A new Peruvian species of the genus *Sthenoboea* Champion, 1885 (Coleoptera: Tenebrionidae: Stenochiinae)

Una nueva especie peruana del género *Sthenoboea* Champion, 1885 (Coleoptera: Tenebrionidae: Stenochiinae)

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Abstract.- A new species of Peru belonging to the genus *Sthenoboea* Champion, 1885, *Sthenoboea ferreri* sp. nov., is described, illustrated and compared to *Sthenoboea girardi* Ferrer & Moraguès, 2005.

Key words. *Cnodalonini, taxonomy, Amazonian fauna, description, South America.*

Resumen.- Una nueva especie de Perú perteneciente al género *Sthenoboea* Champion, 1885, *Sthenoboea ferreri* sp. nov., es descrita, ilustrada y comparada a *Sthenoboea girardi* Ferrer & Moraguès, 2005.

Palabras clave: *Cnodalonini, taxonomía, fauna Amazónica, descripción, Sudamérica.*

The genus *Sthenoboea* was proposed in 1885 by Champion, including only the type species *Sthenoboea apicalis* Champion, 1885 based on a single female specimen from Mexico and placed in his "Tenebrionides" genus-group. This genus was included under Tenebrionini in Gebien (1941) and Blackwelder (1945) catalogues. After the morphological review and reclassification by Doyen (1989), it is currently placed in Cnodalonini (= Coelometopini) tribe of Stenochiinae (Bouchard et al., 2021).

Several years later, five South American species were subsequently added (Ferrer, 1996; Ferrer & Moraguès, 2005; Gonzales, 2015): *Sthenoboea boucheri* Ferrer & Moraguès, 2005, *Sthenoboea durantoni* Ferrer & Moraguès, 2005, *Sthenoboea moraguesi* Ferrer, 1996 and *Sthenoboea yvineci* Gonzales, 2015 from French Guiana, and *Sthenoboea girardi* Ferrer & Moraguès, 2005 from Brazil. While French Guiana contains four of the known species (Gonzales et al., 2014; Gonzales, 2015), only one is known from Brazil and Mexico respectively. For other South American countries, such as Colombia (Ascuntar-Osnas et al., 2023) and Peru (Smith et al., 2015; Giraldo & Flores, 2016), this genus remains unrecorded so far.

The objective of this work is to describe a new species of the genus *Sthenoboea*, the first record for this genus in the Peruvian territory.

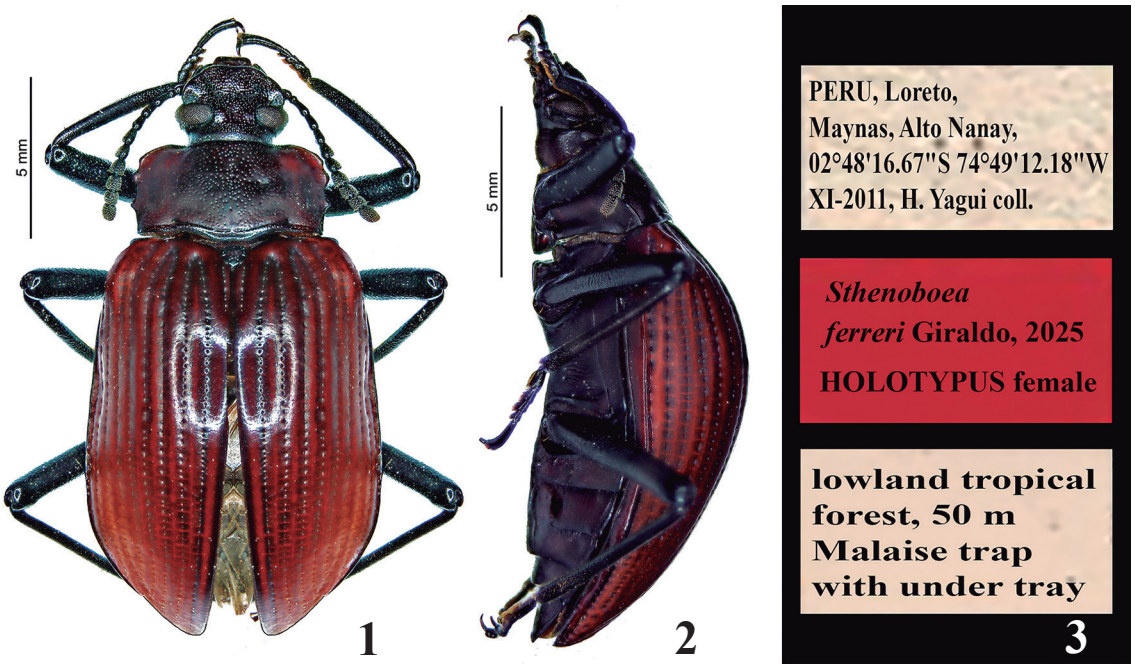
Material and methods

Type specimens are deposited in Museo de Entomología Klaus Raven Büller, Universidad Nacional Agraria La Molina, Lima, Perú (MEKRB) and Muséum National d'Histoire Naturelle, Paris, France (MNHN).

