

# The genus *Hottentotta* Birula, 1908, with the description of a new subgenus and species from India (Scorpiones, Buthidae)

WILSON R. LOURENÇO

(With 7 figures)

## A b s t r a c t

A new subgenus and species of scorpion, *Hottentotta* (*Deccanobuthus*) *geffardi* sp. n. (Buthidae), are described. The type specimen was collected in Kurduvadi, Deccan Province, India. This specimen had been examined previously by Vachon (pers. comm.), who suggested that it represented a new genus closely allied to *Buthotus* Vachon (= *Hottentotta* Birula). However, because the precise composition of *Hottentotta* remains unclear, only a subgenus is proposed at present for this new species.

## I n t r o d u c t i o n

In the mid-1940s, Vachon started some general studies on the scorpions of North of Africa (see Vachon 1952). One of his main preoccupations was to better define several groups within the family Buthidae, which lead to the division of the genus *Buthus* Leach, 1815 into about 10 different genera. One of the genera proposed by Vachon (1949) was *Buthotus*, which grouped the majority of the species previously assigned to the subgenus *Hottentotta* Birula, 1908 (see Vachon & Stockmann 1968). Kraepelin (1891) was the first to distinguish a "hottentotta group" (species-group) within *Buthus*. This mainly included species allied to *Buthus Hottentotta* (Fabricius, 1787). Birula (1908) created the subgenus *Hottentotta*, but Vachon (1949), without explanation, discarded both *Hottentotta* Birula, 1908 and *Dasy scorpio* Pallary, 1938 establishing a new name, *Buthotus*, instead. *Hottentotta* is, however, a valid senior synonym and was re-established by Francke (1985). The only other valid subgenus, besides the nominotypical *Hottentotta*, is *Balfouri anus*, which was created by Vachon (1979) for *Hottentotta socotrensis* (Pocock, 1889), a species endemic to the island of Socotra.

Vachon & Stockmann (1968) and Vachon & Kinzelbach (1987) suggested that the African, Saharo-Sindian and Indian lineages were different. In fact, several species considered as belonging to the Indian lineage are currently placed in the genus *Mesobuthus* Vachon, 1950, although their status remains uncertain, according to Fet et al. (2000). Because the precise composition of the genus *Hottentotta* remains unclear, only a new subgenus is proposed in this paper for the new species described below from India.

*Deccanobuthus* subgen. n.

**ETYMOLOGY:** The subgeneric name is an association between the name *Buthus* and the name of the region from where the scorpion originates.

**D i a g n o s i s:** Within the genus *Hottentotta* Birula, the new subgenus is allied to the subgenera *Hottentotta* Birula and *Balfourianus* Vachon. It can, however, be distinguished from these by the following characters: 1). the keels of the carapace are feeble; the anterior median being almost absent, 2). the dentition on the distal part of pedipalp-chela movable finger, presents four terminal denticles, 3). metasomal segment I with 12 keels; II to IV with 10 keels and V with 7 keels.

*Deccanobuthus* differs also from *Balfourianus* by its trichobothrial pattern, with trichobothria *dt* and *db* of the fixed finger being respectively distal to *et* and *est*.

Type species of the genus, *Hottentotta (Deccanobuthus) geffardi* n. sp., by present designation.

*Hottentotta (Deccanobuthus) geffardi* sp. n.  
(Figs 1-7)

