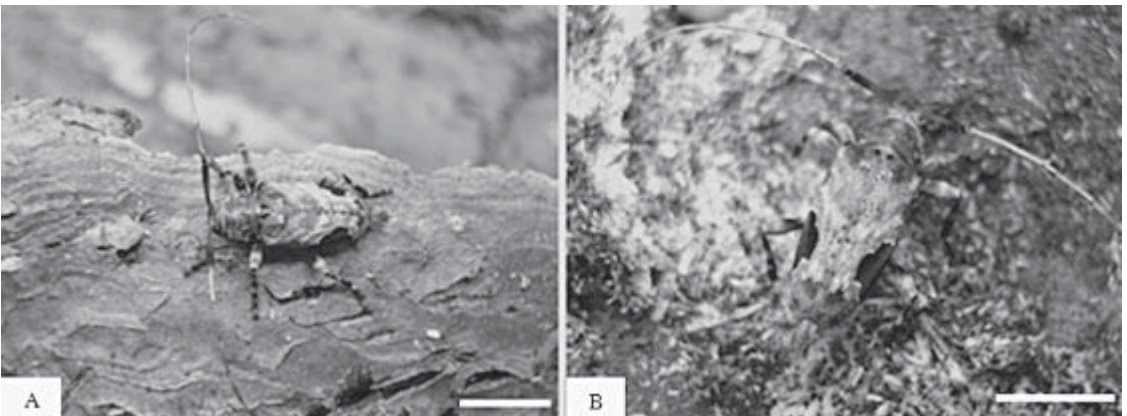


Fig. 3. A) and B) *Hylettus seniculus* (Coleoptera: Cerambycidae) adults preparing for flight on a *Pinus caribaea* var. *hondurensis* log at Prata, Minas Gerais State, Brazil, Dec 2008 and 2009. Scale bars = 10 mm.

ACKNOWLEDGEMENTS

To “Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)”, “Coordenação de Aperfeiçoamento

de Pessoal de Nível Superior (CAPES)” and “Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG)” for financial support. To Dr. Antonio Santos Silva, University of São Paulo for the iden-

tification of the species studied and the Faber-Castell S.A. by supporting the experiment. Global Edico Services corrected and edited the English of this manuscript.

REFERENCES CITED

- BERTI-FILHO, E. 1997. Impacto de Coleoptera: Cerambycidae em florestas de *Eucalyptus* no Brasil. *Sci. Forest.* 52(1): 53-56.
- CAVEY, J. F., HOEBEKE, E. R., PASSOA, S., AND LINGAFELTER, S. W. 1998. A new exotic threat to North American hardwood forests: an Asian longhorned beetle, *Anoplophora glabripennis* (Motschulsky) (Coleoptera: Cerambycidae). I. Larval description and diagnosis. *Proc. Entomol. Soc. Washington* 100(2): 373-381.
- COSTA LIMA, A. M. 1955. Insetos do Brasil: Coleópteros. Rio de Janeiro, Escola Nacional de Agronomia, 9^o Tomo, 3^a Parte. 289 pp.
- DODDS, K. J., ZYLSTRA, K. E., DUBOIS, G. D., AND HOEBEKE, E. R. 2012. Arboreal insects associated with herbicide-stressed *Pinus resinosa* and *Pinus sylvestris* used as *Sirex noctilio* trap trees in New York. *Environ. Entomol.* 41(6): 1350-1363.
- MOREIRA, M. A. B., OLIVEIRA JUNIOR, J. O. L. AND MONNÉ, M. A. 2003. Ocorrência de *Hylettus seniculus* (Germar, 1824) (Coleoptera: Cerambycidae), em pomares cítricos de Roraima, Brasil, e alternativas de controle. *Acta Amazonia* 33(4): 607-612.
- PAZ, J. K. S., SILVA, P. R. R., PÁDUA, L. E. M., IDE, S., CARVALHO, E. M. S., AND FEITOSA, S. S. 2008. Monitoramento de coleobrocas associadas à mangueira no município de José de Freitas, Estado do Piauí. *Rev. Brasileira Frutic.* 30(2): 348-355.
- SANTOS, A., ZANETTI, R., ALMADO, R. A., AND ZANUNCIO, J. C. 2014. Cerambycidae associated with hybrid *Eucalyptus urograndis* and native vegetation in Carbonita, Minas Gerais State, Brazil. *Florida Entomol.* 97(2): 523-527.
- TAVAKILIAN, G. L., BERKOV, A., MEURER-GRIMES, B., AND MORI, S. 1997. Neotropical tree species and their faunas of *Xylophagous longicornis* (Coleoptera: Cerambycidae) in French Guiana. *Bot. Rev.* 63(4): 304-355.
- WILCKEN, C. F., BERTI-FILHO, E., OTTATI, A. L. T., FIRMINO, D. C. AND COUTO, E. B. 2002. Ocorrência de *Phoracantha recurva* Newman (Coleoptera: Cerambycidae) em eucalipto no Estado de São Paulo. *Sci. Forest.* 62(1): 149-153.
- ZANUNCIO, J. C., SOSSAI, M. F., FLECHTMANN, C. A. H., ZANUNCIO, T. V., GUIMARÃES, E. M., AND ESPINDULA, M. C. 2005. Plants of an *Eucalyptus* clone damage by Scolytidae and Platypodidae (Coleoptera). *Pesq. Agropec. Brasileira* 40(5): 513-515.
- ZANUNCIO, J. C., PIRES, E. M., ALMADO, R. P., ZANETTI, R., MONNÉ, M. A., PEREIRA, J. M. M., AND SERRÃO, J. E. 2009. Damage assessment and host plant records of *Oxymerus basalis* (Dalman, 1823) (Cerambycidae: Cerambycinae: Trachyderini) in Brazil. *Coleopt. Bull.* 63(2): 179-181.
- ZANUNCIO, A. J. V., PASTORI, P. L., KIRKENDALL, L. R., LINO-NETO, J., SERRÃO, J. E., AND ZANUNCIO, J. C. 2010. *Megaplatypus mutatus* (Chapuis) (Coleoptera: Curculionidae: Platypodinae) attacks hybrid *Eucalyptus* L'Héritier De Brutelle clones in southern Espírito Santo, Brazil. *Coleopt. Bull.* 64(1): 81-83.