

***Hemibuthus kraepelini*, a junior synonym of *Hottentotta rugiscutis*  
(Scorpiones: Buthidae)**

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**Abstract.** *Hemibuthus kraepelini* Roewer, 1943, is junior synonym of *Hottentotta rugiscutis* (Pocock, 1897). The genus *Hemibuthus* Pocock, 1900 has the fixed finger of chelicera with only one ventral denticle, whereas the genus *Hottentotta* Birula, 1908 and examined types of *Hemibuthus kraepelini* have two ventral denticles. *Hemibuthus kraepelini* has the same number of granular rows on the movable finger of pedipalps (12), coloration, number of pectinal teeth, overall size, and other characters as *Hottentotta rugiscutis*. *H. rugiscutis* is here for the first time placed in the genus *Hottentotta*. This species has so far been placed in the genera *Buthus*, *Buthotus* or *Mesobuthus*. A key to the Indian species of the genus *Hottentotta* is provided.

**Taxonomy, new synonymy, key, Scorpiones, Buthidae, *Hemibuthus kraepelini*, *Hottentotta rugiscutis*, India**

**MATERIAL.** Designation of the basic trichobothrial pattern (alfa and beta configurations) is adopted from Sissom (1990).

***Hottentotta rugiscutis* (Pocock, 1897) comb. n.**

*Buthus rugiscutis* Pocock, 1897: 106; Kraepelin, 1899: 20; Pocock, 1900: 26; Takashima, 1945: 74.  
*Buthus (Buthus) rugiscutis*: Roewer, 1943: 206.  
*Buthotus rugiscutis*: Vachon & Stockmann, 1968: 91.  
*Buthus pachyurus rugiscutis*: Kraepelin, 1913: 130.  
*Buthus rugiscutis nigritus* Pocock, 1900: 27.  
*Buthus pachyurus nigritus*: Kraepelin, 1913: 130.  
*Mesobuthus rugiscutis*: Tikader & Bastawade, 1983: 229.  
*Hemibuthus kraepelini* Roewer, 1943: 213. **Syn. n.**

**TYPE LOCALITY.** Mahableshwar Tal, Satara, s. Dekhan, India.

**MATERIAL.** India, Dekan, Nilgiris, 1 female (hereby designated the lectotype of *Hemibuthus kraepelini*) and 2 males (hereby designated the paralectotypes Nos 1–2 of *Hemibuthus kraepelini*) No. 8880/222 in Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main, Germany.

**DIAGNOSIS.** The basic trichobothrial pattern is beta (Sissom 1990: 70, fig. 3.3); the third and fourth legs have well developed tibial spurs; the pectines bear fulcra (Sissom 1990: 92, fig. 3.17D); the dentate margin of pedipalp-chela movable finger bears distinct granules divided into 12 rows; the entire dorsal surface of the carapace is nearly horizontal in lateral view; the cheliceral fixed finger has two ventral denticles; the second metasomal segment is similar in width to other metasomal segments; the tergites of mesosoma bear three carinae; the carapace bears distinct carinae including central lateral carinae; the trichobothrium *eb* is clearly on the fixed finger of pedipalps; the movable finger of pedipalps bears four principal distal granules and one terminal granule; the first

and second tarsomeres bear paired ventral spines; and the ventrolateral carinae of the fifth metasomal segment have all granules more or less equal in size and never lobate.

*Hottentotta rugiscutis* is also characterized by yellowish-brown body, pale-yellow legs, total length not exceeding 45 mm, and 20–26 pectinal teeth. Other characters are given in the description of *Hottentotta rugiscutis* (Pocock, 1897: 106).

COMMENTS. Pocock (1897) described *Hottentotta rugiscutis* as *Buthus rugiscutis* from a male and female, which are deposited in the British Museum (Natural History), London, England. In 1900 he further described the subspecies *Buthus rugiscutis nigritus* from one female, also deposited in the British Museum. I refrain from comments on subspecific taxonomy, as they would require more specimens.

