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## A new species of *Anguliphantes* Saaristo & Tanasevitch, 1996 from southern Tadjikistan, Central Asia (Araneae: Linyphiidae)

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**Abstract:** A new species, *Anguliphantes tadjik* sp. nov., is described from medium altitudes in the mountains of the Republic of Tadjikistan. The species is very similar to the Himalayan *A. nepalensis* (Tanasevitch, 1987) and *A. nepalensoides* Tanasevitch, 2011, but clearly differs by certain structural details of the palp in the male and by the shape of the scapus in the female.

**Keywords:** Taxonomy - spiders - Micronetinae - montane fauna.

### INTRODUCTION

*Anguliphantes* Saaristo & Tanasevitch, 1996 is a small Eurasian micronetine genus currently containing 16 species (World Spider Catalog, 2021). At present only two species of this genus are known from the mountains of Central Asia: *A. nepalensis* (Tanasevitch, 1987) and *A. nepalensoides* Tanasevitch, 2011. *Anguliphantes nepalensis* was described from both sexes from the Himalayas of Pakistan, Nepal and India (Tanasevitch, 1987, 2011; Tanasevitch & Saaristo, 2006), while *A. nepalensoides* is only known from a single male from the Himalayan part of West Bengal, India (Tanasevitch, 2011).

Below I report on a third, new species of *Anguliphantes* with very close ties to both Himalayan congeners.

### MATERIAL AND METHODS

This paper is based on specimens (belonging to a new species) from the author's personal collection which will be deposited in the Muséum d'histoire naturelle, Geneva, Switzerland (MHNG) and on comparative specimens in the Zoological Museum of Moscow University (ZMMU). Sample numbers are given in square brackets. Specimens preserved in 70% ethanol were studied using an MBS-9 stereomicroscope. Drawings were done with the help of a drawing tube; a Levenhuk C-800 digital camera was used for taking photographs. Leg chaetotaxy is presented in a formula, e.g., TiI: 2-1(2)-1-0, which means that tibia I has two dorsal spines, one or two prolateral, one retrolateral and no ventral spines, the apical spines are disregarded.

The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus.

All measurements are given in mm. Scale lines in the figures correspond to 0.1 mm unless indicated otherwise. Figure numbers are given above the corresponding scale lines, the length they represent is given below them. The terminology of copulatory organs mainly follows that of Saaristo & Tanasevitch (1996).

### Abbreviations

a.s.l.	above sea level
DS	distal part of scapus
EP	embolus proper
Fe	femur
FG	Fickert's gland
LC	lamella characteristic
LE	lateral extension of embolus
LL	lateral lobe of distal part of scapus
LO	lateral outgrowth of scapus
MA	membranous area of radix
MM	median membrane
Mt	metatarsus
P	paracymbium
PMP	posterior median plate
Ps	proscapus (= proximal part of scapus)
R	radix
SE	swollen extension of paracymbium
SS	serrate surface of embolus
St	stretcher
TA	terminal apophysis

Ti tibia  
TmI relative position of trichobothrium on the metatarsus of leg I

## TAXONOMY

### *Anguliphantes* Saaristo & Tanasevitch, 1996

#### *Anguliphantes tadjik* sp. nov.

Figs 1-9, 14-16

**Holotype:** MHNG; male; TADJIKISTAN, Sanglak Mts, Khatlon Region, Danghara District, environs of Sebiston, ca 38.248°N, 69.245°E, 1200-1500 m a.s.l.; 6.V.1991; leg. S. Ovtchinnikov.

**Paratype:** MHNG; 1 female; collected together with the holotype.

**Comparative material:** *Anguliphantes nepalensis* (Tanasevitch, 1987): ZMMU (# Ta-8182); 1 male; NEPAL, Mustang District, Thakkhola, Chadziou-Khola, 2700-2900 m a.s.l., monsoon-influenced, dense, primary broadleaved forest in canyon, with bamboo growth; X.1969; leg. J. Martens. – ZMMU (# Ta-8183); 2 males, 3 females [sample #108]; Solukhumbu District, Khumbu, Mt. Everest region, 3250-3300 m a.s.l., confluence of Imja and Phunki-Drangka, *Betula* forest; 30.IX.-2.X.1970; leg. J. Martens.

