

INSECTA MUNDI

A Journal of World Insect Systematics

0588

Description of the female of *Solenoptera tomentosa* Lingafelter, 2015
(Coleoptera: Cerambycidae: Prioninae: Solenopterini)

Sergio Devesa

La Iglesia, 4, San Vicente do Grove,
36988 Pontevedra, Spain

Elier Fonseca

Departamento de Biología Animal y Humana, Facultad de Biología,
Universidad de La Habana, Cuba

Alejandro Barro

Departamento de Biología Animal y Humana, Facultad de Biología,
Universidad de La Habana, Cuba

Date of Issue: November 30, 2017

Description of the female of *Solenoptera tomentosa* Lingafelter, 2015 (Coleoptera: Cerambycidae: Prioninae: Solenopterini)
Sergio Devesa, Elier Fonseca, and Alejandro Barro
Insecta Mundi 0588: 1–7

ZooBank Registered: urn:lsid:zoobank.org:pub:EF3F1E1D-7FE4-4495-9298-7AB776F83C66

Published in 2017 by

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

Insecta Mundi is a journal primarily devoted to insect systematics, but articles can be published on any non-marine arthropod. Topics considered for publication include systematics, taxonomy, nomenclature, checklists, faunal works, and natural history. **Insecta Mundi** will not consider works in the applied sciences (i.e. medical entomology, pest control research, etc.), and no longer publishes book reviews or editorials. **Insecta Mundi** publishes original research or discoveries in an inexpensive and timely manner, distributing them free via open access on the internet on the date of publication.

Insecta Mundi is referenced or abstracted by several sources including the Zoological Record, CAB Abstracts, etc. **Insecta Mundi** is published irregularly throughout the year, with completed manuscripts assigned an individual number. Manuscripts must be peer reviewed prior to submission, after which they are reviewed by the editorial board to ensure quality. One author of each submitted manuscript must be a current member of the Center for Systematic Entomology.

Chief Editor: David Plotkin, e-mail: insectamundi@gmail.com
Assistant Editor: Paul E. Skelley, e-mail: insectamundi@gmail.com
Head Layout Editor: Eugenio H. Nearn
Editorial Board: J. H. Frank, M. J. Paulsen, Michael C. Thomas
Review Editors: Listed on the **Insecta Mundi** webpage

Manuscript Preparation Guidelines and Submission Requirements available on the **Insecta Mundi** webpage at: <http://centerforsystematicentomology.org/insectamundi/>

Printed copies (ISSN 0749-6737) annually deposited in libraries:

CSIRO, Canberra, ACT, Australia
Museu de Zoologia, São Paulo, Brazil
Agriculture and Agrifood Canada, Ottawa, ON, Canada
The Natural History Museum, London, UK
Muzeum i Instytut Zoologii PAN, Warsaw, Poland
National Taiwan University, Taipei, Taiwan
California Academy of Sciences, San Francisco, CA, USA
Florida Department of Agriculture and Consumer Services, Gainesville, FL, USA
Field Museum of Natural History, Chicago, IL, USA
National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
Zoological Institute of Russian Academy of Sciences, Saint-Petersburg, Russia

Electronic copies (Online ISSN 1942-1354, CDROM ISSN 1942-1362) in PDF format:

Printed CD or DVD mailed to all members at end of year. Archived digitally by Portico.
Florida Virtual Campus: <http://purl.fcla.edu/fcla/insectamundi>
University of Nebraska-Lincoln, Digital Commons: <http://digitalcommons.unl.edu/insectamundi/>
Goethe-Universität, Frankfurt am Main: <http://nbn-resolving.de/urn/resolver.pl?urn:nbn:de:hebis:30:3-135240>

Copyright held by the author(s). This is an open access article distributed under the terms of the Creative Commons, Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. <http://creativecommons.org/licenses/by-nc/3.0/>

Layout Editor for this article: Robert G. Forsyth

Description of the female of *Solenoptera tomentosa* Lingafelter, 2015
(Coleoptera: Cerambycidae: Prioninae: Solenopterini)

