

Stemonyphantes cus sp.n. (Aranei: Linyphiidae: Stemonyphantinae),
from the cis-Ural steppe, Russia

Stemonyphantescus sp.n. (Aranei: Linyphiidae: Stemonyphantinae) из
степного Приуралья, Россия

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КЛЮЧЕВЫЕ СЛОВА: Araneae, пауки, новый вид, степная зона.

ABSTRACT. Based on a series of nine males and one female, a new species *Stemonyphantes cus* sp.n., is described from Orenburg Region, Russia.

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РЕЗЮМЕ. Новый вид *Stemonyphantes cus* sp.n., описан из Оренбургской области по серии самцов и одной самке.

Introduction

Stemonyphantes Menge, 1866 is a small spider genus accounting for 21 described species [WSC, 2022], and with its modern center of diversity (12 species) lying in central mountainous regions of the Palaearctics. Earlier, two *Stemonyphantes* species were known from the Urals: *S. conspersus* (L. Koch, 1879) and *S. lineatus* (Linnaeus, 1758) [Kharitonov, 1923, 1925; Tanasevitch, 1985; Esyunin, Efimik, 1996]. The third species — *S. altaicus* Tanasevitch, 2000 — was recently found in the Ural steppe zone [Esyunin, 2007; Esyunin, Tuneva, 2012]; it was hitherto described and known from the Altai highlands in southern Siberia [Tanasevitch, 2000].

Numerous materials have been collected during the past decade from various localities of the steppe zone of Orenburg Region, Russia. A new *Stemonyphantes* species has been found in these materials. Based on re-examination of museum specimens, it has been found out that the records of *S. altaicus* from the Ural steppe zone should also be assigned to the same new species, and therefore the occurrence of *S. altaicus* in the Urals is to be rejected.

The aim of the present work is to describe this new species.

Material and Methods

The holotype and paratypes of new species are deposited in the Zoological Museum of the Moscow State University, Moscow, Russia (ZMMU; curator K.G. Mikhailov) and the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZISP, curator D.V. Logunov).

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. Digital images were prepared using Photoshop CS6 image stacking software. SEM micrographs were made by means of Hitachi TM3000 SEM microscope with BSE (back-scattered electrons) at the Perm State University.

The measurements are given in millimeters. Lengths of leg segments are measured from their dorsal side. The measurements are given as follows: total length (femur, patella, tibia, metatarsus, tarsus). Chaetotaxy follows Tanasevitch [2011] and is presented as follows: dorsal–prolateral–retrolateral–ventral (variation, if noticed). The terminology of the palp morphology follows that by Gavish-Regev *et al.* [2013].

Taxonomy

Stemonyphantes cus sp.n.