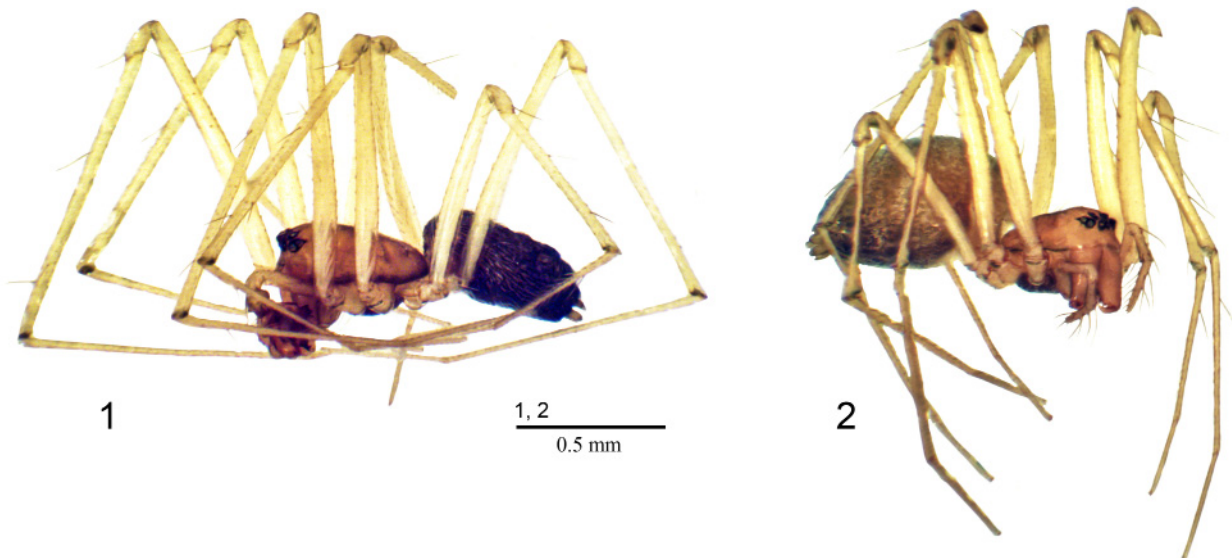
**Etymology:** The species name is a noun in apposition, meaning a native of Tadjikistan.

**Diagnosis:** The new species is distinguished from all known congeners by its relatively long legs. The male is also characterized by a modified palpal tibia, as well as by the shape of its lamella characteristica and