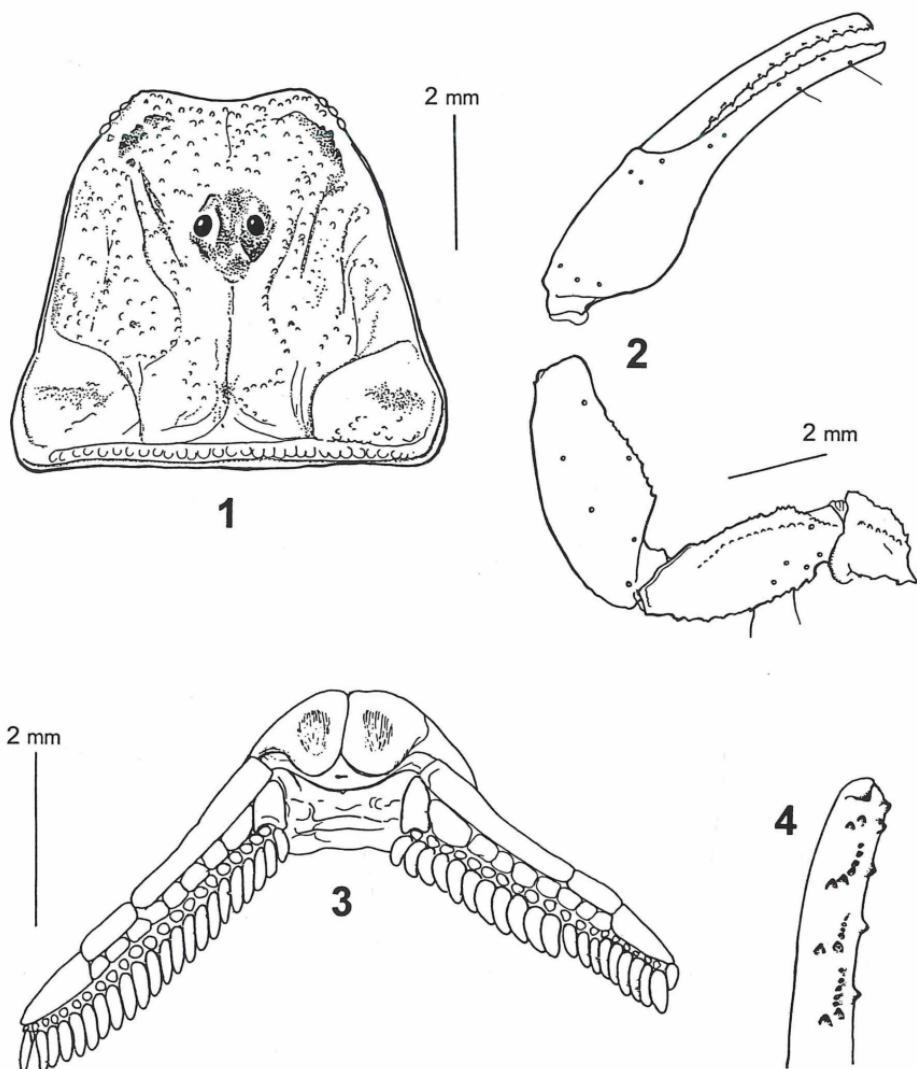
**TYPE MATERIAL:** Holotype female: India, Deccan Kurduvadi ( $18^{\circ} 05' N + 75^{\circ} 26' E$ ), July 1939 (K. Lindberg leg.). Deposited in the Zoologischen Museum Hamburg (ZMH A70/00).

**ETYMOLOGY:** Patronym in honor of M. Didier Geffard, Laboratoire de Zoologie (Arthropodes), Muséum National d'Histoire Naturelle, Paris.

**Description** (based on female holotype). Morphometric measurements are given below.

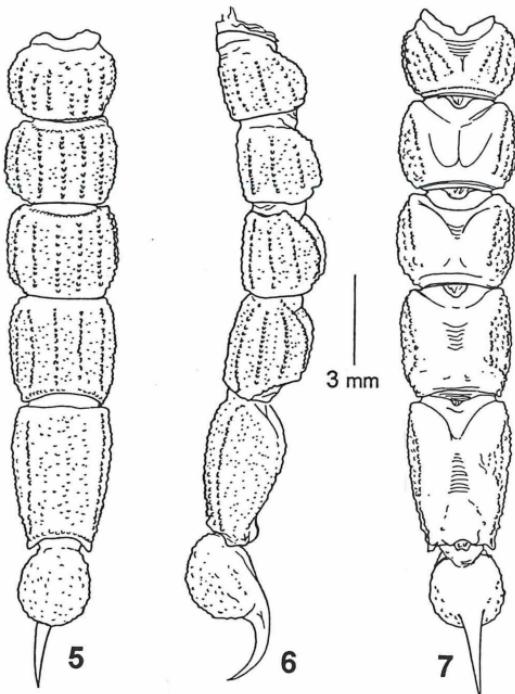
**C o l o r a t i o n.** Basically reddish-yellow. Prosoma: carapace yellowish; eyes surrounded by black pigment. Mesosoma: yellowish with very light gray confluent spots over tergites V to VII. Metasoma: segments I to V dorsally yellowish; ventrally and laterally reddish-yellow. Vesicle paler than segment V, yellowish; aculeus yellowish at the base and reddish on its extremity. Venter pale-yellow, except for sternite VII, reddish-yellow. Chelicerae yellowish with some pale-reddish variegated spots; fingers yellowish-red. Pedipalps: reddish-yellow; chelae fingers with the oblique rows of granules reddish. Legs yellowish without any diffuse fuscous spots.

**M o r p h o l o g y.** Carapace strongly granular; anterior margin with a feeble median concavity. Keels moderate; anterior median keels practically absent; central median and posterior median keels moderate to feebly granular. All furrows moderate to feeble. Median ocular tubercle anterior to the centre of carapace. Median eyes small, separated by two ocular diameters. Three pairs of lateral eyes very large when compared with the median eyes. Sternum subtriangular and wide at the base; longer than wide. Mesosoma: tergites moderately granular. Three longitudinal keels feebly crenulate in all tergites; lateral keels only vestigial in tergites I to VI. Tergite VII pentacarinate. Venter: genital operculum divided longitudinally. Pectines: pectinal tooth count 21-22; middle basal lamellae of the pectines not dilated. Sternites smooth with elongated



Figs 1-4. *Hottentotta (Deccanobuthus) geffardi* sp. n.: 1 - carapace; 2 - pedipalp, dorsal aspect with trichobothrial pattern; 3 - pectines and genital operculum; 4 - distal extremity of movable fingers with typical granulation.

