

A NEW SPECIES OF *ANDROCTONUS* EHRENBERG, 1828 FROM MAURITANIA (SCORPIONES, BUTHIDAE)

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Abstract: A new species of scorpion belonging to the genus *Androctonus* Ehrenberg, 1828 (family Buthidae C.L. Koch, 1837), is described on the basis of a single female specimen collected in the desert of Mauritania, Terjit, south of Atar. The new species is characterized by pale yellow coloration and diffuse reticular greyish-blue spots over the body and appendages. The metasomal segments are narrow with a shallow dorsal depression.

Key words: Scorpiones, Buthidae, new species, *Androctonus aleksandrplotkini* sp. n., Mauritania.

Una nueva especie de *Androctonus* Ehrenberg, 1828 de Mauritania (Scorpiones, Buthidae)

Resumen: Se describe una nueva especie de escorpión del género *Androctonus* Ehrenberg, 1828 (familia Buthidae C.L. Koch, 1837), a partir de un ejemplar hembra recogido en el desierto de Mauritania, en Terjit, al sur de Atar. La nueva especie se caracteriza por el color amarillo claro y la presencia de manchas reticulares difusas de color azul grisáceo en el cuerpo y apéndices. Los segmentos metasomales son estrechos y llevan una depresión dorsal superficial.

Palabras clave: Scorpiones, Buthidae, *Androctonus aleksandrplotkini* sp. n., Mauritania.

Taxonomy/Taxonomía: *Androctonus aleksandrplotkini* sp. n.

Introduction

As discussed in recent papers (Lourenço, 2005; Lourenço & Qi, 2006) the taxonomy of the genus *Androctonus* Ehrenberg has long remained complex and confused. In his contributions to the study of North African scorpions, Vachon (1948, 1952) attempted to establish a better definition of the genus *Androctonus* and its species. He maintained, however, the status of several subspecies, and even described new ones for populations totally disconnected geographically. An example is provided by *Androctonus crassicauda* (Olivier) which is distributed in the Middle East, Iran, Iraq and Israel, and *Androctonus crassicauda gonneti* Vachon, from Morocco and Mauritania. Lourenço (2005) characterized both populations as distinct, and raised *A. crassicauda gonneti* to the rank of species, as *A. gonneti*. Another example concerning species distributed in the South of Morocco and Mauritania is the one of *Androctonus liouvillei* (Pallary, 1924). This species was originally described as *Buthus (Prionurus) liouvillei* and considered by Vachon (1948, 1952) to be a subspecies of *Androctonus aeneas* C.L. Koch, 1839 (= *Androctonus bicolor aeneas*). Lourenço (2005) reconsidered the taxonomic position of this population and raised *Androctonus bicolor liouvillei* to the rank of species as *A. liouvillei*. Therefore, the classification proposed by Vachon (1948, 1952) for the species of *Androctonus*, is unsatisfactory, mainly because of the existence of several poorly defined subspecies. The revision carried out by Lourenço (2005) on the genus *Androctonus*, as well as other studies conducted in the deserts of the South of Morocco and Mauritania, tend to show that this particular area contains a very diverse fauna of scorpions, including several new species and even new genera (Lourenço, 2002a,b;

Lourenço *et al.*, 2003; Lourenço & Geniez, 2005; Qi & Lourenço, 2007).

Recent investigation of another specimen collected in Mauritania has resulted in the description of yet one more new species of *Androctonus*.

Material and methods

Illustrations and measurements were produced using a Wild M5 stereo-microscope with a drawing tube and an ocular micrometer. Measurements follow Stahnke (1970) and are given in mm. Trichobothrial notations follow Vachon (1974) and morphological terminology mostly follows Vachon (1952) and Hjelle (1990).

Description of the new species

Androctonus aleksandrplotkini sp. n.

Fig. 1-14. Table I.

HOLOTYPE: Mauritania, Terjit, South of Atar, 8/I/2005 (Ph. Geniez). 1 female holotype. Deposited in the collections of the Muséum national d'Histoire naturelle, Paris.

ETYMOLOGY: Patronym in honor of Mr. Aleksandr Plotkin, Riga, Latvia for his kind investment to the research of biological diversity.

DIAGNOSIS: A scorpion of medium size, reaching a total length of 58 mm in the female. General coloration yellow to yellowish-grey, with thin reticular spots over the body and appendages. Carinae on carapace moderately to strongly developed. Metasomal segments I to V narrow and of

approximately the same width; dorsal depression on segments I to IV shallow. Anal arc with three sharp lobes and a small fourth lobe. Fixed and movable fingers with 11/12 rows of granules. Pectines with 24–23 teeth in the male.