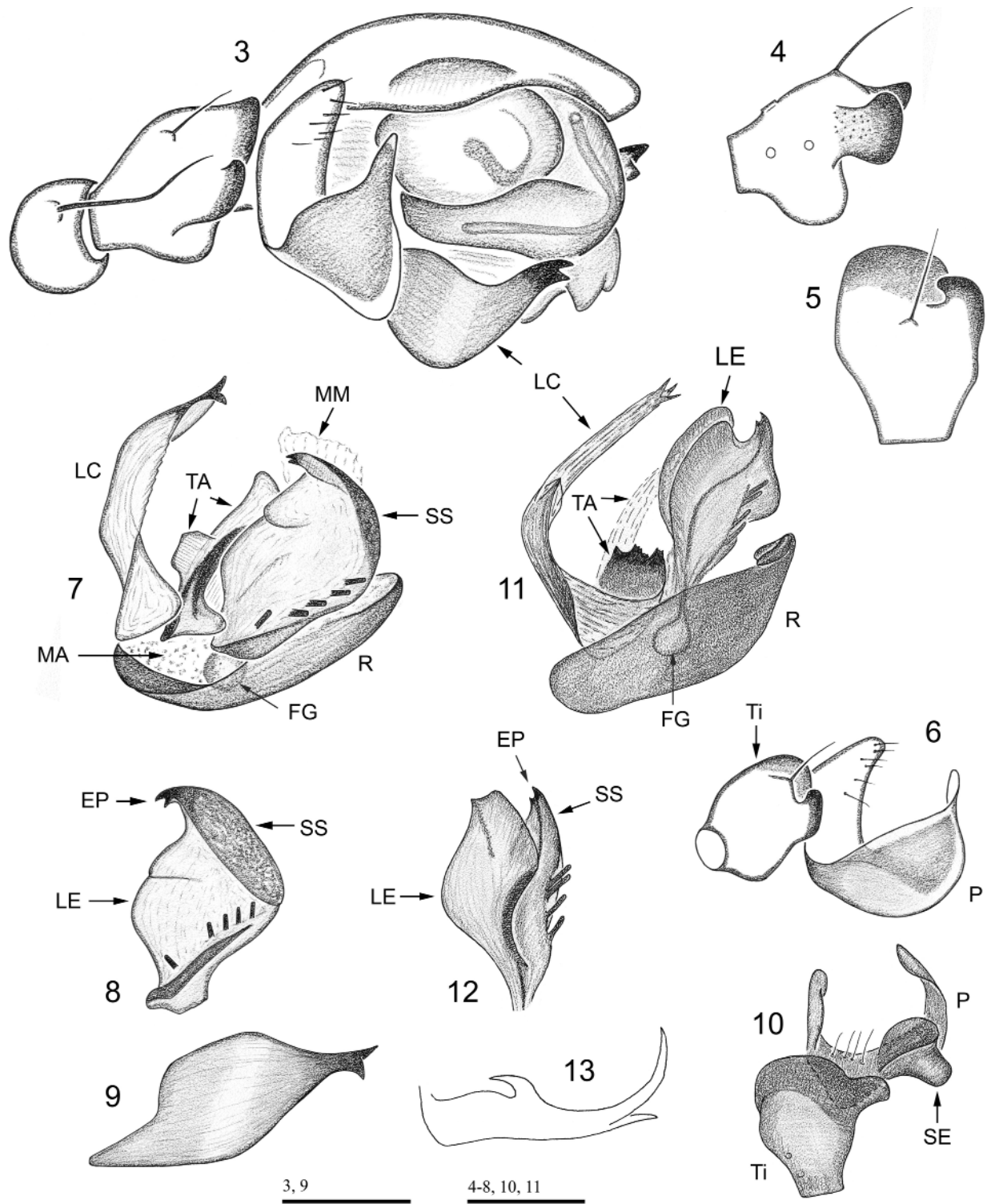
of its embolus. The female differs by the shape of the proscapula base.

**Description:** *Male holotype.* Habitus as in Fig. 1. Total length 2.13. Carapace unmodified, 0.98 long, 0.85 wide; pale brown, with an indistinct grey, median spot and a greyish margin. Eyes relatively small, each with a black fringe. Chelicerae unmodified, 0.43 long, of same colour as carapace. Legs yellow to pale yellow. Leg I 7.42 long (1.75 + 0.30 + 2.00 + 1.98 + 1.39), leg IV 6.09 long (1.63 + 0.28 + 1.65 + 1.75 + 0.78). Chaetotaxy: FeI: 0-2-0-0, FeII-IV: 0-0-0-0; TiI: 2-1-1-0, TiII: 2-0-1-0; TiIII-IV: 2-0-0-0; MtI-III: 1-0-0-0, MtIV: 0-0-0-0. Metatarsi I-III each with a trichobothrium. TmI 0.08. Palp (Figs 3-9): Patella with a special spine (see Saaristo & Tanasevitch, 1996). Cymbium with neither posterodorsal outgrowth nor process. Tibia with a small, conical dorsal tubercle carrying a weak spine, and with a small arcuate projection retrolaterally. Paracymbium relatively large, toothless, its posterior and anterior pockets merged into a single large pocket. Terminal apophysis relatively small, complex in shape. Lamella characteristica widened near middle, narrowing distally, bifid apically. Embolus large and wide, its serrate surface (see Saaristo & Tanasevitch, 1996) well-developed. Five small, slender, blunt teeth at base of embolus. Embolus proper short, bifid. Abdomen (Fig. 1) 1.10 long, 0.65 wide, dark grey, dorsal pattern absent.

