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A NEW SPECIES OF THE WOLF SPIDER GENUS *MONGOLICOSA* (ARANEAE, LYCOSIDAE) FROM MONGOLIA

© 2024 S. L. Esyunin^{a, *}, A. L. Ustinova^{a, **}, B. Tsagaanbileg^{b, c, ***}

^aPerm State University, Perm, 614600 Russia

^bWestern Region Ecological Research Station, Khovd Branch, National University of Mongolia, Khovd, Jargalant, 84153 Mongolia

^cProgress Secondary School, Khovd, Jargalant, 84140 Mongolia

*e-mail: esyunin@mail.ru

**e-mail: anastasiya-ustinova-98@mail.ru

***e-mail: b.tsagaanbileg@gmail.com

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A diagnosis and an illustrated description of *Mongolicosa uvs* Esyunin et Ustinova sp. n. from the Uvs Province of Mongolia is provided, based on both sexes. The new species belongs to the *pseudoferruginea* group and appears to be especially similar to *M. glupovi* Marusik, Azarkina et Koponen 2004, yet differing in having a wide septal stem of the epigyne and an elongated terminal apophysis of the male palp.

Keywords: spider, taxonomy, western Mongolia

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Mongolicosa Marusik, Azarkina et Koponen 2004 is a small wolf spider genus accounting for 12 named species (WSC, 2024), which are classified in two species groups (Marusik et al., 2004). The range of the genus covers the mountainous regions of northwestern China, western Mongolia and southern Siberia. According to Fomichev and Marusik (Fomichev, Marusik, 2017, 2018), *Mongolicosa* species are highly specialised to inhabit rocky screes at high mountains. The majority of species remain known only from their type localities and are believed to be endemic to small mountain systems. Only two species, *M. glupovi* Marusik, Azarkina et Koponen 2004 and *M. pseudoferruginea* (Schenkel 1936), are relatively widespread (Marusik et al., 2004). Therefore, Fomichev and Marusik (2017) suspected that an actual species diversity of *Mongolicosa* in western Mongolia is much higher than that known to date, and new species would be discovered from there. Thus, it is not surprising that a comparatively small general spider sample collected by the third author from western Mongolia contains a new *Mongolicosa* species. Prior to this study, six species of this genus have been known from the Mongolian Altai (Marusik et al., 2004; Fomichev, Marusik, 2017, 2018). The aim of the present paper is to diagnose and describe a new, seventh species from this region.

The holotype and paratype of new species are deposited in the Zoological Museum of the Moscow State University, Moscow, Russia (ZMMU; curator K.G. Mikhailov). Stacks of colour images were manually

generated using an Olympus OMD EM-10 digital camera with a Panasonic Lumix H-H025 25 mm f/1.7 lens mounted on a Zeiss microscope. SEM micrographs were made by means of Hitachi TM3000 SEM microscope with BSE (back-scattered electrons) at the Perm State University. The terminology of the palp and epigyne morphology follows Marusik et al. (2004), with additions by Fomichev (2021). In the following description, leg podomeres are abbreviated as follows: Fm – femur, Pt – patella, Tb – tibia, Mt – metatarsus, Tr – tarsus; leg spination: a – apical, d – dorsal, pl and rl – pro- and retrolateral, v – ventral. The sequence of leg segment measurements is as follows: total length (Fm, Pt, Tb, Mt, Tr). All measurements are given in millimeters.

***Mongolicosa uvs* Esyunin et Ustinova sp. n.**
(Figs 1–3)

Material. Holotype, ♀, Mongolia, Uvs Province, Türgen Somon, 49°51'3666" N 91°31'8006" E, mountain steppe, 13.06.2021, B. Tsagaanbileg. Paratype, 1 ♂, together with holotype.

