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A new species of *Pseudosparna* Mermudes & Monné, 2009 from Costa Rica (Coleoptera, Cerambycidae, Lamiinae)

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Keywords:

Coleoptera ; *Pseudosparna* ;
Cerambycidae ; taxonomy ;
Lamiinae ; Costa Rica ;
longhorned beetles ; Central America.

Abstract. – A new species of *Pseudosparna* Mermudes & Monné, 2009 is described from Costa Rica. It is the first species of the genus known from Central America. The key to species of the genus is updated.

Devesa S. & Santos-Silva A., 2020. – A new species of *Pseudosparna* Mermudes & Monné, 2009 from Costa Rica (Coleoptera, Cerambycidae, Lamiinae). *Faunitaxys*, 8(17): 1 – 5.

ZooBank: <http://zoobank.org/98C317CD-DD59-41E5-AFC5-2F17E54C44FC>

Introduction

The cerambycid genus *Pseudosparna* Mermudes & Monné, 2009 was proposed to include four species: *P. amoena* Mermudes & Monné, 2009 and *P. aragua* Mermudes & Monné, 2009, both from Venezuela, *P. flaviceps* (Bates, 1863) from Brazil and French Guiana, and *P. luteolineata* Mermudes & Monné, 2009 from Ecuador. Monné & Monné (2011) described *P. boliviana* from Bolivia; Monné & Monné (2014) described two new species, *P. tucurui* from Brazil, and *P. pichincha* from Ecuador, and provided a key to known species. Dalens & Touroult (2015) described *P. ubirajara* from French Guiana; Nascimento and McClarin (2018) described *P. triangulata* from Ecuador; finally, Santos-Silva *et al.* (2019) described *P. antonkozlovi* from Colombia (Bezark 2020a; Monné 2020; Tavakilian & Chevillotte 2020).

Pseudosparna mantis sp. nov. is the first species recorded from Central America (Costa Rica).

Although is not mentioned in the labels of the new species described here, the geographical coordinates allow knowing that the specimen was collected within the Braulio Carrillo National Park. According to Schelhas & Sánchez-Azofeifa (2006): “The Central Volcanic Cordillera Biosphere Reserve in northeast Costa Rica includes Braulio Carrillo National Park (BCNP), La Selva Biological Station (LSBS), and two areas of private landholdings designated as buffer zones (Butterfield, 1994). This reserve system conserves a rich tropical forest biodiversity, ranging from the lowland forests of La Selva Biological Station (elevation 36 m) to the top of Barva Volcano (elevation 2,906).” Still according to them, the area is “one of the few places in Central America where an intact forested altitudinal gradient is formally protected.”

Material and Methods

General observations and measurements (mm) were made using an ocular micrometer adapted to an Olympus SZX7 0.8–5.6X stereomicroscope. Photographs were taken with a Canon digital

camera EOS 5D Mark III equipped with a Canon MP-E 65mm f/2,8 1–5X macro lens, controlled by Cognisys Stackshot. The photographs were stacked using Zerene Stacker AutoMontage software and processed with Aperture software.

The acronyms used in the text are as follow:

– MHNUSC: Museo de Historia Natural de la Universidad de Santiago de Compostela, SPAIN

– SDPC: Sergio Devesa Private Collection, Pontevedra, SPAIN

Results

LAMIINAE Latreille, 1825

ACANTHOCININI Blanchard, 1845

Pseudosparna mantis sp. nov.

(Fig. 1–9)

ZooBank: <http://zoobank.org/8B6E8011-4500-41D9-87D2-01BCCE23C8E>

Holotype, ♂: COSTA RICA, Provincia de Heredia, 16 Km SSE La Virgen, (10°16'N / 84°05'W; 1050–1150 m), 10-14.III.2001, no collector indicated (MHNUSC, temporary in SDPC).

Description of the holotype.

Shape. – Elongate.

Coloration. – Integument mostly dark brown; mouthparts yellowish brown except dark brown mandibles; antennomeres I–III dark brown, IV yellowish except blackish apex, V–VII reddish brown with blackish apex, VIII–XI dark brown; pronotum orangish brown except dark brown semicircular area on postero-central quarter; procoxae yellowish, mesocoxa yellowish except dark brown basal area, metacoxa yellowish toward trochanter, brown on remaining surface; femora yellowish brown dorsally, yellowish ventrally; protibia yellowish basally and centrally, dark brown on remaining surface; meso- and metatibia yellowish on base and central area, reddish-brown between these areas, dark brown on posterior third; tarsomere I yellowish on basal 2/3, dark brown on apical third; tarsomere II yellowish basally, dark brown on remaining surface; tarsomere III and IV dark brown; tarsomere V yellowish brown on basal half, brown on posterior half; mesoventral process yellowish on posterior half; abdominal ventrite II

yellowish brown laterally, III yellowish laterally and basally, brownish on remaining surface, IV–V yellowish (Fig. 1–3).