Terminology used in description follows recent treatments about the genus *Sthenoboea* (Ferrer & Moraguès, 2005; Gonzales, 2015). Three body measurements were applied to the specimen (mm), length = from labrum apex to elytral apex; width = maximum elytral width and height = maximum elytral height. Two body ratios were used for interspecific comparison, length: width and length: height. Holotype of new species was photographed with a Canon© EOS Rebel T5i DSLR, equipped with macro lens. Photos were edited using Combine ZP (Hadley, 2006) and Adobe Photoshop software. Distribution map was prepared using SimpleMappr (Shorthouse, 2010).

Editor responsable: Bolívar R. Garcete-Barrett* / Recibido: 26.v.2025 / Aceptado: 24.xi.2025 / Publicado online: 3.xii.2025

*Museo Nacional de Historia Natural del Paraguay, San Lorenzo, Paraguay.



Figures 1-3. *Sthenoboea ferreri* sp. nov. (Holotype MEKRB). **1)** Dorsal habitus. **2)** Lateral habitus. **3)** Labels. Scale bars = 5 mm.

Results and discussion

Sthenoboea ferreri n. sp.

(Figs. 1, 2, 3, 7)

HOLOTYPE. ♀ [PERU, Loreto/Maynas, Alto Nanay/02°48'16.67"S 74°49'12.18"W/XI-2011, H. Yagui coll.] [lowland tropical/forest, 50 m/ Malaise trap/with under tray] [*Sthenoboea/ ferreri* Giraldo, 2025/HOLOTYPUS female] (MEKRB).

Description. Length: 15.6 mm, width: 7.8 mm, height: 5.8 mm. Uniformly reddish-brown, head, pronotum and elytral suture darkened, antennae, legs and venter greyish black, mostly dull, with shining reflections on pronotum, elytra and venter. Winged.

Head transverse, labrum with fine punctures and covered with setae on anterior margin; anterior border of the clypeus very slightly notched in its middle, revealing thus the very narrow labro-clypeal membrane; clypeus widely trapezoidal, with clypeo-genal notches marked by oblique faint carinae extending towards the frons in a "V" shape. Epistomal canthi sub-obtuse, barely wider than the eyes, depressed before them. Fronto-clypeal suture barely evident by a transverse row of coalescent punctures. Frons raised between the eyes; eyes reniform, separated from the epistome by a distance greater than an eye diameter, interocular space equal to 1.5 eye diameters, surrounded by a slight post-ocular groove; vertex slightly convex. Head surface with coarse and dense punctures on clypeus and frons, denser on clypeus; fine and sparse punctures on vertex. Antennae reaching pronotal base, antennomeres becoming transverse from the sixth, eleventh antennomere elongate-oval. Mentum subtrapezoidal, convex along its median line and somewhat impressed on both sides, adjacent to a cardo of similar appearance and width on each side. Gula deeply excavated. Maxillary palps axe-shaped.