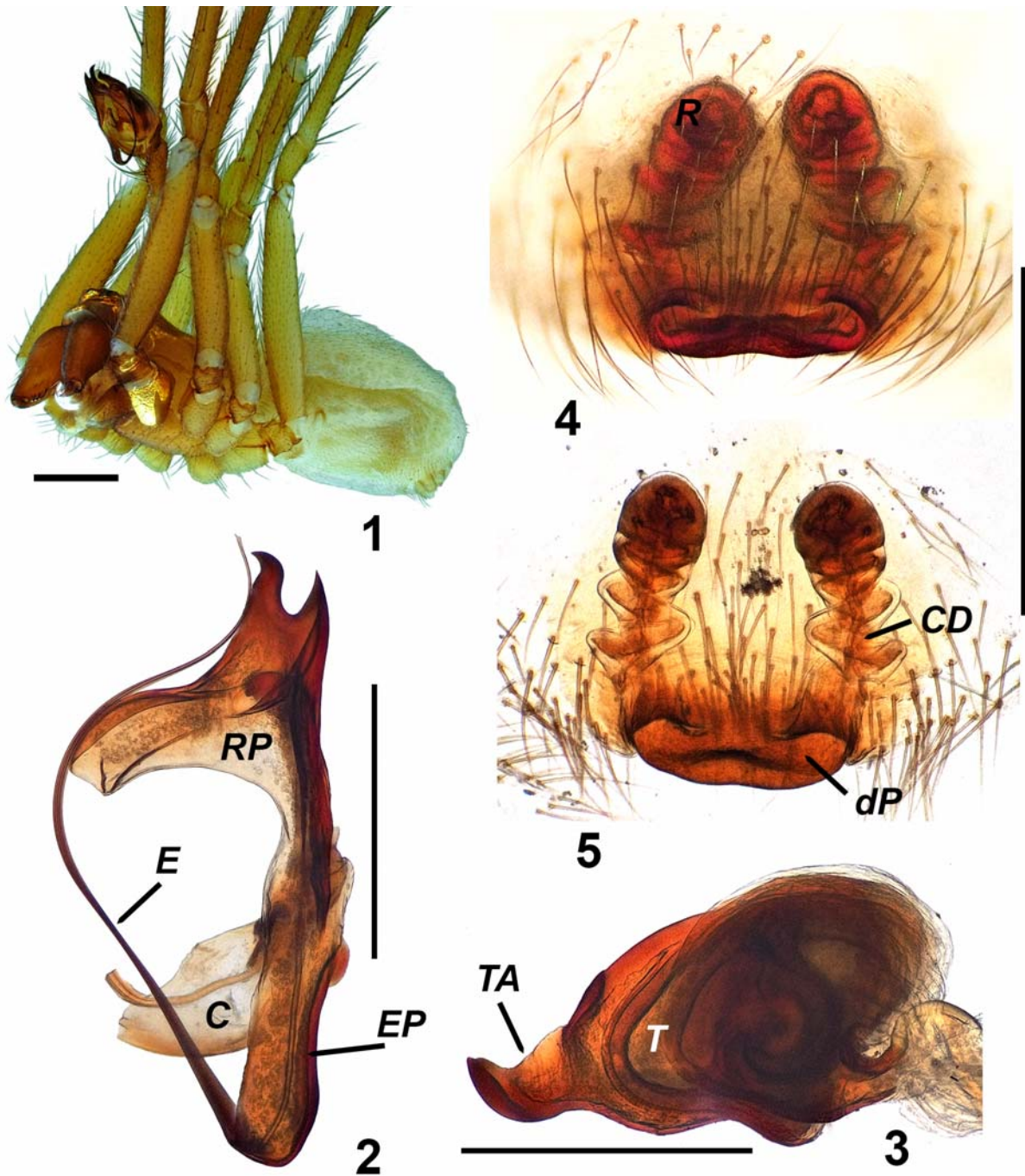
Figs 1–12.

HOLOTYPE ♂ (ZMMU), Russia, Orenburg Region, Akbulak District, the Preduralskaya Steppe site of Orenburg State Nature Reserve (51°09'06"N, 56°05'29"E), saline land, 30.IV–6.V.2022, S.V. Vlasov.

PARATYPES: 1 ♂ (ZMMU), together with the holotype; 1 ♂ (ZISP, ARA_ARA_0000024.), Russia, Orenburg Region, 3 km NE of Pervomaiskii Vil., Donguz steppe (51°41'28"N, 54°58'17"E), Stipe steppe 20.V–4.VI.2007, V.O. Koz'minykh; 4 ♂♂, 1 ♀ (ZMMU), the same locality and biotope, 21.IX–29.X.2008, V.O. Koz'minykh; 2 ♂♂ (ZMMU), the same locality and biotope, 29.X.2008–16.IV.2009, V.O. Koz'minykh.

ETYMOLOGY. The specific epithet is an abbreviation of the name of the natural zone within which the species was found — CisUralsSteppe, noun in apposition.

DIAGNOSIS. *Stemonyphantes cus* sp.n. belongs to the *lineatus* species group (*sensu* Tanasevitch [1985]). The spe-

