

A new species of *Cicileus* Vachon, 1948 (Chelicerata, Scorpiones, Buthidae) from Niger

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(With 10 figures)

Abstract

A new species of the enigmatic genus *Cicileus* Vachon, 1948 (Scorpiones, Buthidae) is described. The description of *Cicileus cloudsleythompsoni* sp. n. is based on two adult specimens, male and female, collected in the region of Dao Timni, 260 km north of Bilma, Niger. The genus *Cicileus* was previously believed to be monotypic, the only known species being *C. exilis* (Pallary, 1928) from Algeria. With the description of *C. cloudsleythompsoni* sp. n. the number of taxa is raised to two and the distribution of the genus extended from Algeria to Niger. The two known species are very similar in their general morphology, but can be readily identified by the keels and furrows, which are stronger in *C. exilis* than in *C. cloudsleythompsoni* sp. n.

Introduction

The genus *Cicileus* was erected by Vachon (1948), on the basis of a single species described by Pallary (1928) as *Buthacus exilis*. The decision of Pallary (1928) remained enigmatic to Vachon (1948, 1952) since, according to this last author, the species described by Pallary had no points in common with those belonging to the genus *Buthacus* Birula, 1908. In fact, *Buthacus* is characterized by the absence of keels on the carapace whereas in *Cicileus* these keels are strongly developed.

Since the creation of the genus by Vachon it has remained monotypic and has only been cited or commented on by a few authors (e.g. Vachon 1958; Larrouy *et al.*, 1972; Pérez 1974; El-Hennawy 1992). In fact, one of the aspects indicated by Vachon (1951, 1952) about the genus *Cicileus* was its endemic nature. Vachon (1951) in a paper about the biogeography of North African scorpions stated that: "Genres habitant un territoire restreint mais homogène: *Buthiscus* (Sud Tunisien et Algérie), *Cicileus* (Hoggar et Tassili)". The original description of Pallary was based on specimens from Djanet in the Tassili Mts of Algeria, where elevation reaches 1,180 to 1,200 m. Other specimens have subsequently been collected from the Hoggar Mts at 1850 m.