RELATIONSHIPS

Androctonus alexandrplotkini sp. n., can be distinguished from the other species of *Androctonus* which are also distributed in Mauritania and South of Morocco, by the following characters: (i) its overall yellowish coloration with thin but conspicuous dark reticular spots over the body and appendages (ii) metasomal segments I to V narrowed with a shallow dorsal depression; absence of any conspicuous spinoid granules on dorsal carinae; segment II with 8 carinae (iii) fingers of the chela with 11–12 rows of granules, (iv) anal arc with 3 sharp lobes and one small latero-dorsal lobe.

DESCRIPTION BASED ON FEMALE HOLOTYPE.

Measurements in Table I.

Coloration. Mainly yellow to yellowish-grey, giving a bluish to purplish appearance in living specimens (Fig. 14). Prosoma: carapace yellowish with thin but conspicuous reticular spots, better marked laterally; carinae and eyes marked by dark pigment. Mesosoma: yellowish with confluent reticular spots; carinae slightly marked with dark pigment. Metasoma: segments I to V yellowish with conspicuous dark reticular markings, more conspicuous on IV–V; carinae coloured with dark pigment; vesicle yellowish heavily spotted on lateral and ventral faces; aculeus yellowish at its base and dark at its extremity. Venter yellowish; genital operculum and pectines pale yellow. Chelicerae yellowish with thin variegated spots on the anterior half; fingers yellowish with dark teeth. Pedipalps: yellowish with a thin dark reticular drawing; fingers with the oblique rows of granules dark. Legs pale yellow with vestigial dark spots.

Morphology. Carapace moderately granular; anterior margin almost straight and without a median concavity. Carinae moderately to strongly marked; anterior median, central median and posterior median carinae moderately to strongly granular. All furrows moderate to weak. Median ocular tubercle somewhat anterior to the centre of carapace. Eyes separated by two and a half ocular diameters. Four pairs of lateral eyes: the first three of moderate size, the last only slightly reduced. Sternum triangular and narrow; longer than wide. Mesosoma: tergites moderately to weakly granular. Three longitudinal carinae moderately crenulate in all tergites; lateral carinae reduced in tergites I and II. Tergite VII pentacarinata. Venter: genital operculum divided longitudinally, forming two oval plates. Pectines: pectinal tooth count 24–23 in female holotype; middle basal lamella of the pectines not dilated. Sternites without granules, smooth with elongated spiracles; four moderately marked carinae on sternite VII; other sternites acarinate and with two vestigial furrows. Metasoma: segment I with 10 carinae, strongly crenulated; segments II to IV with 8 carinae, crenulated; lateral inframedian carinae represented on segment II by 3–4 granules; the first four segments with a smooth shallow dorsal depression; segment V with five carinae; the latero-ventral carinae crenulate with several lobate denticles; ventral median carina not divided posteriorly; anal arc composed of 11/12 inconspicuous ventral teeth, three sharp lateral lobes and one small latero-dorsal lobe. Intercarinal



Fig. 13. Map of Mauritania showing the type locality of the new species (black star).

spaces slightly granular to smooth. Telson with some strong granulations on ventral surface; aculeus moderately curved and slightly shorter than the vesicle, without a subaculear tooth. Cheliceral dentition as defined by Vachon (1963) for the family Buthidae; external distal and internal distal teeth approximately the same length; basal teeth on movable finger small but not fused; ventral aspect of both fingers and manus covered with long dense setae. Pedipalps: femur pentacarinata; patella with eight carinae but only dorso-internal and internal are well marked; other carinae vestigial; chela with only vestigial carinae; all faces weakly granular to smooth. Fixed and movable fingers with 11/12 oblique rows of granules. Internal and external accessory granules present, strong; three accessory granules on the distal end of the movable finger next to the terminal denticle. Legs: tarsus with numerous thin setae ventrally; tibial spur moderate on legs III and IV; pedal spurs moderate to strong on legs I to IV. Trichobothriotaxy: trichobothrial pattern of Type A, orthobothriotaxic as defined by Vachon (1974). Dorsal trichobothria of femur arranged in β (Beta) configuration (Vachon, 1975).

Table I. Morphometric values (in mm) of the female holotype of *Androctonus alexandrplotkini* sp. n.

