



Nota científica

(Short communication)

**LEPTOFOENUS STEPHANOIDES (ROMAN 1920) (PTEROMALIDAE: LEPTOFOENINAE):
NEW LOCALITY AND DISTRIBUTION RANGE EXTENSION FOR COLOMBIA**

**LEPTOFOENUS STEPHANOIDES (ROMAN 1920) (PTEROMALIDAE: LEPTOFOENINAE):
NUEVA LOCALIDAD Y RANGO DE DISTRIBUCIÓN PARA COLOMBIA**

OSCAR ASCUNTAR-OSNAS* & DIANA MARCELA TORRES-DOMÍNGUEZ

Grupo de Investigaciones Entomológicas, Universidad del Valle, Facultad de Ciencias Naturales y Exactas,
Departamento de Biología <dianamarcela24@gmail.com>.

* Autor de correspondencia: <askuntar.osnas@gmail.com>.

Recibido: 29/06/2016; aceptado: 13/03/2017

Editor responsable: Pedro Reyes Castillo.

Ascuntar-Osnas, O., & Torres-Dominguez, D. M. (2017) *Leptofoenus stephanoides* (Roman 1920) (Pteromalidae: Leptofoeninae): New locality and distribution range extension for Colombia. *Acta Zoológica Mexicana* (n.s.), 33(2), 411-415.

Ascuntar-Osnas, O. y Torres-Dominguez, D. M. (2017). *Leptofoenus stephanoides* (Roman 1920) (Pteromalidae: Leptofoeninae): nueva localidad y rango de distribución para Colombia. *Acta Zoológica Mexicana* (n.s.), 33(2), 411-415.

ABSTRACT. *Leptofoenus* (Leptofoeninae) is an unusual group within Pteromalidae due to its morphological peculiarities. Although, widely distributed in America few, are documented reports. In this note, the department of Valle del Cauca (Buenaventura) is registered as a new locality of *Leptofoenus stephanoides* for Colombia; After 38 years the species is reported again in the country. The only female collected is deposited in the Museo de Entomología de la Universidad del Valle (MUSENUV) Cali, Valle del Cauca.

RESUMEN. *Leptofoenus* (Leptofoeninae) es un grupo inusual dentro de Pteromalidae debido a sus particularidades morfológicas. Aunque, distribuido ampliamente en América pocos son los reportes documentados. En esta nota se registra el departamento del Valle del Cauca (Buenaventura) como nueva localidad de *Leptofoenus stephanoides* para Colombia; después de 38 años se reporta la especie nuevamente en el país. La única hembra colectada se encuentra depositada en el Museo de Entomología de la Universidad del Valle (MUSENUV) Cali, Valle del Cauca.

Leptofoeninae Handlirsch is a small subfamily of Pteromalidae, particularly interesting due to its unusual dimensions and morphological features head with raised rough parascrobal crests separated by deep scrobes and neck-like pronotum (Bouček & Heydon, 1997; Krogmann & Burks, 2009). Leptofoenines closely resemble parasitoids of the families Pelecinidae, Gasteruptionidae, and Stephaniidae (Engel, 2009). Despite of its conspicuous size (11-27 mm in female y 5-12 mm in males) are rarely collected and little is known about their biology (Engel, 2009). Due to its extremely long ovipositor, elongate and tubular body, long legs and the fact that specimens have been collected on dead or fell trees, it is suggested that the species of Leptofoeninae could be parasitoids of xylophagous beetles (Bouček, 1959; Brues, 1924; Dodd, 1927; Hanson

& Heydon, 2006). The subfamily includes two genera and nine species (Noyes, 2016; Krogmann & Burks, 2009); the genus *Doddifoenus* Bouček includes three species distributed in Australasia and the genus *Leptofoenus* Smith with six species restricted to America which they are distributed from northern Argentina to the Southwest of the United States (Engel, 2009; Krogmann & Burks, 2009; Noyes, 2016).

Leptofoenus is characterized by presenting the eighth gastral tergum reduced, pronotal lateral surfaces with finely striate regions and the length of basitarsus of all legs twice as long as second tarsomere (Engel, 2009). LaSalle & Stage (1985) reviewed the genus and provided a female key for the five species from to America: *L. howardi* (Ashmead), *L. peleciniiformis* Smith, *L. rufus*

LaSalle & Stage, *L. stephanoides* (Roman) and *L. westwoodi* (Ashmead). In 2009, an extinct new species, *L. pittfieldae* Engel, was described from a fossil record of Miocene found in Dominican Republic; information about the possible phylogenetic relationships of the Lep-tofoeninae species and an identification key to the sub-family genera were also provided (Engel, 2009).

