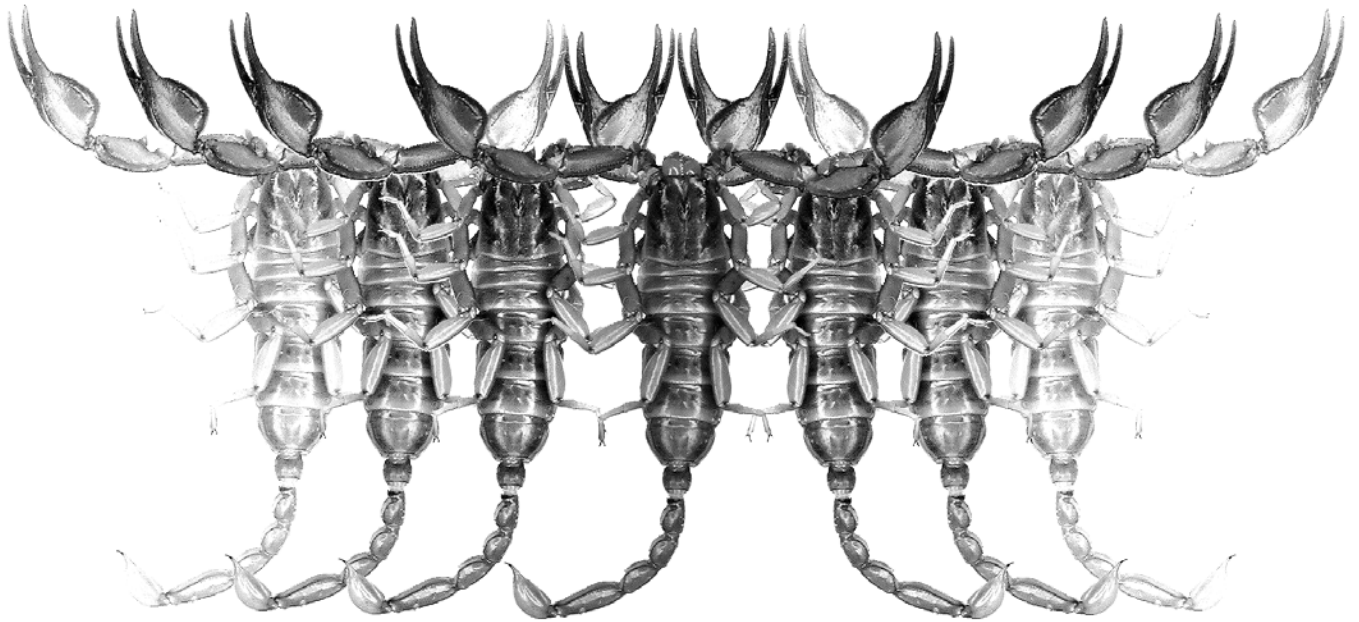


# *Euscorpilus*

Occasional Publications in Scorpiology



**A New Species of *Ananteris* Thorell, 1891 from  
Cordillera Central in Colombia, with Some Notes on  
the Taxonomy of the Genus (Scorpiones: Buthidae)**

**Rolando Teruel & Luis Fernando García H.**

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## Occasional Publications in Scorpiology

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- **WAM**, Western Australian Museum, Perth, Australia
- **NTNU**, Norwegian University of Science and Technology, Trondheim, Norway

# A new species of *Ananteris* Thorell, 1891 from Cordillera Central in Colombia, with some notes on the taxonomy of the genus (Scorpiones: Buthidae)

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## Summary

A new species of *Ananteris* Thorell, 1891 is herein described from a single locality placed in the Cordillera Central of Colombia, which represents the first record of this genus for Tolima department. This new taxon exhibits several singular features, and apparently represents a relict population inside an urbanized area. Also, some aspects on the taxonomy of the genus are briefly discussed, and its diagnosis is emended. With this addition, the total of *Ananteris* species described from Colombia is raised to six.

