

## Two new species of the subfamily Erigoninae from the Caucasus (Aranei: Linyphiidae)

### Два новых вида пауков подсемейства Erigoninae с Кавказа (Aranei: Linyphiidae)

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КЛЮЧЕВЫЕ СЛОВА: пауки, *Asthenargus*, *Maculoncus*, Россия, Адыгея, Грузия, новые виды.

**ABSTRACT.** Two new species of the subfamily Erigoninae are described from the Caucasus: *Asthenargus adygeicus* sp.n. (Adygea Republic, Russia) and *Maculoncus (?) obscurus* sp.n. (Adygea Republic, Russia; Georgia). *A. adygeicus* sp.n. seems to be most similar to the Caucasian *A. caucasicus* Tanasevitch, 1987, but is distinguished by the absence of a mastidion in the male chelicerae, as well as by a few details of genitalic structure in both sexes. Since the taxonomic position of *M. (?) obscurus* sp.n., described from males alone, remains unclear, it is provisionally assigned to the genus *Maculoncus* Wunderlich, 1995.

**РЕЗЮМЕ.** Два новых вида подсемейства Erigoninae описаны с Кавказа: *Asthenargus adygeicus* sp.n. из Адыгеи, Россия и *Maculoncus (?) obscurus* sp.n. из Адыгеи и Грузии. *A. adygeicus* sp.n. наиболее близок к кавказскому *A. caucasicus* Tanasevitch, 1987, от которого отличается отсутствием мастидиона на хелицерах самца, а также деталями строения гениталий обоих полов. Таксономическое положение *M. (?) obscurus* sp.n., описанного по самцам, не ясно; вид помещён в род *Maculoncus* Wunderlich, 1995 условно.

### Introduction

This paper continues our series of publications devoted to descriptions of new linyphiid species from the Caucasus (see Tanasevitch *et al.*, 2015; Tanasevitch, Ponomarev, 2015; Tanasevitch *et al.*, 2016). The current contribution describes two new species of Erigoninae from the Republic of Adygea, Russia, partly also from Georgia.

### Material and methods

The type specimens are shared between the collections of the Zoological Museum of the Moscow State University, Moscow, Russia (ZMMU), and the Muséum d'histoire naturelle, Geneva, Switzerland (MHNG).

In the description, the sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given in mm. Scale bars in the figures correspond to 0.1 mm. The formula of chaetotaxy means the number of dorsal spines on tibia I–IV.

The terminology of copulatory organs follows that of Merrett [1963] and Hormiga [2000].

The following abbreviations are used in the text and figures: ARP — anterior radical process; DSA — distal supratרגular apophysis; E — embolus; Fe — femur; Mt — metatarsus; R — radix; S — supratרגulum; Ti — tibia; TmI — position of trichobothrium on metatarsus I.

