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First record of the genus *Lamprochernes* (Pseudoscorpiones: Chernetidae) in Albania

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Abstract. The finding of pseudoscorpion *Lamprochernes nodosus* (Schrank, 1803) represents the first record of the genus *Lamprochernes* and only the third record of chernetids in Albania. One female was extracted from compost heap near the field at locality Uznovë, Berat County in Albania. A description of the species is provided based on the main morphological and morphometric characters.

Key words: Albania, compost, *Lamprochernes*, new record, Pseudoscorpiones, taxonomy.

Albania is a country in southeast Europe and it is a part of the globally important Mediterranean basin biodiversity hotspot (Myers et al. 2000). Although it is a small country, Albania is distinguished for its high habitat diversity that creates favourable conditions for a number of local endemism throughout the biota (Ćurčić et al. 2006a,b, 2007, 2008, Marzahn et al. 2016). This is related to the highly varied topography of the country and the relative stability of a Mediterranean climate resulting from little influence of Pleistocene glaciations. Due to the political, cultural and scientific isolation of Albania, the basic zoological research on most of animal groups is fragmentary and is developing only slightly.

It applies especially to pseudoscorpions. Only a few papers about Albanian pseudoscorpions were published until now, but many of them include new described species. Caporiacco (1932, 1949) studied Albanian arachnids and found four neobisiid species, including the species *Roncus lonai* Caporiacco, 1949 recorded only from the territory of Albania until now. Sporadic records of several pseudoscorpion species were mentioned in other papers (Ellingsen 1910, Beier 1928, 1929a, 1963). Müller (1931) described species *Neobisium albanicum* (G. Müller, 1931) from undefined "Berat cave". The exploration of the Albanian pseudoscorpion fauna graduated in the early 21th century when five endemic neobisiid and chthoniid pseudoscorpions were described (Ćurčić et al. 2006a,b, 2007, 2008). Summarizing all the data, there are 19 pseudoscorpion species belonging to eight genera and five families occurring in the country (Harvey 2013). Hence, the aim of the study is to present and describe specimens of another species, *Lamprochernes nodosus* (Schrank, 1803), recorded for the first time in Albania.

Lamprochernes nodosus (Schrank, 1761)

The female of *L. nodosus* was extracted from the compost sample collected near the field by the second and third authors of the paper in Berat County at locality Uznovë (40.685668 N, 20.010649 E; 59 m a.s.l.; September 24, 2015; Fig. 1). The body and dissected appendages were studied as a temporary slide mounts using lactic acid, and after returned to 70% ethanol. Measurements were taken from photographs using the Zeiss AxioVision 40LE application (v. 4.6). They were photographed using a Leica DM1000 compound microscope with ICC50 Camera Module (LAS EZ application, 1.8.0). The first author of the paper identified the specimen using several identification keys (Beier 1963, Legg & Jones 1988, Christophoryová et al. 2011). Taken measurements following Beier (1963) and nomenclature for taxa follows Harvey (2013). The material is deposited in the zoological collections of the first author on Department of Zoology, Comenius University, Bratislava.

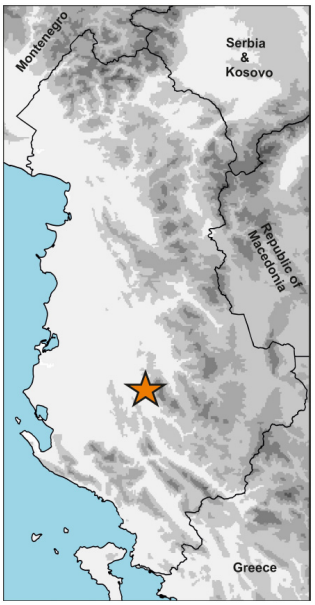

Figure 1. Map of Albania showing the record of the occurrence of *Lamprochernes nodosus*.

