



A New Species of the Genus *Bathyphantes* Menge, 1866 (Araneae: Linyphiidae) from Ukraine

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Abstract: *Bathyphantes fragmitis* sp. n. (Linyphiidae) is described from a reed bed from the Opuk Reserve, Leninsky District, Crimea, on the basis of a male specimen. An illustrated description is presented and the affinities of the new species are discussed.

Key words: spiders, *Bathyphantes fragmitis* sp. n., Crimea, male, description.

Introduction

The world fauna of the genus *Bathyphantes* Menge, 1866 comprises 58 species (WORLD SPIDER CATALOG 2020). Of these, 13 species are known from Europe. Six of them occur in Ukraine and are available in our collection. These are *B. approximatus* (O. Pickard-Cambridge, 1871), *B. gracilis* (Blackwall, 1841), *B. nigrinus* (Westring, 1851), *B. parvulus* (Westring, 1851), *B. setiger* O. Pickard-Cambridge, 1894 and *B. similis* Kulczyński, 1894.

Recent examination a male specimen of the genus *Bathyphantes* from Crimea and its comparison with males of the congeneric species revealed clear morphological differences in the palp structure. This male specimen is described in the present article as a new species.

Materials and Methods

The specimen was collected using a hand-held suction sampler. The determination was made using a binocular microscope MBS-10. Drawings were made with a camera lucida. The holotype (male) is deposited in the collection of the author (VGC).

Abbreviations of the names of palp and epigyne structures follow HORMIGA (1994, 2000): C –

cymbium, E – embolus, L – lamella characteristica, Pc – paracymbium, SA – suprathegular apophysis, SPT – suprathegulum, St – subtegulum, T – tegulum. Other abbreviations used in the text: AP – apical part of paracymbium, FA – frontal arm of lamella, Fe – femur, K – keel apophysis of lamella, MP – middle part of paracymbium, N – notch between lamella's frontal arm and keel, O – outgrowth of lamella ventral angle, PP – proximal part of paracymbium, S – spur apophysis of lamella, Ti – tibia; leg spines position: d – dorsal, p – prolateral, r – retrolateral.

All measurements are in mm.

Results

Linyphiidae Blackwall, 1859

Bathyphantes Menge, 1866

Bathyphantes fragmitis sp. n.

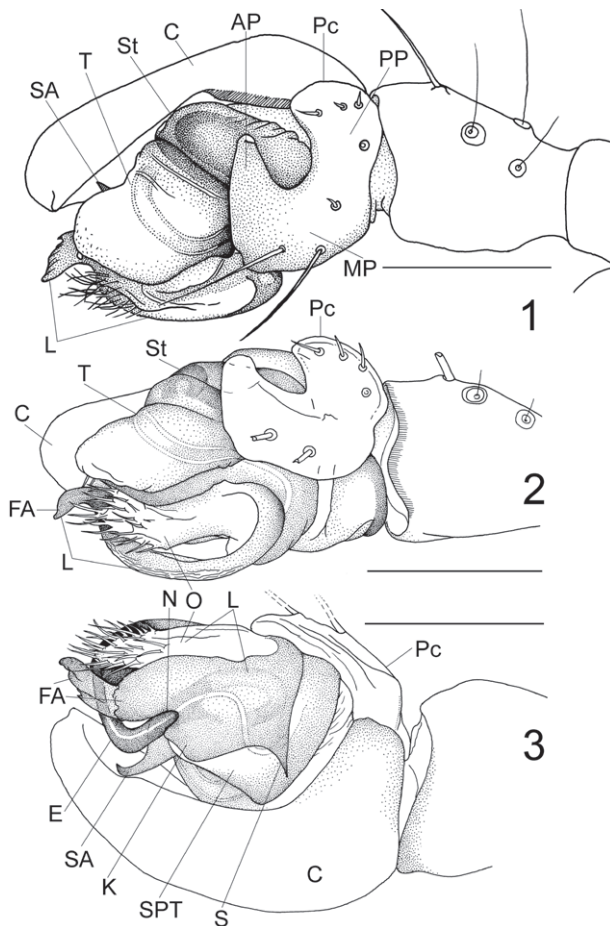
Figs. 1–6

Type material: Holotype male, Ukraine, Crimea, Leninsky District, 4.5 km WSW from Jakovenkovo Village, Opuk Reserve, 45.05°N 36.26°E, short gully on the abrupt sea shore, *Phragmites* bed, in dead leaves on the ground, 17 April 2005, leg. V. Gnelitsa (VGC).

Etymology: The name is derived from *Fragmites* (the generic name of the reed). It is a noun in a nominative case.

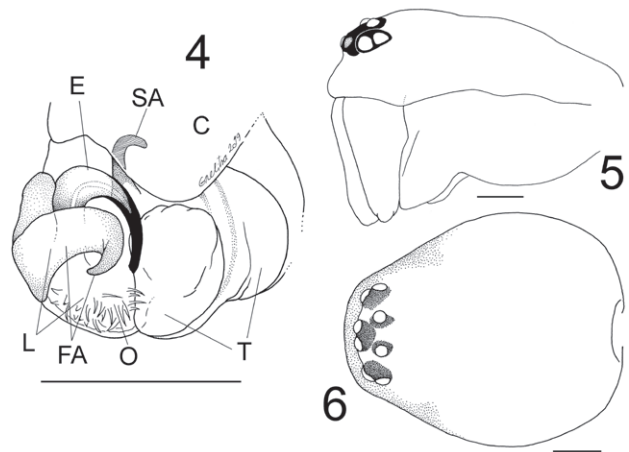
Table 1. Legs measurements of *Bathyphantes fragmitis* sp. n. (holotype).