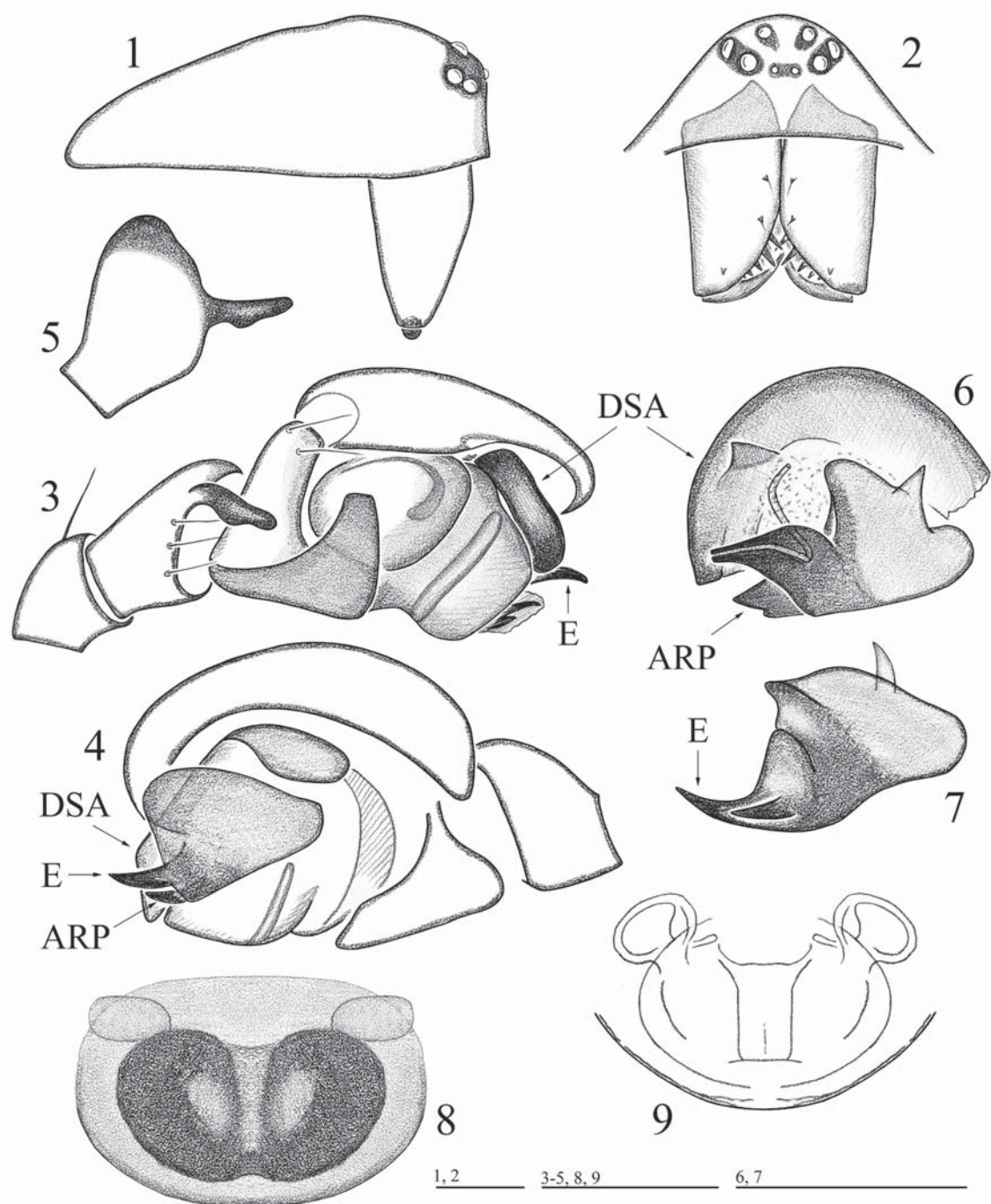
### Description

#### *Asthenargus adygeicus* sp.n.

Figs 1–9.

**HOLOTYPE** ♂ (ZMMU), RUSSIA, Caucasus, Adygea Republic, Maikop District, 6 km S of Pervomayskiy, environs of “Lesnaya skazka”, Polkovnitskaya balka, 44.345400°N 40.189467°E, ca. 450 m a.s.l., pitfall traps, 1–17.X.2011, leg. Yu. Chumachenko.

**PARATYPES:** 2 ♂♂ (ZMMU), collected together with holotype; 2 ♀♀ (ZMMU), Polkovnitskaya balka, 44.345400°N 40.189467°E, 450 m a.s.l., pitfall traps, 15.IV.–2.V.2011; 2 ♂♂,