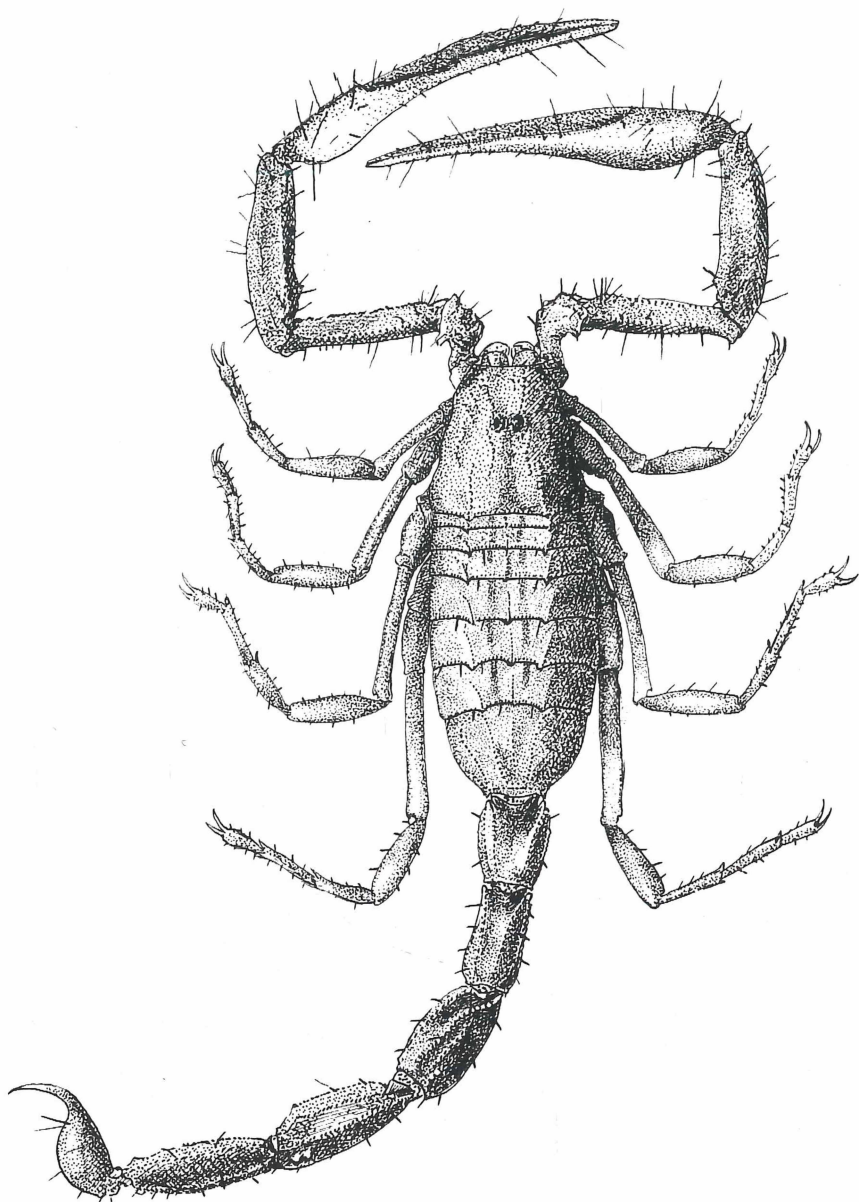


Fig. 1. Habitus of *Cicileus exilis* (Pallary), adult ♀ from Djanet in Algeria (total length 49 mm; from Vachon 1952).

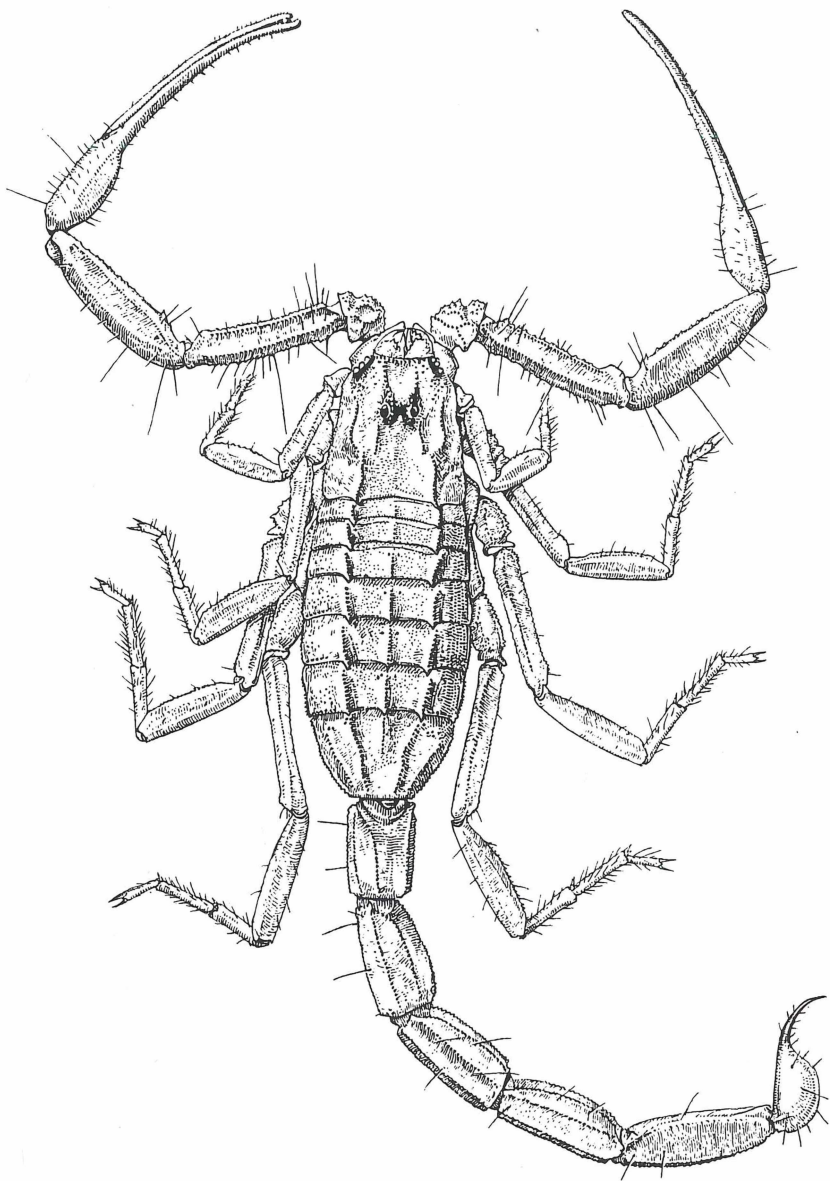
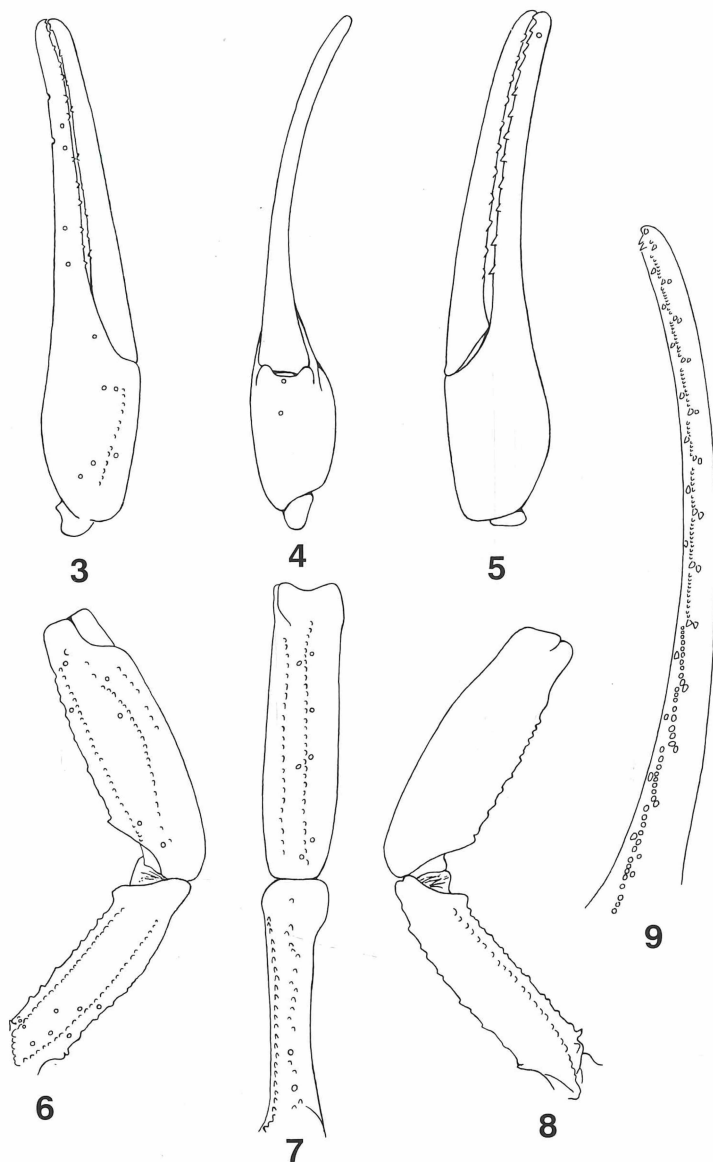


