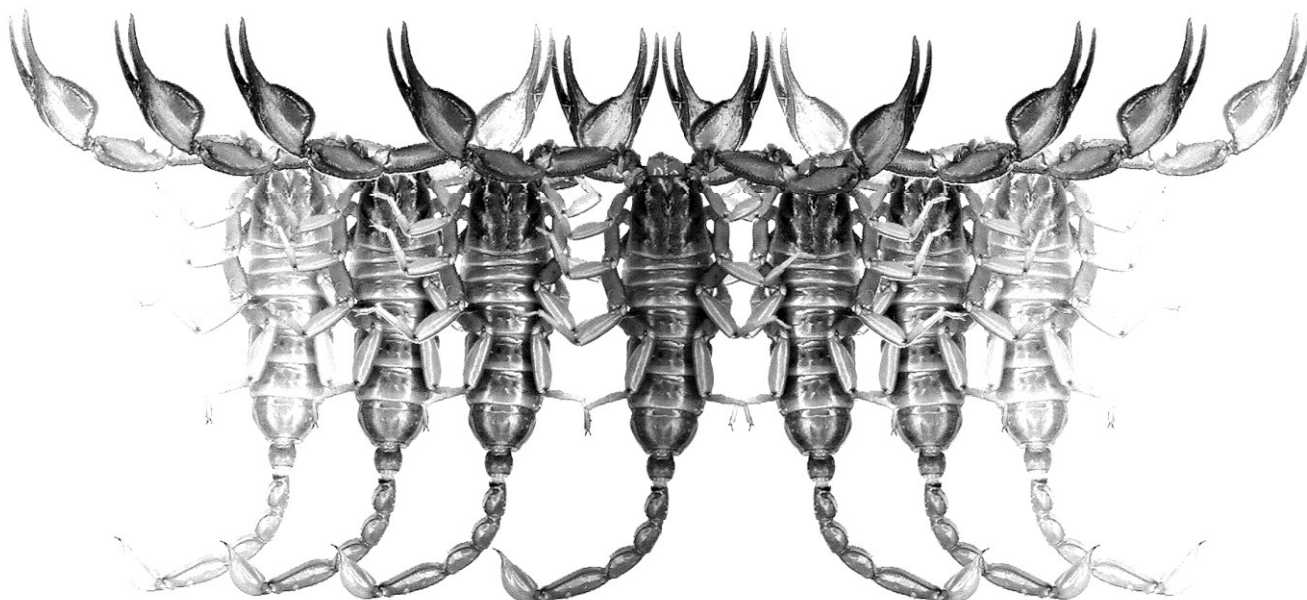


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Occasional Publications in Scorpiology



**A New Species of the Genus *Centruroides* Marx, 1890
(Scorpiones: Buthidae) from Guatemala**

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A new species of the genus *Centruroides* Marx, 1890 (Scorpiones: Buthidae) from Guatemala

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Summary

A new species of the genus *Centruroides* Marx, 1890 is described from northeastern Guatemala on basis to an adult male. By its general pattern and slight sexual dimorphism, the new species looks like *C. flavopictus* (Pocock, 1898), a larger species from Veracruz, Mexico, with higher pectinal tooth count (males: 21 to 24 teeth) and stronger subaculear tubercle. It also resembles *Centruroides chamulaensis* Hoffmann, 1932, from Chiapas, Mexico, a smaller species with small to obsolete subaculear tubercle, stronger metasomal carinae, pedipalp chelae narrower than patella, and anterior margin of carapace almost straight (V-shaped in the new species).

Resumen

Se describe una especie nueva del género *Centruroides* Marx, 1890, de la región nordeste de Guatemala, Centroamérica, sobre la base de un macho adulto. Por su patrón general de colorido y escaso dimorfismo sexual se parece a *C. flavopictus* (Pocock, 1898), de Veracruz, México, pero ésta es mucho más grande, con mayor conteo de dientes pectíneos (machos: 21-24 dientes) y tubérculo subaculear más fuerte y mucho más próximo a la base del acúleo. Por su patrón general de coloración y el conteo de dientes pectíneos, también se asemeja a *C. chamulaensis* Hoffmann, 1932, de Chiapas, México, que es de menor tamaño y presenta el tubérculo subaculear mucho menos desarrollado, la pinza del pedipalpo más estrecha que la patela y el carapacho con el margen anterior casi recto (no en forma de V).

