

A NEW SPECIES OF *GUYANOCHACTAS* LOURENÇO, 1998 (SCORPIONES, CHACTIDAE) FROM FRENCH GUIANA

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Abstract: A new species of scorpion belonging to the genus *Guyanochactas* Lourenço, 1998 (family Chactidae Pocock, 1893), is described on the basis of three specimens collected in French Guiana. The new species is characterized by reddish-yellow to pale yellow coloration and moderate to small size, 35 to 38 mm in total length. This is the second species of the genus *Guyanochactas* reported from French Guiana.

Key words: Scorpiones, Chactidae, *Guyanochactas*, new species, French Guiana.

Una especie nueva de *Guyanochactas* Lourenço, 1998 (Scorpiones, Chactidae) de la Guayana Francesa

Resumen: Se describe una especie nueva de escorpión del género *Guyanochactas* Lourenço, 1998 (familia Chactidae Pocock, 1893), sobre tres especímenes recogidos en la Guayana Francesa. La nueva especie se caracteriza por su coloración, de amarillo rojizo a amarillo claro, y un tamaño entre mediano y pequeño, 35-38 mm de longitud total. Ésta es la segunda especie del género *Guyanochactas* citada de la Guayana Francesa.

Palabras clave: Scorpiones, Chactidae, *Guyanochactas*, especie nueva, Guayana Francesa.

Taxonomy / Taxonomía: *Guyanochactas flavus* sp. n.

Introduction

As discussed in previous publications (Lourenço, 2008; Lourenço & Duhem, 2009; Lourenço *et al.*, 2005, 2010), the scorpion family Chactidae Pocock, is one of the best represented in the Neotropical region. Most South American species are concentrated in the Amazonian and Guayanian floristic Provinces (Mori, 1991; Prance & Lovejoy, 1985; Adis, 2002). Several species, however, are also distributed in the periphery of this core area, in zones such as in the Pacific coastal forests of Colombia and Ecuador or in highlands in the Andes (Lourenço, 1995, 1997, 2010). In South America chactid scorpions have been reported, up to now, mainly from wet forests (Lourenço, 1983, 1986, 1991, 1995, 1997, 2002a; Gonzalez-Sponga, 1996).

Since the beginning of the 1970's a large number of new taxa belonging to the Chactidae have been described, including many new species but also new genera. The validity of several new genera was often questioned and becomes a subject of polemics (Lourenço, 1986; González-Sponga, 1996; Sissom, 2000). One of these new genera was *Guyanochactas* (Lourenço, 1998) created to accommodate some 'atypical' species previously placed in the genera *Brotheas* C. L. Koch, 1837 and *Broteochactas* Pocock, 1893. The validity of *Guyanochactas* was retained by Sissom (2000), Lourenço & Pinto da Rocha (2000) and Lourenço (2002a, b). Subsequently it was rejected by Soleglad & Fet (2003), revalidated by Prendini & Wheeler (2005), and again rejected by Fet & Soleglad (2005:10). Since the polemical debate remains opened the validity of the genus *Guyanochactas* is accepted in the present note.

The great complexity of endemism in the Guayana region has been previously discussed by Lourenço (1986,

1991, 2001). Evidence from scorpion biogeographic patterns has already been used to support the Guayan region as an important area of endemism (Lourenço, 1986, 1991, 2001). In the present paper, a new species of *Guyanochactas* is described from French Guiana. This confirms once again the very high levels of endemics in the Guayana region.

Methods

Illustrations and measurements were made using a Wild M5 stereo-microscope with a drawing tube and an ocular micrometer. Measurements follow those of Stahnke (1970) and are given in mm. Trichobothrial notations are those developed by Vachon (1974) and the morphological terminology mostly follows that of Hjelle (1990).

Taxonomic treatment

Family CHACTIDAE Pocock, 1893

Genus *Guyanochactas* Lourenço, 1998

Guyanochactas flavus sp. n.

Fig. 1-11, 13. Table I.

MATERIAL: French Guiana, Roura-Cacao, 'Montagne Tortue', at the end of forested road of Bélizou, PK-27, under litter and/or log in trail, 1/II/1992 (J.-P. Mauries & J.-M. Betsch). Male holotype and one female paratype. Anamites, XI/2010 (E. Ythier), one female paratype. Material deposited in the Muséum national d'Histoire naturelle, Paris.

