

A new false-scorpion genus and species from Vietnam (Pseudoscorpiones Neobisiidae)

Новый род и вид ложноскорпионов из Вьетнама (Pseudoscorpiones Neobisiidae)

Selvin Dashdamirov
С.Д. Дащдамиров

Drogalnyi Str. 6, ♂ 34, Baku 370010 Azerbaijan.
Дрогальний пер., 6, кв. 34, Баку 370010 Азербайджан.

KEY WORDS: Pseudoscorpiones, Neobisiidae, taxonomy, new genus, new species, Vietnam.

КЛЮЧЕВЫЕ СЛОВА: Pseudoscorpiones, Neobisiidae, систематика, новый род, новый вид, Вьетнам.

ABSTRACT: A new false scorpion genus and species is described from a subtropical montane forest in northern Vietnam: *Dentocreagris vietnamensis* gen. et sp.n. The new taxon is distinguished by the remarkable conformation of the pedipalpal chela, that is, the presence of large denticle-like appendages on the immovable finger.

РЕЗЮМЕ: Из горного субтропического леса в Северном Вьетнаме описан новый род и вид ложноскорпионов: *Dentocreagris vietnamensis* gen. et sp.n. Новый таксон отличается особым строением клешни педипалпы, а именно в наличии крупных зубцевидных отростков на неподвижном пальце.

Introduction

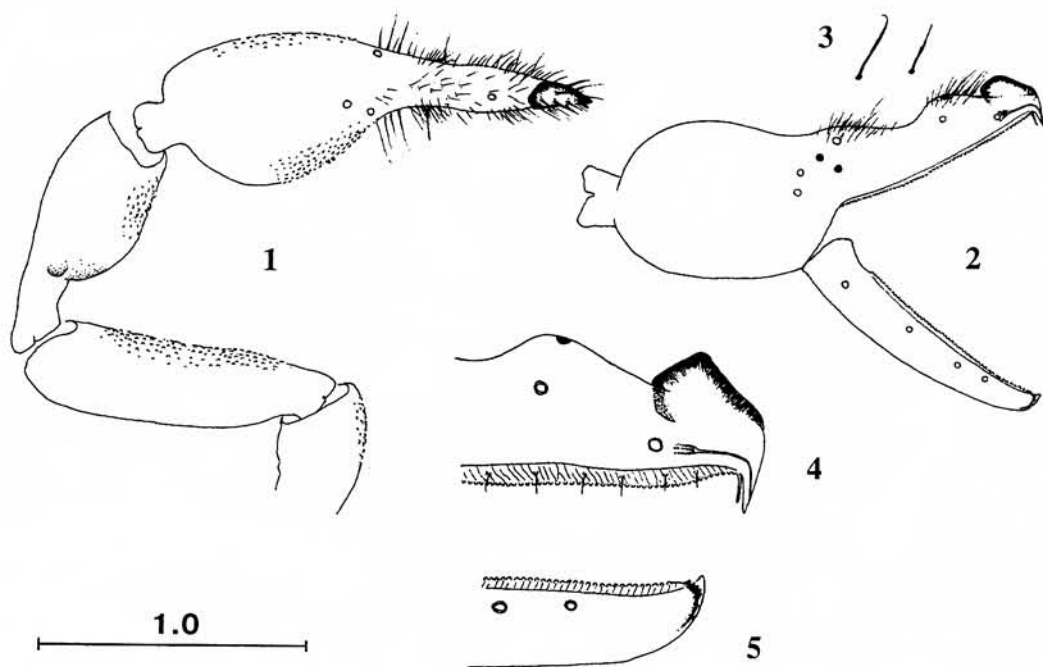
While sorting out a small material of Vietnamese pseudoscorpions kept in the Zoological Museum of the Moscow State University (ZMMU), I have been lucky to come, among other things, across a highly interesting neobisiid. Upon a careful study of that specimen, it has turned out to belong to a new genus and species. This new form appears to display all features characteristic of the "*Microcreagris*" group of genera: presence of a galea, distinctive trichobothriotaxy, flagellum with 8 blades pinnate anteriorly, apex of pedipalpal coxa with 4 setae, pleural membranes of abdomen granulate, fissure between femur and patella of caudal legs perpendicular to main axis [Mahnert, 1974, 1979].