Introduction

The genus *Centruroides* Marx, 1890 is represented in the Guatemalan fauna by six species: *Centruroides exilimanus* Teruel et Stockwell, 2001, *C. fallassisimus* Armas et Trujillo, 2010, *C. gracilis* (Latreille, 1804), *C. schmidtii* Sissom, 1995, *C. tapachulaensis* Hoffmann, 1932, and *C. thorelli* (Kraepelin, 1891) (Sissom, 1995; Viquez & Armas, 2005; Armas & Trujillo, 2010; Armas et al., 2010, 2011). None of these species is a Guatemalan endemic.

Centruroides exilimanus, *C. thorelli*, and *C. tapachulaensis* inhabit the Pacific slope (western Guatemala), whereas *C. fallassisimus*, *C. gracilis*, and *C. schmidtii* are mainly known from the Atlantic (Caribbean) slope.

In this contribution, we describe a new species of the genus *Centruroides* from the Atlantic slope, based on an adult male recently collected during a herpetological survey.

Material and Methods

Nomenclature and measurements (in mm) follow Stahnke (1970), except for trichobothriotaxy (Vachon, 1974), and metasomal carinae (Francke, 1977). For pedipalp chela carinae we follow Stahnke (1970) modified by Prendini (2000), but we recognize nine carinae instead of eight, as pointed out by Acosta et al. (2008: 492–493, fig. 14).

The examined specimen is deposited in the Museo de Historia Natural, Universidad de San Carlos, Guatemala City (MHN).

Taxonomy

Centruroides caral Armas et Trujillo, sp. n.
(Fig. 1–3, Table 1)

<http://zoobank.org/urn:lsid:zoobank.org:act:F18CC52C-1783-4608-B1D5-5B15CB909DB9>

Type material. Male holotype (MHN), Firmeza farm (510 m a.s.l., 15.40684° N, 88.69590° W), Sierra Caral,



Figure 1: *Centruroides caral* sp. n. Male holotype. Habitus: dorsal (A) and ventral (B).

Morales municipality, Izabal Department, Guatemala, 15 August, 2011, leg. C. Vazquez Almazán, at night, in house.

Distribution. Only known from the type locality (Fig. 2A).

Etymology. The specific name is a noun in apposition, taken from the type locality.

Diagnosis. Male 44.35 mm in total length; female unknown. Base color light yellow; carapace, tergites and pedipalps (except chelae) with distinct dusky marbling throughout; each tergite bearing a narrow yellow median longitudinal line; cheliceral manus with dark brown reticulations all over; pedipalp chelae with faint spots on the external surface only, with dark brown fingers. Carapace finely granular, with moderate granules on the interocular triangle; anteromedian notch V-shaped. Pedipalp manus slightly wider than patella; movable finger with poorly developed basal lobe. Pectines with 18–19 teeth; basal plate rectangular, wider than long. Metasoma: segments I–IV with dorsolateral carinae, lateral supramedian carinae, ventrolateral carinae and ventral submedian carinae moderately developed, granular to slightly serrate; segments I–IV with two pairs of ventrolateral macrochaetae; intercarinal spaces I–IV coriaceous; vesicle deeper than wide; subaculear tub-

ercle strong, spine-like, with tip pointing towards the apex of the aculeus. Metasomal segment III length/width ratio 1.19; metasomal segment V: length/width ratio 2.83, length/height ratio 2.70; carapace length/metasomal segment V length ratio 0.78.

Description of the male holotype.

Coloration. Base color light yellow. Carapace with lateral and posterior margins infuscate and distinct dusky marbling throughout (Fig. 2B). Tergites I–VI with dusky band along posterior margins; anterior portions of tergites with diffuse dusky markings; each tergite bearing a narrow yellow median longitudinal line, and latero-marginal whitish spots (Fig. 1A). Metasomal segments I–IV light yellow; V and telson slightly darker. Cheliceral manus with dark brown reticulations all over (Fig. 2B). Pedipalps (Figs. 2D–F) yellow with moderate dusky markings on femur and patella; chelae with faint spots on the external surface only, with dark brown fingers. Legs pale yellow with faint to moderate dusky markings. Venter yellowish with pale brown diffuse markings on apex of coxapophyses I–II and sternites IV–VII (Fig. 1B).

