

2645

289a

NATURHIST. MUSEUM WIEN  
ENTOMOLOGISCHE MITTEILUNGEN  
aus dem  
Zoologischen Museum Hamburg

HERAUSGEBER: PROF. DR. H. STRÜMPPEL, DR. G. RACK,  
DR. H. DASTYCH, PROF. DR. R. ABRAHAM  
SCHRIFTFÜHRUNG: DR. H. DASTYCH

ISSN 0044-5223

Hamburg

14. Band

1. Juni 2004

Nr. 169

A new species of *Compsobuthus* Vachon, 1949  
from India (Scorpiones, Buthidae)

WILSON R. LOURENÇO

(With 9 figures)

**Abstract**

A new species of buthid scorpion belonging to the genus *Compsobuthus* Vachon, 1949 (*C. andresi* sp. n.) is described on the basis of two specimens collected at northeast of Jaunpur, northeastern region of India. From the absence of outer denticles on the movable finger of the pedipalps, the new species can be placed in the *acutecarinatus*-group.

**Key words:** Scorpiones, taxonomy, *Compsobuthus andresi* sp. n., description, India

**Introduction**

During the preparation of his monographic work on the scorpions of North Africa, Vachon published a large number of preliminary papers which were subsequently condensed into a single monographic work (Vachon 1952). In some of them, Vachon (1949) revised the relationships between several species included in the genus *Buthus* (Leach, 1815), and proposed a number of different genera, including *Compsobuthus*, for the species associated with *Buthus acutecarinatus* (Simon, 1882). In the following years, other species were included in the new genus and the first detailed synthesis was proposed by Vachon (1952).

The exact composition of the genus *Compsobuthus* remains uncertain at present. Sissom (1990) indicated 12 species should be included in the genus, with a geographic distribution ranging from northern Africa to the Middle East and India. Sissom (1994) also revised the taxonomic positions of *C. acutecarinatus*, *C. brevimanus* (Werner, 1936), *C. weneri weneri* (Birula, 1908), and described a new species, *C. vachoni*. In addition, he discussed an unnamed subspecies of *C. weneri*, thereby attesting to the problematical status of species and subspecies within the genus.

In the Catalog of the Scorpions of the World, Fet & Lowe (2000) listed 15 congeneric species, one of them with two subspecies. Most authors agree that the taxonomy of the genus *Compsobuthus* remains confused and poorly studied (Sissom 1994, Fet & Lowe 2000), even though the status of some species has recently been clarified (Sissom 1994, Sissom & Fet 1998, Lourenço & Monod 1998).

Two new species of *Compsobuthus* from Morocco and Niger have been described by Lourenço (1999), one from Oman (Lowe 2001), one from Iran (Lourenço & Vachon 2001) and one from Afghanistan (Lourenço 2001).

Examination of two scorpions collected in North-eastern region of India reveals a new species of *Compsobuthus*. This is described in the present paper.

### Description

#### *Compsobuthus andresi* sp. n.

(Figs 1-7)