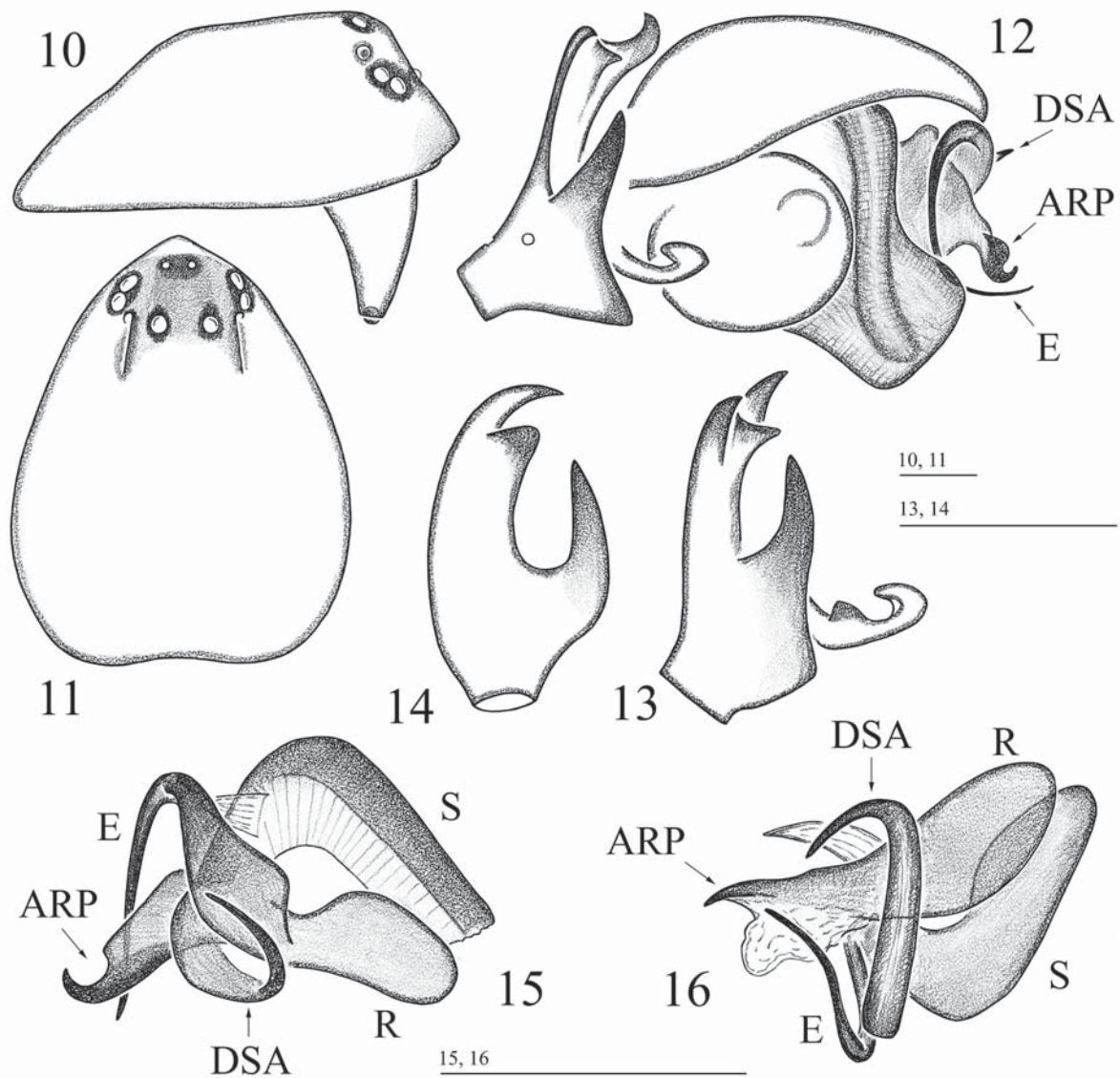
Figs 1–9. *Asthenargus adygeicus* sp.n., ♂ and ♀ paratypes from Polkovnitskaya balka. 1, 2 — ♂ carapace, lateral and frontal views, respectively; 3, 4 — right palp, retrolateral and proximal views, respectively; 5 — distal view of right palp; 6 — distal suprategular apophysis and embolic division; 7 — embolic division; 8 — epigyne, ventral view; 9 — cleared epigyne, ventral view.

Рис. 1–9. *Asthenargus adygeicus* sp.n., ♂ и ♀ паратипы из Полковнической балки. 1, 2 — карапакс ♂, латерально и фронтально, соответственно; 3, 4 — правая пальпа, ретролатерально и проксимально, соответственно; 5 — дистальный отрезок супратегулы и эмболюс; 6 — дистальный отросток супратегулы и эмболюс; 7 — эмболюс; 8 — эпигина, вид снизу; 9 — просветлённая эпигина, вид снизу.

1 ♀ (ZMMU), Polkovnitskaya balka, *Quercus & Carpinus* forest, 44.345400°N 40.189467°E, pitfall traps, 16.III.–1.IV.2011; 7 ♂♂ (ZMMU), 2 ♂♂, 1 ♀ (MHNG), Maikop District, Lagonaki Plateau, near Pass Azishskiy, *Fagus & Abies* forest, 1800 m a.s.l., 44.077694°N 40.011306°E, pitfall traps, 26.VIII.–23.IX.2013, all leg. Yu. Chumachenko.