Certainly, describing a new pseudoscorpion genus or species based on a single specimen is quite risky, as a rule, the more so as the status of most of the genera composing the "*Microcreagris*" group is doubtful. However, I dare do so in this particular case for several reasons. The most important one is the creature's highly distinctive conformation of the

palpal chela, i.e. the presence of denticle-like appendages in the apical part of the immovable finger, the location of trichobothria uncharacteristic of the bulk of the "*Microcreagris*" group's constituents, the location and number of teeth on the chelal fingers, the presence of a small conical protuberance on the dorsal side of the palpal tibia, and the two-side pinnate first blade of the flagellum. Such a combination of characters clearly warrants a new genus. In addition, full symmetry of these features points to the holotype being completely normal. Moreover, based on some of the above characters, one can expect this new taxon as actually displaying a well-expressed sex dimorphism in secondary sexual structures. This statement is corroborated by the fact that the "*Microcreagris*" group has long been known as comprising some striking examples of sex dimorphism, for instance in *Stenohya hamata* (Leclerc & Mahnert, 1988). On the other hand, large protuberances, teeth, impressions and modified setae occur on the pedipalps sufficiently regularly in all families of the Pseudoscorpiones.

Another reason to put on record this discovery right now lies in the failure of all my attempts to amass more material/information. My appeals to several colleagues worldwide as possible donors of further samples and/or observations in order to locate the same or a similar creature both in available collections and in the literature have echoed back in replies invariably reading something like, "nothing of this kind is present in the collections I know of, and nothing of this kind is known to me from the literature". This has become an additional strong argument to describe at least the holotype, because (re)collecting or my getting a second specimen might take longer than my lifetime.

Both measurements and terminology here accepted are those after Chamberlin [1931] and Harvey [1992]. All measurements are given in mm.



Figs 1-5. *Dentocreagris vietnamensis* gen. et sp.n., ♂ holotype: 1 — pedipalp, dorsal view; 2 — chela, lateral view; 3 — setae on dorsal surface of chelal finger; 4 & 5 — tip of movable and immovable fingers, lateral view. — Scale bar: 1.0 mm.

Рис. 1-5. *Dentocreagris vietnamensis* gen. et sp.n., голотип ♂: 1 — педипальпа, дорсально; 2 — хела, латерально; 3 — щетинки на дорсальной поверхности пальца хелы; 4 & 5 — вершина подвижного и неподвижного пальцев, латерально. — Масштаб 1,0 мм.

Descriptive part

Dentocreagris gen.n.

Type species: *Dentocreagris vietnamensis* sp.n.

Name: Emphasizes the denticle-like appendages on top of the immovable chelal finger.

Diagnosis (♂ only): A genus of Neobisiidae. All legs with 2-jointed tarsi. Pleural membranes of abdomen granulate. Surfaces of carapace and abdomen with numerous acuminate setae. Cephalothorax without cucullus, fore margin subequal in width to rear one.

Carapace with four eyes and a small knob-like epistome.

Movable finger of chelicera with numerous distinct teeth:

Inner serrula truly serrate throughout. Cheliceral movable finger with a distinct galca. Cheliceral flagellum with eight setae, all setae plumose, of which the distal-most is two-side serrate (Fig. 6). Genital opercula generally typical for the Neobisiidae (Fig. 11). Apex of pedipalpal coxa with four setae. Pedipalp typical for the family except for a large denticle-like appendage and saddle-shaped impressions on dorsal side of immovable finger (Figs 1, 2, 4). Palpal chela with a usual number of trichobothria (eight on immovable finger, four on movable one).

Several dorsal vestitural setae on immovable palpal finger rounded or denticulate laterally. Claviform part of palpal tibia with a conical protuberance on dorsal side and separated from pedicel only on medial side. Venom apparatus present only in immovable chelal finger, venom duct very short. Nodus ramosus near *et*. Palpal chelal

fingers longer than hand with pedicel. Fissure between femur and patella of caudal legs perpendicular to main femoral axis. Tibia, metatarsus and tarsus each with one tactile seta.

Subterminal seta of tarsomere 2 serrate. Claws simple, arolium shorter than claws.

Remarks: *Dentocreagris* gen. n. is unique among the known pseudoscorpions from the "*Microcreagris*" group in having the denticle-like appendages and saddle-shaped constriction on the chelal finger. *Stenohya hamata* (Leclerc & Mahnert), another Indochinese "*Microcreagris*"-like neobisiid, has only a large heavy spine, but this is placed on the ventral side of the chelal hand.

