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A new species of *Talavera* Peckham et Peckham, 1909 (Aranei: Salticidae) from the Crimea

Новый вид рода *Talavera* Peckham et Peckham, 1909 (Aranei: Salticidae) из Крыма

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КЛЮЧЕВЫЕ СЛОВА: пауки, *Talavera*, новый вид, описание, Крым.

ABSTRACT. A new species, *Talavera logunovi* sp.n., from the Crimea is described and illustrated. The new species is the most similar to *T. monticola*. The males of *T. logunovi* sp.n. can be easily distinguished by the peculiar spine-shaped embolic tip (hook-like in *T. monticola*). The females of *T. logunovi* sp.n. differ from those of *T. monticola* in having the slightly longer insemination ducts.

РЕЗЮМЕ. Новый вид, *Talavera logunovi* sp.n., описан из Крыма. Новый вид наиболее близок к *T. monticola*. Самцы *T. logunovi* sp.n. хорошо отличаются характерным игловидным кончиком эмболюса (крючковидный у *T. monticola*). Самки *T. logunovi* sp.n. отличаются от *T. monticola* более длинными осеменительными каналами эпигины.

Introduction

The jumping spider genus *Talavera* has a Holarctic distribution [World Spider Catalog, 2015]. In total, fifteen species of *Talavera* are known. In North America, the only species known is the generotype: *T. minuta* (Banks, 1895) [World Spider Catalog, 2015]. Eleven species are known from Europe and thus Europe seems to be the diversity center of the genus.

Recently the genus was revised by Logunov & Kronestedt [2003] and Wunderlich [2008], who provided the good identification keys for all the species described. However, some difficulties occur with the identification of *Talavera* species from the Karadag Nature Reserve in the Crimea. To date, we have accumulated many specimens (males and females) of this species in our collection. The goal of the present paper is to describe this obscure species as new.

Material and methods

The type specimens are shared between the National Arachnological Collection in V.I. Vernadsky Taurida National University, Simferopol, the Crimea, curator M.M. Kovblyuk (TNU), the Manchester Museum of the University of Manchester, UK, curator D.V. Logunov (MMUM), and the Zoological Museum of the Moscow State University, Moscow, Russia, curator K.G. Mikhailov (ZMMU).

Leg segments were measured after their separation from the prosoma. All measurements are in mm: minimum-maximum. Drawings were made using the dissecting and compound microscopes using a grid method. All scale bars are 0.1 mm.

The format of description, morphological terminology and abbreviations follow Logunov & Kronestedt [2003]: *CO* — copulatory opening; *DS* — distal sclerite of the tegulum; *E* — embolus; *FD* — fertilization duct; *ID* — insemination duct; *M* — exposed embolus-tegulum membrane; *R* — receptacle.