ETYMOLOGY. The specific name refers to the *terra typica*; adjective.

DIAGNOSIS. The species is characterized by the absence of a mastidion, the thinner embolus and the rounded shape of the epigyne.



Figs 10–16. *Maculoncus (?) obscurus* sp.n. ♂ paratype from the Caucasian Nature Reserve. 10, 11 — carapace, lateral and dorsal views, respectively; 12 — right palp, retrolateral view; 13 — palpal tibia and paracymbium, anterolateral view; 14 — palpal tibia, dorsal view; 15, 16 — distal suprategular apophysis and embolic division, different aspects.

Рис. 10–16. *Maculoncus (?) obscurus* sp.n. ♂ паратип из Кавказского заповедника. 10, 11 — карапакс, вид сбоку и сверху, соответственно; 12 — правая палпа, ретролатерально; 13 — голень палпы и парацимбиум, вид сзади и соку; 14 — голень палпы, вид сверху; 15, 16 — дистальный отросток супратегула и эмболюсный отдел, различные аспекты.

**DESCRIPTION.** Male paratype from Polkovnitskaya balka. Total length 0.93 (0.90–1.10; 12 samples measured). Carapace 0.55 long, 0.48 wide, pale brown to brown, unmodified (Fig. 1). Chelicerae 0.24 long, mastidion absent, only a small distal denticle present on frontal cheliceral face (Fig. 2). Legs pale yellow to pale brown, leg I, 1.63 long (0.48 + 0.18 + 0.40 + 0.31 + 0.26), IV, 1.49 (0.43 + 0.18 + 0.35 + 0.30 + 0.23). Chaetotaxy 2.2.2.1, spines thin, weak, about as long as or a little longer than segment diameter. TmI, 0.34. Metatarsi IV without trichobothrium. Palp (Figs 3–7): tibia short, with a retrolateral, specific, dark process. Paracymbium relatively large, L-

shaped. Distal suprategular apophysis relatively long, abruptly truncate apically. Radix more or less rounded, with a strong, well-sclerotized, anterior radical apophysis and a small, sharp, almost transparent apophysis in middle part of radix. Embolus short, claw-shaped. Abdomen 0.50 long, 0.30 wide, white or pale grey.

Female from Polkovnitskaya balka. Total length 1.38 (1.20–1.38; three samples measured). Carapace 0.65 long, 0.53 wide, pale brown to brown. Chelicerae 0.25 long. Legs pale yellow to pale brown, leg I, 1.66 long (0.50 + 0.20 + 0.38 + 0.33 + 0.25), IV, 1.70 (0.50 + 0.18 + 0.43 + 0.35 + 0.24). Formula of chaetotaxy as in male. TmI 0.35. Metatarsi IV without trichobothri-

um. Epigyne rounded (Figs 8, 9), with strongly sclerotized internal parts. Receptacles slightly elongated, widely apart. Abdomen 0.83 long, 0.60 wide, white or pale grey.

**TAXONOMIC REMARKS.** The species seems to be most similar to its Caucasian congener, *A. caucasicus* Tanasevitch, 1987, but can easily be distinguished by the absence of a mastidion, a thinner embolus, the presence of outgrowths on the embolic division in the male, by the rounded epigyne with more strongly separated receptacles in the female.

**DISTRIBUTION.** Known only from the Republic of Adygea, Caucasus, Russia.

*Maculoncus* (?) *obscurus* **sp.n.**  
Figs 10–16.

**HOLOTYPE** ♂ (ZMMU), RUSSIA, Caucasus, Adygea Republic, Caucasian Nature Reserve, 3 road-km between Guzeripl and Pasture Abago, 1000 m a.s.l., dead soil-covering forest with *Fagus orientalis* & *Abies nordmanniana*, pitfall traps, 20.V.–6.VI.2009, leg. Yu. Chumachenko.

**PARATYPES:** 3 ♂♂ (ZMMU), 2 ♂♂ (MHNG), collected together with holotype. 1 ♂ (ZMMU), GEORGIA, Tkibuli District, 15 km E of Tkibuli, Mukhura, 700–800 m a.s.l., *Castanea*, *Fagus* & *Carpinus* forest, litter sifting, under bark & stones, 7–9.V.1987, leg. S. Golovatch & K. Eskov.