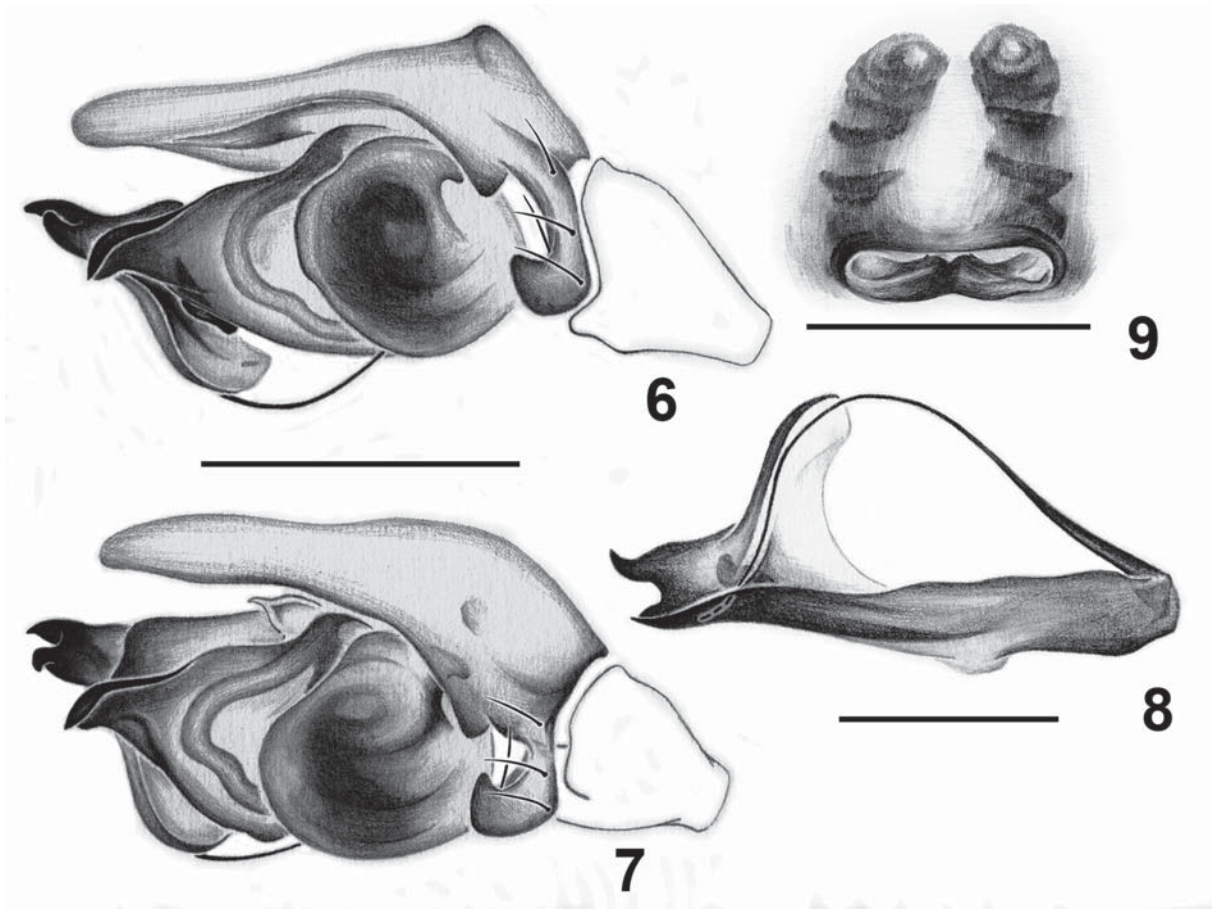


Figs 1–5. *Stemonyphantes cus* sp.n.: 1 — habitus in lateral view (male holotype); 2 — embolic division, dorsal view; 3 — tegulum with suprattegulum; 4 — intact epigyne, ventral view, 5 — macerated endogyne, dorsal view. Abbreviations: C — column; CD — copulatory duct; dP — dorsal plate; E — embolus; EP — embolic part; RP — radical part; R — receptacle; TA — tegular apophyses; T — tegulum. Scale bars: 1 — 1.0 mm; 2–5 — 0.5 mm.

Рис. 1–5. *Stemonyphantes cus* sp.n.: 1 — общий вид, сбоку (самец, голотип); 2 — эмболярный отдел, сверху; 3 — тегурум с супратегулом; 4 — не обработанная эпигина, снизу, 5 — обработанная эпигина, сверху. Сокращения: C — столбик; CD — копулятивный проток; dP — дорсальная пластинка; E — эмболюс; EP — эмболярная часть; RP — радикал; R — рецептакул; TA — тегулярный отросток; T — тегурум. Масштаб: 1 — 1,0 мм; 2–5 — 0,5 мм.

cies of this group are characterized by the following characters: (1) the entire cymbium, (2) the relatively long embolus, (3) the absence of a apophysis on the radix at the embolic base, (4) oval receptacles (except for *S. conspersus* and *S. grossus*) with an internal spiral structure.