Table 1. Morphometric values ♂ holotype (in mm) of *Guyanochactas gonzalezspingai* (Ggonz) and *Guyanochactas flavus* sp. n. (Gflav)

	Ggonz	Gflav
Total length	45.8	38.2
Carapace:		
- length	5.6	5.5
- anterior width	3.4	3.3
- posterior width	5.8	5.6
Metasomal segment I:		
- length	2.7	1.9
- width	3.5	3.3
Metasomal segment II:		
- length	3.0	2.5
- width	3.3	2.9
Metasomal segment III:		
- length	3.3	2.6
- width	3.2	2.8
Metasomal segment IV:		
- length	3.8	3.4
- width	3.1	2.6
Metasomal segment V:		
- length	5.8	5.3
- width	3.0	2.4
- depth	2.4	2.1
Telson length	7.4	5.1
Vesicle:		
- width	2.5	2.1
- depth	2.1	1.7
Pedipalp:		
- Femur length	3.9	4.3
- Femur width	2.0	1.9
- Patella length	4.8	4.8
- Patella width	2.2	2.1
- Chela length	9.2	9.4
- Chela width	3.4	3.3
- Chela depth	3.7	3.5
Movable finger:		
- length	4.9	4.7

ETYMOLOGY: The specific name refers to the yellowish coloration of the new species.

DIAGNOSE: Moderate to small scorpions, 35 to 38 mm in total length. Coloration reddish-yellow pale yellow. Carapace slightly emarginated. Body and appendages moderately granulated, with minute punctation. Ventral internal carina of pedipalp femur with spinoid granules; internal face of pedipalp chela granulated. Pectines with 8-10 teeth in male and females. Dentate margin of chela fingers with five rows of granules. Metasomal segments I-III wider than long. Spiracles semi-oval. Tarsi with spinoid setae. Trichobothrial pattern of type C neobothriotaxic 'majorante'.

Guyanochactas flavus sp. n. can be distinguished from others in the genus and in particular from *Guyanochactas gonzalezspingai* (Lourenço, 1983) which is also distributed in French Guiana, by the following features: (i) overall paler yellowish coloration; without any dark spots, (ii) overall size smaller with metasomal segments I-III wider than long, (iii) smaller number of pectinal teeth, and (iv) chela fingers with five rows of granules.

DESCRIPTION BASED ON MALE HOLOTYPE AND FEMALE PARATYPES.

Coloration. Basically reddish-yellow to pale yellow. Pro-soma: carapace yellowish with some reddish-yellow zones. Tergites yellowish, slightly paler than carapace, with one longitudinal reddish-yellow strip. Metasomal segments yellowish, with reddish-yellow zones over carinae; vesicle yellowish; aculeus reddish-yellow at the base and reddish at the tip. Chelicerae yellowish, without spots; reddish-yellow with reddish teeth. Pedipalps yellow to reddish-yellow with dark reddish zones over carinae. Legs yellow. Venter and sternites yellowish; pectines and genital operculum paler than sternites.

Morphology. Carapace slightly emarginated, with minute granulations and punctations; furrows shallow. Median eyes anterior to the centre of the carapace, separated by one ocular diameter; two pairs of lateral eyes. Sternum pentagonal, wider than long. Tergites acarinate, with only minute granulations and punctations. Pectinal tooth count 9-9 for holotype (8-8, 10-10 for paratypes), fulcra absent. Sternites smooth and punctuated; VII acarinate; sternite III on female with a strong setation. Metasomal segments I to III wider than long; metasomal tegument with moderately marked granulations and a few punctuations; segment V with spinoid granulations ventrally. Carinae on segments I-V moderately to strongly marked; ventral carina vestigial on segment I, weakly marked on II, moderately marked on III and strongly marked on IV. Pedipalps: femur with dorsal internal, dorsal external and ventral internal carinae moderately to strongly marked; ventral internal carina with spinoid granules; ventral external carina weakly marked; all aspects with minute granulations. Patella with minute granulations and punctations; dorsal internal, ventral internal, ventral external and external carinae moderately marked; other carinae vestigial. Chela with weakly to moderately marked granulations; ventral and dorsal median carina moderately marked; other carinae weakly marked; internal aspect with spinoid granules. Dentate margins on movable and fixed fingers with 5 rows of granules. Chelicerae elongated with a dentition typical of the family Chactidae (Vachon, 1963), and with dense setation ventrally and internally. Trichobothriotaxy of type C; neobothriotaxic 'majorante' (Vachon, 1974). Tarsi with spinoid setae.