Diagnosis. *Mongolicosa uvs* Esyunin et Ustinova sp. n. belongs to the *pseudoferruginea* species group (sensu Marusik et al., 2004). In the shape of the epigynal septum and fovea, and the wide embolus having a small spine in its basal part, it is most similar to the generotype *M. glupovi*. The new species differs from *M. glupovi*

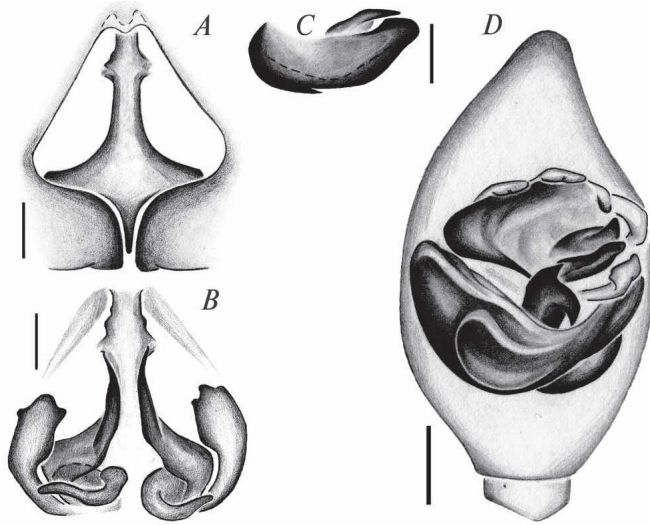


Fig. 1. Copulatory organs of *Mongolicosa uvs* Esyunin et Ustinova sp. n.: *A* – epigyne, ventral view; *B* – endogyne, dorsal view; *C* – embolus with terminal apophysis; *D* – palp, ventral view. Scale bar: 0.1 mm.

in having the wide septal stem (*SS*) of the epigyne (Figs 1*A*, 2*A*) and the elongated terminal apophysis of the male palp (Fig. 3*B*, 3*C*), compared to the narrow septal stem and the short, spine-like terminal apophysis in *M. glupovi* (Marusik et al., 2004: figs 208–210, 185).

The female of the new species is also similar to those of *M. ozkutuki* Fomichev et Marusik 2018, *M. pseudo-ferruginea* (Schenkel 1936) and *M. uncia* Fomichev et Marusik 2017, but *M. uvs* Esyunin et Ustinova sp. n. can be easily distinguished by the ovoid fovea (Fig. 2*A*), compared to the pear-shaped fovea in the related species (Marusik et al., 2004: fig. 218; Fomichev, Marusik, 2017: fig. 3*D*; Fomichev, Marusik, 2018: fig. 8*d*).

Description. Holotype female. Total length 7.5. Carapace 3.5 long, 2.9 wide; dark-brown (almost black); clypeus brown. Cephalic part of carapace densely covered with long black setae. Chelicerae black-brown, with long protruding setae. Legs and palps black-brown; coxae black with yellow basal spots. Labium black, with a distal-apical light brown swelling; endites black, with yellow inner edge and basal spot. Sternum black, densely covered with grey protruding setae. Abdomen dorsally and laterally black, densely covered with grey hairs and black setae; ventrally black, with two longitudinal rows of yellow dots, densely covered with gray setae. Measurements of leg segments: I: 9.18 (2.68, 1.00, 2.13, 2.18, 1.20); II: 10.88 (3.00, 1.38, 2.53, 2.60, 1.38); III: 11.13 (2.88, 1.28, 2.45, 3.13, 1.40); IV: 15.45 (3.68, 1.43, 3.40, 5.00, 1.95). Measurements of palp segments: 4.50 (1.40, 0.73, 1.13, –, 1.25). Spination of legs: Fm I d 1-2-3, pl 0-1-4, rl 0-1-2; II and III: d 1-1-1, pl 0-1-1, rl 0-1-1; IV: d 1-1-1, pl 0-1-1, rl 0-0-1; Tb I: d 1-1-0, pl 0-2-0, rl 0-2-0, v 2-2+2-2a; II: d 1-0-0, pl 1-1-0, rl 1-1-0, v 2-2+2-2a; III and IV: d 1-1-0, pl 1-1-0, rl 1-1-0, v 2-2-2a. Spination of

