

# *Mecynargus minutipalpis* sp. n. (Araneae: Linyphiidae) from Ukraine

Valery A. Gnelitsa

Sumy State Teacher's Training University, 87, Romenskaja street, Sumy 40002, Ukraine; E-mail: gnelitsa@mail.ru

**Abstract:** The illustrative description of the new spider species *Mecynargus minutipalpis* sp. n. from the Step of Kherson area and Crimea is presented.

**Key words:** *Mecynargus minutipalpis* sp. n., Linyphiidae, description, Ukraine.

## Introduction

According to PLATNICK (2010) *Mecynargus* KULCZYN'SKI, 1894 genus today unites 14 species of late *Conigerella* HOLM, 1967, *Rhaebothorax* SIMON, 1926 and *Latithorax* HOLM, 1943 genera. All *Mecynargus* species possess virtually identical conformations of male palps (simple narrow elongate embolic part with embolus ended opposite to the radical tailpiece); the branchial opercula possess the complex stridulatory ridges (MERRETT 1963) the structure which, after MILLIDGE (1977), can be regarded as an autapomorphous character for this group of species; tibia spination 2-2-2-1.

After ESKOV (1988) *Mecynargus* species are the model specimens of Hypoarctic fauna though divided into two groups. In the first group there are four European species: *Mecynargus brocchus* (L. KOCH, 1872); *Mecynargus longus* (KULCZYN'SKI, 1882); *Mecynargus pyrenaicus* (DENIS, 1950); *Mecynargus foveatus* (DAHL, 1912) which inhabits the mountains or spread along the deciduous forest belt. In the second group the two Holarctic species (*Mecynargus borealis* (JACKSON, 1930); *Mecynargus paetulus* (O. P.-CAMBRIDGE, 1875)) and the six Palaearctic species (*Mecynargus asiaticus* TANASEVITCH, 1989; *Mecynargus hypnicola* ESKOV, 1988; *Mecynargus*

*monticola* (HOLM, 1943); *Mecynargus morulus* (O. P.-CAMBRIDGE, 1873); *Mecynargus pinipumilis* ESKOV, 1988; *Mecynargus sphagnicola* (HOLM, 1939); *Mecynargus tundricola* ESKOV, 1988; *Mecynargus tungusicus* (ESKOV, 1981)) from Boreal and Arctic zone are united (MARUSIK, BÖCHER, KOPONEN 2006), (ESKOV 1994).

In Ukraine only *Mecynargus foveatus* (DAHL, 1912) was known so far (EVTUSHENKO 1993, MIKHAILOV 1997). It has been found in the meadow in the North-West of the Ukrainian Forest zone (Fig. 17).

Recent collecting in Kherson area and in the North Crimea (Ukraine) has revealed a new species of this genus close to *M. foveatus*, which is here described. The comparative pictures of *M. foveatus* are presented as well.

## Materials and Methods

The specimens were collected using a hand-held suction sampler. The determination was made using binocular microscope MBS-10, drawings were made using camera lucida. The materials examined for this study are deposited in the collection of Zoological Museum of Moscow State University (ZMMU) and in the author's private collection (VGC).

The following abbreviations were used: DSA = distal suprategular apophysis; E = embolus; EM = embolic membrane; MSA = marginal suprategular apophysis; P = paracymbium; Pti = pedipalpal tibia; SPT = suprategulum; ST = subtegulum; T = tegulum; TP = radical tailpiece. All measurements given below are in mm.

### Taxonomic part

#### *Mecynargus minutipalpis* sp. n.

**Material examined:** Holotype male, female, the *Fragmitis* near the salt-marsh, in detritus, Solenoozerny part of Chernomorsky reserve, Goloprstan distr., Kherson area, Ukraine, 46°27'N, 31°59'E, 22 Apr. 2008, V. Gnelitsa (ZMMU).

