

On some scorpions from Malay Peninsula, with the description of a new subspecies of *Lychas* C. L. Koch, 1845 (Scorpiones, Buthidae)

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(with 11 figures)

Abstract

In this note a new subspecies of *Lychas* is described from the cave of Gua Kala Jengking in Malaysia. This is the second element of the genus to be confirmed from the peninsula. Two other species of scorpion, *Liocheles australasiae* (Fabricius, 1775) and *Heterometrus spinifer spinifer* (Ehrenberg, 1828) have also been recorded from the region.

Keywords: Scorpiones, taxonomy, new subspecies, *Lychas*, Malaysia.

Introduction

Although studies on the scorpions of the Malay peninsula began during the second half of the 19th Century (Pocock 1894, Simon 1901) and continued throughout the 20th Century (Kopstein 1937, Bristowe 1952), this region of the world remains poorly studied. I recently received a small collection of scorpions from the Malay Peninsula containing three specimens belonging to distinct families, genera and species. Two were collected in caves, and one of these belongs to the genus *Lychas* C. L. Koch, 1845. This last scorpion, although similar to *Lychas hosei* (Pocock, 1891), shows remarkable differences in its pattern of pigmentation. It is described here as a new subspecies.

Description of the new subspecies for *Lychas hosei* (Pocock, 1891)

Buthidae C. L. Koch, 1837

Lychas C. L. Koch, 1845

Lychas hosei cavernicola ssp. n.
(Figs 1-10)

TYPE MATERIAL: Holotype (♀): Malaysia, State of Perak, Gunung Lanno, 10 km S of Ipoh, Gua Kala Jengking cave, 16 November 2001, coll. J. Segl. Deposited in the Zoologisches Museum Hamburg, Germany (ZMH Acc. No. A30/07).

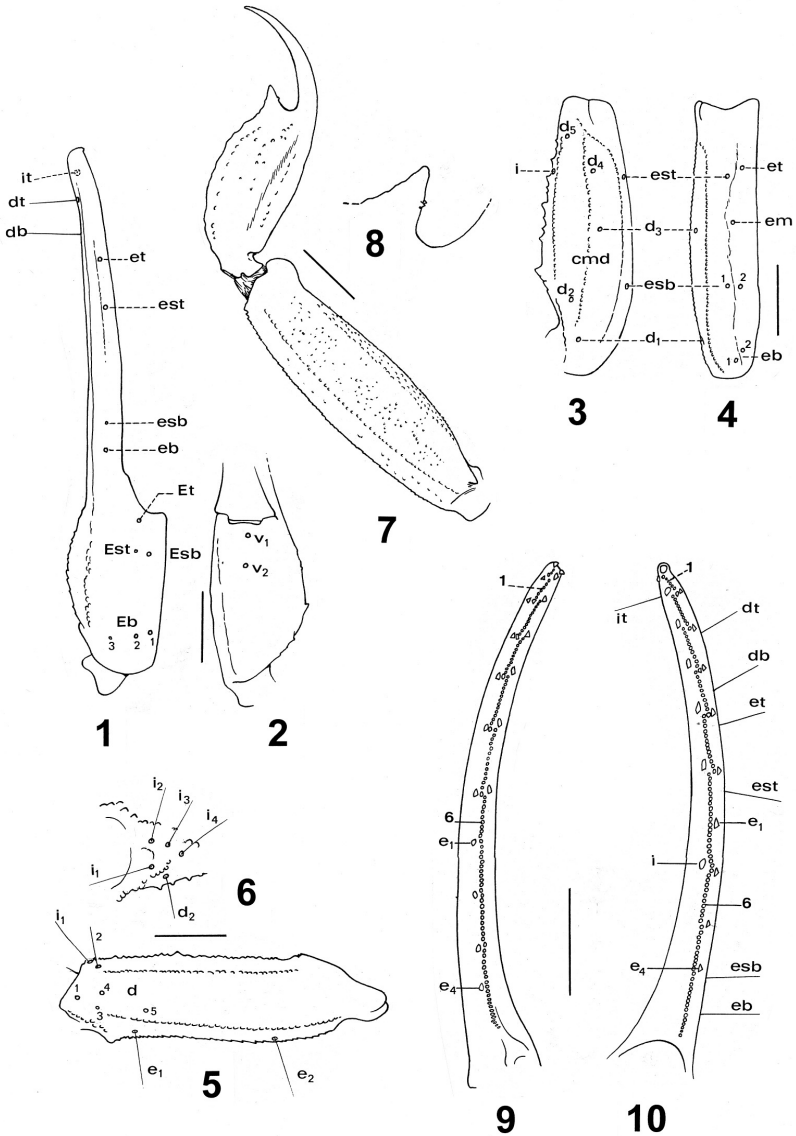
ETYMOLOGY: The subspecific name refers to the habitat where the new subspecies lives.

DIAGNOSIS: Scorpion of large size with respect to the genus, measuring 64.4 mm (female). General coloration yellowish to pale yellow with some diffused pigmentation over the body and legs; pedipalps without any pigmentation. Carinae and granulations moderately marked. Pectines long; pectinal tooth count 18-19 in the female. Dentate margins of fixed and movable fingers of pedipalp chela with 6-7 almost linear rows of granules. Subaculear tubercle strong and spinoid, with two small ventral granules.

DESCRIPTION (based on the female holotype. Measurements after the description).