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## Introduction

The first record of the genus *Ananteris* Thorell, 1891 from Colombia was made by Lourenço (1982), who listed as *Ananteris ashmolei* Lourenço, 1981 several specimens collected in different localities. Almost a decade elapsed until Lourenço & Flórez (1989) described *Ananteris gorgonae* from an island located in southern Chocó region, and shortly after Lourenço (1991) himself rejected all Colombian records for *A. ashmolei*, and described *Ananteris columbianus* from the Sierra de Santa Marta; this name was corrected to *Ananteris columbiana* by Fet & Lowe (2000).

A few years later, Lourenço (1994) both described *Ananteris ehrlichii* from the southern Amazon region, and also published another paper (Lourenço, 1999) where he described *Ananteris leilae* from the northern Chocó region, and expanded the known distributions of both *A. columbiana* and *A. gorgonae*. All of this information was synthesized and catalogued by Flórez (2001), and last, Botero-Trujillo (2007) described *Ananteris myriamae* from the Amazonian piedmont of Cordillera Oriental, and provided new records for *A. columbiana*, *A. ehrlichii*, *A. gorgonae* and *A. leilae*.

During recent field work undertaken by one of us (LFGH) as a part of a joint research project on the systematics of Colombian scorpions, two specimens of *Ananteris* were collected in a relict forest inside the city of Ibagué, which represent both the first record of this genus for Tolima Department, and a new species, which is described in the present contribution.

## Methods & Material

The specimens were studied, measured and photographed under a Zeiss Stemi 2000-C stereomicroscope, equipped with line scale and grid ocular micrometers, and a Canon PowerShot A620 digital camera, all calibrated to 20x. Digital images were slightly processed with Adobe Photoshop® 8.0, only to optimize bright and contrast features. Nomenclature and measurements follow Stahnke (1970), except for trichobothriotaxy (Vachon, 1974), metasomal carinae (Frankcke, 1977) and sternum (Soleglad & Fet, 2003). In the table, all measurements are given in millimeters as length/width/depth except for the carapace, where these correspond to length/posterior width. Holotype and paratype deposited in the first author's personal collection (RTO), with collecting and identification labels originally written in Spanish, but translated to English in the text only for coherence purposes.

## Systematics

*Ananteris tolimana* Teruel et García, **new species**  
(Figures 1–5; Table 1)

**Diagnosis:** species of medium size (male 26 mm) for the genus. Body yellowish, very densely mottled with blackish brown; chelicerae reticulated with blackish; pedipalp fingers blackish, telson almost immaculate reddish. Carapace with four pairs of lateral eyes. Sternite V with a smooth, whitish and bulky patch more deve-



**Figure 1:** Adult male holotype of *Ananteris tolimana* sp. n.: a) entire dorsal view; b) entire ventral view.

Dimensions		♂ Adult
Carapace	L/Wp	3.10 / 2.80
Mesosoma	L	6.50
Tergite VII	L/W	1.65 / 2.50
Metasoma	L	16.80
Segment I	L/W	1.55 / 1.65
Segment II	L/W	1.90 / 1.60
Segment III	L/W	2.15 / 1.55
Segment IV	L/W	2.90 / 1.50
Segment V	L/W/H	4.30 / 1.50
Telson	L	4.00
Vesicle	L/W/H	2.60 / 0.90 / 0.85
Pedipalp	L	10.15
Femur	L/W	2.80 / 0.70
Patella	L/W	3.30 / 0.95
Chela	L	4.05
Hand	L/W/H	0.95 / 0.65 / 0.70
Movable finger	L	3.10
<b>Total</b>	<b>L</b>	<b>26.40</b>

**Table 1:** Measurements of the holotype of *Ananteris tolimana* sp. n. Abbreviations: length (L), width (W), posterior width (Wp), depth (H).

loped in male. Dorsolateral and lateral suprmedian carinae of metasomal segments II–IV each with an enlarged and spiniform posterior granule. Telson smooth and polished, elongate in adult male; vesicle with a dentate medioventral crest, subaculear tubercle very large and spiniform. Pedipalp fingers with six principal rows of granules; fixed finger trichobothria *db* and *est* at the same level. Pectines with vestigial fulcra; pectinal tooth count 22–23 teeth in male, 21–22 in female.

**Holotype:** adult ♂ (RTO: Sco.0366): COLOMBIA: TOLIMA: Ibagué: Parque “Centenario” (4°26'N, 75°14' W); July 12, 2007; L. F. García.