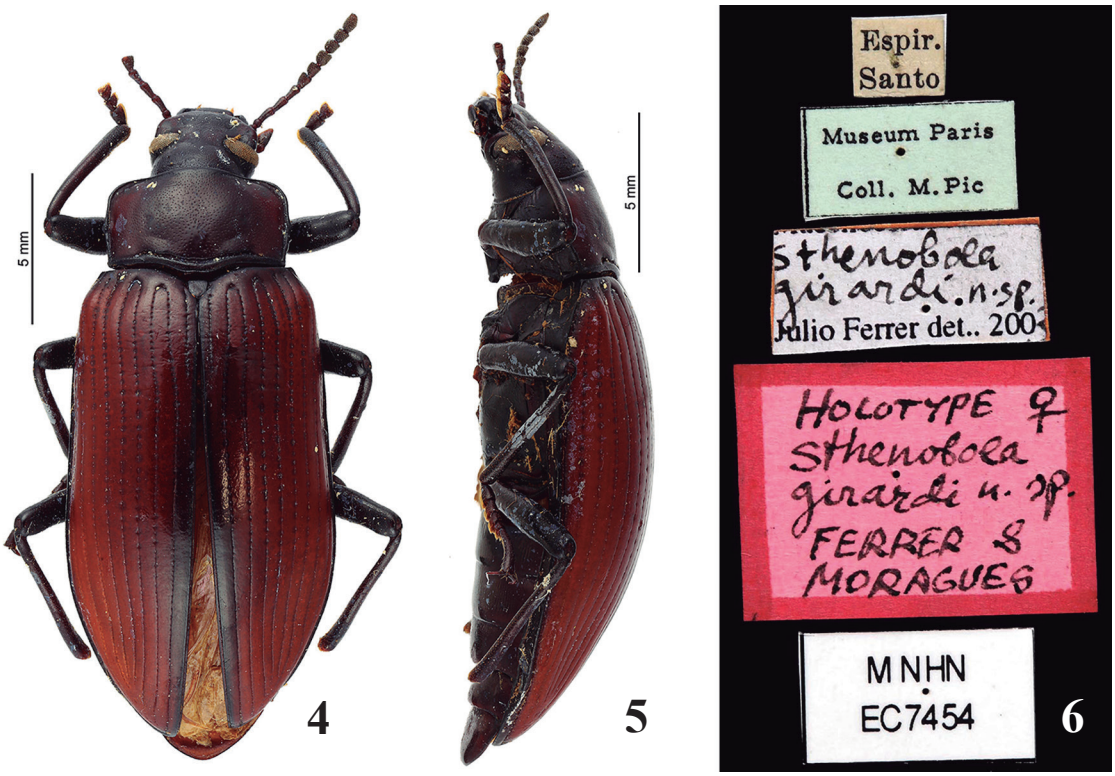
Pronotum transverse, twice as wide as long, maximum width before the midpoint. Anterior angles obtuse, posterior angles substraight; sides sinuate, anterior half with two lobes and posterior half with one lobe just after the midpoint,

becoming subparallel towards the base. Pronotal base sinuate on each lateral third. Anterior and lateral sides with narrow margins, basal margin wider, thick and preceded by a deep transversal groove. Disc longitudinally furrowed. Pronotal surface with coarse and dense punctures on disc, fine and sparse punctures on lateral thirds. Scutellum triangular, with rounded vertices, coarse punctures and margins.

Elytra elongated oval, 1.3 times as long as wide; anterior two thirds parallel-sided, posterior third narrowing triangularly in dorsal view; anterior two thirds hump-backed, posterior third declining towards the apex in lateral view. Humeri sharpened, each with humeral callus embossed and rounded. Elytral striae maked with linear rows of punctures, striae 1-3 well impressed, striae 4-9 less impressed; sutural striae short; striae 1+2 and 3+4 basally joined, striae 5-9 umpaired. Elytral intervals flat, sutural interval clearly carinate except towards the apex; elytral margin dorsally visible in most of its length. Elytral surface alutaceous, with very fine and barely perceptible punctures, with black squared areas under striae punctures and minute transverse crevices on intervals.

Ventral surface glabrous. Prosternal process straight, visible in profile, faintly carinate on sides and rounded apically. Mesosternum strongly margined, with a longitudinal "V" shaped groove in the middle. Metasternum longitudinally concave; smooth, finely impressed with a longitudinal groove at middle, with transverse wrinkles on lateral thirds. Epipleurae smooth, truncate basally, uniformly wide throughout most of their length, thinned at level of fifth abdominal ventrite.

Basal process of the first ventrite rounded, coarsely margined. Abdominal ventrites glabrous, with fine punctures and longitudinal



Figures 4-6. *Sthenoboea girardi* Ferrer & Moraguès, 2005 (Holotype MNHN EC7454). **4)** dorsal habitus. **5)** Lateral habitus. **6)** Labels. Scale bars = 5 mm. [photographs kindly provided by Antoine Mantilleri and Christophe Rivier].

wrinkles; fifth ventrite finely margined.

Legs with coarse and dense punctures on overall surface; femora sub-claviform, uniformly wide throughout their length; tibiae flattened at ventral surfaces, protibiae slightly curved, meso-metatibiae straight, all tibiae with ventral setae arranged in apico-lateral rows ending in small distal tufts. Tarsi with short and dense setae on ventral surface; relative length ratio between apical: basal tarsomeres in pro, meso and metatarsi approaching to 4.0, 3.0 and 2.0 respectively, apical and basal tarsomeres clearly longer than the remaining ones.