**Paratypes:** 11 males, 36 females, same data (VGC), ♀, halophilous vegetation, salt marsh, Ivano-Rybalchansky part of Chernomorsky reserve, Goloprstan distr., Kherson area, 26 Apr. 2007, V. Gnelitsa (VGC); ♂ 14♀, halophilous vegetation, in grass, Solenoozerny part of Chernomorsky reserve, same location, 24 Apr. 2008, V. Gnelitsa (VGC); ♂, *Quercus* with *Fragmitis* and grass, in detritus near the water, the shore of the small lake, same location, 21 Apr. 2008, V. Gnelitsa (VGC); ♂ 6♀, the grass near the lake, in detritus, same location, 24 Apr. 2008, V. Gnelitsa (VGC); ♂ 3♀, the strip of halophilous vegetation near the lake, in grass and detritus, same location, 22 Apr. 2008, V. Gnelitsa (VGC); ♀, *Pinus pallasiana* artificial stand, in detritus, same location, 23 Apr. 2008, V. Gnelitsa (VGC); 3♂, halophilous vegetation (*Salicornia europaea*, *Halocnemum stro-*

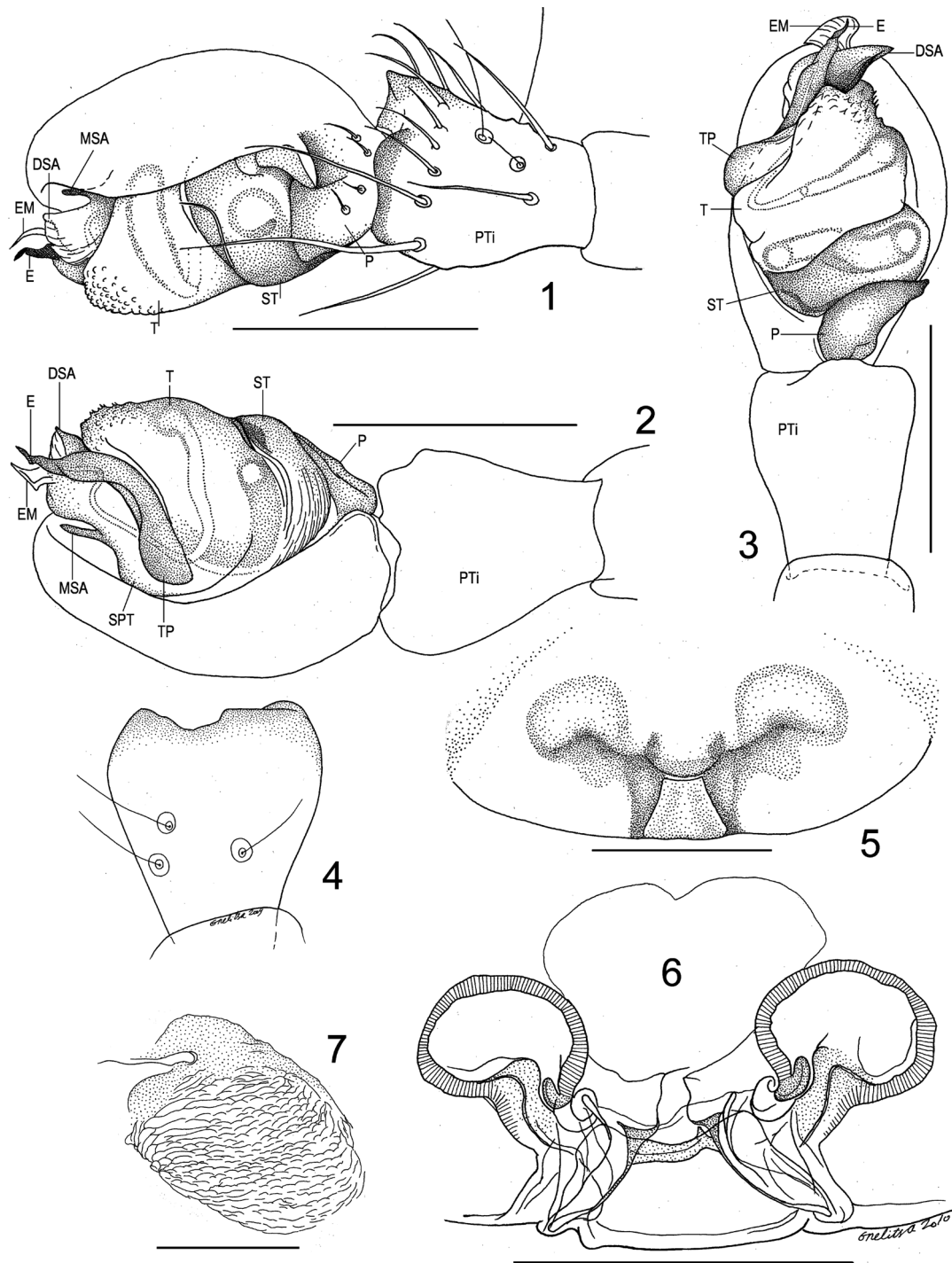
*bilaceum*), on the ground and in grass, Sasyk lake shore, Pribrezhnoye railway station, Saky distr., Crimea, 30 Apr. 2000, M. Kovblyuk (VGC); ♂ ♀, same place, 9 May 