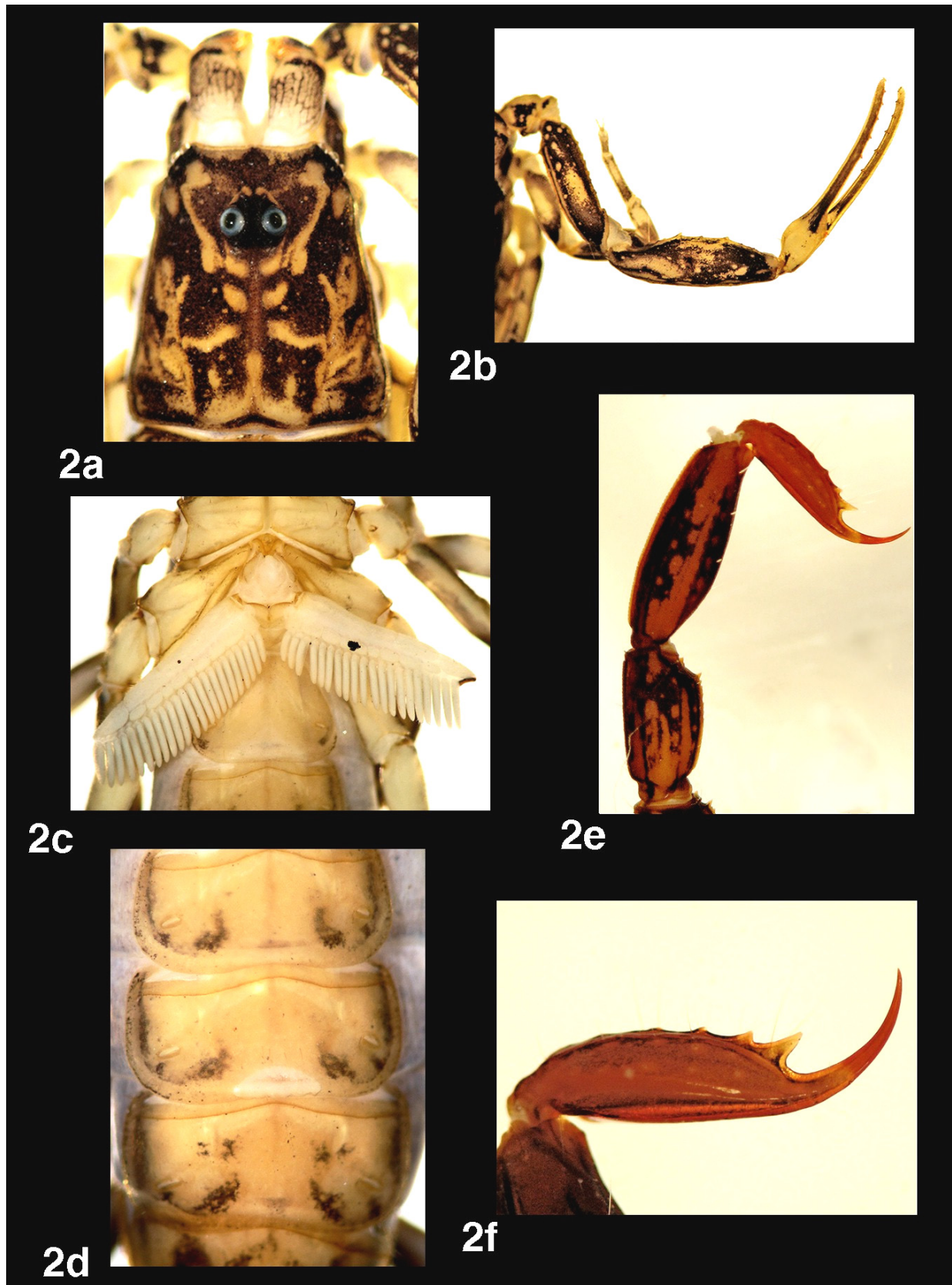
**Paratype:** juvenile ♀ (RTO: Sco.0367): COLOMBIA: TOLIMA: Ibagué: Parque “Centenario”; January 6, 2007; L. F. García.

**Etymology:** the specific name is derived from the Tolima Department, where the type locality of this species is placed.