Fig. 2. Habitus of *Cicileus cloudsleythompsoni* sp. n., holotype ♂.



Figs 3-9. *Cicileus cloudsleythompsoni* sp. n., paratype ♀; 3-8: trichobothrial pattern; 3-5: chela - external ventral and internal aspects, respectively; 6-8: tibia and femur - dorsal, external and ventral aspects, respectively; 9: disposition of granulation over the dentate margins of the pedipalp-chela fingers.

Examination of two scorpions belonging to the genus *Cicileus*, collected in Niger in the region of Dao Timni, 260 km N of Bilma, revealed a second species in this genus. The new species is described below.

Description

Cicileus cloudsleythompsoni sp. n.

(Figs 2 - 9)

TYPE MATERIAL. H o l o t y p e male: Niger, Dao Timni, 260 km N of Bilma, "Cercle d'Agader", 16 July 1958 (coll. L. Vedy). Deposited in the Zoologisches Museum Hamburg (ZMH Reg. No. A11/99).

P a r a t y p e : allotypic female, same locality data, lodged in ZMH (No. A12/99).

Table 1. Morphometric values (in mm) of *Cicileus cloudsleythompsoni* sp. n.

	Holotype ♂	Allotype ♀
Carapace:		
length	4.2	6.4
anterior width	2.8	3.7
posterior width	4.6	5.7
Metasomal segment I:		
length	2.8	3.4
width	2.3	2.8
Metasomal segment V:		
length	4.7	5.7
width	1.6	2.0
depth	1.6	2.0
Vesicle:		
width	1.6	2.0
depth	1.5	1.7
Pedipalp:		
femur length	4.8	6.2
femur width	1.1	1.3
tibia length	5.7	7.1
tibia width	1.5	1.8
chela length	9.7	11.8
chela width	1.4	1.7
chela depth	1.3	1.6
Movable finger:		
length	7.2	8.9

