

## CONFIRMATION OF A NEW SPECIES OF *CHACTAS* (SCORPIONES, CHACTIDAE) TO PANAMA AND COSTA RICA

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### RESUMEN

Se describe e ilustra una nueva especie de alacrán, *Chactas bonito* sp. nov., de Panamá y Costa Rica. Se incluyen también algunos comentarios sobre la antigua especie de Werner, *Iomachus exsul*.

Palabras clave: *Chactas*, Scorpiones, Chactidae, nueva especie, Panamá, Costa Rica.

### ABSTRACT

A new species of scorpion, *Chactas bonito* sp. nov., from Panama and Costa Rica, is here described and illustrated. Some comments concerning the old Werner's species *Iomachus exsul* are also included.

Key words: *Chactas*, Scorpiones, Chactidae, new species, Panama, Costa Rica.

### INTRODUCTION

Werner (1939) in a paper concerning some scorpions deposited in the Hamburg Museum, described a new species of scorpion from Costa Rica, namely *Iomachus exsul*, which curiously was included by him in the family Chactidae. In fact the genus *Iomachus* was first included among the scorpions of the family Scorpionidae and more recently moved to the family Ischnuridae by Lourenço (1989). Moreover, the species belonging to the genus *Iomachus* are exclusively distributed in India and parts of Oriental Africa. The description of *Iomachus exsul* proposed by Werner was extremely

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short and incomplete, and the only illustration provided (the dorsal aspect of one pedipalp), was insufficient to any possible recognition of the new taxon. To further complicate this situation the type specimen was destroyed during World War II.

More recently the faunas of Panama and Costa Rica have been summarized respectively by Lourenço & Méndez (1984) and by Francke & Stockwell (1987). In the first contribution Werner's species was not discussed, however, in the contribution by Francke and Stockwell, the *Chactas* material studied was, in a first version of the manuscript considered as a new species, named *Chactas bonito*. However, in a second version of their manuscript, the authors changed their first opinion and associated the *Chactas* material from Costa Rica to the old Werner's species under a new combination as *Chactas exsul* (Werner, 1939).

In a more recent contribution to some scorpions of Panama and Costa Rica, Lourenço (1996) proposed a description of the male of "*Chactas bonito*" since only females were reported in the original description. In fact this mistake was originated because during the preparation of his 1996 paper, Lourenço used a proof version of Francke and Stockwell's paper, being unworried about the fact that in their final printed version these authors changed their decision about the description of *Chactas bonito*.

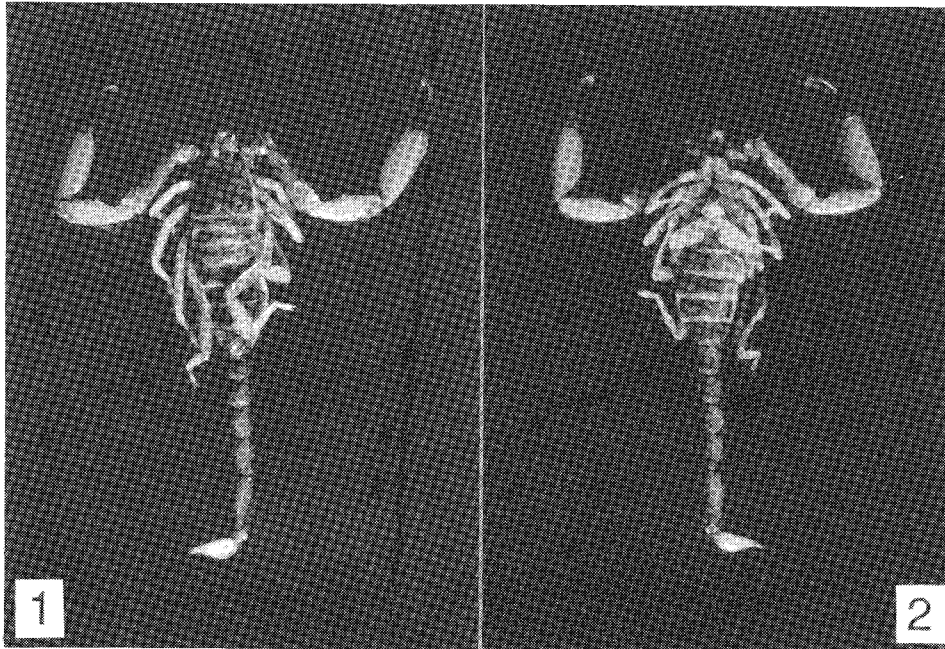
The description of the male *Chactas bonito* created a case of *lapsus calami* which was demonstrated by Montoya (1996-1997). Lourenço (1996-1997) in a reply to Montoya about the use of the name *Chactas bonito*, accepted that his comments were correct, but stated the following : "So, for what is of nomenclature Dr. Montoya is right; however, for what is of the validity of Werner's species I am not so sure. In fact the description given by Werner for *Iomachus exsul* is poor and the single illustration bad. Besides, the types were destroyed in the war. In my opinion, Werner probably associated some juveniles of *Opisthacanthus* to his *Iomachus* species (which only exist in India and parts of Africa). However, young *Opisthacanthus* may look like *Iomachus*. He also cited one specimen of *Opisthacanthus elatus* (one female) in his paper, but this was an adult. In conclusion, my mistake had to be corrected, however, I do think that the *Chactas* present in Costa Rica and Panama should be named as a new species, as was originally intended by Francke and Stockwell."