**Distribution:** known only from the type locality, in the mountains of the Cordillera Central (Colombian Andes, Figs. 4–5).

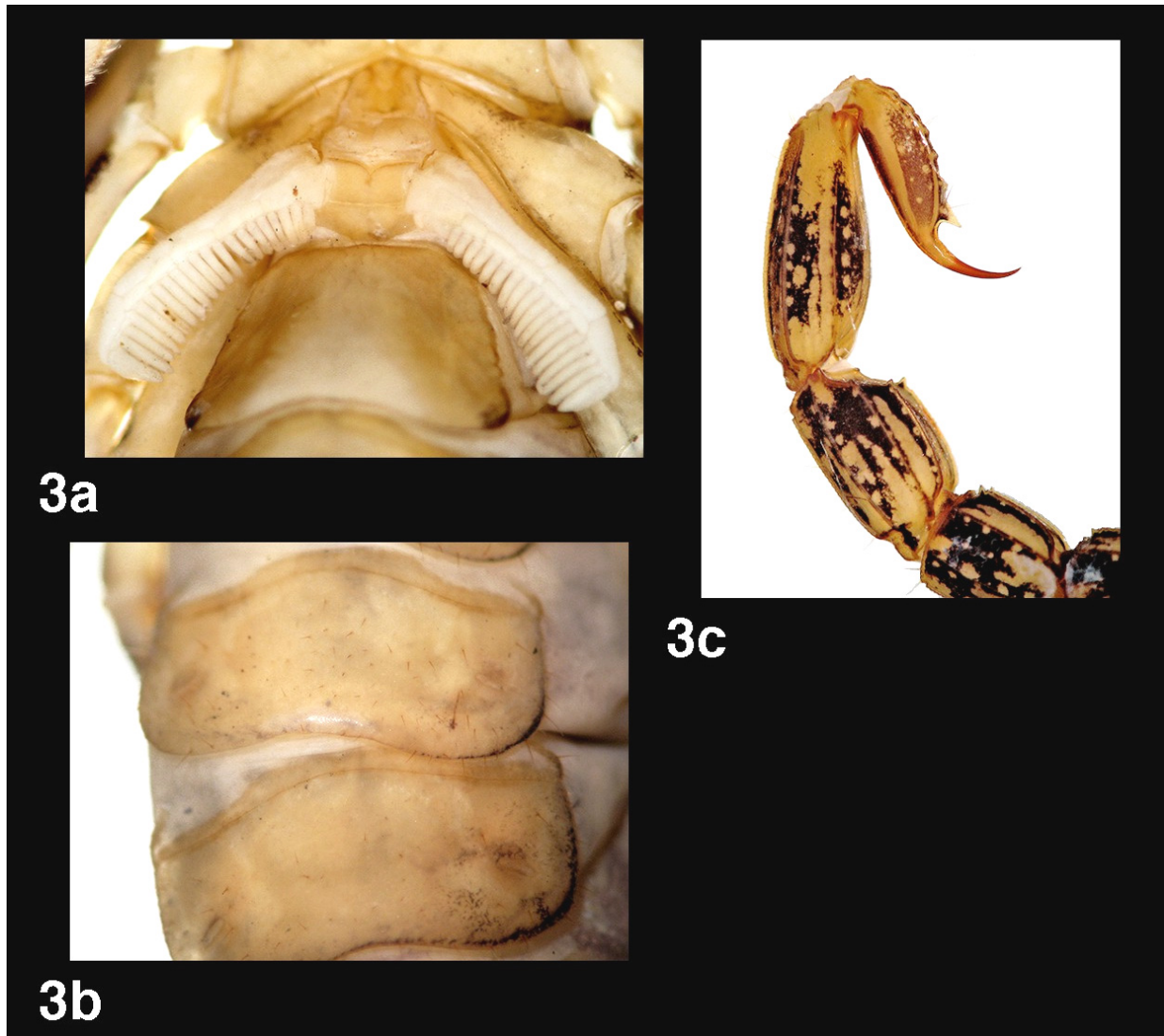
**Description** (adult male holotype): **Coloration** (Fig. 1a) basically yellowish, with a very dense pattern of blackish brown spots all over the body and appendages, except for