Carapace (Figs. 2B–C) 1.06 times longer than wide; anteromedian notch V-shaped, reaching the posterior margin level of the second pair of lateral eyes; interocular triangle with moderate granules, the rest

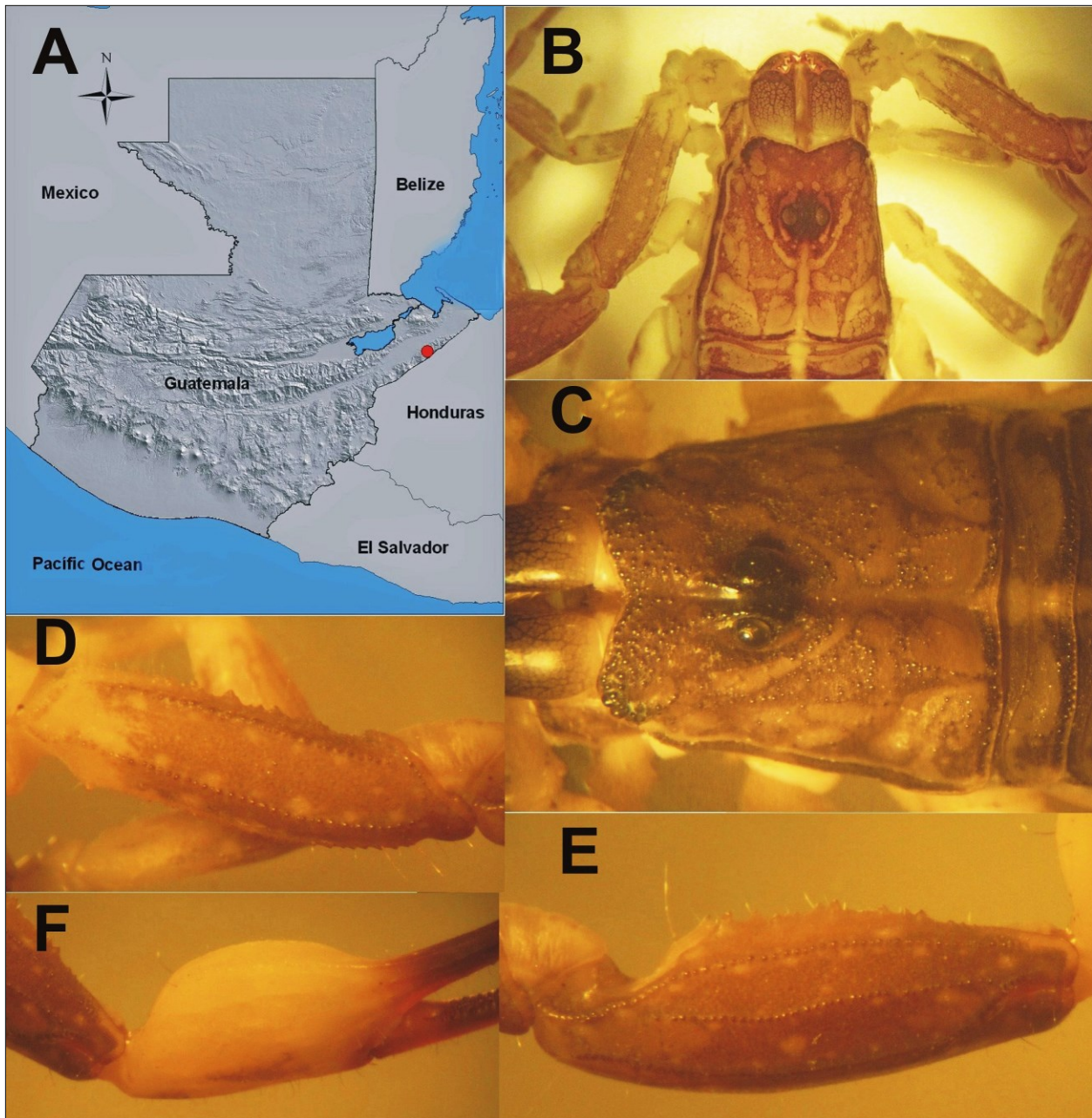


Figure 2: *Centruroides caral* sp. n. A, geographical distribution. B–F, male holotype: B, partial view of the carapace, dorsal (in 75% ethanol); C, carapace; D–F, right pedipalp, dorsal aspect: D, femur; E, patella; F, chela.

finely granular. Anterior median carinae vestigial, with disperse moderate granules; superciliary carinae strong, subgranulose; posterior median carinae moderate, subgranulose, other carinae indistinct.