Taxonomy

Genus *Talavera* Peckham et Peckham, 1909

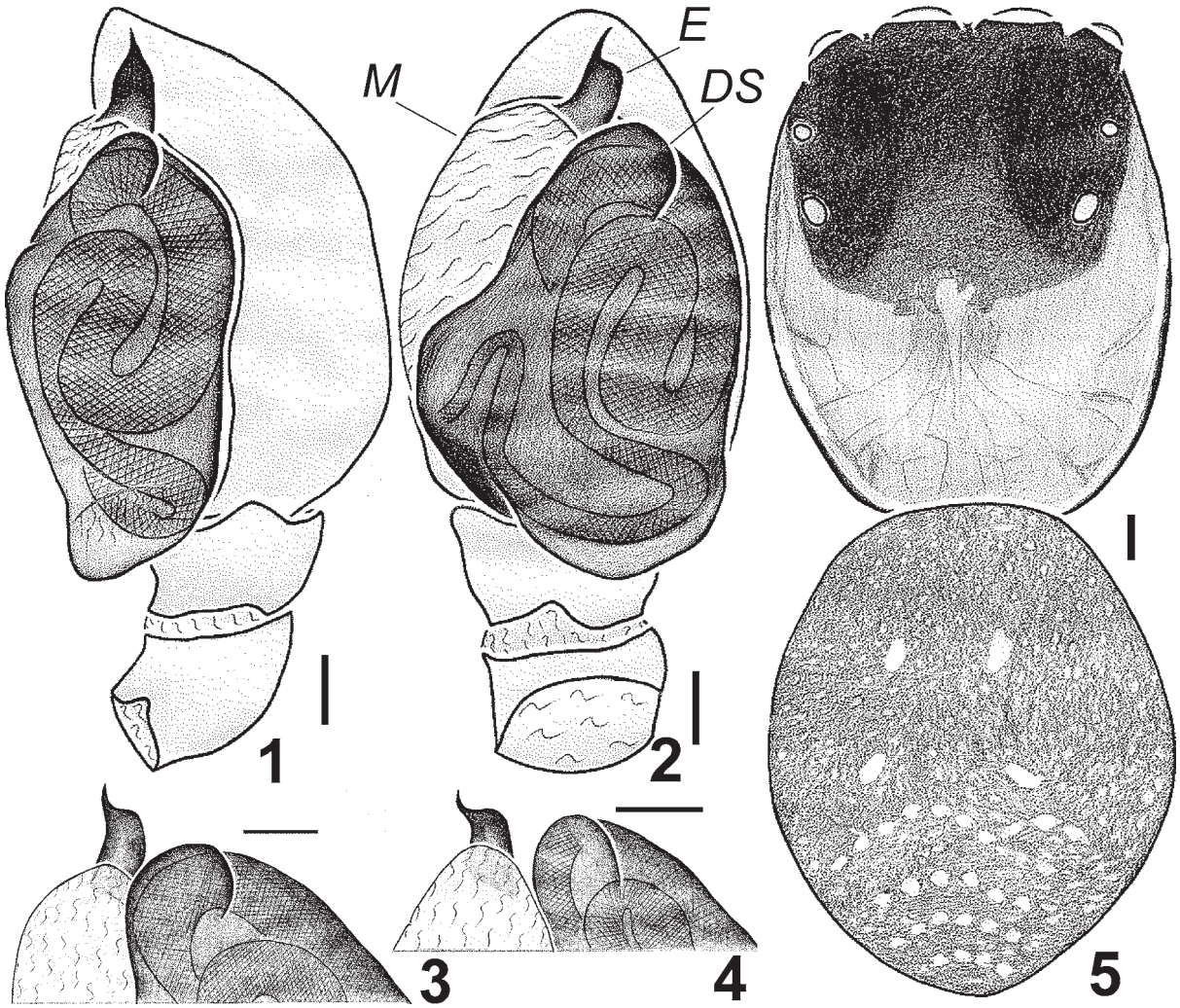
Type species: *T. minuta* (Banks, 1895).

DIAGNOSIS. *Talavera* is closest to *Euophrys* C.L. Koch, 1834 *sensu stricto*, but can be easily distinguished by the absence of RTA (present in *Euophrys*), the male maxilla with the endite tooth (absent in *Euophrys*), the exposed embolus-tegulum membrane and the distal sclerite of the tegulum (both are unique diagnostic characters = apparently apomorphies) [Logunov, Kronestedt, 2003; Wunderlich, 2008].

DESCRIPTION. A detailed description of the genus was provided by Logunov & Kronestedt [2003].

COMPOSITION. Currently genus encompasses 15 species [Logunov, Kronestedt, 2003; Wunderlich, 2008; World Spider Catalog, 2015].

DISTRIBUTION. Holarctic, with the majority of species occurring in Europe.



Figs 1–5. Male of *Talavera logunovi* sp.n.: 1 — palp, retrolateral view; 2 — palp, ventral view; 3–4 — embolus, ventral view (variations); 5 — habitus, dorsal view. Abbreviations: *DS* — distal sclerite of the tegulum; *E* — embolus; *M* — exposed embolus-tegulum membrane. Scale 0.1 mm.

Рис. 1–5. Самец *Talavera logunovi* sp.n.: 1 — пальпа, ретролатерально; 2 — пальпа, вентрально; 3–4 — эмболюс, вентрально (вариации); 5 — габитус, дорсально. Обозначения: *DS* — дистальный склерит тегулюма; *E* — эмболюс; *M* — наружная мембрана, соединяющая эмболюс с тегулюмом. Масштаб 0,1 мм.

Talavera logunovi **sp.n.**
Figs 1–9.

Talavera krocha Logunov et Kronestedt, 2003: 1106, figs 59–61 (♂ only).