Roewer (1943) described *Hemibuthus kraepelini* from one female and two males without selecting one of them as the holotype, without mentioning characters that would justify placing the species in the genus *Hemibuthus*, and differentiating it only from the type species *Hemibuthus crassimanus* (Roewer, 1943: 216).

An enclosed label indicates that the types of *Hemibuthus kraepelini* were examined in 1960 by Max Vachon, who regarded them as *Buthotus kraepelini*, but never mentioned them in print, not even in the revision of the genus *Buthotus* (Vachon & Stockmann, 1968). The genus *Buthotus* Vachon, 1949, is a junior synonym of *Hottentotta* Birula, 1908 (see Fet, 1988: 81).

AFFINITIES. *Hemibuthus* is most closely related to *Hottentotta*. The genus *Hemibuthus* is characterized by only one ventral denticle on the cheliceral fixed finger, whereas *Hottentotta* has two ventral denticles (Sissom, 1990: 97–100).

The four species of the genus *Hottentotta* occurring in India may be differentiated as follows:

1. Pectinal teeth number 26–38. Total length of adult 60–80 mm. .... *Hottentotta tamulus* (Fabricius, 1798)
- Pectinal teeth number 20–26. Total length of adult 38–50 mm. .... 2
2. Total length of adult 45–50 mm. Movable finger of pedipalps long, with 13–15 rows of granules. ....  
..... *Hottentotta hendersoni* (Pocock, 1900)
- Total length of adult not more than 45 mm. Movable finger of pedipalps short, with 12 rows of granules. ... 3
3. Color yellowish-brown. Legs pale yellow, never dark. .... *Hottentotta rugiscutis* (Pocock, 1897)
- Color dark blackish-green. .... *Hottentotta pachyurus* (Pocock, 1897)

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#### REFERENCES

- FET V. YA. 1988: A catalogue of scorpions (Chelicerata: Scorpiones) of the USSR. *Riv. Mus. Sci. Natur. E. Caffi Bergamo* 13: 73–171.
- KRAEPELIN K. 1899: *Das Tierreich. 8. Lieferung. Scorpiones und Pedipalpi*. Berlin: Verlag von R. Friedländer und Sohn. 265 pp.
- KRAEPELIN K. 1913: Neue Beiträge zur Systematik der Gliederspinnen. III. A. bemerkungen zur Skorpionenfauna Indiens. B. Die Skorpione, Pedipalpen und Solifugen Deutsch-Ostafrikas. *Jahrb. Hamburg. Wiss. Anstalten* 30: 123–196.
- POCOCK R. I. 1897: Descriptions of some new species of scorpions from India. *J. Bombay Natur. Hist. Soc.* 11: 102–117.
- POCOCK R. I. 1900: *The fauna of British India, including Ceylon and Burma. Arachnida*. London: Taylor and Francis, 279 pp.
- ROEWER C. F. 1943: Über eine neuerworbene Sammlung von Skorpionen des Natur-Museums Senckenberg. *Senckenberg. Biol.* 26: 205–244.

- SISSOM W. D. 1990: Systematics, Biogeography and Palaeontology. Pp. 64–160. In: POLIS G. A. (ed.): *The biology of Scorpions*. Stanford: Stanford University press, 587 pp.
- TAKASHIMA H. 1945: Scorpions of Eastern Asia. *Acta Arachnol. Tokyo* 9: 68–106.
- TIKADER B. K. & BASTAWADE D. B. 1983: Scorpions (Scorpionida: Arachnida). In: *The Fauna of India, Vol. 3*. (Edited by the Director). Calcutta: Zool. Survey of India, 671pp.
- VACHON M. & STOCKMANN R. 1968. Contribution à l'étude des Scorpions Africains appartenant au Genre *Buthotus* Vachon 1949 et étude de la variabilité. *Monitore Zool. Ital. Firenze* 1968 (2. suppl.): 81–149.