The aim of this contribution is to finally clarify the status of the *Chactas* population present in Panama and Costa Rica. I decided to retain the name *Chactas bonito* to the new species to clearly associate my decision with the intended decision of Francke and Stockwell.

***Chactas bonito* sp. nov.**  
(Figs. 1-13)

Nec. *Chactas bonito*; Lourenço, 1996, Rev. Biol. Trop., 44 (1) : 177, *nomen nudum*.

**Holotype male.** PANAMÁ: PROVINCIA COLÓN: Río Llano Sucio, área Sta. Rita, Vertiente Atlántica. V.1971 (D.Quintero). Deposited in the Muséum National d'Histoire Naturelle (MNHN-RS-7928), Paris.



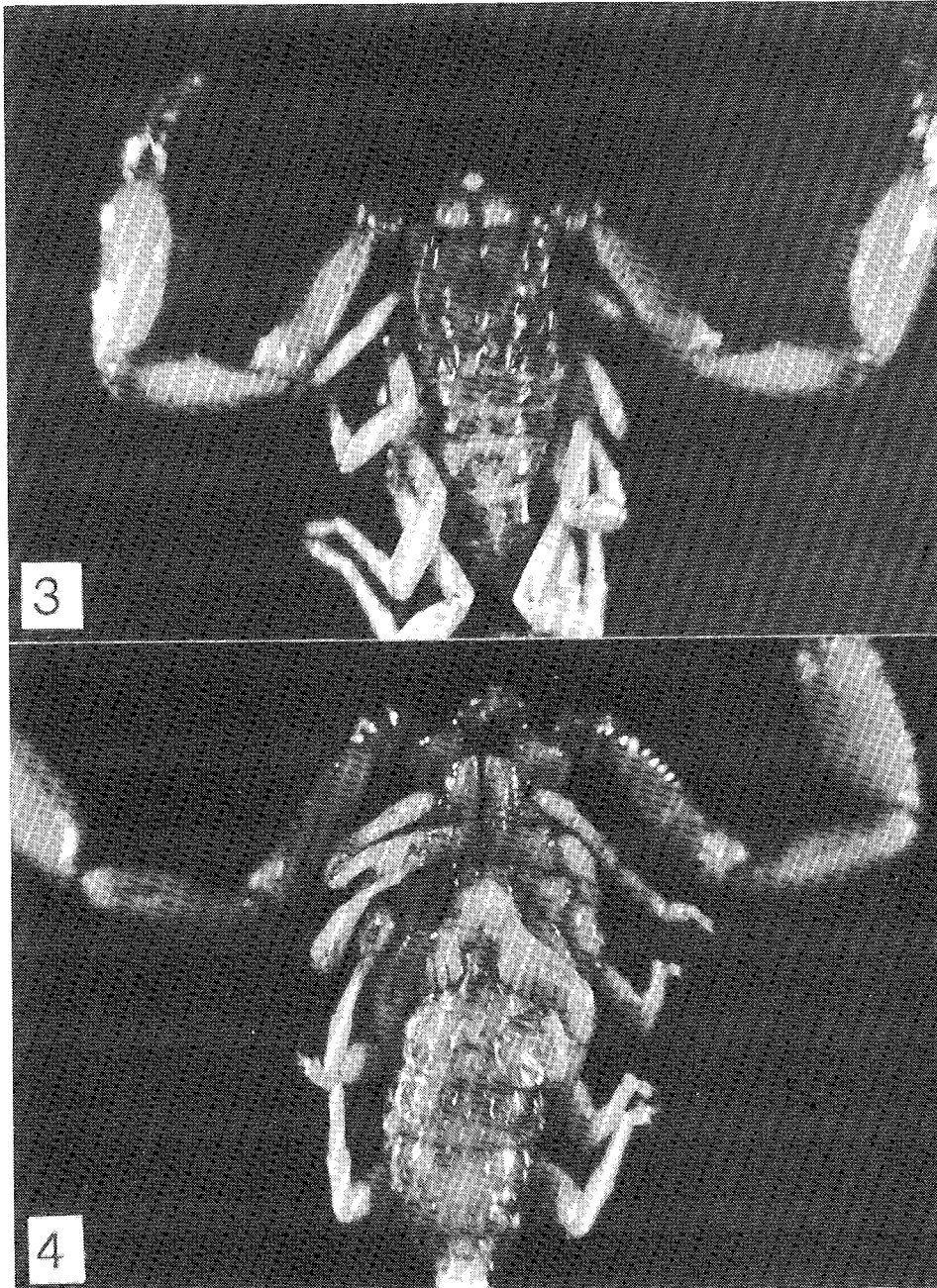
Figs. 1 and 2. *Chactas bonito* sp. nov., male holotype, dorsal and ventral aspects.

