

## FURTHER CONSIDERATIONS ON THE GENUS *ANANTERIS* THORELL (SCORPIONES, BUTHIDAE) IN BRAZILIAN AMAZONIA, AND DESCRIPTION OF A NEW SPECIES

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**Abstract:** A new species, belonging to the genus *Ananteris* Thorell has been discovered in Brazil. *Ananteris cachimboensis* sp. n., is described from two male specimens collected in the region of Serra do Cachimbo, State of Pará, Brazil. This is the sixth species of *Ananteris* to be described from the Amazon region of Brazil. The number of *Ananteris* species present in the scorpion fauna of Brazil is raised to 13, and the total number of species in the genus to 31.

**Key words:** Scorpion, Buthidae, *Ananteris*, sp. n., Brazil.

### Nuevas consideraciones sobre el género *Ananteris* Thorell (Scorpiones, Buthidae) en la Amazonía brasileña y descripción de una nueva especie

**Resumen:** Una nueva especie, perteneciendo al género *Ananteris* Thorell ha sido descubierta en Brasil. *Ananteris cachimboensis* sp. n. se describe a partir de dos especímenes macho colectados en la región de Serra de Cachimbo, Estado de Pará, Brasil. Ésta es la sexta especie de *Ananteris* descrita de la región de la Amazonía brasileña. El número de especies de *Ananteris* presente en la escorpiofauna de Brasil se eleva a 13, y el número total de especies en el género a 31.

**Palabras clave:** Scorpion, Buthidae, *Ananteris*, sp. n., Brasil.

**Taxonomy/Taxonomía:** *Ananteris cachimboensis* sp. n.

### Introduction

As explained in recent publications (Lourenço, 2003, 2004a,b), since the genus *Ananteris* Thorell, 1891 was last revised (Lourenço 1982) the number of species described in it has increased continuously. It now contains 30 known species (see Lourenço, 2001, 2003, 2004a,b, 2005; Rojas-Runjaic, 2005).

During a revision of the genus (Lourenço, 1982), several new species from Brazil were described in addition to *Ananteris balzanii* Thorell, the only species known from the country before that date. These new species are: *Ananteris dekeyseri* Lourenço, *Ananteris franckei* Lourenço, *Ananteris mariaterezae* Lourenço, *Ananteris maury* Lourenço and *Ananteris pydanieli* Lourenço. Subsequently Lourenço (1984, 1987a) described *Ananteris luciae* Lourenço, followed by *Ananteris maranhensis* Lourenço (Lourenço, 1987b) and *Ananteris deniseae* Lourenço (Lourenço, 1997, 2002). Of these, three species are clearly typical Amazonian elements; *Ananteris dekeyseri*, *Ananteris pydanieli* and *Ananteris luciae*. They have been later confirmed as members of the fauna of Amazon region of Brazil (Lourenço, 1986, 2002). More recently, *Ananteris nairae* (Lourenço, 2004a) was described from the West of the State of Amazonas, showing the most westerly distribution of all Brazilian species in the genus. Even more recently, another Amazon species, *Ananteris cryptozoicus* Lourenço, was described from the region of Tarumã Mirim river, near to Manaus. This is the first species of the genus to be confirmed as an obligate soil element (Lourenço, 2005).

The new species described here is the first confirmed record of an *Ananteris* species in the South of the State of

Pará, on the border with the State of Mato Grosso. With its description, the number of known *Ananteris* species is raised to 31, thirteen of which are represented in the Brazilian scorpion fauna. Recent collections with pitfall and Winkler traps, tend to suggest that some species are more common than was originally suspected (Lourenço, unpublished).