Head. – *Frons* finely, very sparsely punctate except smooth area between antennal tubercles; with sparse whitish-yellow pubescence toward clypeus and denser, yellowish toward antennal tubercles, especially along median groove; pubescence not obscuring the integument. Area behind and close to eyes with yellowish pubescence, not obscuring integument. – *Antennal tubercles* with pubescence as on frons. – *Median groove* distinct from clypeus to near pronotum. – *Vertex* finally, sparsely punctate; with abundant yellow pubescence partially obscuring integument. – *Gena* with punctures and pubescence as on frons. – *Anteclypeus* with sparse yellowish setae laterally, glabrous on central area. – *Labrum* with abundant, long yellowish setae, with long, erect dark setae interspersed, and fringe of nearly golden setae on anterior margin (Fig. 7). Distance between upper eye lobes 0.21 times length of scape; in frontal view, distance between lower eye lobes 0.33 times length of scape. – *Antennae* 2.53 times elytral length, reaching elytral apex at base of antennomere VI; with short, appressed, dark pubescence not obscuring integument on scape, pedicel, and antennomeres; *scape* reaching base of elytra; ventral surface of scape, pedicel, and antennomeres III–VI with long, erect dark setae, more abundant on scape, distinctly sparser toward VI.

Antennal formula (ratio) based on length of antennomere III:

– Scape = 1.50. – Pedicel = 0.07. – IV = 0.93. – V = 0.71. – VI = 0.64. – VII = 0.64. – VIII = 0.64. – IX = 0.71. – X = 0.86. – XI = 0.79.

Thorax. – *Prothorax* 1.6 times wider (at lateral spine) than long; distinctly margined at apical edge, transverse depression narrow, distinctly narrower than posterior margin; sides with large conical tubercle on posterior half, its anterior area as a continuation of side of prothorax. – *Pronotum* coarsely punctate on posterior quarter; with abundant, appressed orange pubescence obscuring integument, except brownish pubescent on dark brown area (Fig. 4). Sides of prothorax with orange pubescence obscuring integument. – *Prosternum* with yellowish-white pubescence not obscuring integument, shorter centrally. – *Prosternal process* micropunctate, without pubescence, except a few bristly pubescence apically; distinctly narrowed centrally (0.07 times procoxal width) and expanded apically. – *Mesoventrite* with a few yellowish-white setae centrally. – *Mesoventral process* narrowed centrally (0.18 times mesocoxal width). – *Mesanepesternum*, *mesepimeron*, and *metanepesternum* with yellowish-white pubescence (more grayish depending on light intensity). – *Metaventrite* finely punctate, with yellowish-white pubescence not obscuring integument (more grayish depending on light intensity), denser laterally. – *Scutellum* triangular, weakly punctate on sides, with short, appressed brownish pubescence not obscuring integument.

Elytra. – Parallel-sided on anterior 4/5, narrowed toward posterior fifth; apex sinuate, outer angle distinctly spiniform, small rounded projection centrally, sutural angle rounded, slightly projected; coarsely, abundantly punctate on basal half, punctures distinctly finer, sparser on posterior half; with a few long, erect setae apically on margins (Fig. 8); with short, appressed brownish pubescence not obscuring integument (slightly more yellowish-brown on some areas depending on angle of light source).

Legs. – *Profemora* (Fig. 5, 6) strongly, gradually widened from base to posterior quarter, then abruptly narrowed ventrally, with one rounded tubercle on each side of superior margin of this area (region between tubercles somewhat sulcate); most of surface finely rough, especially dorsally, with short, sparse yellowish-white pubescence. – *Mesofemora* gradually widened from base to posterior quarter, then distinctly narrowed toward apex, more strongly and abruptly ventrally; sculpturing and

pubescence as on profemora. – *Metafemora* moderately widened from base to posterior fifth, then slightly, gradually narrowed toward apex; sculpturing and pubescence as on profemora. – *Protibia* (Fig. 5, 6) distinctly arched on cylindrical basal third; ventral surface strongly expanded from apex of basal third to base of posterior quarter, triangle-shaped about middle of tibia, crenulate from apex of cylindrical area to apex (crenulae more tubercle-shaped with blunt apex after triangular projection); with yellowish-white pubescence not obscuring integument, longer and denser than on femora, except bristly yellowish-brown pubescence on posterior third of ventral surface. – *Meso-* and *metatibiae* subcylindrical, arched basally; with yellowish-white pubescence not obscuring integument, more bristling, yellowish-brown on apical third; with short, thick, erect dark setae from apex of basal third (setae gradually more abundant toward apex). – *Metatarsomere* I slightly longer than II–III together.