**Paratypes** (as indicated by Francke & Stockwell, 1987). PANAMÁ: EL VALLE, I.1947 (N.L.H. Krauss) (two females); PORTO BELLO, II.1911 (A. Busck) (one female), 14.III.1911 (A. Busck) (one juvenile) deposited in the United States National Museum, Smithsonian Institution, Washington. COSTA RICA: PROV. LIMÓN, Hamburg Farm, no date (C.R. Dodge) (one female) deposited in the Museum of Comparative Zoology, Harvard.

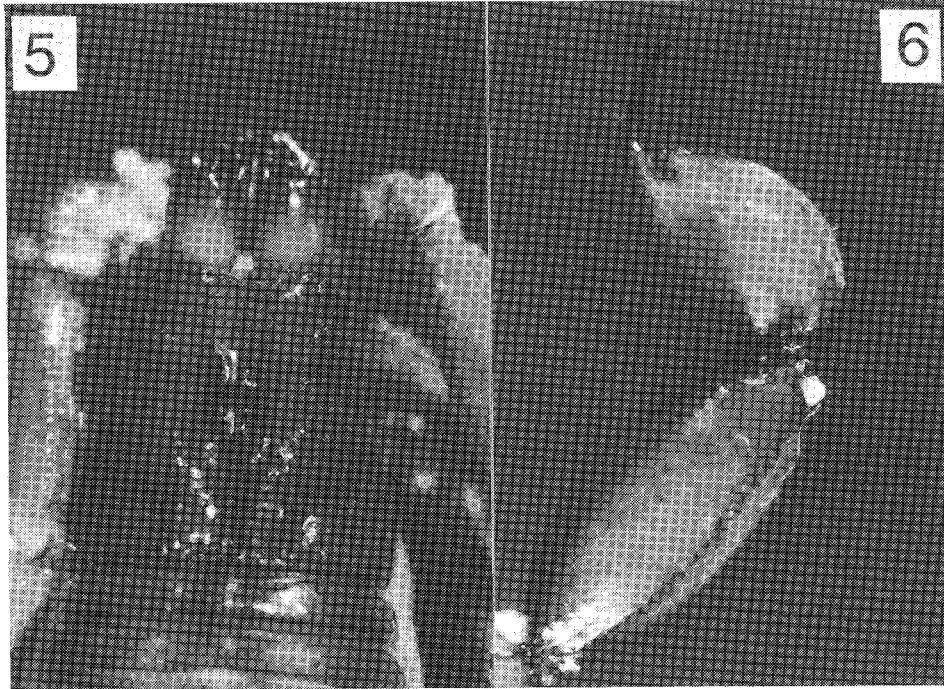
**Etymology.** The name *bonito*, means beautiful in Spanish, is placed in apposition to the generic name. This name was proposed by Francke & Stockwell (in litt.), but was never published. I retain the same name at present.