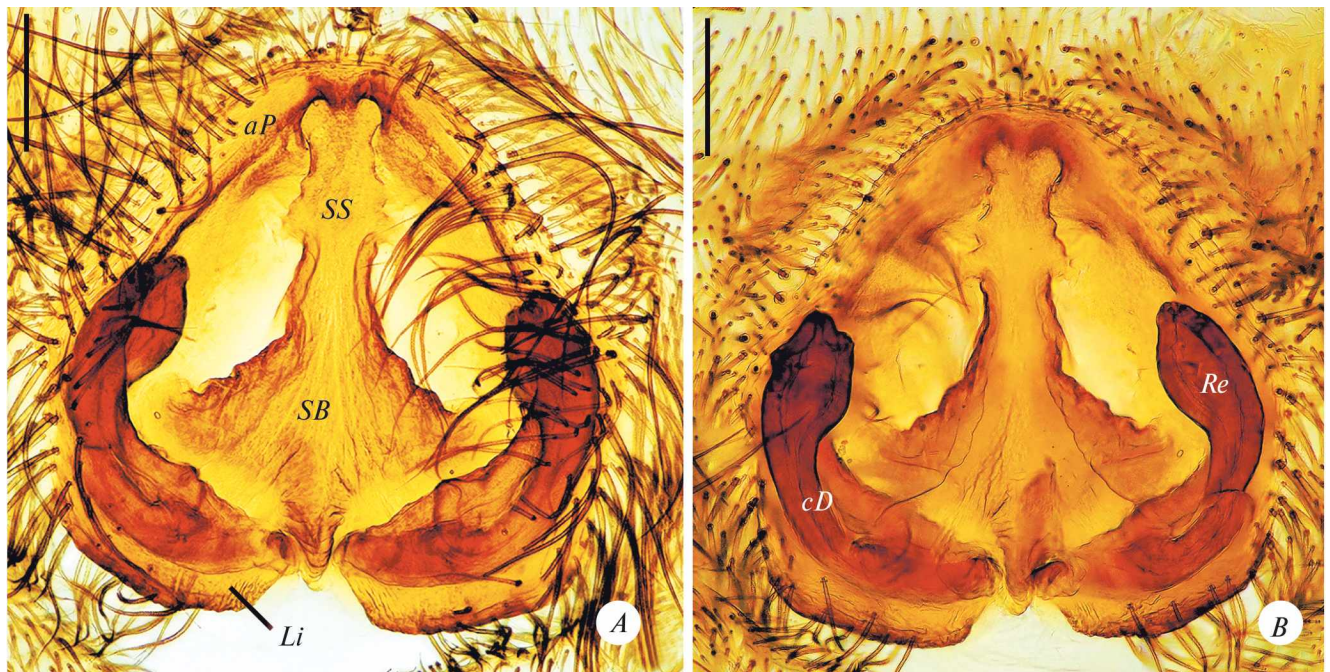


Fig. 2. Epigyne of *Mongolicosa uvs* Esyunin et Ustinova sp. n.: *A* – ventral view; *B* – dorsal view. Abbreviations: *aP* – apical pocket, *cD* – copulatory duct, *Li* – lip of the epigyne, *Re* – receptacle, *SB* – septal base, *SS* – septal stem. Scale bar: 0.1 mm.