### Checklist of the known *Ananteris* species

1. *Ananteris ashmolei* Lourenço. Ecuador.
2. *Ananteris balzanii* Thorell. Argentina, Brazil, Paraguay.
3. *Ananteris cachimboensis* sp. n. Brazil.
4. *Ananteris charlescorfieldi* Lourenço. Bolivia.
5. *Ananteris coineau* Lourenço. French Guyana.
6. *Ananteris columbiana* Lourenço. Colombia.
7. *Ananteris cryptozoicus* Lourenço. Brazil.
8. *Ananteris cussinii* Borelli. Trinidad, Venezuela.
9. *Ananteris dekeyseri* Lourenço. Brazil.
10. *Ananteris deniseae* Lourenço. Brazil.
11. *Ananteris diegorojasi* Rojas-Runjaic. Venezuela.
12. *Ananteris ehrlichi* Lourenço. Colombia.
13. *Ananteris evellynnae* Lourenço. Brazil.
14. *Ananteris elisabethae* Lourenço. French Guyana.
15. *Ananteris feae* (Borelli). Africa, Guinea, Guinea-Bissau.
16. *Ananteris festae* Borelli. Ecuador.
17. *Ananteris franckei* Lourenço. Brazil.
18. *Ananteris gorgonae* Lourenço & Florez. Colombia.
19. *Ananteris guyanensis* Lourenço & Monod. French Guyana.
20. *Ananteris leilae* Lourenço. Colombia.
21. *Ananteris luciae* Lourenço. Brazil.
22. *Ananteris maranhensis* Lourenço. Brazil.

23. *Ananteris mariaelenae* Lourenço. Ecuador.
24. *Ananteris mariaterzeae* Lourenço. Brazil.
25. *Ananteris mauryi* Lourenço. Brazil.
26. *Ananteris nairae* Lourenço. Brazil.
27. *Ananteris platnicki* Lourenço. Costa Rica, Panama.
28. *Ananteris pydanieli* Lourenço. Brazil.
29. *Ananteris sabineae* Lourenço. French Guyana.
30. *Ananteris turumbanensis* Gonzalez-Sponga. Venezuela.
31. *Ananteris venezuelensis* Gonzalez-Sponga. Venezuela.

## Taxonomic treatment

### *Ananteris cachimboensis* sp. n.

Figs. 1-8.

**DIAGNOSIS:** Species of moderate size when compared with the average size of the other species of the genus (24.4 mm in total length; see Table I). General coloration dark. Pedipalps very slender; fingers with 6 rows of granules; male pectines with 19 teeth. The new species can be distinguished from other known species of the genus from the Amazonian region of Brazil, and in particular from *A. luciae*, which is also distributed in the State of Pará by: (i) darker, almost blackish pigmentation of the body and appendages, (ii) pedipalp fingers with 6 rows of granules, (iii) male pectines with 19 teeth, in contrast to 15-16 in *A. luciae*. (iv) distinct morphometric values (see Table I). The new species is possibly an endemic element of the Serra do Cachimbo formation.

**TYPE MATERIAL:** Male holotype. Brazil, State of Pará, Serra do Cachimbo, Rio Cristalino, 1/XI/2004 (L.J. Vitt). Deposited in the arachnological collection of the University of Brasília, Brazil: 1 male paratype, same data as for the holotype, deposited in the Museum national d'Histoire naturelle, Paris.

**ETYMOLOGY:** The specific name makes reference to the locality in which the new species was found.

**DESCRIPTION based on male holotype and on male paratype.** (Morphometric measurements in Table I).

**Coloration.** Generally yellow to reddish-yellow with dark brown to blackish pigmented zones on the body and its appendages. Prosoma: carapace reddish-yellow with blackish spots on the anterior, lateral and posterior edges; eyes surrounded by black pigment. Mesosoma: reddish-brown with confluent blackish zones on the posterior and lateral edges of tergites. Metasoma: segments I to III yellowish; IV reddish-yellow; V reddish; all segments intensely marked with blackish spots. Vesicle reddish with diffused blackish spots; the base of the aculeus yellowish. Venter yellowish; sternite VII with diffused brownish spots. Chelicerae yellowish with variegated blackish spots over the entire surface; fingers with blackish spots; teeth reddish. Pedipalps: yellowish; femur and patella with dispersed blackish spots; chela hand almost entirely blackish; fingers yellowish. Legs yellowish, with several blackish spots.

**Morphology.** Carapace with thin but intense granulation; anterior margin not emarginated, almost straight. Anterior median superciliary and posterior median carinae weak or absent. All furrows moderate to weak. Median ocular tubercle distinctly anterior to the centre of the carapace; median eyes separated by approximately 0.8 of one ocular diameter.