**Diagnosis.** *Chactas bonito* sp. nov., can be recognized from all the other species of *Chactas* (mainly distributed in Colombia), by its clear coloration which is basically yellowish to yellow-reddish, whereas the other species are brownish to blackish-brown (Lourenço, 1997). Description based on male holotype. Measurements in table 1.

**Color.** Basically yellow-reddish with some diffuse variegated fuscous colour. Carapace yellow. Tergites yellow fuscous and distinctly variegated. Metasomal segments reddish yellow; vesicule yellow. Chelicerae yellow; base with diffuse variegated fuscous colour; fingers uniformly dense fuscous colour. Pedipalps reddish yellow; fingers densely red. Venter and sternites yellowish.

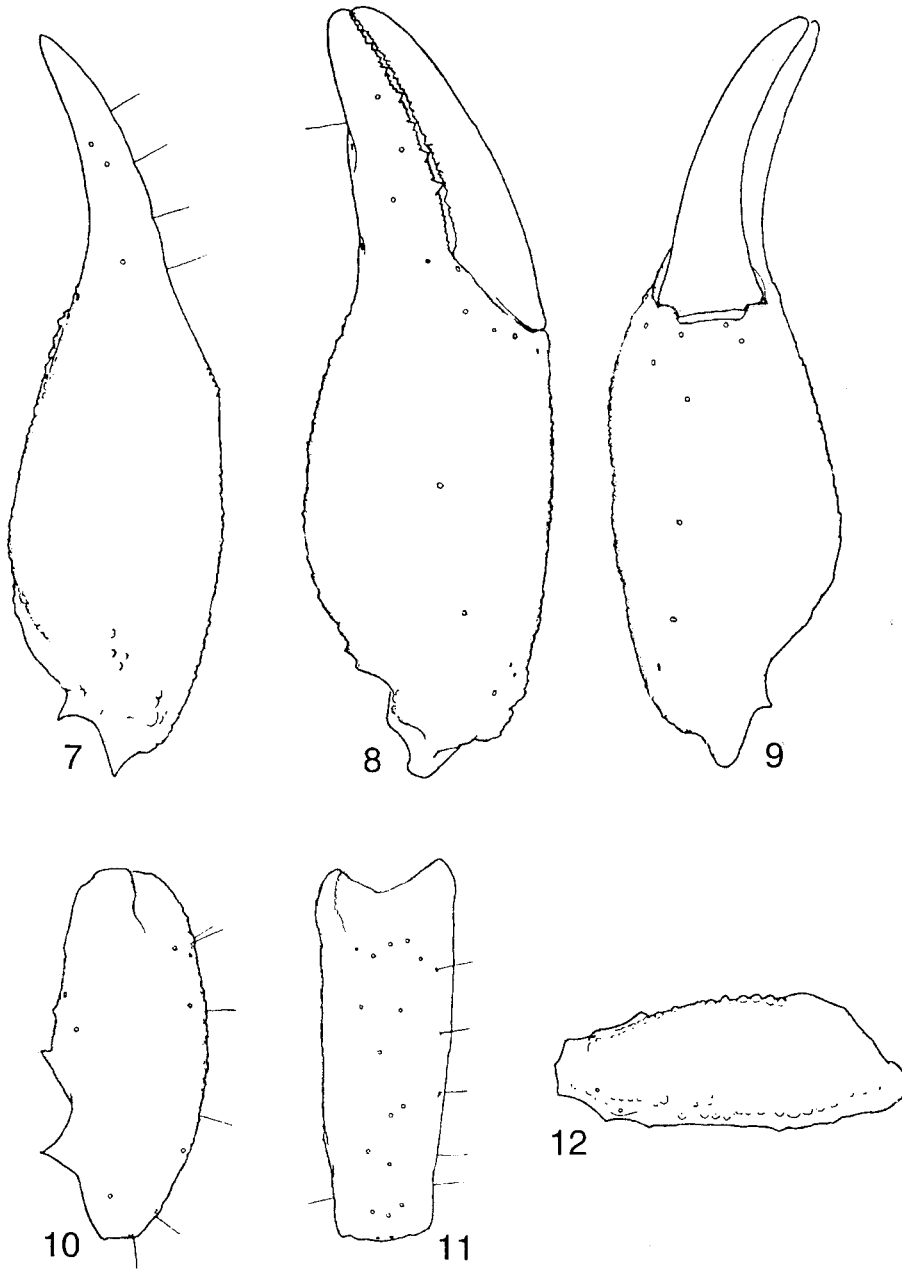


Figs. 3 and 4. *Chactas bonito* sp. nov. 3. Chelicerae, carapace and tergites. 4. Sternum, genital operculum and pectines.