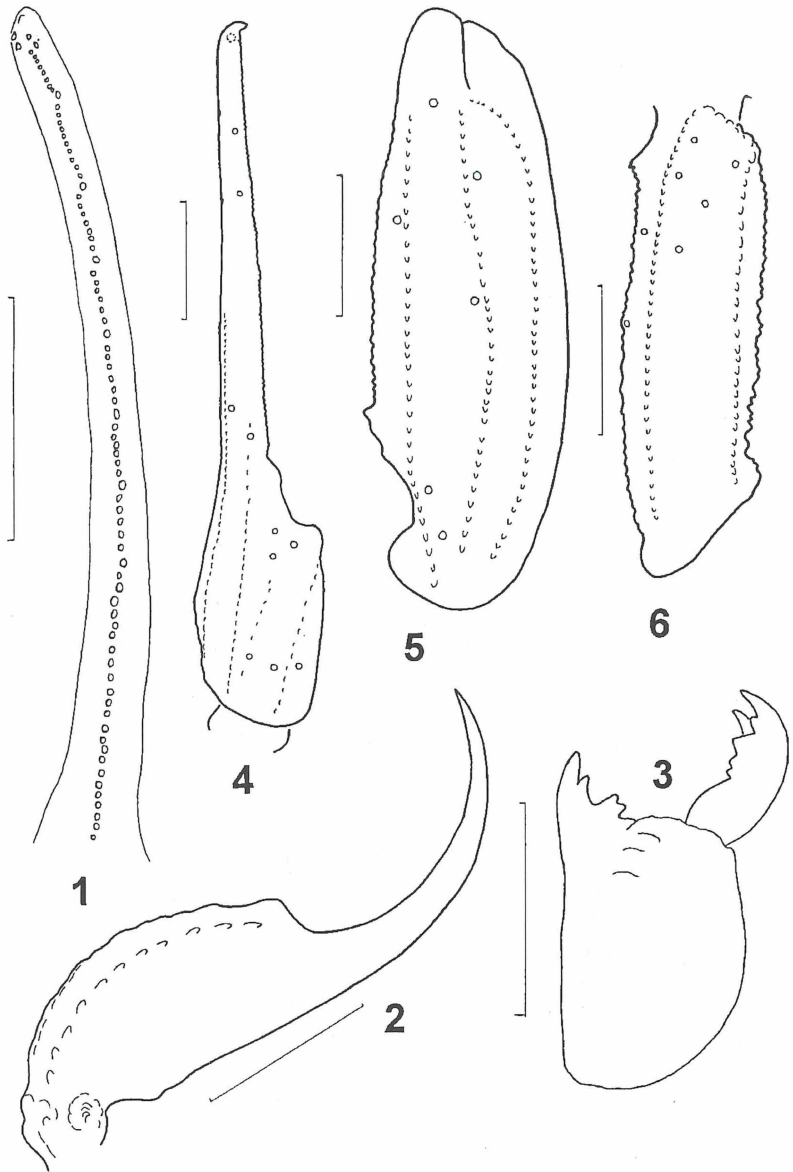
TYPE MATERIAL: holotype (♂) and paratype (♀). India, NE of Jaunpur, May 1962, coll. A. Anderson. Deposited in the Zoologisches Museum Hamburg [ZMH Acc. No. A5/04 (holotypus), A6/04 (paratypus)].

ETYMOLOGY: In honor of Dr. Andrés Ojanguren, Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina, for his contribution to the study of scorpions.

DIAGNOSIS. Small to medium sized scorpions, generally pale yellow except for the metasoma which is reddish; spots and pigmented zones on the body and its appendages are absent. Accessory denticles on the movable finger of the pedipalps are also absent. Pectinal tooth count 22-22. Chelicera with two reduced denticles at the base of the ventral aspect of the movable finger. Dentate margins on movable and fixed fingers of chela composed of 9/10 linear rows of poorly distinct granules. Telson with the aculeus longer than the vesicle.

Description (based on male holotype and female paratype; morphometric measurements in Table I).

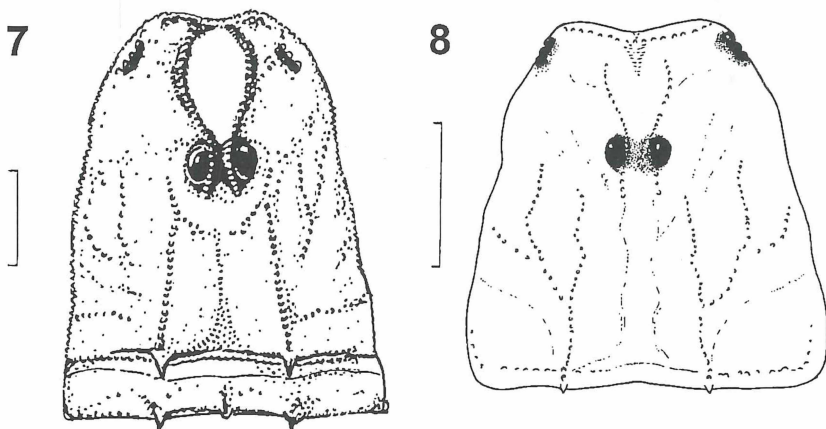
Coloration. Generally pale yellow, excepted the metasoma which is reddish; without any spots or pigmented zones on the body and appendages.