2000, M. Kovblyuk (VGC); ♂, same place, 19 May 2000, M. Kovblyuk (VGC); 3♂ ♀, same place, 21 Sept. 2000, M. Kovblyuk (VGC); ♂, same place, 17 Oct. 2000, M. Kovblyuk (VGC); ♀, same place, 19 Nov. 2000, M. Kovblyuk (VGC); ♂, same place, 3 Dec. 2000, M. Kovblyuk (VGC); ♂ 3♀, *Halocnemum strobilaceum*, *Puccinella* sp., on the ground and in grass, 14 Apr. 2003, V. Gnelitsa (VGC); 2♀, the strip of halophilous vegetation near the water, SW extremity of the Yarylgach lake, to the North from Chernomorsk town, Chernomorsk distr., Crimea, 20 Apr. 2004, V. Gnelitsa (VGC); 4♀, the strip of halophilous vegetation near the water, S extremity of Panskoye lake., same location, 25 Apr. 2004, V. Gnelitsa (VGC); 7♀, the strip of halophilous vegetation near the water, Panskoye lake shore, same location, 20 Apr. 2004, V. Gnelitsa (VGC); ♀, in sparse grass, sandy shore of Panskoye lake, same location, 20 Apr. 2004, V. Gnelitsa (VGC); 5♀, the strip of sparse halophilous vegetation near the water, sandy shore between two salt lakes., Olenevka vil., same location, 16 Apr. 2004, V. Gnelitsa (VGC).