The male of *S. cus* sp.n. is similar to that of *S. altaicus*, but differs from it in the absence of a knob at the base of P1 — apical radical processes (vs. such knob presents in *S. altaicus* (see figs 3, 4 in Tanasevitch [2000], or figs 4C and 4D in Gavish-Regev *et al.* [2013])).



Figs 6–9. *Stemonyphantes cus* sp.n.: 6, 7 — palp, lateral and ventro-lateral view; 8 — embolic division, dorsal view; 9 — intact epigyne, ventral view. Scale bars: 0.5 mm.

Рис. 6–9. *Stemonyphantes cus* sp.n.: 6, 7 — палепа, сбоку и снизу-сбоку; 8 — эмболярный отдел, сверху; 9 — эпигина, снизу. Масштаб: 0,5 мм.

The female of the new species is most similar to those of *S. blauveltae* Gertch, 1951, *S. lineatus* and *S. sibiricus* (Grube, 1861), but differs from them in number of revolutions in the spiral structure: two in *S. cus* sp.n., compared to 3–4 in the related species [Wiehle, 1956: fig. 464; Helsdingen, 1968: figs 13, 14, 28, 29; Millidge, 1984: fig. 24].

DESCRIPTION. Male. Habitus as in Fig. 1. Total length 5.8. Carapace 2.55 long and 2.00 wide. Chelicera 1.15 long. Carapace brownish yellow; sides and front of the head part brown. Chelicerae brown. Labium and endites brown, with distal-apical yellow swellings. Legs yellow; tibia, metatarsi and tarsi brownish. Abdomen grey, without a pattern. Measurements of leg I: 11.65 (2.95, 0.95, 3.00, 3.25, 1.50); leg II: 10.35(2.70, 0.85, 2.55, 2.90, 1.35); leg III: 8.20 (2.30, 0.75, 1.95, 2.15, 1.05); leg IV: 11.30 (3.00, 0.80, 2.85, 3.25, 1.40). Chaetotaxy. Fe I: 1-1-0-0; Fe II–IV: 2-0-0-0; Ti I, II: 0-0-0-6(9 on right Ti I); Ti III, IV: 1(0 on right Ti III)-1-1-6; Mt I 0-0-0-2(0 left); MT II: 0-0-0-4; Mt III: 0-1-1-6; Mt IV: 0-1-1-4. All metatarsi without trichobothria.

Palp. Cymbium with a small ecto-basal cymbial process (Fig. 6); tegulum with tegular apophysis bent downwards (Figs 3, 12); embolus after its turning point becomes curved long and flagelliform (Figs 2, 8, 10, 11); radical part with two clawed processes: apical (*PI* & *P2*), one dorsal (*P3*) and one long distal radical ones (*dP*; Figs 2, 10, 11).