the telson and ventral region of preabdomen; metasomal segments IV–V reddish; chelicerae densely reticulated with blackish brown; pectines whitish. Pedipalps with yellowish spots indicating position of trichobothria on femur and patella; chelae with pale yellow hands (almost immaculate) and blackish fingers. **Carapace** (Fig. 2a) trapezoidal and basically without carinae; tegument finely and densely granulose; median eyes large, displaced forward and separate by less than one ocular diameter; four pairs of lateral eyes: three large and aligned in a straight row over the carapace edge, and one very small and placed above each second lateral eye. **Tergites** finely and densely granulose, with sparse larger granules near the posterior margin, longitudinal carinae granulose on all tergites; VII with two pairs of strong and serrate lateral carinae. **Chelicerae** (Fig. 2a) with typical dentition for the genus; tegument smooth and polished. **Pedipalps** (Fig. 2b) orthobothriotaxic A-β; fixed finger trichobothria displaced to distal half, with *db* and *est* at the same level. Femur with all carinae granulose, intercarinal tegument finely granulose, internal surface without basal spur. Patella with all carinae very weak, intercarinal tegument coriaceous, internal surface with some moderately sized, spiniform granules. Chela very slender, much narrower than patella; hand very small (3.2 times shorter than movable finger), with all carinae obsolete, intercarinal tegument smooth; fingers very elongate and evenly curved, without basal lobe/notch combination, with six almost straight principal rows of



**Figure 2:** Adult male holotype of *Ananteris tolimana* sp. n.: a) prosoma, dorsal view; b) right pedipalp, dorsal view; c) sternopectinal region, ventral view; d) sternites IV–VI, ventral view; e) metasomal segments IV–V and telson, lateral view; f) telson, lateral view.





**Figure 3:** Juvenile female paratype of *Ananteris tolimana* sp. n.: a) sternoplectinal region, ventral view; b) sternites V–VI, ventral view; c) metasomal segments IV–V and telson, lateral view.

granules of which the basalmost is very large, and the remaining are flanked by three accessory granules (two external and one internal), apical subrow composed by five granules aligned similar to principal rows. **Legs** (Figs. 1a–b) with all carinae serrate, intercarinal tegument very finely granulose. **Sternum** (Fig. 2c) type 1, small and markedly pentagonal, typical for the genus. **Pectines** (Fig. 2c) very large and straight, with vestigial fulcra along the distal third; pectinal tooth count 22/23 (the two distalmost teeth on the right pecten are almost entirely missing, but their remaining basal portion allows accurate count). **Sternites** (Figs. 2c–d) finely granulose, spiracles long and narrow, almost slit-like; sternite III with a large, smooth, translucent patch, which is subtriangular; posterior margin of sternite V with a large, smooth, whitish patch, which is bulky, much wider than long and paraboloid-shaped; sternite VII with two pairs of finely

serrate lateral carinae. **Metasoma** (Figs. 1a–b, 2e–f) slightly elongate, intercarinal tegument finely and densely granulose; segments I–II with ten carinae, III–IV with eight (even though vestiges of lateral inframedian carinae are present on basal third of III as weak aligned granules), V with five, all strongly serrate to subserrate, specially the dorsolateral and lateral supramedian which possess an enlarged and spiniform posterior granule; telson elongate and slender, vesicle smooth and polished, but with a strong, denticulate medioventral carina which becomes progressively elevated to end with a very large, spiniform subaculear tubercle; aculeus long, sharp and evenly curved.

**Female (Fig. 3a–c):** the single available specimen is an immature (apparently subadult), which differs from the holotype in the following maturity-independent charac-



**Figure 4:** Known geographical distribution of Colombian described species of the genus (modified from Lourenço, 1999, fig. 10, and Botero-Trujillo, 2007, fig. 1): *Ananteris columbiana* (1), *A. ehrlichi* (2), *A. gorgonae* (3), *A. leilae* (4), *A. myriamae* (5), and *A. tolimana* sp. n. (6).

ters: (1) sternite V with the whitish patch smaller and less bulky (Fig. 3b); (2) pectines much smaller, curved and with teeth proportionally shorter and broader (Fig. 3a); (3) sternum proportionately larger and less pentagonal-shaped; (4) genital papillae absent.

