

ARTÍCULO:

A new species of *Brotheas* (Scorpiones, Chactidae) from the Rio Negro region in the State of Amazonas, Brazil

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ARTÍCULO:

A NEW SPECIES OF *BROTHEAS* (SCORPIONES, CHACTIDAE) FROM THE RIO NEGRO REGION IN THE STATE OF AMAZONAS, BRAZIL

Wilson R. Lourenço & Adriana Molteni Machado

Abstract:

In recent publications evidence based on biogeographic patterns of scorpions has been proposed in support of the hypothesis that the Rio Negro region is an important endemic area of the western Amazonia. In this note, a new species, *Brotheas henriquesi* sp. n., is described from the 'Parque Nacional Jaú, Novo Airão', in the Brazilian Amazonia. This provides further confirmation of the very high level of endemism of the Rio Negro region.

Key words: Scorpiones, Chactidae, new species, Rio Negro region endemism, Brazil, Amazonia.

Taxonomy: *Brotheas henriquesi* sp. n

Una nueva especie de *Brotheas* (Scorpiones, Chactidae) de la región de Rio Negro en el estado de Amazonas, Brasil

Resumen:

En recientes publicaciones se han presentado datos basados en modelos biogeográficos sobre escorpiones para apoyar la hipótesis de que la región de Rio Negro es una importante área de endemismo de la Amazonia occidental. En este trabajo se describe una nueva especie, *Brotheas henriquesi* sp. n., del 'Parque Nacional Jaú, Novo Airão', en la Amazonia brasileña. Se presentan igualmente diversas confirmaciones del alto nivel de endemismo de la región de Río Negro.

Palabras clave: Scorpiones, Chactidae, nueva especie, región de Rio Negro, Brasil, Amazonia.

Taxonomía: *Brotheas henriquesi* sp. n

Introduction

Studies of the Amazonian scorpion fauna and, in particular, of the members to the family Chactidae, began in the second half of the 19th century with a number of publications including those of Karsch (1879), Simon (1877, 1880) and Pocock (1893, 1897, 1900). Most of this work, however, focused on Oriental Amazonia, mainly Eastern Brazil and parts of the Guayana region. In his monograph on the scorpions of South America, Mello-Leitão (1945) proposed a global synthesis of the Chactidae.

Beginning in the 1970's several studies have been published describing a large number of new taxa belonging to the family Chactidae Pocock. The most important work is that by Gonzalez-Sponga (summarized in Gonzalez-Sponga, 1996), who dealt almost exclusively with the fauna of Venezuela. Also relevant are the investigations carried out by Lourenço (1983, 1986, 1988a,-b, 1994, 1995a,-b, 1997), Lourenço & Pinto da Rocha (2000), and Monod and Lourenço (2001). These indicated that the scorpion fauna of Amazonia was certainly much more complex than had previously been supposed, and suggested that many new species still remained to be discovered (Lourenço, 2002).

Although the extreme complexity of endemism in the Rio Negro area had already been discussed by Prance (1982) and Steyermark (1979), this region remains poorly investigated. In a previous publication, evidence based on scorpion biogeographic patterns has already been proposed supporting the Rio Negro region as an important area of endemism in Occidental Amazonia (Lourenço, 1994). In the present paper, a new species, *Brotheas henriquesi* sp. n., is described from the 'Parque Nacional Jaú, Novo Airão', State of Amazonas, Brazil. This confirms once again the very high levels of endemism in the Rio Negro region.

Taxonomic treatment

Brotheas henriquesi sp. n. (Figs. 1-8)

TYPE MATERIAL: 1 male holotype, 5 male paratypes, Brazil, State of Amazonas, Novo Airão, Parque Nacional Jau, Seringalzinho (01° 52' 34" S – 61° 35' 15" W), 8-16/IV/2001 (S. Neckel). Holotype and four paratypes deposited in the Instituto Nacional de Pesquisas da Amazonia (INPA), Manaus. One paratype deposited in the Muséum national d'Histoire naturelle, Paris.