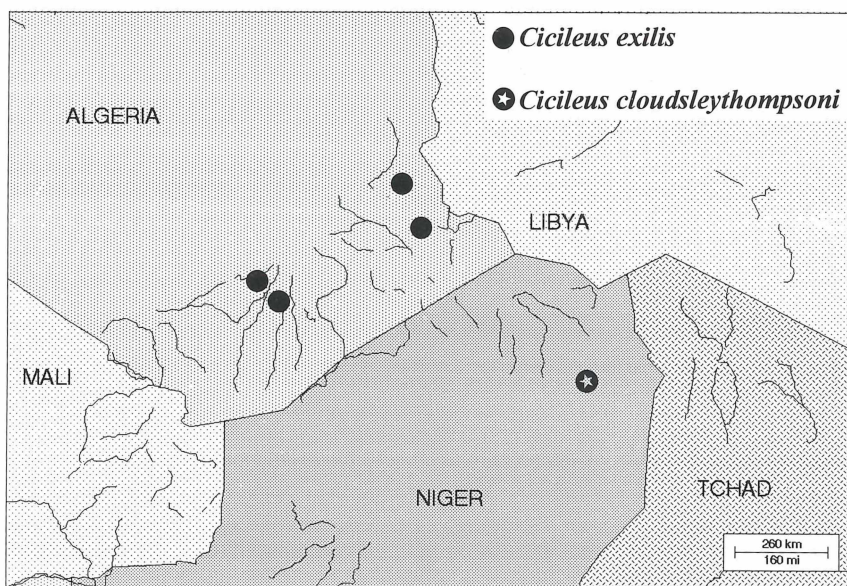


Fig. 10. Known records of *Cicileus exilis* (Pallary) and type locality of *Cicileus cloudsleythompsoni* sp. n.

ETYMOLOGY: Patronym in honor of my colleague and friend, Prof. John L. Cloudsley-Thompson, London, in recognition of his enormous contribution to the study of desert biology.

Description (based on male holotype). Morphometric measurements in Table 1.

Coloration. Basically yellowish with some darker reddish areas on the anterior margin of carapace and on the tergite keels. Prosoma: carapace yellowish with a reddish triangular area in the anterior portion; eyes surrounded by black pigment. Mesosoma: yellowish, with reddish pigment over longitudinal keels. Metasoma: segments I to V yellowish. Vesicle yellowish; aculeus reddish. Venter yellowish. Chelicerae yellowish; fingers reddish. Pedipalps: yellowish overall; chela with some reddish yellow areas on the articulations. Legs yellowish.

Morphology. Carapace moderately granular; anterior margin with a very feeble concavity. Anterior and posterior ocular keels strong; furrows moderate to feeble. Median ocular tubercle anterior to the center; median eyes separated by more than one ocular diameter. Three pairs of lateral eyes. Sternum triangular. Mesosoma: tergites with moderate to feeble granulations. Median keel strong in all tergites. Two latero-longitudinal keels, which arise behind the posterior ocular keel of the carapace, very strong in all tergites. Tergite VII pentacarinat; all keels strong. Venter: genital operculum divided longitudinally. Pectine: pectinal tooth count 27-27; basal middle

lamellae of each pecten not dilated. Sternites feebly granular with moderately elongated stigmata; sternites IV to VII with four keels. Metasoma: segment I with 10 keels, crenulate; segments II to IV with 8 keels, crenulate. Segment V with 5 keels. Tegument moderate to feebly granular. Telson smooth, with a long and moderately curved aculeus. Subaculear tooth absent, without any vestigial granule present. Cheliceral dentition characteristic of the family Buthidae (Vachon 1963); ventral aspect of both finger and manus with long but not very dense setae. Pedipalps: femur pentacarinat strongly crenulate; tibia with 7 keels; chelae with 7/8 keels feebly crenulate; all faces very feebly granular, almost smooth. Movable fingers with 12 non-oblique rows of granules. Trichobothriotaxy: A- β , orthobothriotaxy (Vachon 1973, 1975). Legs: tarsi with two series of fine setae ventrally. Tibial and pedal spurs present, moderate to strong on legs III and IV.

P a r a t y p e (female): larger and more bulky than the male (see Table 1). General coloration slightly darker than that of the male and more reddish-brown. Pectines smaller. Pectinal tooth count 20-21; basal middle lamellae of each pecten not dilated.

D i f f e r e n t i a l d i a g n o s i s. *Cicileus cloudsleythompsoni* sp. n. is very similar to *C. exilis* in its general morphology, but both species can be readily identified by the following features:

	<i>C. cloudsleythompsoni</i> sp. n.	<i>C. exilis</i>
Size	medium	medium to large
General colour	yellowish	dark brown
Carapace keels and furrows	moderate to strong	strong
Pectinal teeth	20 to 27	20 to 24
Number of series of granulations on the pedipalp chela fingers	12	11
Size of lateral eyes	moderate	large

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

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