Male. Unknown.

Etymology. Sincerely dedicated to the memory of Julio Ferrer (1944-2020), due to his valuable contributions to the knowledge of Neotropical Tenebrionidae.

Sthenoboea girardi Ferrer & Moragués, 2005

(Figs. 4, 5, 6, 7)

Type material examined. 1 ♀ [Espir./Santo] [Holotype ♀/*Sthenoboea*/*girardi* n. sp./FERRER &/MORAGUES] [*Sthenoboea*/*girardi* n. sp./Julio Ferrer det. 2003] [Museum Paris/Coll. M. Pic] [MNHN/EC7454] (MNHN).

Comparative diagnosis. *Sthenoboea ferreri* is most similar in general appearance to *S. girardi*, but the former is distinctive because its shortened body (length: width = 2.0), pronotal sides with three lobes, pronotal disc with longitudinal furrow, and elytra swollen in lateral view (length: height = 2.7) (Figs. 1, 2). In contrast, *S. girardi* has an elongate body (length: width = 2.4), pronotal sides with only one lobe, pronotal disc lacking longitudinal furrow, and elytra slightly curved in lateral view (length: height = 3.8) (Figs. 4, 5; Ferrer & Moragués, 2005, Figs. 4,8).

Biology and distribution. The biology of *Sthenoboea* species is largely unknown. Ferrer & Moragués (2005) suggest that these would be xylophagous, with larvae developing in rotten logs and adults flying at night; just like the genus *Taraxides* Waterhouse, 1876, their morphological counterparts in the Afrotropics.

The distribution of *Sthenoboea* species is disparate between South American countries, with four in French Guiana, one in Brazil, and one in Peru, described in the present work (Fig.

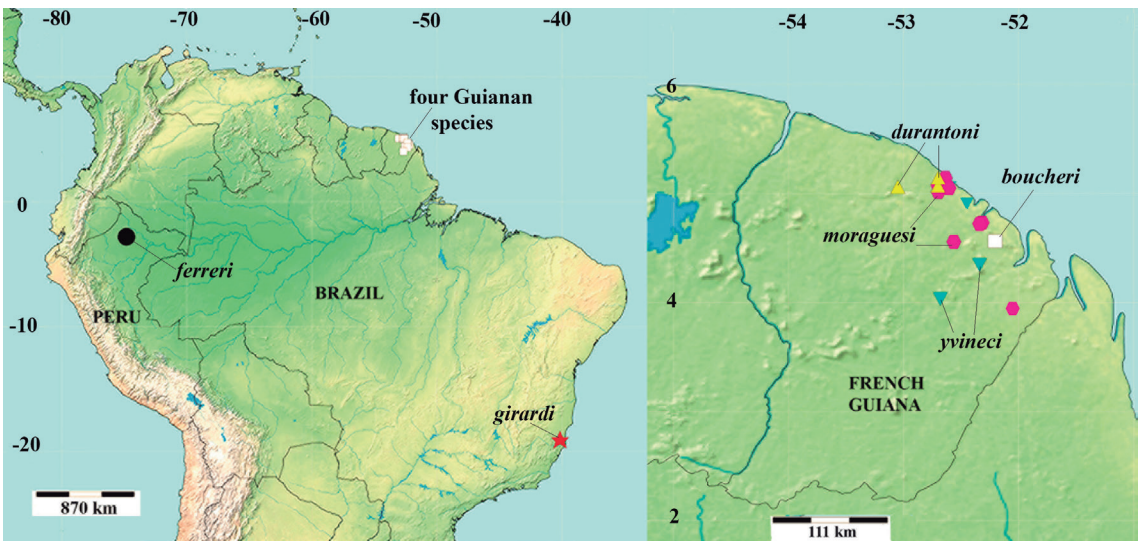


Figure 7. Distribution map of South American species of the genus *Sthenoboea*. To the left, distribution of the six species in South America. To the right, detailed distribution of four species in French Guiana. **Symbols:** *ferreri* (black circle), *girardi* (red star), *boucheri* (white square), *durantoni* (yellow triangles), *moraguesi* (fuchsia rhombuses), *yvineci* (turquoise inverted triangles).

7). The available specimens of each species are also markedly uneven, most of them with only one or a few recorded specimens. Only *S. moraguesi* and *S. yvineci* are known by several tens of specimens, as a result of monthly collections performed in tropical forests of French Guiana, using a combination of five kinds of light traps and three kinds of aerial interception traps (Gonzales et al., 2014; Gonzales, 2015).