Coloration. In general yellowish to pale yellow with diffused pigmentation over body and legs. Prosoma: carapace yellowish with several pigmented zones particularly on the anterior margin and central zone; eyes surrounded by black pigment. Mesosoma: tergites yellowish with several diffused spots forming approximately three longitudinal strips. Venter pale yellow, without spots. Metasoma: segments I to IV yellowish; ventral aspect with diffused dark spots; segment V dark everywhere. Vesicle yellowish; aculeus yellow at the base and reddish at its extremity. Chelicerae yellowish with brownish variegated spots on its entire surface; teeth dark reddish. Pedipalps: yellowish throughout without spots; rows of granules on dentate margins of the fingers dark reddish. Legs yellowish with very diffused brownish spots.

MORPHOLOGY. **P r o s o m a:** Anterior margin of carapace moderately to strongly emarginate. Carapace carinae moderate to weak; anterior median and posterior median carinae weakly developed. Intercarinal spaces moderately granular. Median ocular tubercle anterior to the centre of the carapace; median eyes separated by one ocular diameter. Three pairs of lateral eyes. **M e s o s o m a:** tergites I-VI with a median carina; obsolete on I, moderate on II-VI. Tergite VII pentacarinata, with lateral pairs of carinae moderate to strong; median carinae present in proximal half, moderately developed. Intercarinal spaces with thin but intense granulation; more intense than that of carapace. Sternites smooth; spiracles long; sternite VII with four carinae and some thin granulations. Pectines long; pectinal tooth count 18-19. **M e t a s o m a:** Segment I with 10 carinae, crenulate; II to IV with 8 carinae, crenulate. Segment V with five carinae; no posterior spinoid granules on the dorsal carinae of segments I-IV. Dorsal furrows of all segments weakly developed, smooth; intercarinal spaces weakly granular. Telson weakly granular, almost smooth, with one ventral carina; subaculear tubercle strong and spinoid, with two small granules on the ventral surface. **C h e l i c e r a e** with the dentition characteristic of the buthids (Vachon 1963); two moderate and well distinct basal teeth on movable finger. **P e d i p a l p s:** Femur pentacarinata; all carinae moderately crenulate. Patella with six carinae,



Figs 1-10. *Lychas hosei cavernicola* ssp. n. 1-2, chela, dorso-external and ventral aspects; 3-4, patella, dorsal and external aspects; 5-6, femur, dorsal and internal aspects; 7, metasomal segment V and telson, lateral aspect; 8, detail of the subaculear tooth; 9-10, disposition of granulations on the dentate margins of the pedipalp chela fixed and movable fingers (scale bars = 2 mm).

moderately crenulate; dorsointernal carinae with eight spinoid granules. Chela with vestigial carinae weakly crenulated, and three internal spinoid granules. Intercarinal spaces weakly granular. Dentate margins on movable and fixed fingers composed of 6-7 linear rows of granules. Trichobothrial pattern type *A*, orthobothriotaxic (Vachon 1974); dorsal trichobothria of femur in β (*beta*) configuration (Vachon 1975). Legs: ventral aspect of tarsi with a brush-like group of setae. Tibial spurs present on legs III-IV, moderately developed; pedal spurs present on all legs; reduced on legs I and II.

Morphometric values (in mm) of the female holotype of *Lychas hosei cavernicola* ssp. n. Total length 64.4. Carapace: length 7.9, anterior width 5.2, posterior width 8.0. Metasomal segment I: length 4.5, width 3.5. Metasomal segment V: length 9.0, width 2.8, depth 3.1. Vesicle: width 2.4, depth 2.5. Pedipalp: femur length 7.9, femur width 2.0, patella length 9.0, patella width 2.8, chela length 13.8, chela width 2.3, chela depth 2.2. Movable finger: length 9.8.

REMARKS: In its general morphology, the new subspecies is most closely related to *Lychas hosei* (Pocock, 1891), described from Baram in Borneo. It can, however, be distinguished from the latter taxon by a much paler general pigmentation of the body and appendages. *L. hosei* is uniformly blackish (see Pocock 1891, Vachon & Lourenço 1985). Moreover, both subspecies occupy quite distinct habitats.

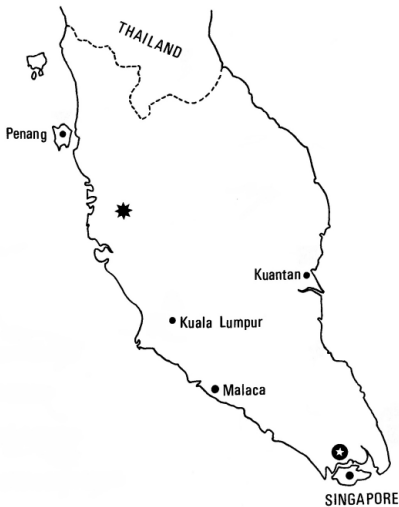


Fig. 11. Malaysian Peninsula, with the localities of the new subspecies and *L. australasiae* (F.) (black star) and *Heterometrus spinifer spinifer* (Ehrenberg) (black circle with white star).

Other species found

Family Liochelidae Fet & Bechly,
2001

Liacheles australasiae
(Fabricius, 1775)

Material: Juvenile: Malaysia, State of Perak, Gunung Lanno, 10 km South of Ipoh, Gua Puncak cave, 22 November 2001, (coll. L. Price). Deposited in the Zoologisches Museum Hamburg, Germany (ZMH Acc. No. A28/07).

Family Scorpionidae Latreille,
1802

Heterometrus spinifer spinifer
(Ehrenberg, 1828)

Material: Male: Malaysia, Gunong Pantii forest reserve, 12 August 1983, (coll. K. O. Yee) Deposited in the Zoologisches Museum Hamburg, Germany (ZMH Acc. No. A29/07).

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