The *L. stephanoides* female (Fig. 1A) is distinguished by basal cell with 16 or less setae; cubital vein not represented posterior to basal cell, or rarely represented by 1-2 setae (Fig. 1B); single row of setae between preorbital ridge and eye not approaching vertex, not or barely extending dorsal of middle of head (Fig. 2C); hind tibia with rasplike structure along entire inner margin (Fig. 1D); ovipositor extended past apex of T9 for a length greater than twice the length of T9 (Fig. 1A); and pronotum with lateral striolate area (Fig. 1E) (LaSalle & Stage 1985). Superfamily and family identification follows Mason & Fernandez (2006), Gibson (2006) and Hanson & Heydon (2006); genus follows Engel (2009) and species LaSalle & Stage (1985). Material deposited in the Colección Entomológica del Museo de Entomología de la Universidad del Valle, (MUSENUV) revealed the presence of *L. stephanoides*.

***Leptofoenus stephanoides* (Roman)**

(Figs. 1-2)

Material examined: 1 Female. COLOMBIA, Valle del Cauca, Buenaventura, Vereda El Salto, Área en Conservación de la Microcuenca Quebrada Pericos. Date: August 14, 2014, 344 masl. 3°50'1"N, 76°46'50"W. Manual capture (with hand net), flying over decomposing trunk at noon, Tropical rainforest, Collectors: Oscar Ascuntar-Osnas. Deposit: Museo de Entomología de la Universidad del Valle (MUSENUV), accession number MUSENUV-27834

Comments and world distribution Within the genus, *L. stephanoides* is one of the most widely distributed species in America (De Santis, 1968; LaSalle & Stage, 1985; Ruiz *et al.*, 2004; GBIF, 2016; Noyes, 2016 – Fig. 2): ARGENTINA (Misiones, Loreto), PARAGUAY (San Bernardino), BRAZIL (Parana, Santa Catarina, Goias, Mato Grosso, Amazonas), FRENCH GUIANA (Nouveave Chantier), VENEZUELA (Zulia), COLOMBIA (see below), PANAMA (Barro Colorado Island). COSTA RICA (Bagaces, Palo Verde Natural National Park, Palo Verde Station, 40 m, 10,34957N, -85,35236W; A.C.L.A.C,

Central, Res Biol Hitoy Cerere, Est Hitoy Cerere, Send Bobócara, 300 m, 9.67227N, -83.04137W; Osa, Sierpe, Rancho Quemado, 200 m, 8.6791N, -83.56671W; Guanacaste National Park. La Cruz. Maritza Biological Station, 600 m, 10.96254N, -85.49524W). MEXICO (80 Km S. Victoria, Route 85, Carr. La Gloria, 197m, 23.261N, -98.842W. [Tamaulipas]; Chiapas, 1 female, Simojovel, 2.viii.1958 (Chermsak) (BMNH)).

In Colombia, *L. stephanoides* is the only species reported so far and it has been recorded in the Orinoquia region (La Macarena, Department of Meta) from a single male collected in 01-15.iii.1976 (LaSalle & Stage, 1985). However, the genus (unpublished data) has been recorded in the three natural regions: Amazon Region (Amazonas: PNN [Parque Nacional Natural] Amacayacu, Mocagua, 03°41'S 70°15'W, 150 m, Malaise, 06-12.vi.2000, A. Parente leg. M. 670; same data except for: 07-14. viii. 2000, M. 677); Caribbean Region (Magdalena: PNN Tayrona, Zaino, 11°20'N 74°2'W, 50 m, Malaise, 28.vii-14. viii.2000, R. Henríquez leg. M. 567) and Orinoquia Region (Vichada: PNN El Tuparro, Bosque Sabana, 5°21'N 67°51'W 100 m, Malaise, 08-18. viii.2000, W. Villalba leg. M. 515). Specimens were found in lowland areas from 50 m to 150 m. The material was collected under the project "Insect Diversity of Colombia" (Sharkey, 2016) and became part of the Colección Entomológica, Jorge Ignacio Hernández Camacho, Museo del Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH-E), Villa de Leyva, Colombia. This material was not reviewed because the identification of the specimen deposited in MUSENUV is part of the curation process of the museum and not a study focused on the genus *Leptofoenus*.