Abdomen. – *Ventrites* with yellowish-white appressed pubescence, not obscuring integument, denser on I and II, and sides of III and IV with abundant, short, yellowish-white appressed pubescence laterally, less dense centrally; ventrite V with a few long, erect black setae near the apex, and tuft of long yellowish setae on apex; apical margin of V concave, with sides not spiniform (Fig. 9).

Dimensions (mm), holotype male.

– Total length: 6.5
 – Prothoracic length: 1.1
 – Prothoracic basal width: 1.2
 – Prothoracic apical width: 1.0
 – Prothoracic central width (at lateral spine): 1.8
 – Elytral length: 4.7
 – Elytral width (at humerus): 1.9
 – Total length/pronotal length: 5.91
 – Elytral length/elytral width (at humerus): 2.47
 – Pronotal length/pronotal width (at lateral spine): 0.61
 – Total antennal length: 11.9
 – Antennae length/total length: 2.53.

Etymology. – The species name *mantis* refers to the genus *Mantis* Linnaeus, 1758 (Mantodea), alluding to the form and position of profemora and protibia; noun in the nominative singular standing in apposition to *Pseudosparna*.

Remarks. – *Pseudosparna mantis* sp. nov. is similar to *Pseudosparna pichincha* Monné & Monné, 2014, but differs as follows: lateral tubercles of the prothorax distinctly larger; profemora and protibiae modified (see description); meso- and metafemora shorter; elytral apex sinuous with central projection. In *P. pichincha* (see photograph of the holotype on Bezark 2020b), the lateral tubercles of the prothorax are smaller, profemora and protibiae have no modifications, meso- and metafemora are longer, and the elytral apex has no central projection.

Pseudosparna mantis sp. nov. is also very similar to *Miguellus monnei* Santos-Silva, Galileo & McClarin, 2018 (see photograph of the holotype male on Bezark 2020b), but can be easily separated by the frontal shape of the head, elytral apex, shape of the pronotal tubercles, color of the abdominal

***Pseudosparna mantis* sp. nov. can be included in the key from Monné & Monné (2014) (modified) as follows:**

1.	Elytra with setae only along the posterior third of the lateral margins or near apex	2
–	Elytra with setae along the posterior half or the entire lateral margins	5
2(1).	Profemora and protibiae with distinct projections	<i>P. mantis</i> sp. nov.
–	Profemora and protibiae lacking projections	2'
2'(2).	Elytral apex wide, transverse truncate	<i>P. pichincha</i> Monné & Monné, 2014
–	Elytra apex moderately narrow, obliquely truncate	3