MATERIAL. ***The Crimea.*** Feodosiya Distr., Karadag Nature Reserve: **Holotype** ♂ (ZMMU from TNU-2595/9/1), Lobovoy Mt. Ridge, 28.05.2008, A.A. Nadolny. **Paratypes:** 1 ♂ (MMUM, vial No.1764/12 from TNU), the way from Biological station to Gyaur-Cheshme spring and "Verhnie trassy" cordon, 17.05.2003, M.M. Kovblyuk; 3 ♀♀ (TNU-2023/3/2), Besh-Tash valley, near the lake, wet meadow, 4.07.2004, M.M. Kovblyuk; 1 ♂ (TNU-1998/4), Besh-Tash valley, near the lake, *Phragmites communis, Artemisia, Thymus,* 9.07.2005, M.M. Kovblyuk; 1 ♀ (TNU-2282/4), Karadag gulch, dry slope with *Artemisia* semidesert steppe, 9.07.2006, M.M. Kovblyuk; 1 ♀ (TNU-2397/5), the way from Biological station to spring Gyaur-Cheshme, *Quercus pubescens* forest, in litter, 3.07.2007, M.M. Kovblyuk; 1 ♂, 1 ♀ (TNU-2595/9/2), Lobovoy Mt. Ridge, together with holotype, 28.05.2008, A.A. Nadolny; 1 ♂ (TNU-2716/12), N44°55′11.7″, E35°12′18.0″, dry stony steppe with lichen on the soil, 10 pitfall traps, 6–20.06.2008, A.A. Nadolny; 1 ♀ (TNU-2722/11), same locality, 7 pitfall traps, 21.07–4.08.2008, A.A. Nadolny; 1 ♂ (TNU-2739/13), N44°55′10.9″, E35°12′17.6″, 37 m, *Quercus pubescens* forest, 10 pitfall traps, 6–20.06.2008, A.A. Nadolny; 1 ♀ (TNU-2936/9), N44°54′11.4″, E35°12′25.5″, 43 m, ravine bottom, *Quercus pubescens* forest on the banks of the temporary stream, 9 pitfall traps, 15–29.08.2008, M.M. Kovblyuk; 1 ♂ (TNU-2870/12), N44°54′58″, E35°12′21″, 51 m, *Pistacia mutica* forest in steppe, 11 pitfall traps, 6–20.06. 2008, A.A. Nadolny; 1 ♀ (TNU-2910/11), sea coast near of the mouth of the ravine "Chernyi Yar", N44°54′44.9″, E35°12′37.5″, 5 m, *P. mutica* and *Cotinus coggygria* on the crumbling seaside slope, 11 pitfall traps, 6–20.06.2008, M.M. Kovblyuk; 1 ♂ (TNU-3044/22), N44°55′33.7″, E35°12′37.2″, 109 m, meadow steppe, 10 pitfall traps, 7–21.06.2008, M.M. Kovblyuk; 1 ♀ (TNU-3045/14), same locality, 10 pitfall traps, 21.06.–3.07.2008, A.A. Nadolny; 2 ♂♂, 1 ♀ (TNU-3046/17), same locality, 11 pitfall traps, 3–22.07.2008, A.A. Nadolny; 1 ♀ (TNU-3047/12), same locality, 10 pitfall traps, 22.07–5.08.2008, A.A. Nadolny; 1 ♂ (TNU-3188/13), North Pass, N44°56′11.7″, E35°12′56.4″, 264 m, stony steppe, 10 pitfall traps, 24.05–7.06.2008, M.M. Kovblyuk; 1 ♂ (TNU-

3189/11), same locality, 11 pitfall traps, 7–21.06.2008, A.A. Nadolny; 1 ♂, 1 ♀ (TNU-3191/11), same locality, 11 pitfall traps, 3–22.07.2008, A.A. Nadolny; 1 ♀ (TNU-2955/6), Beregovoy Mt. Ridge, N44°54′58.2″, E35°13′16.2″, 238 m, stony steppe, 10 pitfall traps, 22.07–5.08.2008, A.A. Nadolny; 1 ♀ (TNU-2973/19), Beregovoy Mt. ridge, N44°54′57.6″, E35°13′05.0″, 226 m, *Juniperus excelsa* forest, 10 pitfall traps, 7–21.06.2008, M.M. Kovblyuk; 1 ♀ (TNU-2975/20), same locality, 10 pitfall traps, 3–22.07.2008, A.A. Nadolny; 1 ♂ (TNU-3259/90), sifting, 28–31.05.2010, M.M. Kovblyuk, N.N. Yunakov; 1 ♂ (TNU-3157/17), Biological station, 15.05–06.2012, O.V. Kukushkin; 1 ♀ (TNU-3320/13), Biological station, 24.05–14.06.2013, O.V. Kukushkin.