**Variation:** paratype female with 22/21 pectinal teeth; base coloration much paler, with dark pattern more conspicuous. Alike all other *Ananteris* which have been studied (R. Teruel, personal observation), the first difference is sexually dimorphic, and the second is related to the immaturity of this specimen.

**Ecological notes:** this species lives in the black, humid soil of a gully which forms part of a forested enclave inside the city of Ibagué. This is apparently an isolated relict population, because further searches conducted in other non-urbanized areas around the city have been so far unsuccessful.

The type locality is at an altitude of 1260 m, which represents the second highest finding of *Ananteris* in

Colombia; Lourenço (1982: 141) listed one specimen of this genus collected at 1569 m a.s.l. in the mountains of Serranía de Nueva Granada.

The holotype was obtained in a pitfall trap set for a single night, and the paratype was found under a rock; *Ananteris tolimana* sp. n. lives syntopically with *Chactas vanbenedeni* (Gervais, 1843).

**Comparisons:** *Ananteris tolimana* sp. n. exhibits a combination of four characters which are very unique amongst all species of the genus which have been described to date: (1) pectines with vestigial fulcra; (2) four pairs of lateral eyes; (3) dorsolateral and lateral supramedian carinae of metasomal segments II–IV each with an enlarged and spiniform posterior granule; (4) fixed finger with trichobothria *db* and *est* at the same level. Apart from these features, the remaining five Colombian species can be easily separated as follows: *Ananteris columbiana* is smaller, with lower pectinal tooth count (18 in males, 15–16 in females); *Ananteris ehrlichi* is larger, with heavily spotted pedipalp hand;





**Figure 5:** Type locality of *Ananteris tolimana* sp. n.

*Ananteris gorgonae* is more slender, with pedipalps and metasoma conspicuously attenuated; *Ananteris leilae* has lower pectinal tooth count (15–16 in female), and seven principal rows of granules on both pedipalp fingers; *Ananteris myriamae* has two concavities in the anterior margin of the carapace, and six carinae in metasomal segment IV.

### General Comments

The very unique characters presented by *Ananteris tolimana* sp. n. make it necessary to redefine the diagnosis of the genus, which has never been updated since the revision of Lourenço (1982), despite the fact that the number of species in this genus rapidly increased to 60 described species today (including *A. tolimana*).

**Diagnosis of the genus *Ananteris* (emended):** scorpions of small size (10–40 mm). Trichobothrial pattern A-β orthobothriotaxic, with fixed finger trichobothria displaced to the distal half of the finger. Carapace trapezoidal and basically devoid of carinae; anterior

margin essentially straight or with two shallow convexities; median eyes very large and displaced forward; 3–4 pairs of lateral eyes. Tergites with a single longitudinal carina. Chelicerae with dentition typical of Buthidae. Sternum type 1, subpentagonal to markedly pentagonal in shape, wider than long. Pedipalp chela with very small hand and very elongate fingers, each with 5–7 almost straight principal rows of granules. Pectines with conspicuous sexual dimorphism (very large and straight in males, small and frequently curved in females), with pectinal tooth count 11–25 and basal middle lamella not modified or slightly dilated in females; fulcra absent or vestigial. Sternites with oval to elongate spiracles; sternites III and V with or without a smooth, whitish patch. Legs III–IV with well developed tibial spur; ventral surface of tarsomere II with fine setae irregularly arranged. Metasoma slightly elongated in adult males; carinae well developed; telson with a large and spiniform subaculear tubercle.

In general appearance, the species of *Ananteris* are very easy to recognize at first sight from the remaining New World genera of Buthidae except the monotypic

*Microananteris*, recently described from French Guiana (Lourenço, 2003). Nevertheless, the status of this genus is extremely unclear because its diagnosis is ambiguous and lacks any characters which demonstrate its distinction from *Ananteris*, of which it appears to be merely a junior synonym. In fact, even Lourenço (2006) himself recently described another interesting Amazonian species, *A. cryptozoicus*, which was explicitly recognized by him (Lourenço, 2005: 951) to be morphologically intermediate between both genera, but he chose to assign it to *Ananteris*. Further studies are needed to clarify this situation, but this is beyond the aim of the present paper.

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