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First report of *Desmiphora hirticollis* (Olivier) (Coleoptera:
Cerambycidae) on *Wigandia urens* (Ruiz and Pavón) H.B.K.
(Hydrophilaceae) in Mexico

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First report of *Desmiphora hirticollis* (Olivier) (Coleoptera: Cerambycidae) on *Wigandia urens* (Ruiz and Pavón) H.B.K. (Hydrophilaceae) in Mexico

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ABSTRACT. *Desmiphora hirticollis* (Olivier) (Coleoptera: Cerambycidae) was found in Oaxaca, Mexico, feeding in the stems of *Wigandia urens* (Ruiz and Pavón) H.B.K. (Hydrophilaceae), a new host record. Information about damage in the plant stems and some observations of the insect's biology are provided.

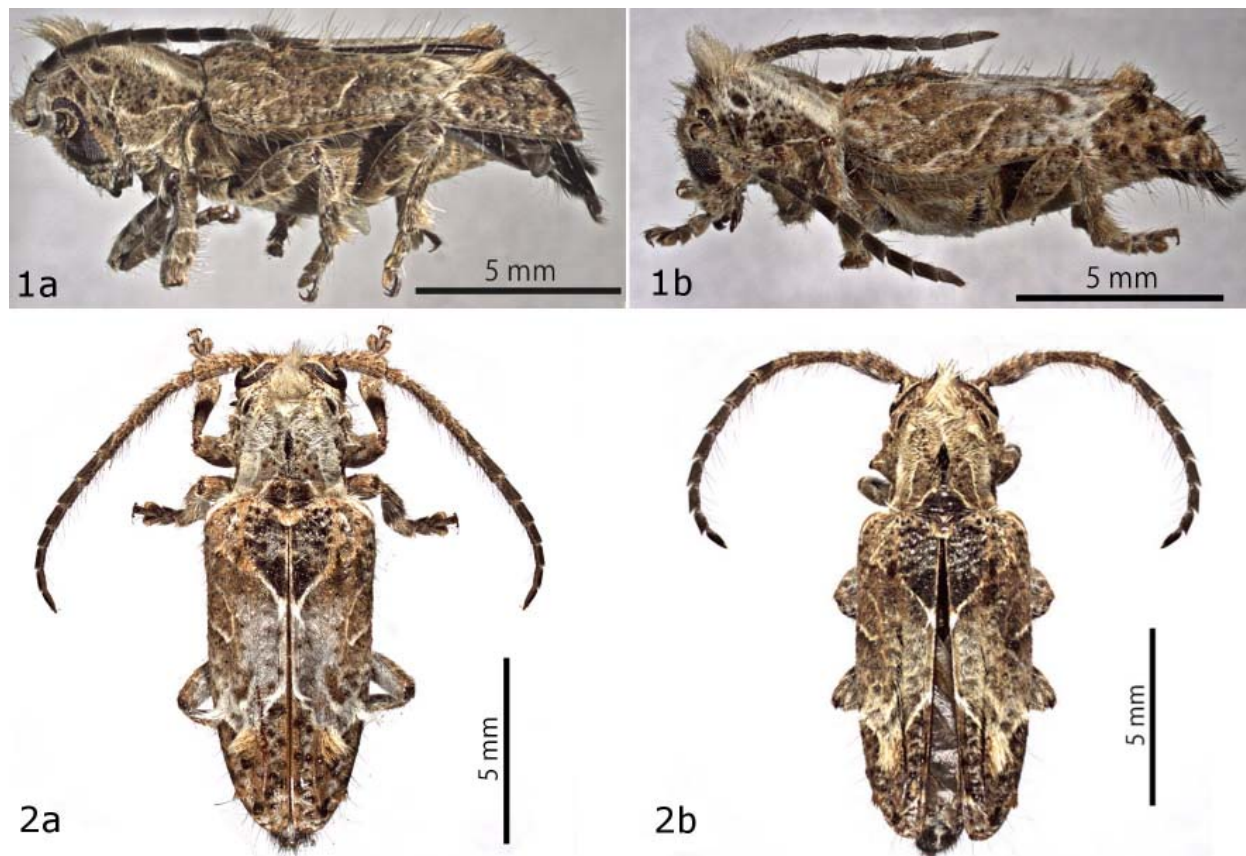
RESUMEN. Se reporta por primera vez en México la presencia del cerambícido *Desmiphora hirticollis* (Olivier) (Coleoptera: Cerambycidae) alimentándose de los tallos de *Wigandia urens* (Ruiz and Pavón) H.B.K. (Hydrophilaceae). Se proporciona información sobre los daños que provoca este insecto a los tallos de la planta, así como algunas observaciones biológicas del insecto.

