

# A new genus and species of scorpion (Scorpiones, Buthidae) from Pakistan

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(With 5 figures)

## Abstract

Division of the genus *Orthochirus* Karsch, 1891 has been proposed in two earlier papers (Lourenço & Vachon 1995, 1997), in which two new genera, *Paraorthochirus* and *Afghanorthochirus*, were described. In the present paper, yet another new genus *Pakistanorthochirus* gen. n., and species *Pakistanorthochirus weitschati* sp. n., are described from the region of Karachi in Pakistan.

## Introduction

Since its creation, the genus *Orthochirus* Karsch, 1891 has been the subject of confusion. It was first considered by Kraepelin (1899) to be only a synonym to the genus *Butheolus* Simon, 1883, but was later reestablished by Simon (1910) as a valid genus.

Another point of confusion has been the precise composition of the species within the genus. A considerable number of species, subspecies and varieties have been described from the area of distribution of the genus, which is regarded as extending from Senegal to India (Vachon, 1952). For instance, Birula (1927) accepted only one clearly characterised species, *Orthochirus scrobiculosus* (Grube, 1873), along with a large number of subspecies, whereas Vachon (1952) accepted at least four species (Lourenço & Vachon 1995).

In recent papers, Vachon (1966, 1979) again demonstrated considerable hesitation as to the precise composition of the genus *Orthochirus*. In his publications of 1952 and 1979, he insisted on the need for a global revision of the entire group of species, and also suggested the possible need for division of the genus *Orthochirus* into distinct genera, but he did not arrive at any definitive conclusions.

In a previous publication (Lourenço & Vachon 1995), I took the decision to subdivide the genus *Orthochirus* by creating the new genus *Paraorthochirus* and describing two new species from the south of Iran. More recently (Lourenço & Vachon 1997) another genus, *Afghanorthochirus*, was created, along with the description of three new species from Afghanistan and Pakistan. A third species was also added to

the genus *Paraorthochirus* for Pakistan. In the present paper another new genus associated to the *Orthochirus* « complex » is described from the region of Karachi in Pakistan.

*Pakistanorthochirus* gen. n.

**D i a g n o s i s :** The new genus is associated with the genera *Orthochirus* Karsch, 1891, *Paraorthochirus* Lourenço & Vachon, 1995, *Afghanorthochirus* Lourenço & Vachon, 1997 and *Baloorthochirus* Kovarik, 1996. It can be, however, distinguished from them by the following features :

- The presence of 6 series of granules in the distal two thirds of the inner surface of the movable finger of the chelae, whereas in the basal third the granulation is not arranged in series, but presents a rather random distribution;
- The presence of four pairs of lateral eyes;
- Distal granules of the ventrolateral keels in the fifth segment of the metasoma with a lobed or lobate shape.

The trichobothrial pattern is *A-β*, neobothriotaxy; trichobothrium  $d_2$  of the femur being absent.

*Pakistanorthochirus weitschati* sp. n.  
(Figs 1-5)

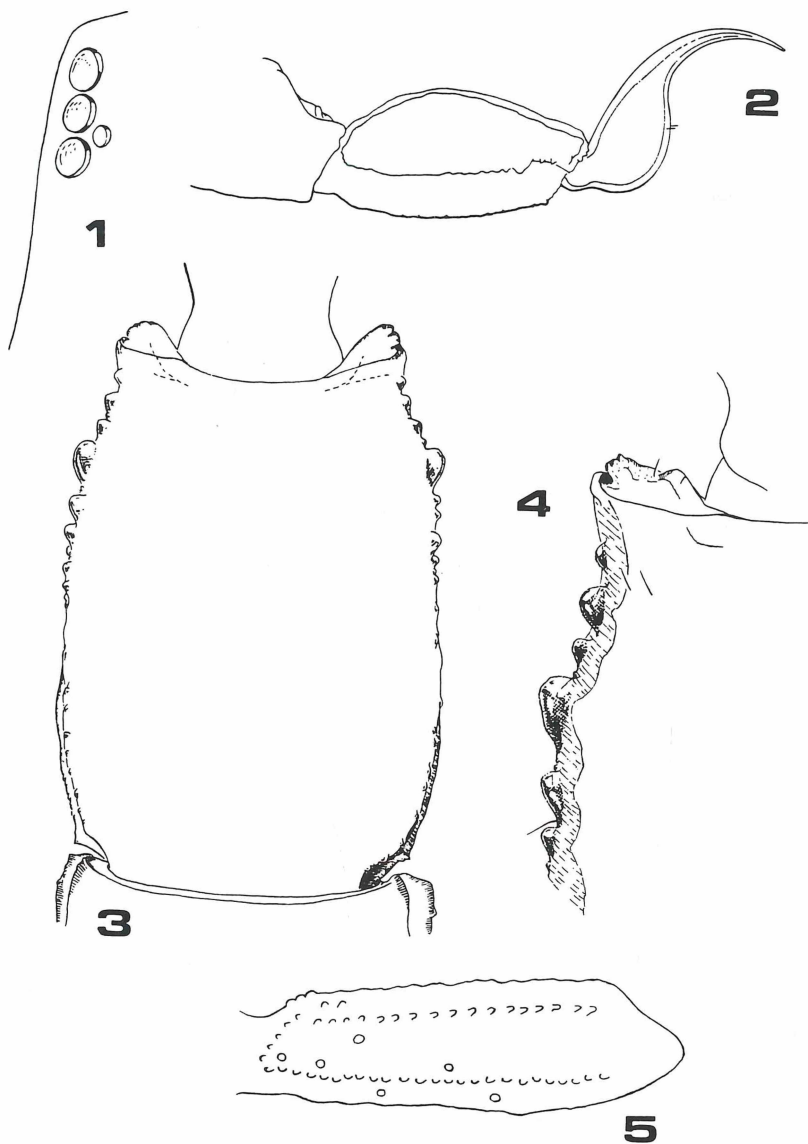
**HOLOTYPE** (female): Region of Karachi, Pakistan, 1953; dry area, probably under stone (unknown collector). Donated by W. R. Lourenço and deposited in the Zoological Museum of the University of Hamburg (Reg. No. A18/97).