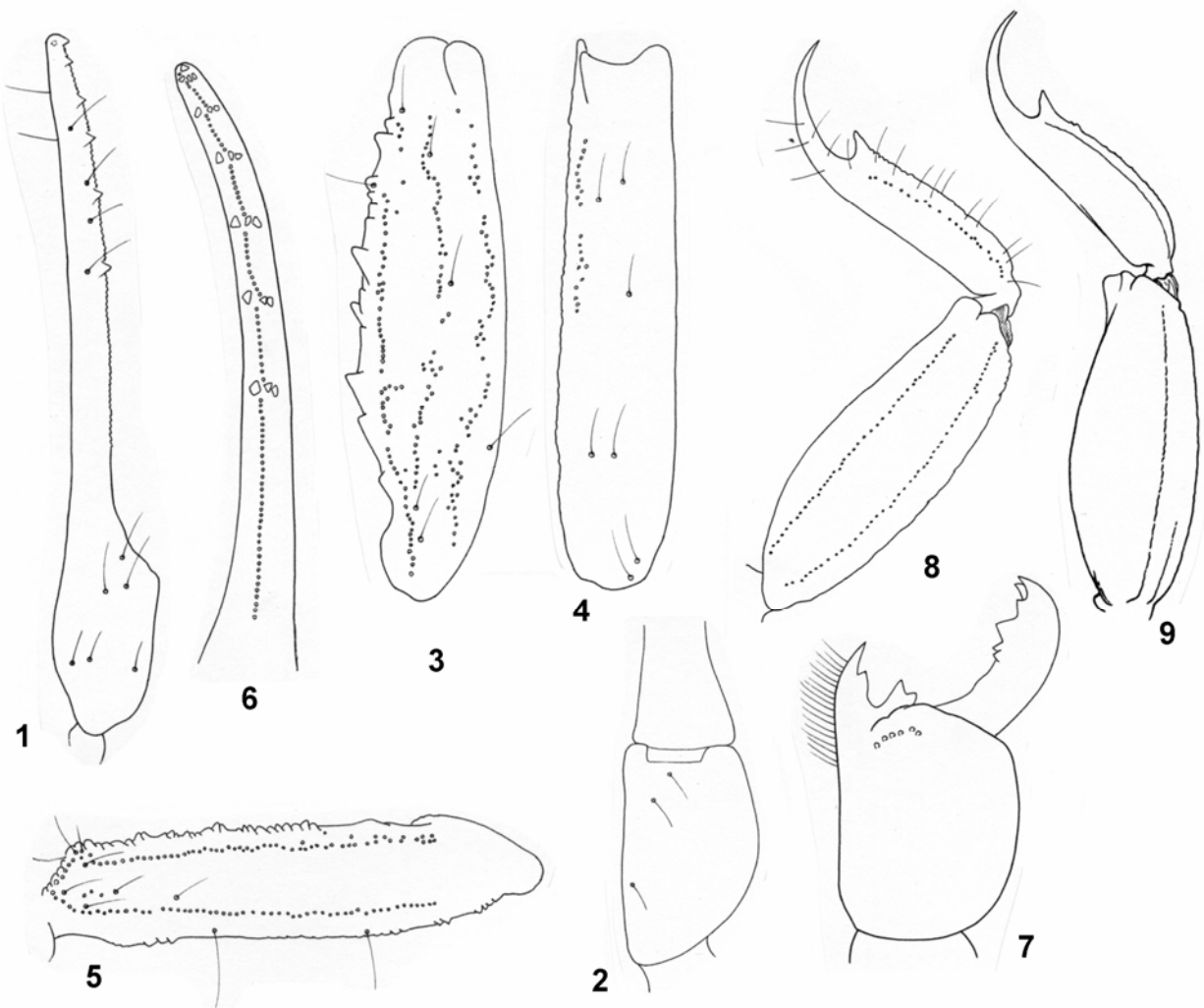
**Table I. Morphometric values (in mm) of a male specimen of *Ananteris luciae* and of the male holotype of *Ananteris cachimboensis* sp. n.**

	<i>A. luciae</i>	<i>A. cachimboensis</i> sp. n.
Total length	18.0	24.4
Carapace:		
- length	2.3	3.3
- anterior width	1.5	2.1
- posterior width	2.2	3.0
Metasomal segment I:		
- length	1.3	1.8
- width	1.3	1.7
Metasomal segment V:		
- length	3.0	5.1
- width	1.2	1.4
- depth	1.2	1.5
Vesicle:		
- width	0.7	0.8
- depth	0.7	0.7
Pedipalp:		
- Femur length	2.0	3.5
- Femur width	0.5	0.8
- Patella length	2.7	4.0
- Patella width	0.7	0.9
- Chela length	3.2	4.8
- Chela width	0.5	0.7
- Chela depth	0.5	0.6
Movable finger:		
- length	2.3	3.8