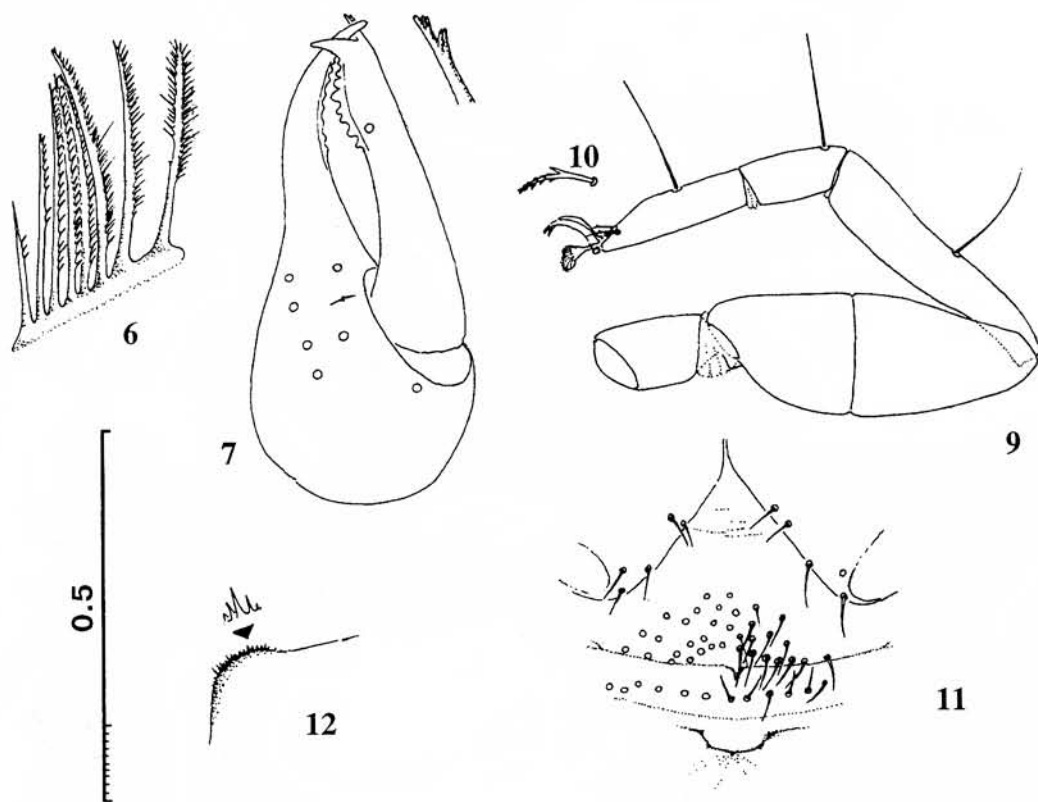
Dentocreagris vietnamensis sp.n. Figs 1-12.

Holotype: ♂ (ZMUM), Vietnam, Prov. Vinh-Phu, ca. 100 km N of Hanoi, Tamdao, 800-1200 m a.s.l., montane subtropical forest, 12-22.IV.1986; leg. S. Golovatch.

Name: Emphasizes Vietnam, the terra typica.

Diagnosis: The ♂ is easily distinguished from other "*Microcreagris*" species by the denticle-like appendages on the chelal immovable finger, the protuberances on the palpal tibia, the impressions directed dorsoventrally on the chelal immovable finger, the presence of additional denticles in the apical part of the movable finger of the palpal chela, and the unique, two-side serrate first distal blade of the flagellum.

Description (♂): Teguments smooth, only medial surface of pedipalps with fine granulations. Carapace and pedipalps reddish-brown, tergites and sternites bichromous, sclerotized parts brown, remaining parts



Figs 6-12: *Dentocraegris vietnamensis* gen. et sp.n., ♂ holotype: 6 — flagellum; 7 — chelicera, dorsal view; 8 — galea; 9 — leg IV, lateral view; 10 — subterminal seta on legs; 11 — chaetotaxy of genital area; 12 — coxal spine on leg I. — Scale bar: 0.5 mm.

Рис. 6-12: *Dentocraegris vietnamensis* gen. et sp.n., голотип ♂: 6 — флагеллум; 7 — хелицера, дорсально; 8 — галеа; 9 — нога IV, латерально; 10 — субтерминальная щетинка на ногах; 11 — хетотаксия генитальной области; 12 — коксальный шип на ноге I. — Масштаб 0,5 мм.

yellow. Legs light yellow. Carapace chaetotaxy: 4-4-6-6-6-10 (total number of setae: 36), 1.10 times longer than broad. Epistome like a small tubercle. Chelicera with seven acuminate setae dorsally; movable finger with one seta and nine teeth; immovable finger with seven teeth. All four eyes well-developed. Galea with five spinulae; flagellum with eight blades, distalmost one two-side serrate, remaining ones unilateral pinnate. Serrula exterior with 40 lamellae. Tergal chaetotaxy: 12:12:11:12:13:12:13:12:12:12:8 (4+4 tactile setae):2.