**ETYMOLOGY:** Patronym in honor of Dr. Wolfgang Weitschat of the Geologisch-Paläontologisches Institut und Museum (Universität Hamburg).

Description based on female holotype. Morphometric measurements: see below.

**C o l o r a t i o n.** Basically yellowish with some darker reddish zones on the tergites. Prosoma: carapace yellowish; eyes surrounded with black pigment. Mesosoma: yellowish with confluent reddish zones. Metasoma: segments I to V yellowish. Vesicle yellowish but lighter than segment V; aculeous yellowish with the extremity reddish. Venter yellow with some reddish spots on the sternites. Chelicerae yellowish; fingers reddish. Pedipalps: globally yellowish. Legs yellowish.

**M o r p h o l o g y.** Carapace moderately to feebly granular; anterior margin without any median concavity, straight. All keels and furrows very feeble. Median ocular tubercle slightly anterior to the center; median eyes separated by one and half ocular diameters. Four pairs of lateral eyes; the fourth is situated toward the inner region of the carapace between the levels of the second and the third pair of eyes. Sternum subtriangular. Mesosoma: tergites with thin but intense granulation. Median keel moderate to strong in all tergites. Tergite VII pentacarinat. Venter: genital operculum divided longitudinally. Pectine: pectinal tooth count 17-17; basal middle lamellae of each pecten not dilated. Sternites smooth with elongate stigmata; VII with four keels moderate to feeble. Metasoma: segments I and II with 10 keels, crenulate. Segment



Figs 1-5. *Pakistanorthochirus weitschati* sp. n., female holotype : 1 - lateral eyes; 2 - fifth metasomal segment and telson (lateral view); 3 - fifth metasomal segment and the structure of the ventro-lateral keels (ventral view); 4 - the granules of the ventro-lateral keel and their lobed or lobate shape; 5 - femur with trichobothrial pattern (dorsal view).

III with 8 keels; IV with 6 keels, crenulate. Intercarinal spaces moderate to strongly granular. Segment V with 5 keels; the ventrolateral keels with several lobed or lobate granules in the distal region. Telson smooth with a long and moderately curved aculeous. Cheliceral dentition characteristic of the family Buthidae (Vachon 1963); ventral aspect of both finger and manus with dense, long setae. Pedipalps: femur penta-carinate; tibia and chelae with some keels but feebly crenulate; all faces feebly granular. Movable fingers with 6 oblique rows of granules in the anterior two thirds of the finger and with several granules randomly arranged in the posterior third. Trichobothriotaxy; neobothriotaxy  $A-\beta$ , trichobothrium  $d_2$  of the femur absent (Vachon, 1973, 1975). Legs: tarsus with very numerous median fine setae ventrally. Tibial and pedal spurs present and strong.

**M e a s u r e m e n t s** (in mm): Carapace: length 3.6, anterior width 2.6, posterior width 4.9. Metasomal segment I: length 2.1, width 2.9. Metasomal segment V: length 3.7, width 2.8, depth 1.5. Vesicle: width 1.4, depth 1.0. Pedipalp: femur length 2.4, femur width 1.0, tibia length 3.4, tibia width 1.3, chelae length 4.7, chelae width 0.9, chelae depth 1.1. Movable finger: length 3.1.

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

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