Here, the Department of Valle del Cauca (Buenaventura) is reported as a new locality of *L. stephanoides* from Colombia. The presence of this species is confirmed once again for Colombia after 38 years. This is also the first record for the Pacific Region. It is worth noting that this record was expected as part of *L. stephanoides* distributional range.

ACKNOWLEDGMENTS. The authors wish to thank to Museo de Entomología de la Universidad del Valle (MUSENUV). As well as Juan Felipe Ortega and the Image Lab of the Universidad del Valle for the support in taking the pictures. We would also thank to evaluators for your valuable comments and Diana C. Arias Penna for the information supplied of the material in Villa de Leyva (Instituto Humboldt).

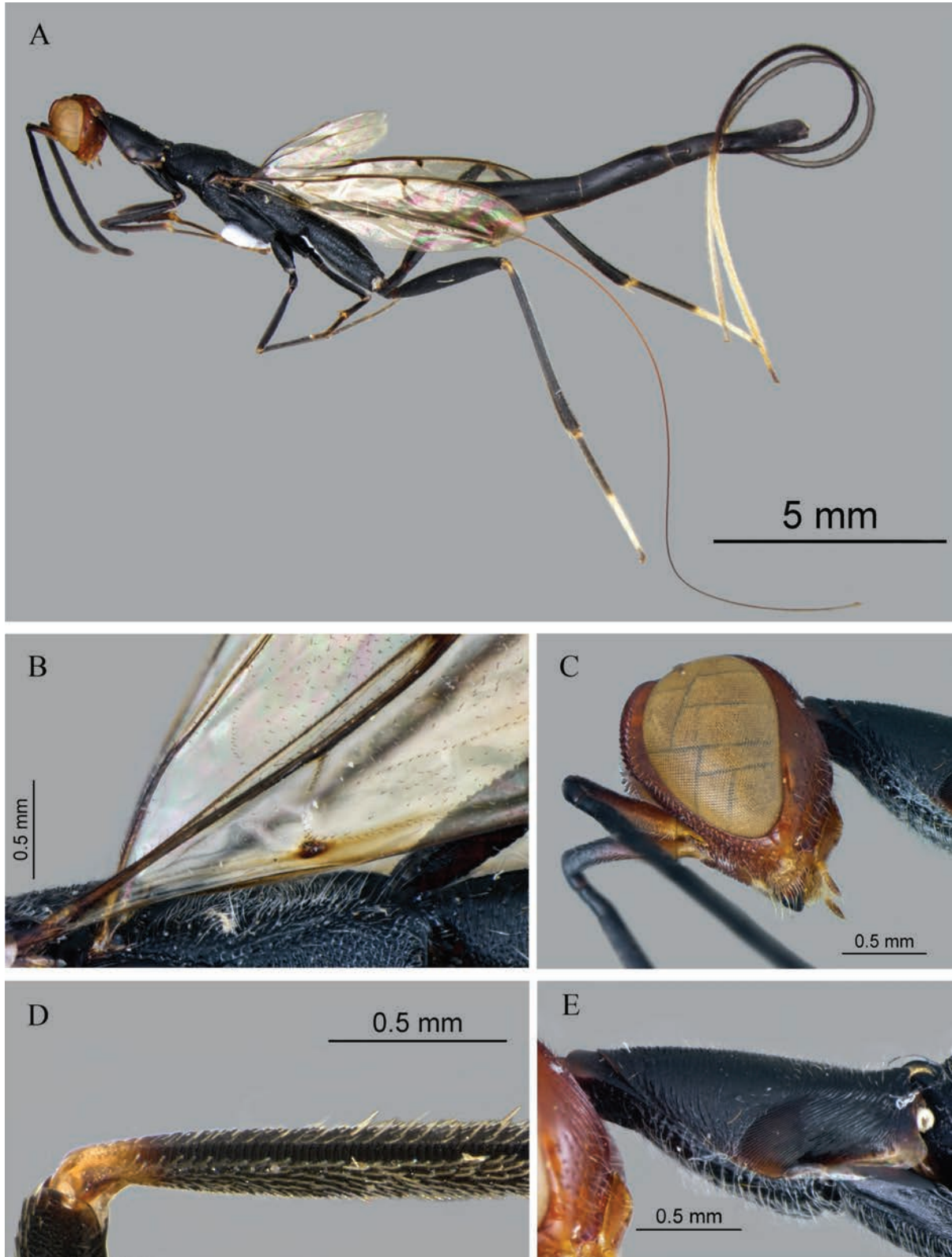


Figura 1. A) *L. stephanoides* Habitus; B) Basal cell of the forewing; C) Head; D) Detail of the rasplike structure in the hind tibia, and E) Area striolate of prothorax.