stigmata; four weak keels on sternite VII; other sternites without keels, with only two feeble furrows. Metasoma: Segment I with 12 crenulate keels; segments II to IV with 10 crenulate keels; segment V with 7 keels, crenulate; all segments with a smooth dorsal depression. Intercarinal spaces feebly granular. Telson smooth dorsally and granular latero-ventrally, with a short and curved aculeus; without subaculear tooth. Cheliceral dentition as defined by Vachon (1963) for the family Buthidae; the external distal tooth



Figs 5-7. *Hottentotta (Deccanobuthus) geffardi* sp. n.: metasoma in dorsal (5), lateral (6) and ventral (7) view.

is slightly shorter than the internal distal tooth, and the basal teeth practically fused together; ventral aspect of both fingers and manus covered with setae. Pedipalps: femur pentacarinate; tibia with only internal keels; chelae without keels; all faces feebly granular, almost smooth. Movable fingers with 11 oblique rows of granules. Internal and external accessory granules present and strong; distal extremity of movable fingers with 4 granules. Legs: tarsus ventrally with two longitudinal rows of 8/9 spines. Tibial spurs present on legs III and IV, and two *prolateral* spurs present in all legs. Trichobothriotaxy: Trichobothrial pattern of Type A, orthobothriotaxic as defined by Vachon (1973). Dorsal trichobothria of femur arranged in  $\beta$ -configuration (Vachon 1975).

**M e a s u r e m e n t s** (in mm): Carapace: length 5.5, anterior width 3.6, posterior width 6.3; Metasomal segment I: length 2.6, width 3.2; Metasomal segment V: length 5.1, width 3.6, depth 3.0; Vesicle: width 2.6; depth 2.6; Pedipalp: femur length 4.1, femur width 1.7, tibia length 5.5, tibia width 2.2, chela length 8.6, chela width 2.1, chela depth 2.0; movable finger: length 5.6.

#### A c k n o w l e d g e m e n t s

I am very grateful to Didier Geffard, Laboratoire de Zoologie (Arthropodes), M.N.H.N., Paris, for preparing the illustrations and to Prof. John L. Cloudsley-Thompson, London, for reviewing the manuscript.

### R e f e r e n c e s

- Birula, A. A., 1908: Ergebnisse der mit Subvention aus der Erbschaft Treiti unternommenen zoologischen Forschungsreise Dr. F. Werner's nach dem Anglo-Aegyptischen Sudan und Nord-Uganda. XIV. Skorpiones und Solifugae. - Sitzungsber. kaiser.-könig. Akad. Wissens., **117** (1): 121-152. Wien.
- Fet, V., Sissom, W. D., Lowe, G. & Braunwalder, M. E., 2000: Catalogue of the scorpions of the world (1758-1998). - New York Entomol. Society, 690 pp. New York.
- Francke, O. F., 1985: Conspectus Genericus Scorpionorum 1758-1982 (Arachnida: Scorpiones). - Occ. Papers Mus. Texas Tech. Univ., **98**: 1-32. Lubbock.
- Kraepelin, K., 1891: Revision der Skorpione. I. Die Familie der Androctonidae. - Jahrb. Hamburg. wissens. Anst., **8**: 1-144. Hamburg.
- Vachon, M., 1949: Etudes sur les Scorpions. III (suite). Description des Scorpions du Nord de l'Afrique. - Archives de l'Institut Pasteur d'Algérie, **27** (2): 134-169.
- Vachon, M., 1952: Etudes sur les scorpions. - Publ. Inst. Pasteur Algér., 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 2<sup>e</sup> sér., **35** (2): 161-166.
- Vachon, M., 1973: 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., 3<sup>e</sup> 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. Sci., sér. D, **281**: 1597-1599. Paris.
- Vachon, M., 1979: Notes on the types of scorpions in the British Museum (Natural History), London. *Buthus socotrensis* Pocock, 1889 (Family : Buthidae). - Bull. Brit. Mus. Nat. Hist. (Zool.), **36** (4): 233-237. London.
- Vachon, M. and R. Kinzelbach, 1987: On the taxonomy and distribution of the scorpions of the Middle East. - In : Krupp, F., Schneider, W., Kinzelbach, R. (Eds.), Proceedings of the Symposium on the Fauna and Zoogeography of the Middle East, Mainz, 1985. Beihefte zum tübinger Atlas des vorderen Orients, Reihe A (Naturwissenschaften), **28**: 91-103. Wiesbaden.
- Vachon, M. and R. Stockmann, 1968. Contribution à l'étude des scorpions africains appartenant au genre *Buthotus* Vachon, 1949 et étude de la variabilité. - Monit. Zool. Ital. (N.S.), **2** (Suppl.): 81-149. Firenze.

Author's address:

Dr. R. W. Lourenço, Laboratoire de Zoologie (Arthropodes), 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: 1999

Band/Volume: [13](#)

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

Artikel/Article: [The genus Hottentotta Birula, 1908, with the description of a new subgenus and species from India \(Scorpiones, Buthidae\) 191-195](#)