Pedipalps orthobothriotaxic Type A. Femur (Fig. 2D): internal surface with large granules, all other surfaces finely granular; dorsointernal, dorsoexternal and ventrointernal carinae moderate, granular; ventroexternal carina strong, serrate. Patella (Fig. 2E): internal surface with few large conical granules; dorsal, external and ventral surfaces finely granular; dorsointernal and dorso-

external carinae moderate, finely granular; dorsomedian carina weak, granular; ventrointernal carina weak, finely granular. Manus (Fig. 2F): oval shaped, 1.1 times wider than patella; intercarinal surfaces almost smooth, dorso-marginal, dorsal secondary and digital carinae weak to moderate, minutely granular; ventroexternal carina strong, almost smooth; other carinae vestigial. Fixed fingers with eight oblique rows of denticles; trichobothrium *et* basal to *db*. Movable fingers with eight principal oblique rows of denticles, plus a distal short one with four denticles.

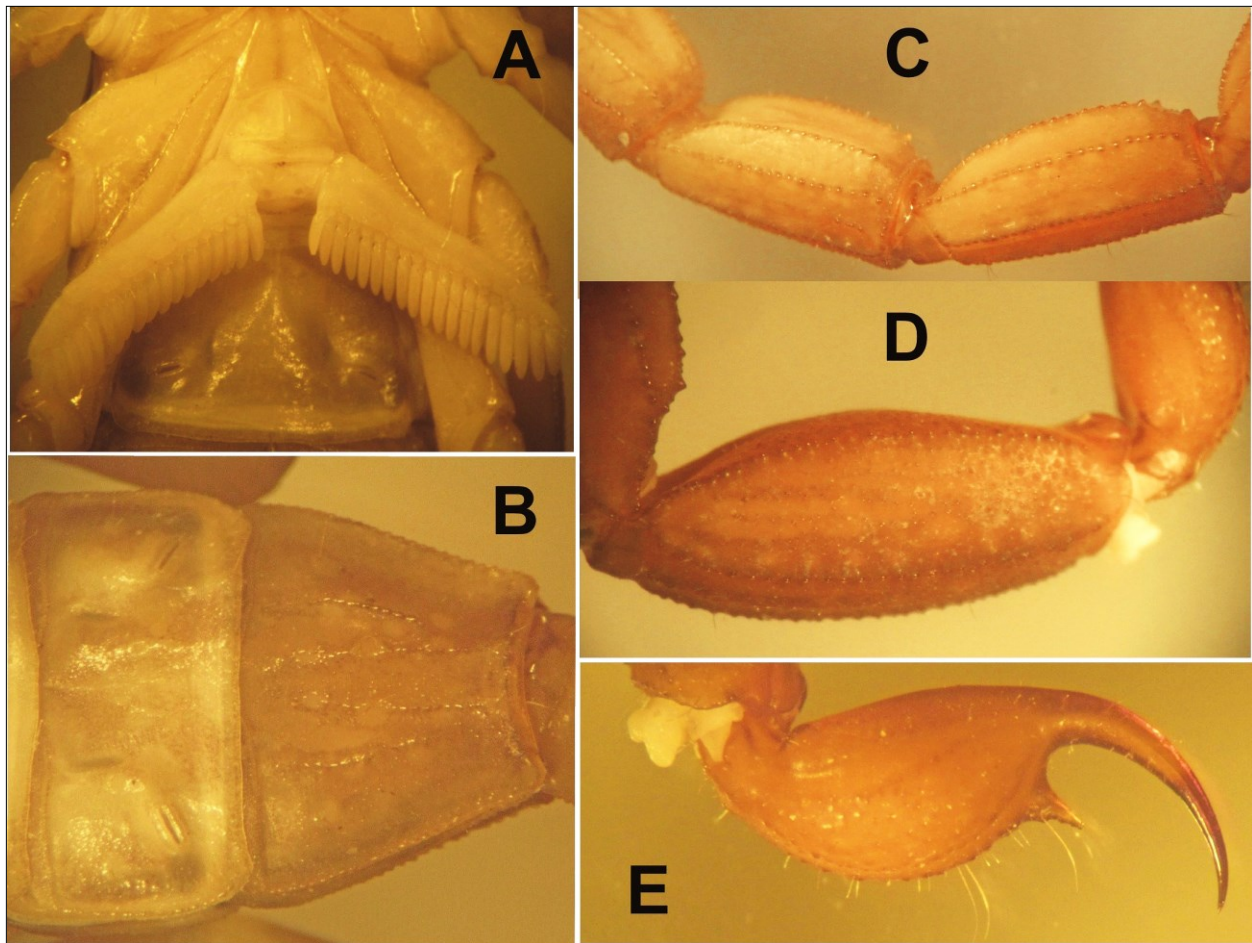


Figure 3 : *Centruroides caral* sp. n. Male holotype. A, coxasternal area and pectines; B, sternites VI–VII; C–D, metasomal segments II–V, lateral aspect; E, telson, lateral aspect.

Pectines (Fig. 3A) with 19/18 teeth; basal plate rectangular, 1.7 times wider than long.

Mesosoma. Tergites I–VII finely granular, with some larger granules on the posterior one-half of I–VI; longitudinal median carina I–VII weak to moderate, granular. Tergite VII lateral and submedian carinae moderate, subserrate. Sternites III–V smooth; VI–VII finely granular; VII lateral and submedian carinae moderate, granular to subserrate (Fig. 3B).

Metasoma (Figs. 3C–E). Intercarinal spaces I–IV coriaceous, with sparse minute granules. Segments II–IV with two pairs of ventrolateral macrochaetae. Segment I, ten carinae; II–IV, eight carinae; V with five carinae; on II, the lateral inframedian carina is only represented by three distal granules; I–IV with dorsolateral, lateral suprmedian, ventrolateral and ventrosupmedian carinae moderately developed, granular to slightly serrate. Segment V: intercarinal spaces finely granulate; dorsolateral, ventrolateral and ventromedian carinae moderate, granular. Vesicle with ventral and lateral surfaces finely granular, deeper than wide;