Sergio Devesa

La Iglesia, 4, San Vicente do Grove,
36988 Pontevedra, Spain
sergio.devesa@gmail.com

Elier Fonseca

Departamento de Biología Animal y Humana, Facultad de Biología,
Universidad de La Habana, Cuba
elierfonseca@gmail.com

Alejandro Barro

Departamento de Biología Animal y Humana, Facultad de Biología,
Universidad de La Habana, Cuba
abarro@fbio.uh.cu

Abstract. The female of *Solenoptera tomentosa* Lingafelter, 2015 (Coleoptera: Cerambycidae: Prioninae: Solenopterini) is described and illustrated for the first time.

Key Words. West Indies, Dominican Republic, longhorned woodboring beetles, systematics.

Resumen. La hembra de *Solenoptera tomentosa* Lingafelter, 2015 (Coleoptera: Cerambycidae: Prioninae: Solenopterini) es descrita e ilustrada por primera vez.

Palabras Clave. Antillas, República Dominicana, cerambycidos, sistemática.

Introduction

The genus *Solenoptera* Audinet-Serville, 1832 currently includes 22 species (Monné 2017). Its distribution is essentially the West Indies, with only one species (*S. intermedia* Gahan, 1890) known from Colombia. Three species are known from Cuba (Devesa et al. 2015, 2016) and seven from Hispaniola (Lingafelter 2015). Previously, *Solenoptera tomentosa* Lingafelter, 2015 was known only from two male specimens (holotype and paratype).

Our review of cerambycid specimens deposited in Cuban collections resulted in the discovery of four specimens (two males and two females) of *S. tomentosa*.

The purpose of this paper is to describe the female of *S. tomentosa*. It is illustrated for the first time and information is provided on the locations where the specimens were collected. Additionally, pictures of the males are provided.

Materials and Methods

General observations and measurements (given in millimeters) were made using an ocular micrometer adapted to an Olympus SZX7 0.8–5.6× stereomicroscope. Photographs were taken with a Canon digital camera EOS 5D Mark III equipped with a Canon MP-E 65mm f/2.8 1–5× and a Canon EF100mm f/2.8 macro IS USM macro lens, controlled by Cognisys Stackshot. Several layers of photographs were stacked with the Zerene Stacker AutoMontage software and processed with Aperture software. The specimens are deposited at the Museo Nacional de Historia Natural, Ciudad de La Habana, Cuba (MNHNCu).

Results

Solenoptera tomentosa Lingafelter, 2015 (Fig. 1–20)

Description. Female (Fig. 1–6, 12, 14, 16, 18–19). Head dark brown; pronotum dark reddish-brown; elytra reddish-brown at base, gradually becoming reddish posteriorly; basal antennomeres dark brown; mandibles blackish at apex; femora, tibiae, tarsi and apical antennomeres reddish-brown; ventral surface dark brown.

Head (Fig. 18). Surface glabrous except some setae around eyes and base of scape and on clypeus; sparsely punctate; central area between antennal tubercles and middle of upper ocular lobes with pronounced, triangular-shaped sulcus, narrowed on vertex and not reaching apex of pronotum (Fig. 12); clypeus strongly punctate; mandibles relatively short and broad, weakly arcuate, with acute apex, cutting edge with small tooth, centrally with a few setae; hypostomal area very coarsely punctate-rugose from gula to anterior third, with a few setae (Fig. 14). Antennal tubercles with small setae at base (Fig. 19). Antennae surpassing elytral base by about 3 antennomeres; antennomeres glabrous, flattened ventrally; scape reaching or extending to just beyond posterior edge of eye, thick, coarsely and moderately punctate; antennomeres IV–IX triangular, constricted at base; segments III–X decreasing in length; poriferous sensory areas as follows: antennomere III with very small dorsal apicolateral rounded patch; one row of three very small apicolateral patches on IV; one row of three apicolateral patches and one apicodorsal patch on V; two rows of three-four apicolateral and apicodorsal patches and many small ones basidorsally on VI–IX; many different sized patches on most dorsal and lateral surfaces of X–XI, larger ones along margins (Fig. 19). Antennal formula (ratio) based on length of antennomere III: scape = 1.17; pedicel = 0.23; IV = 0.73; V = 0.67; VI = 0.61; VII = 0.59; VIII = 0.56; IX = 0.53; X = 0.44; XI = 0.61.