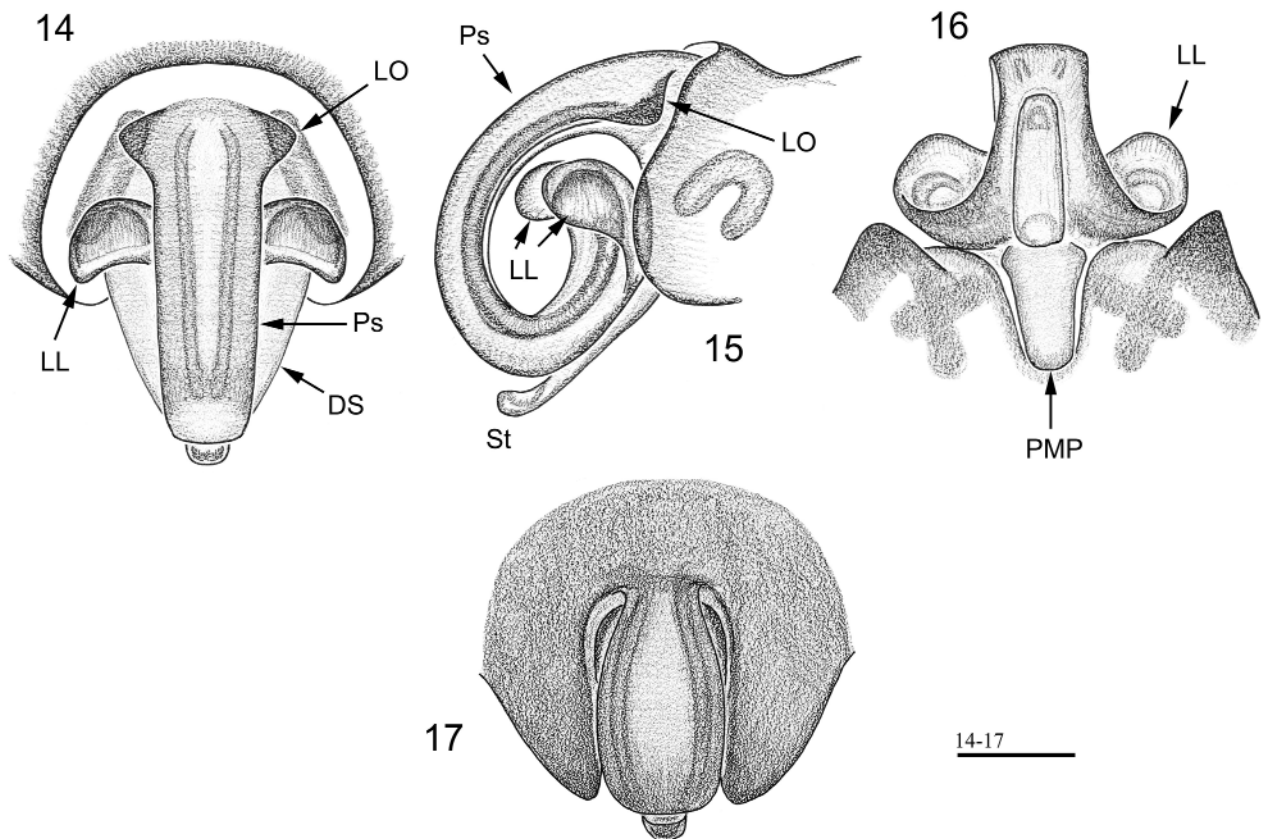
*Female paratype.* Habitus as in Fig. 2. Total length 2.35. Carapace unmodified, 1.05 long, 0.75 wide; yellow, with a grey median spot and a greyish margin. Eye sizes as in male. Chelicerae 0.45 long. Legs yellow. Femur and patella I 1.75 and 0.30 long, respectively, other segments of leg I missing. Leg IV 6.01 long (1.70 + 0.28 + 1.63 + 1.60 + 0.80). Chaetotaxy: FeI: 0-2(3)-0-0, FeII-IV: 0-0-