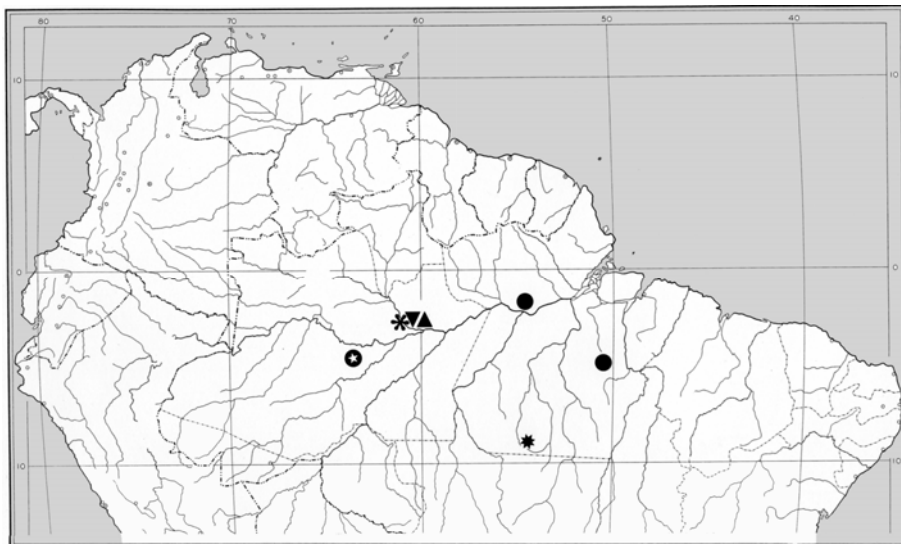
Three pairs of lateral eyes. Sternum subpentagonal. Mesosoma: tergites with thin but intense granulation. Median carina moderate to weak in all tergites. Tergite VII pentacarinat. Venter: genital operculum divided longitudinally, each plate more or less suboval in shape. Pectines: pectinal tooth count 19-19 in both holotype and paratype; basal middle lamellae of the pectines not dilated; fulcra absent. Sternites slightly granular; III and IV almost smooth; stigmata moderately elongate; setation moderate; sternite VII with weakly marked carinae. Metasoma: segments I and II with 10 carinae, crenulate. Segments III and IV with 8 carinae, crenulate. Intercarinal spaces slightly granular. Segment V slightly rounded with 5 carinae. Telson elongated and slightly granular, with one lateral and one ventral carina weakly marked; aculeus moderately short and weakly curved; subaculear tooth strong and spinoid. Cheliceral dentition characteristic of the family Buthidae (Vachon 1963); fixed finger with two moderate basal teeth; movable finger with two weak basal teeth; ventral aspect of both finger and manus with dense, long setae. Pedipalps: femur pentacarinat; internal face with some minute spinoid granules; patella and chela with weak to vestigial carinae; internal face of patella with 6 large and a few minute spinoid granules; all faces slightly granular, almost smooth. Fixed and movable fingers with 6 almost linear rows of granules; two small external and one internal accessory granule present at the base of each row; three granules in the extremity of the fingers; Trichobothriotaxy; orthobothriotaxy A-β-beta (Vachon 1974, 1975). Legs: tarsus with very numerous fine median setae ventrally. Tibial spurs strongly developed on leg IV; moderate on leg III.

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**Figs. 1-8.** *Ananteris cachimboensis* sp. n. Male holotype. Trichobothrial pattern. **1-2.** Chela, dorso-external and ventral aspects. **3-4.** Patella, dorsal and external aspects. **5.** Femur dorsal aspect. **6.** Movable finger of pedipalp chela with rows of granules. **7.** Chelicera, dorsal aspect. **8.** Metasomal segment V and telson, lateral aspect. **9.** Idem for male of *A. luciae*.



**Fig. 10.** Map showing the known distribution of *Ananteris* species in Brazilian Amazonia. *Ananteris dekeyseri* (black triangle). *Ananteris pydanieli* (inverted black triangle). *Ananteris luciae* (black circle). *Ananteris nairae* (black circle with white star). *Ananteris cryptozoicus* (black asterisk). *Ananteris cachimboensis* sp. n. (black star).

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