subaculear tubercle strong, spine-like, with tip pointing towards the apex of the aculeus.

Legs with femora finely granular on the prolateral surface. Telotarsi moderately covered by fine setae on the ventral surface.

Natural History

The male holotype was collected at night, inside the Ecological Station of Sierra Caral (510 m a.s.l.), in a rainforest area. In the same place was collected a nymph I of *C. gracilis*. In the same mountains, but at a higher altitude (850 m a.s.l., cloud forest) lives *Diplocentrus landelinoi* Trujillo et Armas, 2012 (Scorpionidae: Diplocentrinae).

Sierra Caral is the most biodiverse forest remnant in the Caribbean Guatemala. As part of the Merendon Range that stretches from Guatemala to Honduras, this mountainous system of 26 km long and 9.5 km wide is an important remnant of broadleaf evergreen forest,

Characters	Measurements
Carapace, L/posterior W	4.65/4.40
Pedipalp, L	17.90
Femur, L/W	4.65/1.25
Patella, L/W	5.20/1.65
Chela, L/W/D	8.05/1.80/1.70
Underhand, L	3.00
Movable finger, L	4.75
Mesosoma, L	12.25
Tergite VII, L/W	3.35/4.05
Metasoma, L	27.45
I, L/W/D	3.35/2.40/2.00
II, L/W	3.80/2.20
III, L/W	4.70/2.15
IV, L/W	5.20/2.05
V, L/W/D	5.95/2.10/2.20
Telson, L	4.45
Vesicle, L/W/D	2.85/1.25/1.70
Total L	44.35

Table 1: Measurements (mm) of the male holotype of *Centruroides caral* **sp. n.** D, depth; L, length; W, width.

being home to a vast array of critically endangered species.

Comparisons

By its general pattern and slight sexual dimorphism, *C. caral* **sp. n.** resembles *C. flavopictus* (Pocock, 1898), from Veracruz, Mexico, a larger taxon with a higher pectinal tooth count (males: 21–24 teeth) and stronger subaculear tubercle. It also looks like *C. chamulaensis* Hoffmann, 1932, from Chiapas, Mexico, but the latter is a smaller species with small to obsolete subaculear tubercle, stronger metasomal carinae, pedipalp chelae narrower than patella, and anterior margin of carapace almost straight (V-shaped in *C. caral* **sp. n.**).

Acknowledgments

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