Thorax (Fig. 12, 14, 18). Prothorax transverse, almost rectangular, 1.72 times wider than long; sides with acute spine on anterolateral and posterolateral margins, both pointed backward; lateral margins strongly crenulate; posterolateral angle abruptly narrowed; pronotum shiny, weakly punctate on disc, with deep Y-shaped depression anteriorly; lateral areas shiny, rugose-punctate, with a variable irregular golden pubescence on both side of median sulcus, and dense fringe of golden pubescence on anterior margin (Fig. 12). Prosternum shiny, transversely strongly convex, longitudinally rugose in center; prosternal process notched at apex, lobes not divergent, base lacking protuberance; with fringe of golden pubescence around procoxae. Pronotum and prosternum without sexual micropunctuation. Mesosternum and metepisternum with dense golden pubescence. Metasternum with dense golden pubescence except centrally (Fig. 14). Scutellum triangular, with golden pubescence obscuring integument.

Elytra (Fig. 16). Sides nearly parallel, slightly tapering at apical third and not divergent apically at suture; 1.90 times longer than humeral width; nearly glabrous, with very small, suberect setae in each puncture (only visible at high magnification); semirugose basally, densely punctate throughout, punctures gradually smaller toward apex; elytral apex rounded with a few, slightly distinct crenulae, and weakly dentiform apicolaterally and at suture.

Legs. Short; coxae with golden pubescent patches (more evident on pro- and mesocoxae); femora gradually clavate, without pubescence, finely punctate and without denticles on profemora; hind femur extending to apical fifth of elytra; tibiae with dense golden-orange pubescence on inner margins of apical half and without denticles.

Abdomen. Ventrites with wide, dense golden pubescent bands laterally, glabrous centrally, where they are moderately, weakly punctate; last ventrite 1.25 times longer than fourth, rounded, almost flat, without broad emargination at distal margin (Fig. 2–4).

Dimensions, females (in mm). Total length, 29.6/25.3. Pronotum: length, 6.5/5.4; anterior width, 9.7/8.6; posterior width, 10.5/9.8. Elytral length, 20.1/17.2. Humeral width, 10.6/9.3.

Specimens examined. DOMINICAN REPUBLIC, Provincia de Pedernales: Oviedo (17°49'10.3"N / 71°26'15.1"W), 1 male and 2 females, Nov-2003, J.A. Genaro leg. (MNHNCu); Fondo Paradí, Parque Nacional Jaragua (17°45'15"N / 71°24'01"W), 1 male, Feb-2002, J.A. Genaro, E. Gutierrez & G. Alayon col. (MNHNCu).

Remarks. Sexual dimorphism: The morphological differences between the sexes are largely confined to the thoracic segments. The most noticeable difference lies in the appearance and structure of the pronotum and prosternum. The sides of the pronotal disc in male have a matte, densely micropunctate surface, only interrupted by a narrow, oblique, shiny, sparsely punctate ridge (Fig. 13), while in females they are uniformly shiny and moderately punctate (Fig. 12). Antennomeres VI–X in males have long yellow setae (Fig. 20), while in females they lack setae (Fig. 19). The male anterolateral margins of the pronotum are mostly rounded and without distinct spines on the margin (Fig. 13); conversely, the female anterolateral and posterolateral pronotal margins have an acute spine, directed backwards, and the lateral margins are strongly crenulate (Fig. 12). The prosternum in males is densely micropunctate, except for a nearly smooth central area close to the head and on the prosternal process (Fig. 15); the female prosternum is shiny and only rugose around the upper part of the prosternal process (Fig. 14). The elytra in males have moderately dense, fine, suberect setae throughout (Fig. 17), while the female elytral surface is almost glabrous (Fig. 16).