Description of the female (Fig. 2A): Setae on body long, pointed and finely toothed; carapace only faintly granulate, epistome absent, anterior margin of carapace straight, carapace scarcely longer than broad; eyes or eyespot absent; anterior transverse furrow distinct, posterior furrow indistinct. Chaetotaxy of carapace: 101 setae, 46 of them situated in front of anterior transverse furrow, 44 on medial disk, posterior margin with 11 setae; two slitlike lyrifissures present in anterior part of carapace, eight lyrifissures behind anterior furrow. Chelicerae: small, slightly sclerotized, five setae on hand, one on movable finger; movable finger with slender well-developed galea, main stalk with five short terminal rami; rallum of three blades, anterior one finely dentate; serrula exterior with 16 blades; small, largely unsclerotized teeth situated on both movable and fixed fingers. Palps: slender, finely granulate; protuberance on palpal trochanter blunt and rounded; chelal fingers with 12 trichobothria (eight on fixed and four on movable chelal finger), subterminal trichobothrium (*st*) on movable chelal finger situated approximately in the middle between terminal (*t*) and subbasal (*sb*) trichobothria; venom apparatus developed only in movable chelal finger, nodus ramosus situated slightly proximal of terminal trichobothrium (*t*); fixed chelal finger

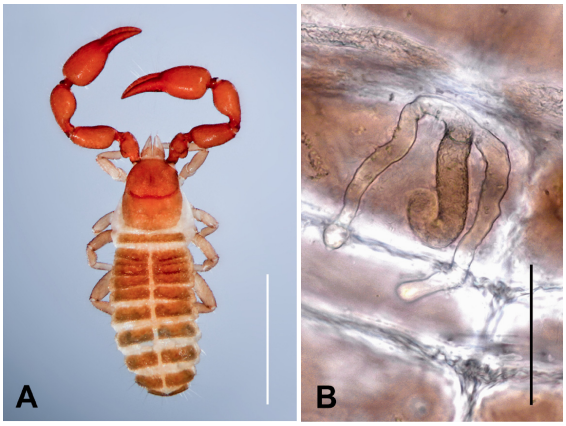

Figure 2. Adult of *Lamprochernes nodosus* collected in Albania. A: Female. B: T-shaped spermatheca. Scales: A – 1 mm, B – 0.1 mm.

with 35 and movable chelal finger with 37 equally long marginal teeth; fixed finger with three antiaxial accessory teeth and two paraxial accessory teeth, movable finger with two antiaxial accessory teeth and one paraxial accessory tooth. Legs: each of pedal tibia and tarsus IV with long tactile seta, tactile seta on tarsus situated approximately one third from the joint with the tibia. Abdominal tergites I–X divided, tergite XI undivided. Chaetotaxy of tergites I–X: 20 (left hemitergite 10 + right hemitergite 10): 22 (11 + 11): 19 (10 + 9): 24 (12 + 12): 22 (11 + 11): 25 (12 + 13): 25 (13 + 12): 25 (13 + 12): 25 (11 + 14): 20 (9 + 11), tergite XI with 8 setae plus a pair of long tactile setae. Chaetotaxy of sternites IV–X: 11 (left hemisternite 6 + right hemisternite 5): 27 (13 + 14): 30 (17 + 13): 29 (15 + 14): 31 (16 + 15): 30 (14 + 16): 22 (12 + 10); sternite XI with 9 setae plus a pair of long tactile setae. Female spermatheca unpaired (Fig. 2B), T-shaped, apically divided into two tubes, tubes descending and equal to the length of the common stem; anterior genital operculum with 21 setae and two lyrifissures, posterior operculum with eight setae and two lyrifissures. Body measurements are given in Table 1.