**Figs 1-6.** *Compsobuthus andresi* sp. n.: holotype ♂, 1 - disposition of the granulations over the dentate margins of the movable finger of the pedipalp-chela; 2 - telson, lateral aspect; 3 - chelicera, dorsal aspect; 4-6, trichobothrial pattern: 4 - chela, dorso-external aspect; 5 - Patella, dorsal aspect; 6 - femur, dorsal aspect (Scale bar = 1 mm).

Prosoma: carapace yellowish; only the eyes surrounded by black pigment. Mesosoma: yellowish. Metasoma: segments I-II reddish-yellow; III-V reddish, more intensely marked in the female. Vesicle reddish-yellow; aculeus reddish-yellow at the base and reddish at its extremity. Venter pale yellow. Chelicerae yellowish; teeth light reddish. Pedipalps: yellowish overall; rows of granules on the dentate margins of the fingers very lightly reddish. Legs yellowish.

**MORPHOLOGY.** *Prosoma*: Anterior margin of carapace moderately emarginate. Carapace carinae moderately to strongly developed; central median and posterior median carinae moderate to strong; anterior median carinae moderate; central lateral and central median carinae moderate to weak; posterior median carinae terminating distally in a small spinoid process that extends slightly beyond the posterior margin of the carapace. Intercarinal spaces somewhat moderately granular laterally; weakly granular centrally. Median ocular tubercle slightly anterior to the center of the carapace; median eyes separated by slightly more than one ocular diameter. Three pairs of lateral eyes. *Mesosoma*: Tergites I-VI tricarinate. Lateral carinae on I-VI moderate to strong, granular; each carina terminating distally with a spinoid process that extends slightly beyond the posterior margin of tergite. Median carinae on tergites I-VI moderate, crenulated; terminating distally on each segment with a spinoid process that extends slightly beyond the posterior margin of the tergite. Tergite VII pentacarinate, with lateral pairs of carinae moderate to strong; median carinae present on proximal half, moderate. Intercarinal spaces weakly granular. Sternites: Lateral carinae absent from sternite III-IV; weak on sternite V; moderate on VI, strongly crenulated on VII. Submedian carinae absent on sternites III-VI; moderate on VI; strong on VII. Pectines moderately long; pectinal tooth count 22-22 on both male and female.



Figs 7-8. *Compsobuthus andresi* sp. n.: holotype ♂, 7 - carapace and tergite I, dorsal aspect; *C. tofti* Lourenço, holotype ♂, 8 - carapace (Scale bar = 1 mm).