The points are presented on the distribution map (Fig. 17).

**Diagnosis:** The new species differs from the similar *M. foveatus* (Figs. 10-16) by the pale coloration, male carapace, smaller size and some features of the male palp as well as by epigyne and vulva. The main features to distinguish these two species are in Table 1.

**Table 1.** Main features of the species.

Female	<i>M. minutipalpis</i> sp.n.	<i>M. foveatus</i> (after Wiehle, 1960)
Colour of carapace	yellow-grey	dark brown
Promargins of chelicerae	4 teeth	6 teeth
Position of metatarsal trichobothrium	0.40 - 0.43	0.30 - 0.31
Length/width ratio of epigyne	0.52 (Fig. 5)	0.62 (Fig. 15)
Receptacles of vulva	widened (Fig. 6)	elongated (Fig. 16)
Male		
Carapace	no head elevation (Fig. 8)	clear head elevation (Fig. 10)
Book lungs opercula	stridulatory areas poor visible	highly developed stridulatory areas
Embolic division	J – form (Fig. 2)	S – form (Fig. 13)
Tegulum distally	without tooth (Fig. 2)	with tooth (Fig. 13)
Palpal tibia	without tooth (Fig. 2)	with tooth (Fig. 14)
Adult	in winter	in summer

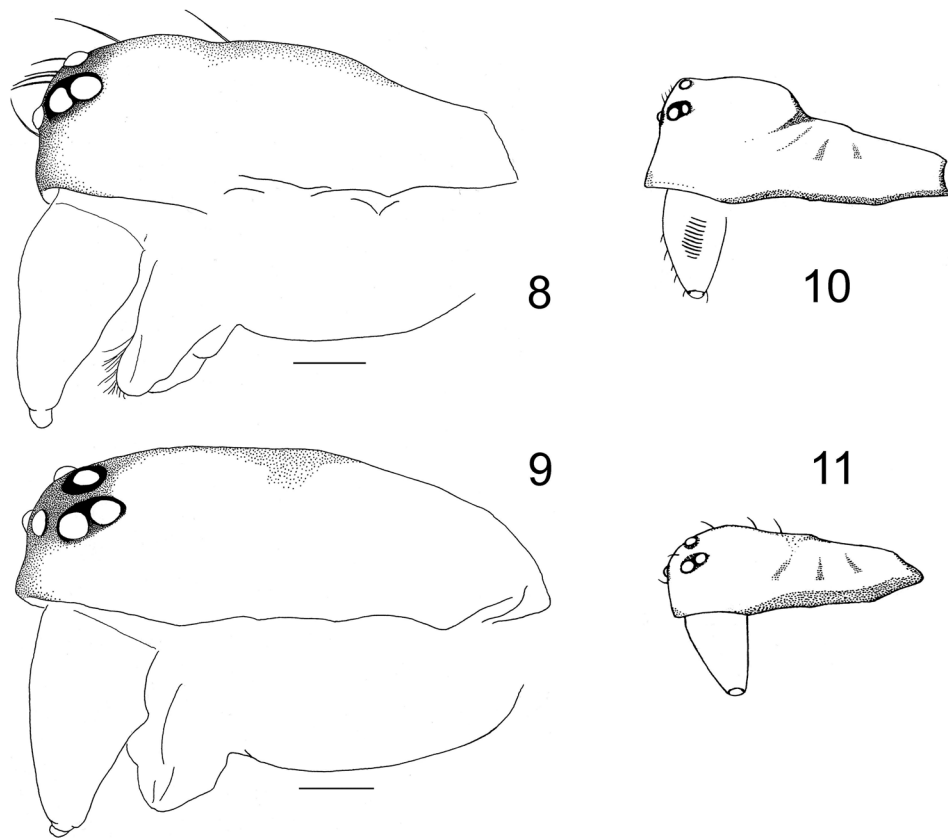


**Figs. 1-7.** *Mecynargus minutipalpis* sp. n.: 1. Left palp, ectal; 2. Left palp, mesal; 3. Left palp, ventral; 4. Left palpal tibia, dorsal; 5. Epigynum, ventral; 6. Vulva; 7. Stridulatory areas on the book lung. Scale lines = 0.1 mm.