ETYMOLOGY: Patronym in honor of Dr. Augusto Henriques, Curator of the Arachnological Collection, INPA, Manaus, Brazil.

DIAGNOSIS. Scorpions moderate to large in size, 55 to 60 mm in total length. Coloration blackish-brown, except for the chelicerae and telson which are reddish-yellow. Body and appendages weakly granulated or smooth, with minute punctation. Pectines with 10 to 11 teeth. Trichobothrial pattern type C neobothriotaxic 'majorante'.

Brotheas henriquesi sp. n. can be included in the group of species of *Brotheas* presenting moderately to strongly developed carinae on the metasomal segments, and spinoid granules on the ventral surface of segment V. The new species can be distinguished from others in the genus *Brotheas* and in particular from *Brotheas amazonicus* Lourenço which is distributed in the nearby region of Manaus, by the following features: (i) carapace, pedipalps and metasomal tegument punctuated, whereas in *B. amazonicus* these are granulated, (ii) metasomal carinae moderately marked, whereas in *B. amazonicus*, these are strongly marked, (iii) chelicerae dark-reddish, without any diffuse variegated brownish spots, whereas in *B. amazonicus* diffuse variegated brownish spots are present.

DESCRIPTION BASED ON MALE HOLOTYPE. Measurements in Table I.

Coloration. Basically blackish-brown. Prosoma: carapace blackish. Tergites blackish-brown, slightly paler than the carapace. Metasomal segments blackish-brown, with blackish zones over carinae; vesicle reddish-yellow. Chelicerae dark-reddish, without any diffuse variegated brownish spots; fingers uniformly dense reddish colour. Pedipalps blackish-brown; femur and patella darker than chela. Legs reddish-brown. Venter and sternites reddish with some yellowish zones; pectines and genital operculum reddish-yellow.

Morphology. Carapace lustrous and acarinate, with dense minute punctation; furrows shallow. Sternum pentagonal, longer than wide. Tergites acarinate, smooth and shiny with punctations. Pectinal tooth count 10-10,

fulcra reduced. Sternites smooth and shiny, VII acarinate. Metasomal segments III to V longer than wide; metasomal tegument lustrous and with small punctations; segment V with small spinoid granulations ventrally. Carinae in segments I-V moderate; ventral carina absent from segment I, weakly marked on segments II-III. Pedipalps: Femur with dorsal internal, dorsal external and ventral internal carinae strongly marked; ventral external carina weakly marked; dorsal and ventral faces without granulations, smooth; internal face weakly granular. Patella smooth and lustrous; dorsal internal, ventral internal, ventral external and external carinae weak; other carinae vestigial. Chela lustrous; ventral median carina moderate to strong; other carinae vestigial or absent; internal face with a few moderate granules, other faces smooth. Dentate margins on movable and fixed fingers composed of six rows of granules. Chelicerae with the dentition typical of the family Chactidae (Vachon, 1963), and with intense setation ventrally and internally. Trichobothriotaxy type C; neobothriotaxic 'majorante' (Vachon, 1974).