Total length		58.6
Carapace:	- length	6.7
	- anterior width	4.7
	- posterior width	7.7
Metasomal segment I:	- length	4.7
	- width	3.9
Metasomal segment V:	- length	7.6
	- width	3.3
	- depth	3.2
Vesicle:	- width	2.6
	- depth	2.4
Pedipalp:	- Femur length	5.5
	- Femur width	2.0
	- Patella length	6.8
	- Patella width	2.8
	- Chela length	11.6
	- Chela width	2.4
	- Chela depth	2.6
Movable finger:	- length	8.2

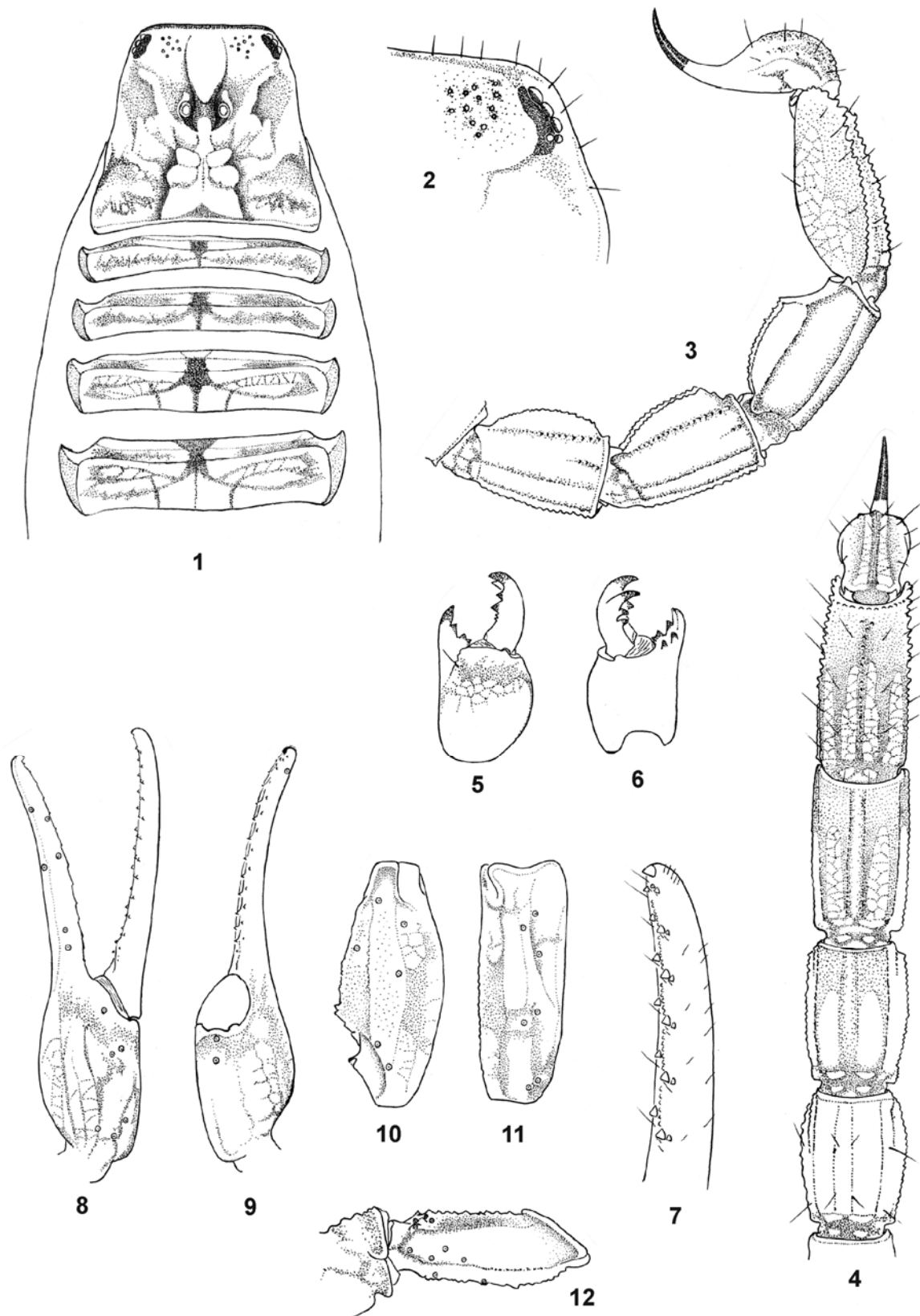


Fig. 1-12. *Androctonus aleksandrplotkini* sp. n., female holotype. **1.** Carapace and tergites I-IV, dorsal aspect. **2.** Detail of lateral eyes, dorsal aspect. **3-4.** Metasomal segments II to V and telson, lateral and ventral aspects. **5-6.** Chelicera, dorsal and ventral aspects. **7.** Extremity of movable finger of pedipalp chela with rows of granules. **8-12.** Trichobothrial pattern. **8-9.** Chela, dorso-external and ventro-internal aspects. **10-11.** Patella, dorsal and external aspects. **12.** Femur, dorsal aspect.

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Fig. 14. *Androctonus alexandrplotkini* sp. n., female holotype alive in its natural habitat (photo Ph. Geniez).
Fig. 15. *Androctonus amoreuxi* (Audouin), female from the region of Atar (photo Ph. Geniez).