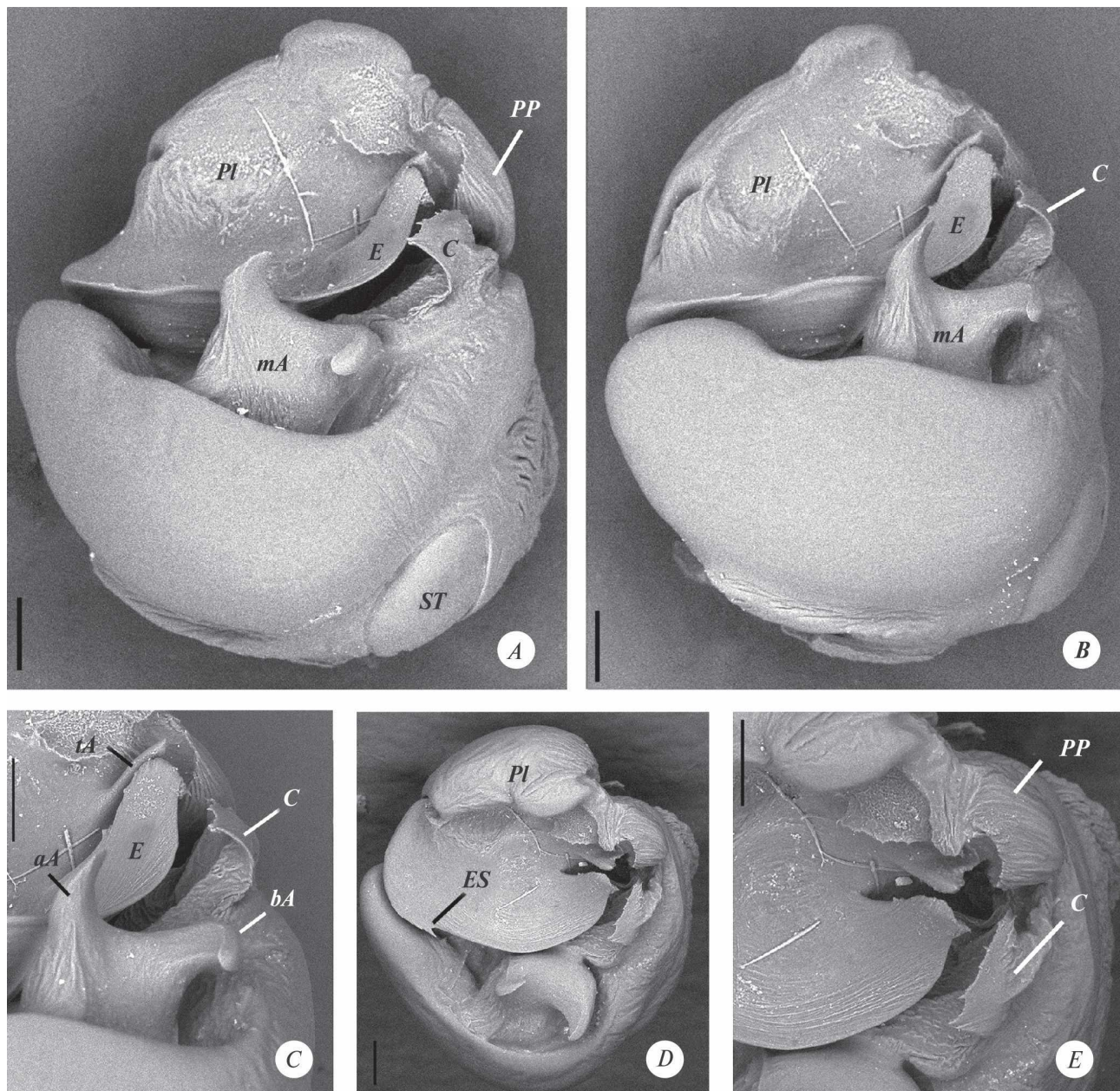


Fig. 3. Male palp of *Mongolicosa uvs* Esyunin et Ustinova sp. n., scanning electron micrographs: *A* – bulbus, ventral view; *B* – same, postero-ventral view; *C* – median apophysis; *D* – bulbus, anterior view; *E* – tip of embolus, anterior view. Abbreviations: *aA* – apical arm of *mA*, *bA* – basal arm of *mA*, *C* – conductor, *E* – embolus, *ES* – embolic spine, *mA* – median apophysis, *Pl* – palea; *PP* – palea processor, *ST* – subtegulum; *tA* – terminal apophysis. Scale bar: 0.1 mm.

pedipalp: Fm d1-1-2, pl 0-0-1, rl 0-0-1; Pt d 1-1, pl 1, rl 1; Tb d 0-1-0, pl 2-0-0; Tr d 1-0-0, pl 2-1-0, rl 2-1-0.