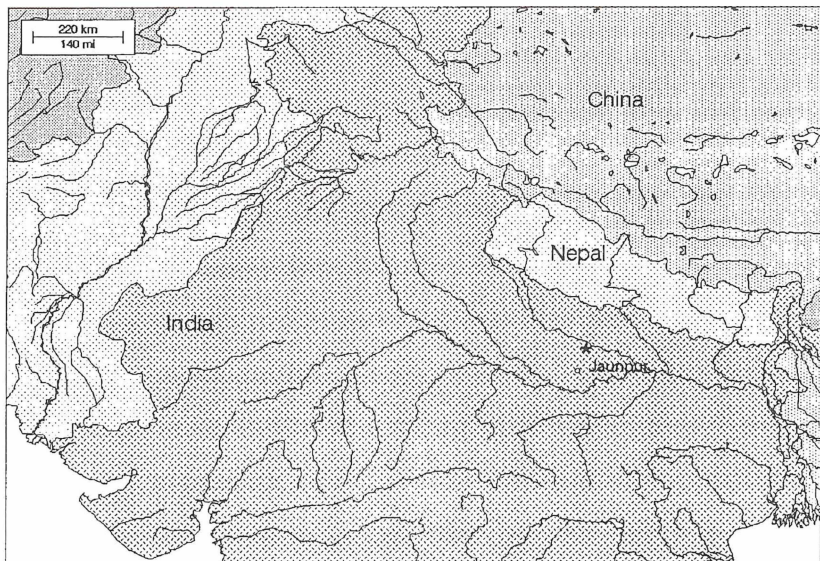


Fig. 9. The type locality (asterisk) of *Compsobuthus andresi* sp. n.

**Metasoma:** Segments I-III with 10 carinae, crenulated; IV with 8 carinae. Dorsolateral carinae moderate to strong, terminating distally with one slightly spinoid denticle. Ventral submedian carinae moderate on segments I-IV. Segment V with 5 carinae; ventromedian carinae moderate to strong. Dorsal furrows of all segments weakly developed; intercarinal spaces moderately to weakly granular. Telson weakly granular with three ventral carinae. Subaculear tubercle weak. Chelicerae: With two very reduced denticles at the base of the movable finger (Vachon 1963). **Pedipalps:** Trichobothrial pattern orthobothriotaxic, type A (Vachon 1974); dorsal trichobothria of femur in beta configuration (Vachon 1975). Femur pentacarinat; all carinae moderately crenulated. Patella with 8 moderate carinae; dorsointernal carinae with one slightly spinoid granule. Chela slender, with elongated fingers; all carinae weakly granular. Dentate margins on movable and fixed fingers composed of 9/10 linear rows of granules. Legs: Ventral aspect of tarsi with two rows of setae. Tibial spurs present on legs III-IV but reduced. Pedal spurs present, moderate on all legs.

**RELATIONSHIPS:** Within the genus *Compsobuthus*, the new species is allied to *C. tofti* Lourenço, 2001. It can, however, be distinguished from this last species by the following characters:

- carapace with stronger carinae,
- presence of submedian carinae on sternite VI,
- metasomal segment III with 10 carinae,
- tibial spurs present on legs III-IV.

Table I. Morphometric values (in mm) of the male holotype and female paratype of *Compsobuthus andresi* sp. n. and the male holotype of *C. tofti* Lourenço.

	<i>C. andresi</i> sp. n.		<i>C. tofti</i>
	holotype ♂	paratype ♀	holotype ♂
Total length	31.1	32.9	17.6
Carapace:			
- length	3.7	4.0	2.4
- anterior width	2.0	2.3	1.4
- posterior width	3.4	4.1	2.4
Metasomal segment I:			
- length	2.5	2.8	1.5
- width	1.9	2.2	1.3
Metasomal segment V:			
- length	4.4	4.8	2.6
- width	1.5	1.5	0.9
- depth	1.5	1.6	0.9
Vesicle:			
- width	1.0	1.2	0.8
- depth	0.9	1.1	0.7
Pedipalp:			
- Femur length	3.2	3.5	2.2
- Femur width	0.9	1.0	0.7
- Patella length	4.2	4.4	2.8
- Patella width	1.4	1.6	0.9
- Chela length	6.1	6.7	4.7
- Chela width	1.1	1.3	0.8
- Chela depth	0.9	1.1	0.6
Movable finger:			
- length	4.5	4.9	3.3

### Acknowledgements

I am very grateful to Prof. John L. Cloudsley-Thompson, London, for reviewing the manuscript.

### References

- Fet, V. & Lowe, G. 2000: Family Buthidae C. L. Koch, 1837. - In: V. Fet, W.D. Sissom, G. Lowe & M.E. Braunwalder (eds.). Catalog of the scorpions of the world (1758-1998). The New York Entomol. Soc., pp. 54-286. New York.
- Lourenço, W. R. 1999: Two new species of *Compsobuthus* Vachon (Scorpiones, Buthidae) from Africa. - Entomol. Mitt. zool. Mus. Hamburg, 13 (160): 85-94. Hamburg.