Figura 2. *L. stephanoides* distribution (black dots) in America, white dots indicate the records for *Leptofoenus* spp. in Colombia



LITERATURE CITED

- Bouček, Z.** (1958). Eine Cleonyminen-Studie; Bestimmungstabelle der Gattungen mit Beschreibungen und Notizen, eingeschlossen einige Eupelmidae (Hym. Chalcidoidea). *Acta Entomologica Musei Nationalis Pragae*, 32, 353-404.
- Bouček, Z. & Heydon S. L.** (1997). Chapter 17. Pteromalidae. Pp 541-692. In: G. A. P. Gibson, J. T. Huber & J. B. Woolley (Eds.). *Annotated keys to the genera of Nearctic Chalcidoidea (Hymenoptera)*. NRC Research Press, Ottawa, Ontario, Canada.
- Brues, C. T.** (1924). The identity of *Leptofoenus* F. Smith and *Pelecinnella* Westwood (Hymenoptera). *Psyche*, 31, 302-304.
- De Santis, L.** (1968). Anotaciones sobre calcidoideos argentinos. III. (Hymenoptera). *Revista de la Sociedad Entomológica Argentina*, 31, 121-125.
- Dodd, A. P.** (1927). Notes on Parasitic Hymenoptera from Australia, with descriptions of new species. *Memoirs of the Queensland Museum*, 9, 63-75.
- Engel, M. S.** (2009). The first fossil leptofoenine wasp (Hymenoptera, Pteromalidae): A new species of *Leptofoenus* in Miocene amber from the Dominican Republic. *ZooKeys*, 13, 57-66.
- Gibson, G. A. P.** (2006). Capítulo 64 Superfamilia Chalcidoidea. Pp. 629-645. In: F. Fernández & M. J. Sharkey (Eds.). *Introducción a los Hymenoptera de la Región Neotropical*. Sociedad Colombiana de Entomología y Universidad Nacional de Colombia, Bogotá D. C.
- GBIF** (2016). Global Biodiversity Information Facility. Available at: http://www.gbif.org/occurrence/search?taxon_key=1397089&HAS_COORDINATE=true&HAS_GEOSPATIAL_ISSUE=false#. (Accessed in April, 2016).
- Hanson P. E. & Heydon S. L.** (2006). *Familia Pteromalidae. Cap. 68*. In: Fernández, F. y M. J. Sharkey (eds.). *Introducción a los Hymenoptera de la Región Neotropical*. Sociedad Colombiana de Entomología y Universidad Nacional de Colombia, Bogotá D. C., xxx + 894 pp.
- Krogmann, L. & Burks, R. A.** (2009). *Doddifoenus wallacei*, a new giant parasitoid wasp of the subfamily Leptofoeninae (Chalcidoidea: Pteromalidae), with a description of its mesosomal skeletal anatomy and a molecular characterization. *Zootaxa*, 2194, 21-36.
- LaSalle J. & Stage G. I.** (1985). The chalcidoid genus *Leptofoenus* (Hymenoptera: Pteromalidae). *Systematic Entomology*, 10, 285-298.
- Mason, W. R. M. & Fernández F.** (2006). Capítulo 10. Clave para las superfamilias neotropicales de Hymenoptera. Pp. 177-202. In: F. Fernández & M. J. Sharkey (Eds.). *Introducción a los Hymenoptera de la Región Neotropical*. Sociedad Colombiana de Entomología y Universidad Nacional de Colombia, Bogotá D. C.
- Noyes, J. S.** (2016). Universal Chalcidoidea Database. World Wide Web electronic publication. Disponible en: <http://intern.nhm.ac.uk/jdsml/perth/chalcidoids/index.dsml>. (Accessed in April, 2016).
- Ruiz C., E., Coronado B. J. M., Myartseva, S. M. & Luna S., J. F.** (2004). Adenda a Chalcidoidea. Cap. 36. Pp. 725-734. In: Llorente B., J.E., J.J. Morrone, O. Yáñez O. e I. Vargas F. (Eds.). *Biodiversidad, taxonomía y biogeografía de artrópodos de México: Hacia una síntesis de su conocimiento*. Vol. IV.
- Sharkey, M.** (2016). Insect Survey of a Megadiverse Country: Colombia. Available at: http://www.sharkeylab.org/biodiversity/db.php?app=colombia&function=view_taxa&genus=Leptofoenus. (Accessed in April, 2016).