Sternal chaetotaxy: x:x:13+10(5/5):14+10(5/5):16:14:14:15:13:12(10+2 tactile setae):9(7+2 tactile setae):2. Sclerotized parts of sternites pierced with numerous, small but well-visible pores, each pore supporting a minute short seta when examined at higher magnifications. Coxal chaetotaxy: P-4, medial process with four long setae; I-6, anteromedial corner with half-transparent delicate spines; II-6; III-6; IV-10. Pedipalp (Figs 1, 2): trochanter 1.82; femur 3.53; patella (tibia) with a conical protuberance on dorsal side, situated between claviform part and pedicel, 2.34; chela (with pedicel) 2.81; chela (without pedicel) 2.61; hand (with pedicel) 1.5; hand (without pedicel) 1.30 times as long as broad. Immovable finger of palp with 74 marginal teeth (see Figs 2, 4); dorsal side of immovable finger with saddle-shaped impressions, on top with denticle-like appendages (see Figs 1, 2, 4).

Movable finger with 75 marginal and six accessory teeth in apical part; accessory teeth arranged in a row parallel to main row, so between these rows there is a scabbard-like deepening for accommodation of the poisonous tooth of the immovable finger. Trichobothrial pattern (Figs 1, 2): *ist* located in basal part of finger and level to *isb*, but on lateral side; *it* closer to *est* (separated by about one areole diameter) than to *et*. Venom apparatus present only in immovable finger, nodus ramosus distally of *et*.

Subterminal seta on all tarsi serrate. Leg IV: femur+patella 2.82; tibia 4.7, with one tactile seta (TS=0.95); metatarsus 2.4, with one tactile seta (TS=0.28); tarsus 3.92 times as long as broad, with a tactile seta (TS=1.41).

Measurements (in mm): Carapace 0.97/0.88. Pedipalp: trochanter 0.62/0.34; femur 1.13/0.32; patella (tibia) 0.96/0.41; chela (with pedicel) 1.80/0.64; chela (without pedicel) 1.67; hand (with pedicel) 0.96; hand (without pedicel) 0.83; movable finger 1.07. Leg IV: femur+patella 1.10/0.39; tibia 0.94/0.20; metatarsus 0.36/0.15; tarsus 0.51/0.13.

Female unknown.

Remarks: The denticle-like appendages on the immovable finger of the palp, the conical protuberance on the dorsal side of the palpal tibia and the modified setae on the dorsal surface of the immovable chelal finger can be suggested as serving the ♂ for fixing the ♀ during

copulation. This kind of sex-linked modification is known in some other pseudoscorpions [e.g. Leclerc & Mahnert, 1988]. However, in the absence of ♀ material, nothing else can be added here.

Acknowledgements. I am indebted to Dr. Kirill G. Mikhailov, the Keeper of Arachnida at ZMMU, for always making ZMMU material available for study, to Dr. Volker Mahnert (Muséum d'Histoire Naturelle, Genève) and Dr. Mark S. Harvey (Western Australian Museum, Perth) for their advice, to Mr. Timur Khanjanov (INTRANS, Baku) for his logistic help, and to Dr. Sergei I. Golovatch (Moscow) for his kind help and encouragement in the course of the entire project.

References

- Chamberlin J.C. 1931. The arachnid order Chelonethida // Stanford Univ Publ., Biol. Sci. Vol.7. No.1. 284 pp.
- Harvey M.S. 1992. The phylogeny and classification of the Pseudoscorpionida (Chelicerata) // Invertebrate Taxonomy. Vol.6. P.1373-1435.
- Leclerc P., Mahnert V. 1988. A new species of the genus *Levigatocreagris* Curcic (Pseudoscorpiones: Neobisiidae) from Thailand, with remarkable sexual dimorphism // Bull. Br. arachnol. Soc. Vol.7. P.273-277.
- Mahnert V. 1974. *Acanthocreagris* nov. gen. mit Bemerkungen zur Gattung *Microcreagris* (Pseudoscorpiones, Neobisiidae) (Über griechische Pseudoskorpione IV) // Rev. suisse Zool. T.81. P.845-885.
- Mahnert V. 1979. The identity of *Microcreagris gigas* Balzan (Pseudoscorpiones, Neobisiidae) // Bull. Br. arachnol. Soc. Vol.4. P.339-341.