- Lourenço, W. R., 2001: A new species of *Compsobuthus* Vachon, 1949 from Afghanistan (Scorpiones, Buthidae). - Entomol. Mitt. zool. Mus. Hamburg, **13** (164): 315-319. Hamburg.
- Lourenço, W. R. & Monod, L. 1998: Redescription of *Compsobuthus rugosulus* (Pocock, 1900) (Scorpiones, Buthidae) based on specimens from Pakistan. - Rev. suisse Zool., **105** (4): 789-796. Geneva.
- Lourenço, W. R. & Vachon, M. 2001: A new species of *Compsobuthus* Vachon from Iran (Scorpiones, Buthidae). - Pp. 179-182, In: V. Fet & P.A. Selden (Eds.), Scorpions 2001: In Memoriam Gary A. Polis, Br. Arachnol. Soc., Burnham Beeches, Bucks.
- Lowe, G., 2001: A new species of *Compsobuthus* Vachon, 1949 from central Oman (Scorpiones: Buthidae). - Pp. 171-177, In: V. Fet & P.A. Selden (Eds.), Scorpions 2001: In Memoriam Gary A. Polis, Br. Arachnol. Soc., Burnham Beeches, Bucks.
- Sissom, W. D. 1990: Systematics, biogeography, and paleontology. - In: G. A. Polis (ed.). The biology of scorpions. Stanford University Press, pp. 64-160. Stanford.
- Sissom, W. D. 1994: Description of new and poorly known scorpions of Yemen (Scorpiones: Buthidae, Diplocentridae, Scorpionidae). - Fauna of Saudi Arabia, **14**: 3-39. Riyadh.
- Sissom, W. D. & Fet, V. 1998: Redescription of *Compsobuthus matthiesseni* (Scorpiones, Buthidae) from Southwestern Asia. - J. Arachnol., **26**: 1-8. Denver.
- Vachon, M. 1949: Etudes sur les scorpions. - Archives de L'Institut Pasteur d'Algérie, **27** (1): 66-100. Alger.
- Vachon, M. 1952: Etudes sur les scorpions. - Publications de l'Institut Pasteur d'Algérie, 482 pp. Alger.
- Vachon, M. 1963: De l'utilité, en systématique, d'une nomenclature des dents des chélicères chez les Scorpions. - Bull. Mus. natn. Hist. nat., Paris 2è sér. **35** (2): 161-166. Paris.
- Vachon, M. 1974: Etude des caractères utilisés pour classer les familles et les genres de Scorpions (Arachnides). 1. La trichobothriotaxie en arachnologie. Sigles trichobothriaux et types de trichobothriotaxie chez les Scorpions. - Bull. Mus. natn. Hist. nat., Paris, 3è sér., n° 140, Zool. **104**: 857-958. Paris.
- Vachon, M. 1975: Sur l'utilisation de la trichobothriotaxie du bras des pédipalpes des Scorpions (Arachnides) dans le classement des genres de la famille des Buthidae Simon. - C. R. séan. Acad. sc., Paris, sér. D, **281**: 1597-1599. Paris.

## Author's address:

DR. W. R. LOURENÇO, Département de Systématique et Evolution, Section Arthropodes (Arachnologie), Muséum National d'Histoire Naturelle, 61 rue de Buffon, 75005 Paris, France (e-mail: arachne@mnhn.fr).

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Entomologische Mitteilungen aus dem Zoologischen Museum Hamburg](#)

Jahr/Year: 2007

Band/Volume: [14](#)

Autor(en)/Author(s): Lourenco Wilson R.

Artikel/Article: [A new species of Compsobuthus Vachon 1949 from India \(Scorpiones, Buthidae\) 157-163](#)