The abdominal ventrites are transversely more convex in females than in males; pubescence is restricted to the sides of the ventrites (Fig. 2–5 and 8–11), and the posterior margin of ventrite V is truncate in females, but deeply emarginate in males. Finally, unlike in most other Prioninae, there is very little difference in the shape and length of the female and male antennae.

The dimensions (in mm) of the two males studied are: Total length: 26.9/29.1. Pronotum: length, 6.0/6.2; anterior width, 8.8/9.0; posterior width, 8.8/9.7. Elytral length, 17.1/19.0. Humeral width, 9.3/10.1.

Acknowledgments

We are grateful to Antonio Santos-Silva and Larry Beznak for their careful reviews of an earlier version of the manuscript.

Literature Cited

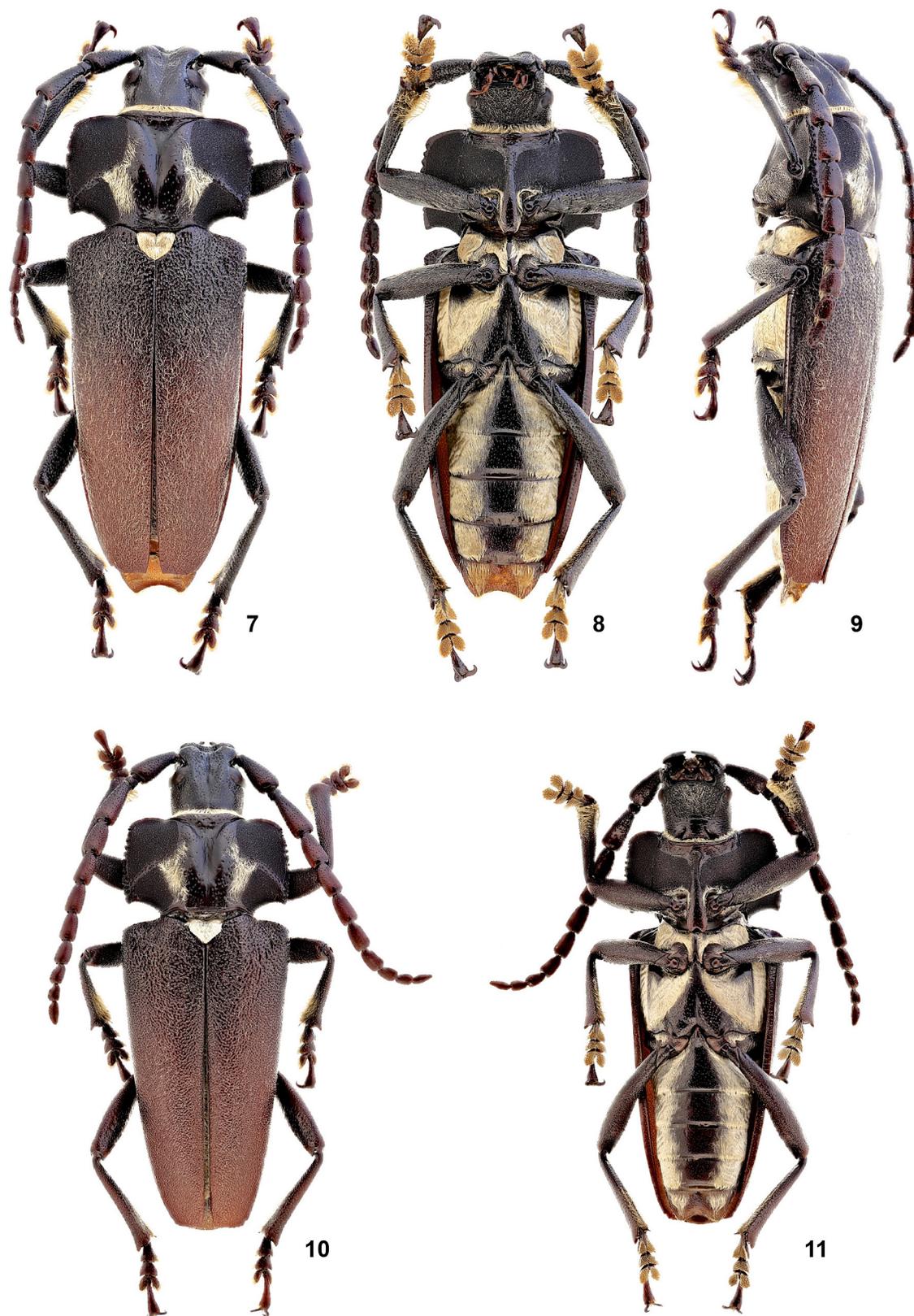
- Devesa, S., E. Fonseca, and A. Barro. 2015.** Longicornios de Cuba (Coleoptera: Cerambycidae). Vol. 1. Parandrinae, Prioninae, Spondylidinae, Cerambycinae. Greta Editores; Barcelona, Spain. 353 p.
- Devesa, S., E. Fonseca, and A. Barro. 2016.** *Solenoptera* Audinet-Serville, 1832 (Coleoptera, Cerambycidae, Prioninae, Solenopterini) in Cuba, with description of a new species. *Zootaxa* 4184(1): 104–116.
- Lingafelter, S. W. 2015.** The Prioninae (Coleoptera: Cerambycidae) of Hispaniola, with diagnosis, descriptions of new species, distribution records and a key for identification. *The Coleopterists Bulletin*, 69(3): 353–388.
- Monné, M. A. 2017.** Catalogue of the Cerambycidae (Coleoptera) of the Neotropical Region. Part III. Subfamilies Lepturinae, Necydalinae, Parandrinae, Prioninae, Spondylidinae and Families Oxypeltidae, Vesperidae and Disteniidae. (Available at ~ <http://www.cerambyxcat.com/>. Last accessed 17 September 2017.)