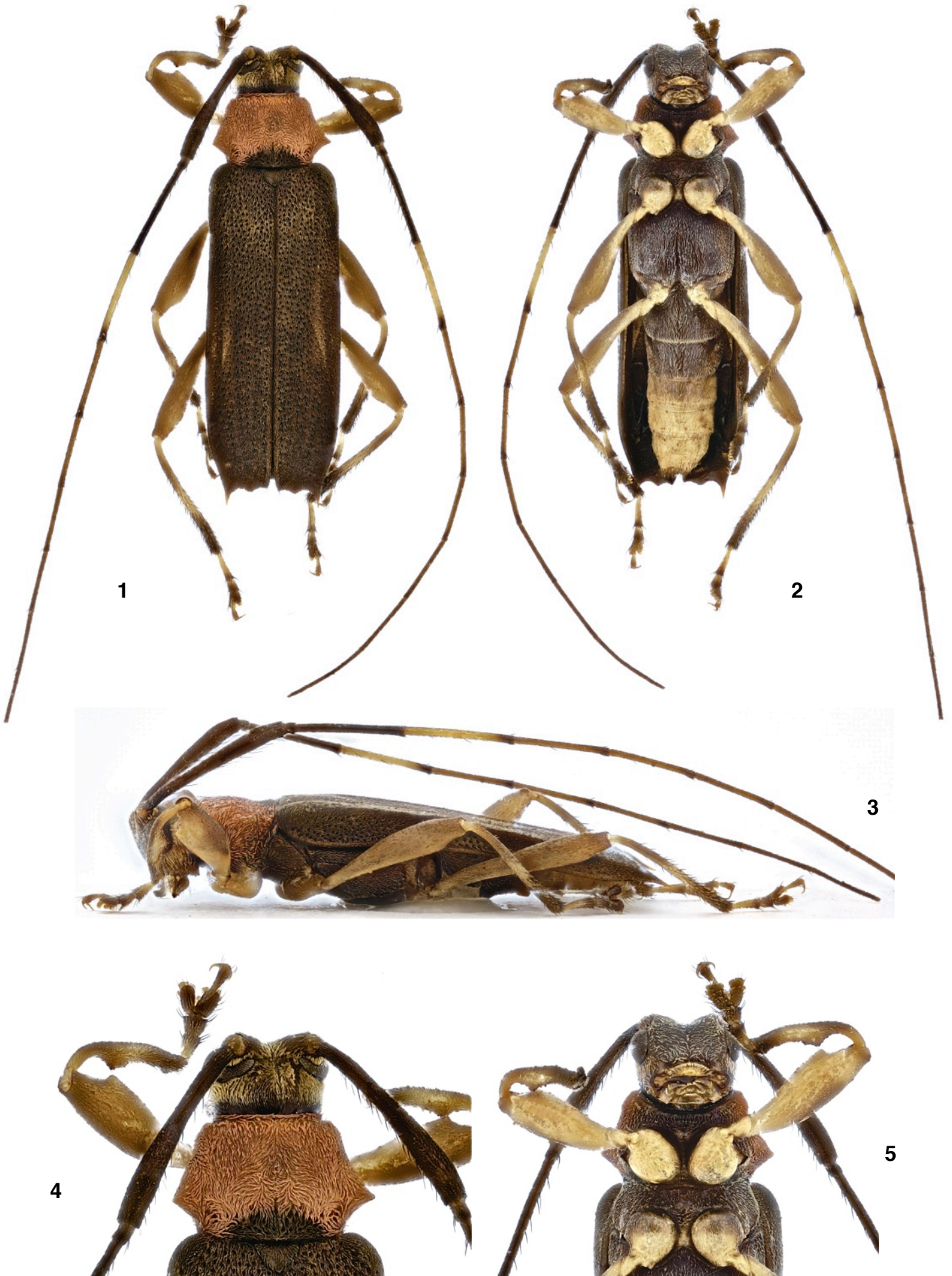


Fig. 1–5. *Pseudosparna mantis* sp. nov., holotype ♂. 1) Dorsal habitus. 2) Ventral habitus. 3) Lateral habitus. 4) Head, pronotum, scape, scutellum, and forelegs, dorsal view. 5) Head, pro- and mesothorax, and forelegs, ventral view.



Fig. 6–9. *Pseudosparna mantis* sp. nov., holotype ♂. **6)** Profemur and protibia, lateral view. **7)** Head, frontal view. **8)** Elytral apex. **9)** Abdominal ventrites.

ventrites, shape of last abdominal ventrite, and shape of profemora and protibiae. Mermudes & Monné (2009) included *Pseudosparna* in the Tribe Acanthocinini, while *Miguellus* is in the tribe Colobotheini. The frontal shape of the head of *Pseudosparna mantis* sp. nov. is much more similar to that of the species of Acanthocinini than in species of Colobotheini. However, at least some species of *Pseudosparna* have the frons exactly as in many species of Colobotheini (including *Sparna* Thomson, 1864). Furthermore, species of *Pseudosparna* have erect setae on elytra (throughout or only on margins), while they are absent in *Miguellus*. A careful study of the species of *Pseudosparna* is necessary to establish the proper tribal placement of the genus, as well as determining whether or not it is monophyletic.

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Résumé

Devesa S. & Santos-Silva A., 2020. – Une nouvelle espèce du genre *Pseudosparna* Mermudes & Monné, 2009 décrite du Costa Rica (Coleoptera, Cerambycidae, Lamiinae). *Faunitaxys*, 8(17): 1–5.

Une nouvelle espèce du genre *Pseudosparna* Mermudes & Monné, 2009 est décrite du Costa Rica. C'est la première espèce du genre connue d'Amérique Centrale. La clé du genre est mise à jour.

Mots clés. – Coleoptera, Cerambycidae, Lamiinae, longicornes, *Pseudosparna*, taxonomie, Costa Rica, Amérique Centrale.

Resumen

Devesa S. & Santos-Silva A., 2020. – Una nueva especie de *Pseudosparna* Mermudes & Monné, 2009 de Costa Rica (Coleoptera, Cerambycidae, Lamiinae). *Faunitaxys*, 8(17): 1–5.

Se describe una nueva especie de *Pseudosparna* Mermudes & Monné, 2009. Es la primera especie del género conocida en Centroamérica. Se actualiza la clave de especies del género.

Palabras clave. – Coleoptera, Cerambycidae, Lamiinae, Longicornios, *Pseudosparna*, taxonomía, Costa Rica, América Central.

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