Epigyne as in Figs 1*A*, 1*B* and 2: fovea triangle, its anterior part shorter than posterior one; apical pockets (*aP*) closely spaced; septum widened posteriorly, forming diamond-shaped base (*SB*); lips (*Li*) almost touching each other; receptacles (*Re*) well distinguishable from copulatory ducts (*cD*), not converging, head of receptacles spaced under edges of fovea.

Paratype male (abdomen damaged, dry). Total length more than 7.5. Carapace 3.6 long, 2.8 wide. Body colouration as in the female. Palp colouration: femur and proximal part of patella dark brown, distal part of patella almost black, tibia and cymbium black with dense black hairs. Abdomen grey, densely covered with grey hairs and black setae. Measurements of leg segments: I: 11.83 (3.05, 1.45, 2.88, 2.90, 1.55); II: 11.78 (3.00, 1.43, 2.68, 3.10, 1.58); III: 12.18 (3.00, 1.30,

2.55, 3.75, 1.58); IV: 16.25 (3.65, 1.53, 3.45, 5.50, 2.13). Spination of legs: Fm I d 1-1-0, pl 0-0-2, rl 0-1-1; II d 1-1-1, pl 0-1-2, rl 0-1-1; III: d 1-1-1, pl 0-1-1, rl 0-1-1; IV: d 1-1-1, pl 0-1-1, rl 0-0-1; Tb I and II: d 1-1-0, pl 1-1-0, rl 1-1-0, v 2-2+2-2a; III and IV: d 1-1-0, pl 1-1-0, rl 1-1-0, v 2-2-2a. Spination of pedipalp: Fm d 1-1-2, pl 0-0-1, rl 0-0-1; Pt d 1-1, pl 1, rl 1; tibia and cymbium covered with dense black setae.

Palp as in Figs 1D and 3: median apophysis with 2 arms, of which the apical arm (*aA*) pointed, and basal arm (*bA*) hook-shaped; palea with laminar large process (*PP*); embolus wide with small embolic spine (*ES*) in basal part (Fig. 1C), terminal apophysis (*tA*) straight, not extending beyond embolus.

Etymology. The specific epithet is a noun in apposition taken from the type locality.

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ETHICAL APPROVAL AND CONSENT TO PARTICIPATE

This work does not contain any studies involving living animals. All studied materials was obtained from the zoological collection of the Department of Invertebrate Zoology and Aquatic Ecology, Perm State University (Perm, Russia).

CONFLICT OF INTEREST

The authors of this work declare that they have no conflicts of interest.

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НОВЫЙ ВИД ПАУКОВ-ВОЛКОВ РОДА *MONGOLICOSA* (ARANEAE, LYCOSIDAE) ИЗ МОНГОЛИИ

С. Л. Есюнин^{1, *}, А. Л. Устинова^{1, **}, Б. Цагаанбилэг^{2, 3, ***}

¹Пермский государственный национальный исследовательский университет, Пермь, 614600 Россия

²Западная региональная экологическая исследовательская станция
при Ховдском филиале Национального университета Монголии, Ховд, Жаргалант, 84153 Монголия

³Средняя школа “Прогресс”, Ховд, Жаргалант, 84140 Монголия

*e-mail: eyusnin@mail.ru

**e-mail: anastasiya-ustinova-98@mail.ru

***e-mail: b.tsagaanbileg@gmail.com

Приведены диагноз и иллюстрированное описание *Mongolicosa uvs* Esyunin et Ustinova sp. n. для самок и самцов из Увс аймака Монголии. Новый вид принадлежит к группе видов *pseudoferruginea*, где он наиболее близок к *M. glupovi* Marusik, Azarkina et Koponen 2004. *Mongolicosa uvs* Esyunin et Ustinova sp. n. отличается от последнего вида широкой ножкой септума эпигины самки и удлиненным терминальным отростком пальпы самца.

Ключевые слова: паук, таксономия, Западная Монголия