Acknowledgements

The author wishes to thank Clorinda Vergara for the collaboration provided during the examination of the MEKRB collection. Photos of holotype specimen of *S. girardi* were kindly provided by Antoine Mantilleri and Christophe Rivier (MNHN). Angela Rincón and David Gonzales provide valuable suggestions that improved the manuscript.

Literature

Ascuntar-Osnas, O., López-Bedoya, P.A., Smith, A.D., Johnston, M.A. & Girón, J.C. (2023). State of knowledge of the Tenebrionidae (Insecta: Coleoptera) in Colombia based on bibliographic revision. *Caldasia*, 45(3): 334–359. <https://doi.org/10.15446/caldasia.v45n3.104445>.

Blackwelder, R.E. (1945). Checklist of the coleopterous insects of Mexico, Central America, the West Indies and South America. Part 3. *Bulletin of the United States National Museum*, 185: 343–550.

Bouchard, P., Bousquet, Y., Aalbu, R.L., Alonso-Zarazaga, M.A., Merkl, O. & Davies, A.E. (2021). Review of genus-group names in the family Tenebrionidae (Insecta, Coleoptera). *ZooKeys*, 1050: 1–633. <https://doi.org/10.3897/zookeys.1050.64217>.

Champion, G.C. (1885). Tenebrionidae (part). Pp. 89–136, *in* Godman, F.D. & Salvin, O. (Eds.). *Biologia Centrali-Americana. Insecta. Coleoptera Heteromera, IV. Part I*. London: R.H. Porter. 572 pp.

Doyen, J.T. (1989). Reconstitution of Coelometopini, Tenebrionini and related tribes of America North of Colombia (Coleoptera, Tenebrionidae). *Journal of the New York Entomological Society*, 97(3): 277–304.

Ferrer, J. (1996). Une *Sthenoboea* nouvelle pour Guyane. Coleoptera, Tenebrionidae. *Nouvelle Revue d'Entomologie, Nouvelle Série*, 13(1): 51–55.

Ferrer, J. & Moraguès, G. (2005). Révision du genre *Sthenoboea* Champion 1885, et description de nouvelles espèces (Coleoptera, Tenebrionidae). *Bulletin de la Société Entomologique de France*, 110(3): 351–358.

Gebien, H. (1941). Katalog der Tenebrioniden. Teil 3. *Mitteilungen der Münchner Entomologischen Gesellschaft*, 31: 1091–1146.

Giraldo, A.E. & Flores, G.E. (2016). Peruvian Tenebrionidae: A review of present knowledge and biodiversity. *Annales Zoologici*, 66(4): 499–513. <https://doi.org/10.3161/00034541ANZ2016.66.4.002>.

Gonzales, D. (2015). Contribution à l'étude des Ténébrionides de Guyane. III. Description d'une nouvelle espèce appartenant au genre *Sthenoboea* Champion, 1885 (Coleoptera, Tenebrionidae). Pp. 112–116, *in* Touroult, J. (Coord.). *Contribution à l'étude des Coléoptères de Guyane. Tome IX. Supplément au Bulletin de liaison d'ACOREP-France «Le Coléoptériste»*. Paris: ACOREP-France. 152 pp.

Gonzales, D., Yvinec, J.-H. & Ferrer, J. (2014). Contribution á l'étude des Ténébrionides de Guyane. I. Catalogue préliminaire (Coleoptera, Tenebrionidae). Pp. 21–39, *in* Touroult, J. (Coord.). *Contribution á l'étude des Coléoptères de Guyane. Tome VIII. Supplément au Bulletin de liaison d'ACOREP-France «Le Coléoptériste»*. Paris: ACOREP-France. 140 pp.

Hadley, A. (2006). *CombineZM public domain image processing software*. London: CombineZM Project. [Consulted:

22.iv.2025]. <https://combinezp.software.informer.com>.

Shorthouse, D.P. (2010). *SimpleMappr, an online tool to produce publication-quality point maps*. Ottawa: SimpleMappr Project. [Consulted: 22.iv.2025]. <http://www.simplemappr.net>.

Smith, A.D., Giraldo-Mendoza, A.E., Flores, G.E. & Aalbu, R.L. (2015). Beetles (Coleoptera) of Peru: A survey of the families. Tenebrionidae. *Journal of the Kansas Entomological Society*, 88(2): 221–228. <https://doi.org/10.2317/kent-88-02-221-228.1>.