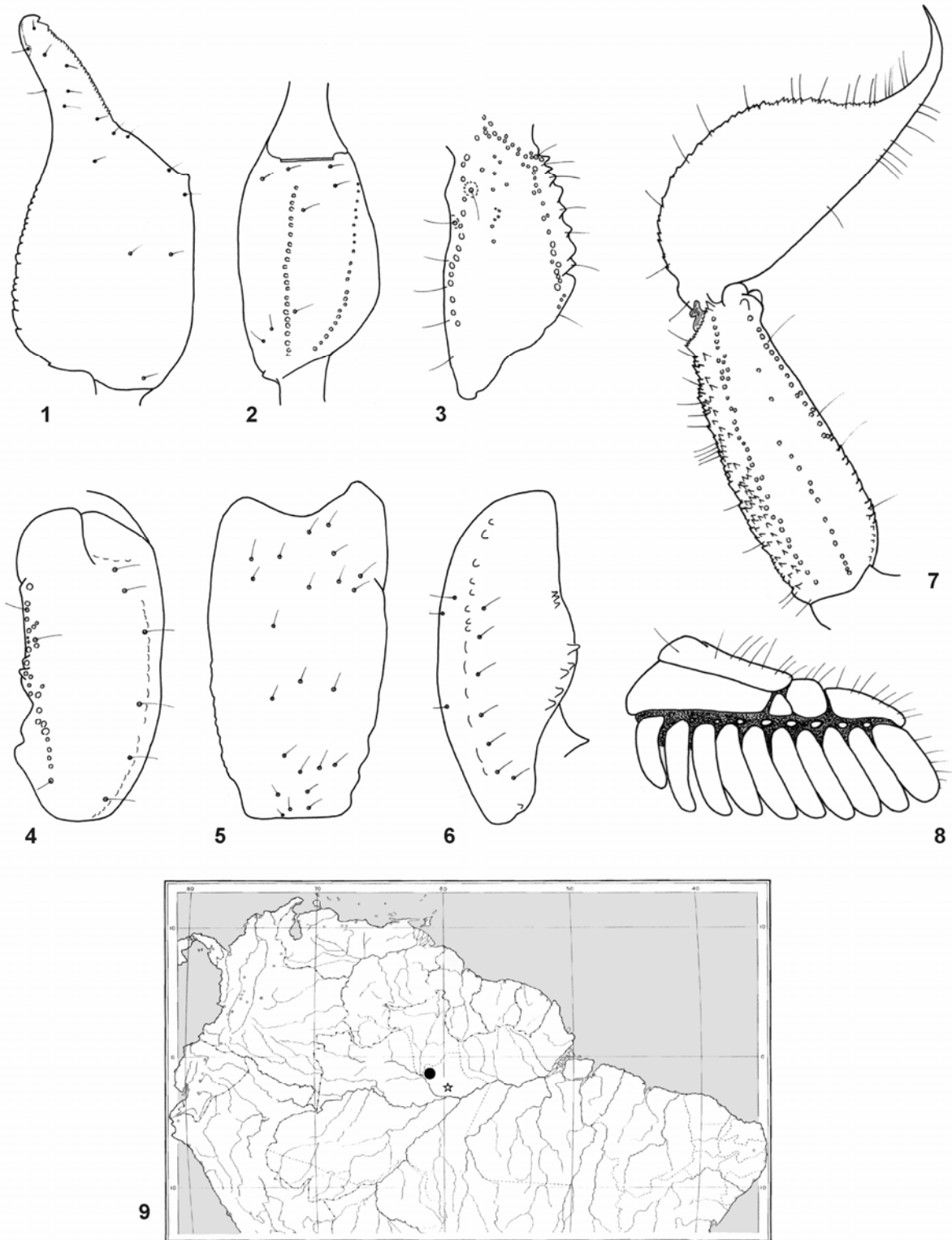
Pectinal tooth count in male paratypes: 10 (eight pectines), 11 (two pectines).

Table I. Morphometric values (in mm) of a male holotype of *Brotheas henriquesi* sp. n.

Total length	56.2
Carapace:	
- length	8.3
- anterior width	5.4
- posterior width	8.4
Metasomal segment I:	
- length	2.8
- width	4.6
Metasomal segment V:	
- length	9.3
- width	3.9
- depth	3.3
Vesicle:	
- width	4.6
- depth	4.1
Pedipalp:	
- Femur length	6.1
- Femur width	2.6
- Patella length	6.8
- Patella width	2.9
- Chela length	13.4
- Chela width	5.3
- Chela depth	5.9
Movable finger	
- length	6.9

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Figs. 1-8. *Brotheas henriquesi* sp. n., male holotype. 1-6. Trichobothrial pattern. 1-2. Chela, dorso-external and ventral aspects. 3. Femur, dorsal aspect. 4-6. Patella, dorsal, external and ventral aspects. 7. Metasomal segment V and telson, lateral aspect. 8. Pecten.

Fig. 9. Map showing the type localities of *Brotheas amazonicus* Lourenço (☆), in the nearby region of Manaus, and of *Brotheas henriquesi* sp. n. (●).

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