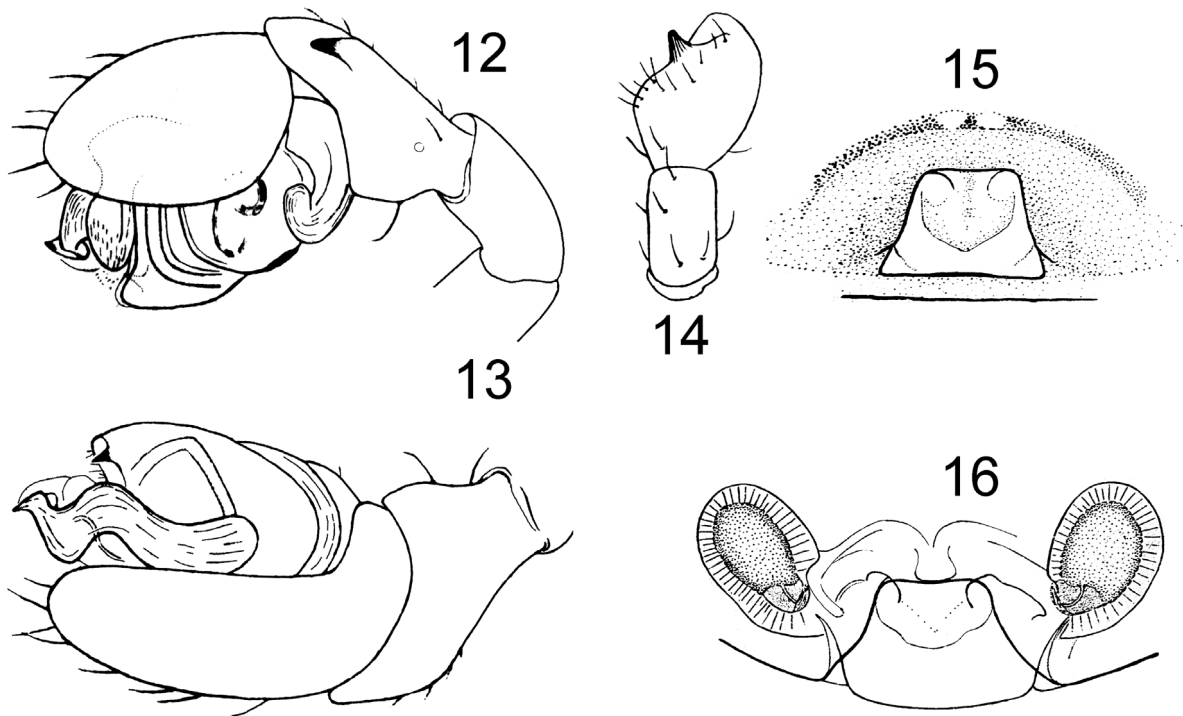
**Description:** Male: Total length 1.5. Carapace (Fig. 8) 0.60 long, 0.49 wide, brown-yellow. Sternum 0.36 long, 0.38 wide, grey-yellow with delicate dark edging. Posterior median eyes are separated by their diameter. Promargins of chelicerae with 5 teeth, retro-margins with 2 teeth. Abdomen dark grey unicolourous. The stridulatory areas on the book lungs are weak-

ly developed and poorly visible (Fig. 7). Legs brownish yellow; tibial spination 2:2:2:1, Ti I-III distal spines are short, thin, extremely poorly visible. Position of the metatarsal trichobothrium: I-0.38, II-0.41, III-0.39. The length of leg segments is given in Table 2.

**Female:** Total length 1.87. Carapace (Fig. 9) 0.70 long, 0.49 wide, yellow-grey. Sternum 0.39



**Figs. 8-11.** *Mecynargus minutipalpis* sp. n.: 8. Male carapace, lateral; 9. Female carapace, lateral; *Mecynargus foveatus* (from Wiehle, 1960): 10. Male carapace, lateral; 11. Female carapace, lateral. Scale lines = 0.1 mm.



**Figs. 12-16.** *Mecynargus foveatus* (from Wiehle, 1960): 12. Left palp, ectal; 13. Left palp, mesal; 14. Left palpal tibia, dorsal; 15. Epigynum, ventral; 16. Vulva.

**Table 2.** Length of leg segments (male).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus
I	0.46	0.18	0.41	0.36	0.34
II	0.43	0.17	0.35	0.34	0.29
III	0.38	0.15	0.30	0.31	0.28
IV	0.52	0.17	0.46	0.41	0.32

Palps as in Figs. 1- 4. The description is given in the table of the diagnosis.

**Table 3.** Length of leg segments (female).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus
I	0.49	0.20	0.42	0.39	0.30
II	0.45	0.18	0.36	0.34	0.28
III	0.41	0.18	0.32	0.33	0.28
IV	0.55	0.19	0.48	0.42	0.29



**Fig. 17.** Distribution map: ■ *Mecynargus foveatus*; ● *Mecynargus minutipalpis* sp. n.

long, 0.41 wide, colouration as in male. Posterior median eyes are separated by approximately their diameter. Promargins of chelicerae with 4 teeth, retromargins with 3 teeth. Abdomen dark grey unicolourous. Legs orange-yellow; tibial spination 2:2:2:1, Ti I-III spines as in male. Position of the metatarsal trichobothrium: I-0.43, II-0.42, III-0.40. The length of leg segments is given in Table 3.

Epygine and vulva as in Figs. 5, 6 respec-

tively. The description is given in the table of the diagnosis.

**Biology:** The new species prefers open rather humid places with enough detritus, especially salt marshes with *Fragmitis* and grass. The mate period is from the end of September till April – May.

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