Discussion

Desmiphora Audinet-Serville (Coleoptera: Cerambycidae) is a Neotropical genus, according to Monné (2005) including 68 species belonging to two subgenera (*Desmiphora* and *Antennifora* Breuning). Of these species, seven have been reported from Mexico: *D. bijuba* Giesbert, *D. canescens* Bates, *D. chemsaki* Giesbert, *D. cirrosa* Erichson, *D. fasciculata* (Olivier), *D. hirticollis* (Olivier) and *D. variola* Giesbert (Giesbert 1998; Monné and Bezark 2012).

Desmiphora hirticollis has been recorded from the USA (southern Texas; Vogt 1949, Rice et al. 1985, Hovore et al. 1987), Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, French Guiana, Galapagos Islands, Grenada, Curaçao, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, St. Vincent, and Venezuela (Giesbert 1998; Monné and Bezark 2012). In Mexico this species has been recorded in Guerrero (Giesbert 1998), Jalisco (Chemsak and Noguera 1993), Oaxaca (Giesbert 1998), Puebla (Noguera and Chemsak 1996), Sonora (Noguera et al. 2009), Veracruz (Noguera and Chemsak 1996) and Quintana Roo (Giesbert 1998).

Monné (2002) reported *D. hirticollis* on *Cordia alliodora* (Ruiz and Pavón), *C. boissieri* (A. DC.), *C. eleagnoides* (A. DC.), *Ehretia anacua* (Berl.) (Boraginaceae), and *Sapium acuparium* Jacq., and Duffy (1960) reported larvae of this beetle in *Sapium* sp. (Euphorbiaceae). *Desmiphora hirticollis* has been reared from *C. eleagnoides* (A. DC.) (Chemsak and Noguera 1993); MacRae (2012) found *D. hirticollis* on logs of "guayabi" (*Patagonula americana* L., Boraginaceae) in Argentina, and suggested that it served as a larval host due to the number of adult specimens observed on it; however, he did not observe any feeding damage on those logs.



Figures 1-2. *Desmiphora hirticollis*. 1) Lateral view. 2) Dorsal view. a) male, b) female.

From May 2011 to November 2012 we collected 71 males (Fig. 1a, 2a) and 68 females (Fig. 1b, 2b) of *D. hirticollis* on *Wigandia urens* (Ruiz and Pavón) H.B.K. (Hydrophilaceae) in Santa Cruz Xoxocotlán, Cuilapam, Jalpan, and Zaachila, Oaxaca (Fig. 3); adults preferred dried leaves or young buds, apparently to avoid detection (Fig. 4). According to MacRae (2012), *D. hirticollis* is nocturnal; in contrast, we observed adults during the day and hypothesize that the beetles' coloration and distinct tufts of setae play a role in cryptic coloration. Adults were occasionally observed within hollowed stems. In March 2012 we collected 10 larvae and obtained three pupae and adults of *D. hirticollis* from branches of *W. urens* (Fig. 5). Larvae caused damage to stems and branches when feeding, resulting in their drying out. Cano and Oyama (1994) reported 14 species of insects on *W. urens* in La Reserva del Pedregal de San Angel, Mexico City, but he did not cite *D. hirticollis*. Our study is the first report of *D. hirticollis* on *W. urens* and the first report of the family Hydrophilaceae as a host plant. *Wigandia urens* has been used for medicinal, ornamental and ceremonial purposes (Rzedowski and Rzedowski 2001) and has biological importance for many species of insects (Cano and Oyama 1994).