COMMENTS. The male of this new species was described and illustrated by Logunov & Kronestedt [2003] from the Chernomorskii Steppe Reserve (Kherson Area of Ukraine) under the name of *Talavera krocha* Logunov et Kronestedt, 2003. The figures and description of male well correspond to those of the males in our material from the Crimea. The female of *T. krocha* illustrated by Logunov & Kronestedt [2003: figs 62–64] on the basis of the paratype from France is very different from the Crimean females. According to Logunov & Kronestedt [2003: 1107], "the male is provisionally matched with the female, as ... no samples in which both sex were collected together".

The male described under the name of *T. krocha* is most similar to that of *T. monticola* (Kulczyński, 1884), but the females are similar to those of *T. aperta* (Miller, 1971) [Logunov, Kronestedt 2003: 1106–1107]. In our material some males and females were collected together (see above under the 'Material') and both sexes are most similar to those of *T. monticola*.

Based on the structure of copulatory organs, the genus *Talavera* was divided into three species groups, two of which were further divided into subgroups [Logunov, Kronestedt 2003]. The *monticola* group was subdivided into two subgroups: the *thorelli* and *monticola* subgroups. In *thorelli* subgroup the epigynal plate always forms a central atrium, and the epigynal fold is present. In *monticola* subgroup the epigyne is without a central atrium, and the epigynal fold is poorly marked, almost invisible. The females described by Logunov & Kronestedt [2003] under the name of *T. krocha* belong to *thorelli* subgroup, but the male is closely related to *T. monticola* from the *monticola* subgroup. Therefore, it is safe to conclude that Logunov & Kronestedt [2003] mismatched the male and the female of *Talavera krocha* Logunov et Kronestedt, 2003. The female holotype of *T. krocha* originated from Kirovograd Area of Ukraine, whereas the male paratype of *T. krocha* originated from the Chernomorskii Steppe Reserve. To conclude, the male described by Logunov & Kronestedt [2003] under the name of *T. krocha* and our *Talavera* specimens from the Karadag Nature Reserve belong to the same and undescribed species. This species is diagnosed and described in the present paper.

DIAGNOSIS. The new species belongs to the *monticola* group and *monticola* subgroup [sensu Logunov & Kronestedt, 2003]. Both sexes of *T. logunovi* sp.n. are most similar to those of *T. monticola* from the mountains of Central Europe (the Alps, Tatras, the Carpathians). The male of *T. logunovi* sp.n. can be easily distinguished by the peculiar spine-shaped embolic tip (hook-like in *T. monticola*). The female of *T. logunovi* sp.n. differs from *T. monticola* in having the slightly longer insemination ducts. The latter character is a poor diagnostic character, but yet the females in the *monticola* subgroup were reported to be indistinguishable [Logunov, Kronestedt, 2003: 1112]. Some females of *T. monticola* have the entrances of the insemination ducts clearly directed towards each other [Logunov, Kronestedt, 2003: p. 1123], while we have found no specimen with such trajectory of the insemination ducts in the studied material of the new species.

DESCRIPTION. Male (paratype, TNU-3044/22). *Measurements.* Total length 2.2. Carapace 1.15 long, 0.85 wide, 0.48 high at PLE. Ocular area 0.43 long, 0.69 wide anteriorly and 0.66 wide posteriorly. Diameter of AME 0.20. Abdomen 1.12 long, 0.78 wide. Cheliceral length 0.29. Clypeal height 0.04. Length of leg segments:

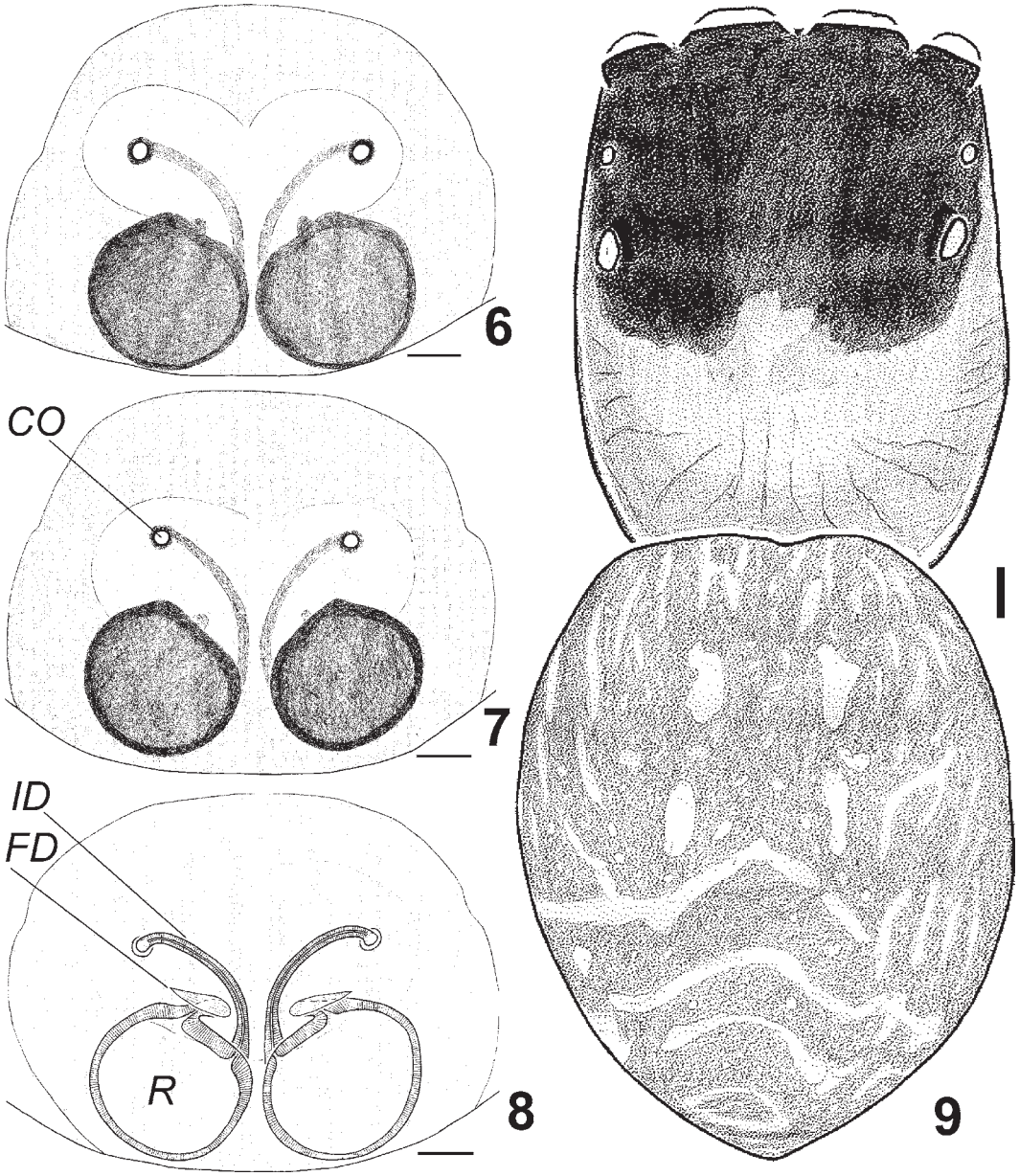
	Fm	Pt	Tb	Mt	Tr	Total
I	0.53	0.29	0.32	0.31	0.25	1.71
II	0.48	0.31	0.28	0.27	0.20	1.53
III	0.67	0.31	0.36	0.36	0.27	1.97
IV	0.62	0.28	0.41	0.38	0.32	2.00

Leg spination. Leg I: Fm d 1-1-1; Tb v 1-2-2ap; Mt v 2-2ap. Leg II: Fm d 1-1-2; Tb pr 1, v 1-2-2ap; Mt pr and rt 1, v 2-2ap. Leg III: Fm d 1-1-1, pr 1-1; Tb pr and rt 1-1, v 1-2; Mt pr, rt and v 1-2ap. Leg IV: Fm d 1-1-1-2; Tb pr and v 1-1; Mt pr and rt 1-1, v 1-2ap.