Figs. 5 and 6. *Chactas bonito* sp. nov. 5. Carapace in detail. 6. Metasomal segment V and telson, lateral aspect.

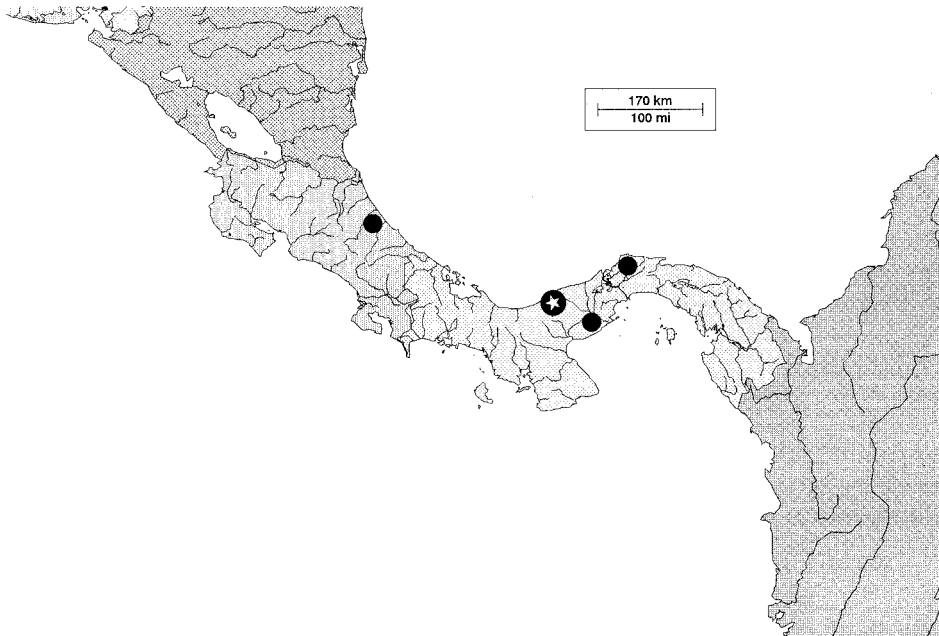
**Morphology.** Carapace lustrous and acarinate, furrows shallow; laterally with moderately dense, minute granulation. Sternum pentagonal, wider than long. Tergites acarinate, smooth and shiny with sparse small granulations postero-laterally, except for VII. Pectinal tooth count 7-7. Sternites smooth and shiny, VII acarinate. Metasomal segments IV and V longer than wide, smooth and shiny; segment V with dense, small granulation ventrally. All keels in segments I-IV weak or absent. Segment V with ventral lateral and ventral median keels weak, granulose. Pedipalps: femur with dorsal internal, dorsal external and ventral internal keels strong, tuberculate; ventral external keel vestigial; dorsal and ventral faces without granulation; internal face median granulose. Tibia smooth, lustrous; dorsal internal, ventral internal, ventral external and external keels weak; other keels vestigial. Chelae lustrous; dorsal marginal, external secondary, and ventro-internal keels vestigial; ventral median keel strong; other keels vestigial to absent, smooth. Chelicerae typical of the family Chactidae. Trichobothriotaxy type C; neobothriotaxic. Measurements (Table 1). Pectinal tooth count in female paratypes 5 to 6.



Figs. 7-12. *Chactas bonito* sp. nov. Female paratype. Trichobothrial pattern. 7-9. Chela, dorsal, external and ventral aspects. 10 and 11. Tibia, dorsal and external aspects. 12. Femur, dorsal aspect.

**Table 1.** Measurements (in mm) of the male holotype of *Chactas bonito* sp. nov.

Carapace:		
	length	4.9
	anterior width	3.5
	posterior width	5.2
Metasoma, segment I		
	length	2.3
	width	2.0
Metasoma, segment V		
	length	4.9
	width	1.7
	depth	1.9
Vesicle:		
	width	1.7
	depth	1.5
	Femur, length	5.5
	Tibia, length	6.3
Chelae:		
	length	10.9
	width	2.9
	depth	2.4
Movable finger:		
	length	4.8

Fig. 13. Localities of holotype and paratypes of *Chactas bonito* n. sp. ★ Holotype. ● Paratypes.

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