The genus *Lamprochernes* Tömösváry, 1882 belongs to the subfamily Lamprochernetinae with nine species of the genus described until now (Harvey 2013). The genus is characterized by the following characters: smooth or faintly granulate carapace, indistinct posterior transverse furrow, the presence of long and pointed setae on body and palps, the presence of long tactile setae on pedal tarsus and tibia IV, a pair of long tactile setae on tergite XI, T-shaped spermatheca in females (Beier 1963, Legg & Jones 1988). Three *Lamprochernes* species are distributed in the Balkans and neighbouring countries (Harvey 2013). *Lamprochernes chyzeri* (Tömösváry, 1882) is known only from Bulgaria, Croatia, Montenegro, Romania and Serbia and differs from *L. nodosus* in longer palpal femur and protuberance on palpal trochanter is conical and pointed (Beier 1963, Christophoryová et al. 2011, Harvey 2013). The second species, *L. moreoticus* (Beier, 1929), occurs only in Greece and differs in lengths of palpal segments and positions of trichobothria on movable chelal finger (Beier 1929b, 1963, Harvey 2013). Species *L. nodosus* is distributed in Bulgaria, Greece and Romania (Harvey 2013). The main taxonomic characters correspond with known descriptions mentioned in the identification keys (Beier 1963, Legg & Jones 1988, Christophoryová et al. 2011); the present description updates the known variability mainly in morphometric characters. The genus is still not known from several neighbouring countries, such as Bosnia and Herzegovina, Republic of Macedonia or Slovenia.

Lamprochernes nodosus is often associated with human activities, lives in compost heaps and manure or, is phoretic or

Table 1. Morphometric data for *Lamprochernes nodosus* female (in mm).

Characteristics	
Body length	2.04
Carapace length	0.60
Carapace posterior width	0.45
Carapace length/posterior width ratio	1.33
Chelicera length	0.18
Chelicera width	0.09
Chelicera length/width ratio	2.00
Cheliceral movable finger length	0.16
Palpal trochanter length	0.27
Palpal trochanter width	0.16
Palpal trochanter length/width ratio	1.69
Palpal femur length	0.44
Palpal femur width	0.19
Palpal femur length/width ratio	2.32
Palpal patella length	0.45
Palpal patella width	0.21
Palpal patella length/width ratio	2.14
Palpal hand with pedicel length	0.46
Palpal hand without pedicel length	0.40
Palpal hand width	0.28
Palpal hand with pedicel length/width ratio	1.64
Palpal finger length	0.40
Palpal chela length	0.81
Palpal chela length/palpal hand width	2.89
Leg I trochanter length	0.14
Leg I trochanter width	0.10
Leg I trochanter length/width ratio	1.40
Leg I femur length	0.10
Leg I femur width	0.10
Leg I femur length/width ratio	1.00
Leg I patella length	0.23
Leg I patella width	0.09
Leg I patella length/width ratio	2.55
Leg I tibia length	0.22
Leg I tibia width	0.07
Leg I tibia length/width ratio	3.14
Leg I tarsus length	0.23
Leg I tarsus width	0.05
Leg I tarsus length/width ratio	4.60
Leg IV trochanter length	0.20
Leg IV trochanter width	0.13
Leg IV trochanter length/width ratio	1.54
Leg IV femoropatella length	0.43
Leg IV femoropatella width	0.12
Leg IV femoropatella length/width ratio	3.58
Leg IV tibia length	0.29
Leg IV tibia width	0.09
Leg IV tibia length/width ratio	3.22
Leg IV tarsus length	0.28
Leg IV tarsus width	0.06
Leg IV tarsus length/width ratio	4.67

lives in bird nests or under tree bark (Beier 1963, Ressl 1983, Mašán & Krištofík 1992, Drogla & Lippold 2004, Krajčovičová & Christophoryová 2014). During our research, three samples from compost heaps were extracted with the aim to find the genus, but only one sample was positive.

The species *L. nodosus* represents only the third record of the chernetid species from Albania, the two other ones are *Lasiochernes graecus* Beier, 1963, without specific locality (Beier 1963) and *Dendrochernes cyrneus* from locality Galica Lums [Gjallica e Lumës, mountain near Kukës town] (Beier 1929a).

According to Harvey (2013), the number of recorded pseudoscorpion species from neighbouring countries varies between 36 (Slovenia) and 142 (Greece). In Albania, only 19 species are known. Therefore, the further research in future is required to bring the new data for Albanian pseudoscorpion fauna and to uncover expected distribution of the species within the country.

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