Coloration. Carapace brown, with black eye field and light spots on its sides at the rear part of eye field. Thoracic part of carapace with black margins and a light marginal line. Black field around eyes. Carapace is covered with elongated white scales. AMEs with a greenish sheen, surrounded by white (above) and red (below) cilia. Clypeus covered with red scales/hairs. Chelicerae, labium, sternum, maxillae light-brown. Abdomen: dorsum brown, with yellow reticulate colour pattern; venter brown, with two light stripes from epigastric furrow to scutum, situated in front of spinnerets. Length of ventral scutum is equal to 1/4 of the distance from the tracheal spiracle to the epigastral furrow. Scutal width three times greater than its length. Book-lung covers light. Spinnerets brown. Leg I from femur to middle metatarsus dark (black); distal half of metatarsus and tarsus light. Leg II: femur dark, remaining segments light, with black rings. Leg III: femur dark, remaining segments light. Leg IV: all segments light with black rings. Palps light, only cymbial tip and tegulum dark brown. Cymbium with dense, basal-prolateral bunch of long white hairs.

Palpal structure as in Figs 1–4.

Female (paratype, TNU-2975/20; all other ♀ paratypes have been measured in order to assess a variation of the carapace size). *Measurements*. Total length 1.98–3.08, carapace 1.02–1.30 long, 0.75–0.95 wide (n=16). High of carapace at PLE 0.50. Ocular area 0.45 long, 0.70 wide anteriorly and 0.62 wide posteriorly. Diameter of AME 0.2. Abdomen 1.55 long,



Figs 6–9. Female of *Talavera logunovi* sp.n.: 6–7 — epigyne, ventral view (variations); 8 — epigyne, dorsal view; 9 — habitus, dorsal view. Abbreviations: *CO* — copulatory opening; *FD* — fertilization duct; *ID* — insemination duct; *R* — receptacle. Scale 0.1 mm.

Рис. 6–9. Самка *Talavera logunovi* sp.n.: 6–7 — эпигина, вентрально (вариации); 8 — эпигина, дорсально; 9 — габитус, дорсально. Обозначения: *CO* — копуляторное отверстие; *FD* — оплодотворительные каналы; *ID* — осеменительные каналы; *R* — резервуар. Масштаб 0,1 мм.

1.15 wide. Cheliceral length 0.28. Clypeal height 0.10. Length of leg segments:

	Fm	Pt	Tb	Mt	Tr	Total
I	0.49	0.29	0.28	0.25	0.20	1.51
II	0.43	0.27	0.24	0.22	0.18	1.34
III	0.59	0.31	0.32	0.29	0.24	1.75
IV	0.59	0.28	0.39	0.36	0.29	1.92

Leg spination. Leg I: Fm d 2; Tb v 2-2-2; Mt v 2-2. Leg II: Fm d 1-1-1; Tb v 1-1; Mt v 2-2. Leg III: Fm d 1; Tb pr, rt and v 1-1; Mt pr, rt and v 1-2. Leg IV: Fm d 1-1-1; Tb pr, rt and v 1; Mt pr and rt 1-2, v 1.

Coloration. Carapace brown, with black eye field and light spots on its sides at the rear part of eye field. Thoracic part of carapace with black margins and a light marginal line. Black around eyes. Carapace is covered with elongated white scales/hairs. AMEs with a greenish sheen, surrounded by white cilia. Clypeus is covered with white scales/hairs. Chelicerae, labium, sternum, maxillae light brown. Abdomen: dorsum brown, with yellow reticulate colour pattern; venter brown, with two light stripes from the epigastral furrow to spinnerets. Book-lung covers light. Spinnerets brown. Leg I: femur dark on its sides; patella darkened distal-

ly; tibia with two spots from the sides distally; metatarsus slightly darkened proximally; tarsus light. Leg II: femur discontinuously darkened on its prolateral side; patella darkened distally; tibia with two spots from the sides distally; metatarsus more darkened than metatarsus of the leg I; tarsus darkened proximally. Legs III–IV: all segments light yellow, with black rings. Palps light yellow.

Epigyne and spermathecae as in Figs 6–8.

TYPE LOCALITY. The Crimea, Karadag Nature Reserve.

DISTRIBUTION. Ukraine (Kherson Area and the Crimea).

HABITATS. The sub-Mediterranean forests with *Quercus pubescens, Pistacia mutica* and *Juniperus excelsa*; meadows; meadow steppes; stony steppes; *Artemisia* semidesert steppes.

PHENOLOGY. ♂♀ — V–VII, ♀♀ — VIII, the peak activity of adults occurs in July.

ETYMOLOGY. The species is named in honour of Dmitri Viktorovich Logunov (Manchester, UK), the arachnologist who has published many papers devoted Salticidae.

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