Figs 1-2. Photographs of the male holotype (1) and of the female paratype (2) of *Anguliphantes tadjik* sp. nov. (1) Habitus, lateral view. (2) Habitus, anterolateral view.



Figs 3-13. Details of the right palp of the male holotype of *Anguliphantes tadjik* sp. nov. (3-9) and of the male paratype (SMF # 34738) of *A. nepalensis* (Tanasevitch, 1987) from Pare, Nepal (10-13; reproduced from Tanasevitch & Saaristo, 2006). (3) Distal part of palp, retrolateral view. (4-5) Palpal tibia, lateral and dorsal views, respectively. (6, 10) Palpal tibia and paracymbium, retrolateral and dorsal views, respectively. (7, 11) Embolic division, lateral view. (8, 12) Embolus, lateral view. (9, 13) Lamella characteristica, lateral view.



Figs 14-17. Epigyne of female paratype of *Anguliphantes tadjik* sp. nov. (14-16) and of female paratype (SMF # 34738) of *A. nepalensis* (Tanasevitch, 1987) from Pare, Nepal (17; reproduced from Tanasevitch & Saaristo, 2006). (14, 17) Ventral view. (15) Lateral view. (16) Dorsal view.

0-0; TiII: 2-0-1-0; TiIII-IV: 2-0-0-0; MtII: 1(2)-0-0-0, MtIII: 1-0-0-0, MtIV: 0-0-0-0. TmI unknown, metatarsi I missing. Abdomen (Fig. 2) 1.50 long, 1.00 wide, grey. Epigyne (Figs 14-16): Proscapus long and slender, gradually curving, with a small outgrowth at its base on both sides. Distal part of scapus widening. Lateral lobes long, extending far out from both sides of proscapus. Stretcher long and slender, pit distinct. Posterior median plate small, longer than wide.

**Taxonomic remarks:** Judging from the modified palpal tibia, the structure of the embolic division in the male and the shape of the scapus in the female, the new species seems to be most closely related to the Himalayan *A. nepalensis* (see Introduction). *Anguliphantes tadjik* sp. nov. differs by the shape of the retrolateral projection of its palpal tibia (Figs 4-5 cf. Fig. 10), by the absence of a swollen extension on its paracymbium (Fig. 6 cf. Fig. 10), by the shape of its embolus (Fig. 8 cf. Fig. 12), as well as by the shape of its lamella characteristica (Fig. 9 cf. Fig. 13). The female differs from that of *A. nepalensis* by the longer proscapus and the presence of lateral extensions on both sides of the proscapus (Fig. 14 cf. Fig. 17).

Breitling (2019, 2021) suggested that *Anguliphantes* is

a junior synonym of *Oryphantes* Hull, 1932 on the basis of DNA barcoding data using a fragment of the MT-CO1 (cytochrome c oxidase subunit I) gene. However, it is well known that CO1 barcoding alone is quite unreliable at the generic level (for details see paragraph 7 at <https://wsc.nmbe.ch/faq>). The separation of the genera *Anguliphantes* and *Oryphantes* was confirmed by clear-cut differences in the genital structures of both sexes, in particular the embolus division of the male palp and the lateral walls of the female epigyne (for details see Saaristo & Tanasevitch, 1996).

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