Legs	Femur	Patella	Tibia	Meta-tarsus	Tarsus	Sum
I	1.08	0.23	1.17	1.01	0.67	4.16
II	0.96	0.21	1.01	0.85	0.56	3.59
III	0.74	0.20	0.64	0.61	0.40	2.59
IV	0.95	0.20	0.91	0.80	0.50	3.36

**Fig. 1–3.** *Bathyphantes fragmitis* sp. n., male palp: 1 – retrolateral, 2 – ventral, 3 – pro-lateral views. Scale line = 0.1 mm.

Diagnosis: The male of the new species can be distinguished by the pale general appearance; coiled elongated embolus without distal loop; stout paracymbium; lamella characteristica with a pointed spur on the basal-upper edge; keel shape apophysis of the frontal-upper edge; wide curved frontal arm with diagonally cut end and ventral long, massive outgrowth forward covered with stout distal bristles.

Description: Male. Total length 1.46; carapace 0.67 long, 0.59 wide (Figs. 5–6), pale yellow; sternum 0.39 long, 0.39 wide, yellow-grey. Posterior

**Fig. 4–6.** *Bathyphantes fragmitis* sp. n., male palp: 4 – apical view. Carapace: 5 – lateral, 6 – dorsal views. Scale line = 0.1 mm.

median eyes 0.8x the diameter apart. Chelicerae pale yellow, anterior margin of chelicerae with 3 small teeth, posterior margin with 3 tiny teeth, numerous fine stridulating files barely visible. For measurements of legs, see Table 1. Legs yellow; spination: FeI – 1d, 2p, TiI – 2d, 1r, 1p, FeII – 1d, TiII – 2d, 1r, FeIII – 1d, TiIII – 2d, TiIV – 2d, position of metatarsal trichobothrium: I – 0.22, II – 0.23, III – 0.23.

Palp (Figs. 1–4) yellow. Cymbium without modification. Paracymbium with broadened base of the proximal part (PP), stout middle part (MP) and robust triangular apical part (AP), rounding at the top (Fig. 1). Coiled elongated embolus gradually narrowed to the end, does not create transverse loop in its distal portion (Figs. 1–4). Lamella (L) of similar general appearance with that of other *Bathyphantes*. This large sclerite gives several outgrowths: pointed spur (S) on the basal-upper edge (Fig. 3), keel-shaped apophysis (K) of frontal-upper edge and a wide curved frontal arm (FA) with diagonally cut end (Figs. 2–4). Last two outgrowths separated with deep notch (N) from which embolus starts to be clearly visible (Fig. 3). The ventral angle of lamella continuing with long massive forward-directed outgrowth (O), covered with numerous stout bristles on its distal part (Figs. 2–4).

Abdomen yellow, gradually becoming yellow-grey caudally; no dorsal pattern.

Female: unknown.

Remarks: Eleven species of the genus *Bathyphantes* are known based on females only. The likelihood of alliance of any of these females with the above-described male from Crimea is very limited. Ten of these species with unknown males were described from localities too distant from Crimea: *B. dubius* Locket, 1968 (Angola), *B. gracilipes* van

Helsdingen, 1977 (St. Helena), *B. gulkana* Ivie, 1969 (Russia – Far East, USA – Alaska, Canada), *B. hirsutus* Locket, 1968 (Congo), *B. lennoxensis* Simon, 1902 (Argentina), *B. menyuanensis* Hu, 2001 (China), *B. montanus* Rainbow, 1912 (Australia), *B. tagalogensis* Barrion & Listinger, 1995 (Philippines), *B. umiatus* Ivie, 1969 (USA – Alaska), *B. yukon* Ivie, 1969 (USA – Alaska) (WORLD SPIDER CATALOG, 2020). The remaining *B. ohlerti* Simon, 1884 from Poland differs from the Crimean specimen by the body size (2.17 mm) and the dark general colour. The single short description of the species (OHLERT 1867) contains no other features suitable for identification. Therefore, the newly-examined male specimen of the genus *Bathyphantes* from Crimea is described here as a new species.

Discussion

The fauna of the genus *Bathyphantes* in Crimea is poor. Only *B. gracilis* (Blackwall, 1841) is mentioned within the Chernomorsky, Saky, Simpheropol, Belogorsky and Leninsky Regions of the peninsula.

In Ukraine, the number of *Bathyphantes* spp. decreases southward: Forest and Forest-Steppe zones (5 species), Carpathians (4) and Steppe zone (3). The arid conditions of the Ukrainian steppe, in-

cluding north, central and east Crimea, impede the distribution of spiders of *Bathyphantes*, which prefer semi-humid, humid or very humid conditions. By this reason, the relationships of the new Crimean *Bathyphantes* with the congeneric species outside of Crimea seem illogical. The morphological peculiarities of the new species, which is obviously distinct from the congeneric species in Ukraine, confirm the distant position of the species of *Bathyphantes* relative to the other species of this genus from Ukraine.

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