Received October 21, 2017; Accepted October 31, 2017.

Review Editor Oliver Keller.



Figures 1–6. *Solenoptera tomentosa* Lingafelter, 2015, female. 1, 4) Habitus, dorsal view. 2, 5) Habitus, ventral view. 3, 6) Habitus, lateral view.



Figures 7–11. *Solenoptera tomentosa* Lingafelter, 2015, male. 7, 10) Habitus, dorsal view. 8, 11) Habitus, ventral view. 9) Habitus, lateral view.



12



13



14



15

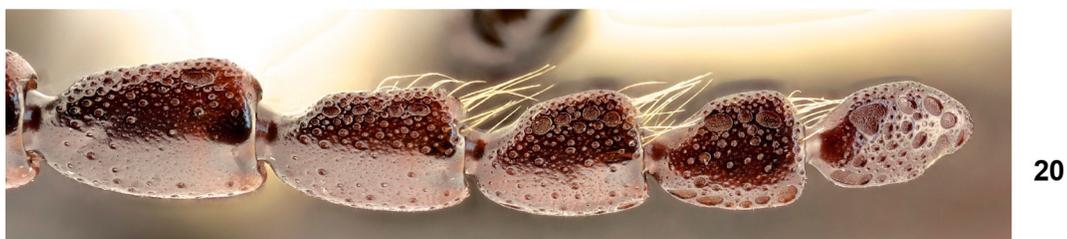


16



17

Figures 12–17. *Solenoptera tomentosa* Lingafelter, 2015. 12–13) Head and prothorax, dorsal view, respectively female and male. 14–15) Head and prothorax, ventral view, respectively female and male. 16–17) Elytra, respectively female and male.



Figures 18–20. *Solenoptera tomentosa* Lingafelter, 2015. 18) Head, scape and prothorax, female. 19) Antennomeres VII–XI, female. 20) Antennomeres VII–XI, male.