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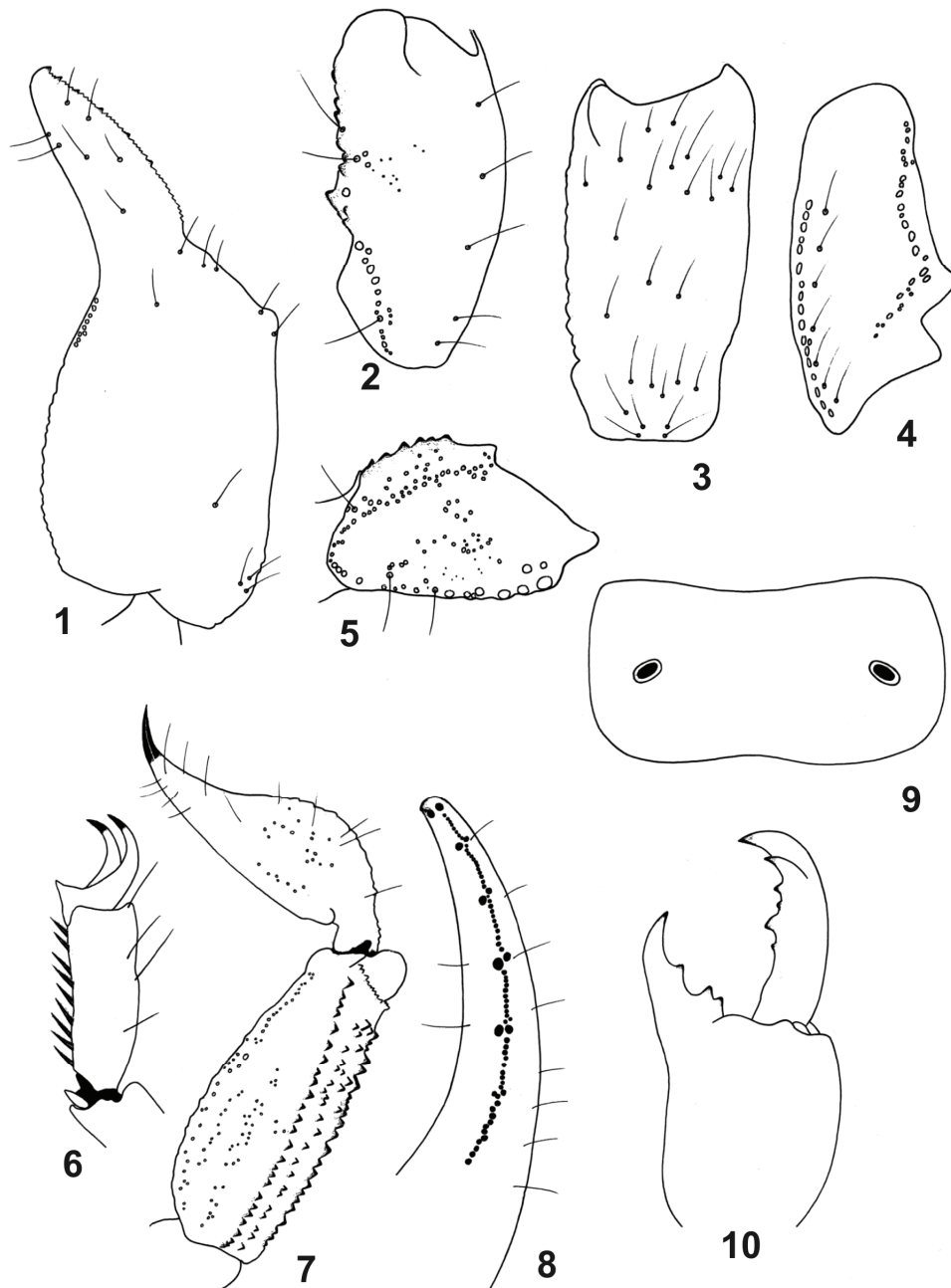


Fig. 1-10. *Guyanochactas flavus* sp. n. Male holotype. 1-5. Trichobothrial pattern. 1. Chela, dorso-external aspect. 2-4. Patella, dorsal, external and ventral aspects. 5. Femur, dorsal aspect. 6. Tarsus with spinoid setae. 7. Metasomal segment V and telson, lateral aspect. 8. Disposition of granules on the dentate margins of the pedipalpal chela movable finger. 9. Sternite V showing spiracles. 10. Chelicera, dorsal aspect.

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Fig. 11. *Guyanochactas flavus* sp.n. Female paratype from Anamites. alive.



Fig. 12. *Broteochactas delicatus* female from Cacao, alive. The very distinct coloration pattern can be observed among these two chactid.



Fig. 13. Map of Guianas with the indication of the type localities of *Guyanochactas gonzalezspongai* (black asterisk) and *Guyanochactas flavus* sp. n. (black circle).

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