Acknowledgments

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Literature Cited

- Cano, S. Z., and K. Oyama. 1994.** *Wigandia urens* (Hydrophyllaceae): un mosaico de recursos para sus insectos herbívoros. *Acta Botánica Mexicana* 28: 29-39.
- Chemsak, J. A., and F. A. Noguera. 1993.** Annotated checklist of the Cerambycidae of the Estación de Biología Chamela, Jalisco, México (Coleoptera), with descriptions of new genera and species. *Folia Entomológica Mexicana* 89: 55-102.



Figures 3-5. *Wigandia urens* (Ruiz and Pavón) H.B.K. with *Desmiphora hirticollis*. **3)** Host plant. **4)** Mating pair. **5)** Larva in host stem.

Duffy, E. A. J. 1960. A monograph of the immature stages of Neotropical timber beetles (Cerambycidae). British Museum of Natural History; London. 327 p.

Giesbert, E. F. 1998. A review of the genus *Desmiphora* Audinet-Serville (Coleoptera: Cerambycidae: Lamiinae: Desmiphorini) in North America, Mexico and Central America. Occasional Papers of the Consortium Coleopterorum 2(1): 27–43.

Hovore, F. T., R. L. Penrose, and R. W. Neck. 1987. The Cerambycidae, or longhorned beetles, of southern Texas: a faunal survey. Proceedings of the California Academy of Sciences 44(13): 283-344.

MacRae, T. C. 2012. *Desmiphora hirticollis*—crypsis or mimicry? Beetles in the Bush. <http://beetlesinthebush.wordpress.com/2012/05/07/desmiphora-hirticollis-crypsis-or-mimicry/> (accessed on October/20/2012).

Monné, M. A. 2002. Catalogue of the Neotropical Cerambycidae (Coleoptera) with known host plant — Part IV: Subfamily Lamiinae, Tribes Batocerini to Xenofreini. Publicações Avulsas do Museu Nacional 94: 1–92.

Monné, M. A. 2005. Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part II. Subfamily Lamiinae. Zootaxa 1023: 1-760.

Monné, M.A. and L. G. Bezark. 2012. Checklist of the Oxypeltidae, Vesperidae, Disteniidae and Cerambycidae, (Coleoptera) of the Western Hemisphere. Available from: <http://plant.cdpa.ca.gov/byciddb/> (accessed on February/14/2013)

Noguera, F. A. and J. A. Chemsak. 1996. Cerambycidae (Coleoptera). P. 381–409. In: Jorge Llorente Bousquets, Alfonso N. Gracia Aldrete y Enrique González Soriano (Eds). Biodiversidad taxonomía,

y biogeografía de artrópodos de México: Hacia una síntesis de su conocimiento. Universidad Nacional Autónoma de México; México, D. F. 660 p.

Noguera, F. A., M. A. Ortega H., S. Zaragoza C., E. Ramírez G., and E. González S. 2009. A faunal study of Cerambycidae (Coleoptera) from one region with Tropical Dry Forest in México: San Javier, Sonora. *Pan-Pacific Entomologist* 85:70-90.

Rice, M. E., R. H. Turnbow, Jr., and F. T. Hovore. 1985. Biological and distributional observations on Cerambycidae from the southwestern United States (Coleoptera). *Coleopterists Bulletin* 39(1):18–24.

Rzedowski, G. C., and J. Rzedowski. 2005. Flora fanerogámica del Valle de México. 2a ed. Instituto de Ecología y Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Pátzcuaro, Michoacán, México. 1406 p. [see p. 601-602]

Vogt, B. G. 1949. Notes on Cerambycidae of the lower Rio Grande Valley, Texas. *Pan Pacific Entomologist* 25(3): 137-144.

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