**ETYMOLOGY.** The species name refers to the ambiguous taxonomic position of this species; adjective.

**DIAGNOSIS.** The new species is characterized by the peculiar shape of the palpal tibia, the very long distal supratregular apophysis and the specific shape of the embolus.

**DESCRIPTION.** Male holotype. Total length 1.09. Carapace 0.56 long, 0.43 wide, brown. Clypeus slightly protruded conically, sulci small, rounded, situated just near posterior median eyes (Figs 10, 11). Chelicerae 0.29 long, mastidion absent. Legs yellow, leg I, 1.33 long (0.39 + 0.12 + 0.31 + 0.25 + 0.26), IV, 1.37 (0.41 + 0.12 + 0.35 + 0.26 + 0.23). Chaetotaxy 2.2.1.1, spines of tibia very small, poorly-visible. TmI, 0.33. Metatarsi IV without trichobothrium. Palp (Figs 12–16): prolateral lobe of tibia with three short and small projections; retrolateral lobe sabre-shaped. Paracymbium small and narrow, with a sharp tooth in middle part. Distal supratregular apophysis very long, making a loop, its distal part narrow, darkened. Embolus thin, making a semi-loop. Radix long, wide, twisted at middle. End of anterior radical process hook-shaped, darkened. Abdomen 0.66 long, 0.43 wide, pale grey.

Female unknown.

**TAXONOMIC REMARKS.** The taxonomic position of *Maculoncus obscurus* sp.n. is unclear. According to the conformation of the embolic division, the new species seems to be most similar to representatives of *Maculoncus* Wunderlich, 1995, i.e., the East Mediterranean *M. parvipalpus* Wunderlich, 1995 and the Taiwanese *M. orientalis* Tanasevitch, 2011 (see Wunderlich, 1995; Tanasevitch, 2011, 2016). However, *M. obscurus* sp.n. differs from these formal congeners by its chaetotaxy (2.2.1.1 versus 1.1.1.1), the clearly modified palpal tibia, the strongly developed distal supratregular apophysis, as well as by the presence of sulci on the carapace. These differences allow us to place the new species in the genus *Maculoncus*, yet only provisionally.

**DISTRIBUTION.** Known from the Caucasus: Republic of Adygea, Russia; Georgia.

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## References

- Hormiga G. 2000. Higher level phylogenetics of erigonine spiders (Araneae, Linyphiidae, Erigoninae) // Smithsonian Contributions to Zoology. No.609. P.1–160.
- Merrett P. 1963. The palpus of male spiders of the family Linyphiidae // Proceedings of the Zoological Society of London. Vol.140. P.347–467.
- Tanasevitch A.V. 2011. On some linyphiid spiders from Taiwan (Araneae: Linyphiidae) // Zootaxa. Vol.3114. P.31–39.
- Tanasevitch A.V. 2016. New species and new records of linyphiid spiders from Israel (Aranei: Linyphiidae) // Arthropoda Selecta. Vol.25. No.3. P.297–306.
- Tanasevitch A.V., Ponomarev A.V. 2015. A new *Gongylidiellum* Simon, 1884 from the western Caucasus (Arachnida: Aranei: Linyphiidae) // Arthropoda Selecta. Vol.24. No.1. P.113–116.
- Tanasevitch A.V., Ponomarev A.V., Chumachenko Yu.A. 2015. Notes on the spider genus *Bisetifer* Tanasevitch, 1987 (Aranei: Linyphiidae), with the description of a new species // Arthropoda Selecta. Vol.24. No.4. P.445–450.
- Tanasevitch A.V., Ponomarev A.V., Chumachenko Yu.A. 2016. A new species of *Tenuiphantes* Saaristo et Tanasevitch, 1996 (Aranei: Linyphiidae) from Adygea, the Caucasus, Russia // Arthropoda Selecta. Vol. 25. No.2. P.217–218.
- Wunderlich J. 1995. Zur Taxonomie europäischer Gattungen der Zwergspinnen (Arachnida: Araneae: Linyphiidae: Erigoninae) // Beiträge zur Araneologie. Bd.4. S.643–654.

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