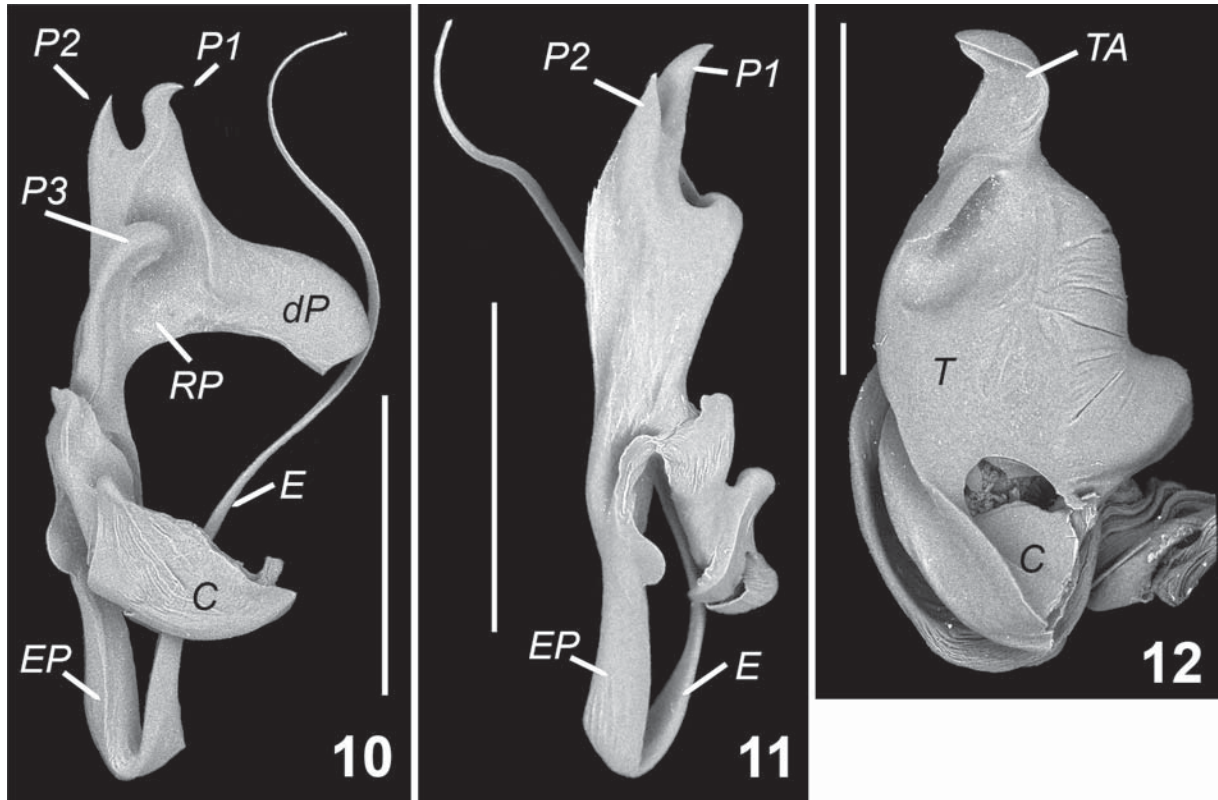
Male variation (paratypes). Carapace 2.38 (2.25–2.50) long and 1.83 (1.75–1.90) wide. Fe I long 2.74 (2.50–2.95). Femur chaetotaxy: Fe I: 2(1)-2(1)-0-0; Fe II: 2(1)-0(1)-0-0; Fe III: 2(1)-0(1, 2)-0-0; Fe IV 2(1)-0-0-0.

Female. Total length 5.6. Carapace 2.25 long and 1.75 wide. Chelicera 1.10 long. Carapace, sternum, pedipalp and leg yellow. Chelicerae yellow-brown. Labium and endites yellow-brown, with distal-apical white swellings. Abdomen pale yellow, without a pattern. Measurements of leg I: 8.70 (2.40, 0.80, 2.15, 2.10, 1.25); leg II: 7.95(2.25, 0.75, 1.80, 1.95, 1.20); leg III: 6.60 (1.85, 0.65, 1.55, 1.60, 0.95); leg IV: 9.10 (2.40, 0.75, 2.30, 2.45, 1.20). Chaetotaxy. Fe I: 2-2(1)-0-0; Fe II–IV: 2(1)-0-0-0; Ti I, II: 1-1-1-6(9 on Ti I); Ti III, IV: 2-2-2(1)-6(4, 5); Mt I 0-0-0-2(4); MT II: 0-0-0-6; Mt III: 0-2-2-6(4); Mt IV: 0-1-1-6. All metatarsi without trichobothria.

Epigyne as in Figs 4, 9. Epigynal plate transverse, with a ridge along its posterior margin (Figs 4, 5, 9); endogyne with globular receptacles and spiral copulatory ducts (Fig. 5).

DISTRIBUTION. Known only from the type locality in the cis-Ural steppe (Fig. 13).

Disclosure statement. No potential conflict of interest was reported by the authors.



Figs 10–12. Scanning electron micrographs of the male palp of *Stemonyphantes cus* sp.n.: 10, 11 — embolic division, lateral and dorsal views; 12 — tegulum, dorsal view. Abbreviations: C — column; dP — distal radical processes; E — embolus; EP — embolic part; RP — radical part; P1 and P2 — two radical processes; TA — tegular apophyses; T — tegulum. Scale bars: 0.5 mm.

Рис. 10–12. Сканирующие электронные фотографии пальпы самца *Stemonyphantes cus* sp.n.: 10, 11 — эмболярный отдел, сбоку и сверху; 12 — тегулум, сверху. Сокращения: C — столбик; dP — дистальный отросток радикаса; E — эмболос; EP — эмболярная часть; RP — радикас; P1 и P2 — два отростка радикаса; TA — тегулярная апофиза; T — тегулум. Масштаб: 0,5 мм.

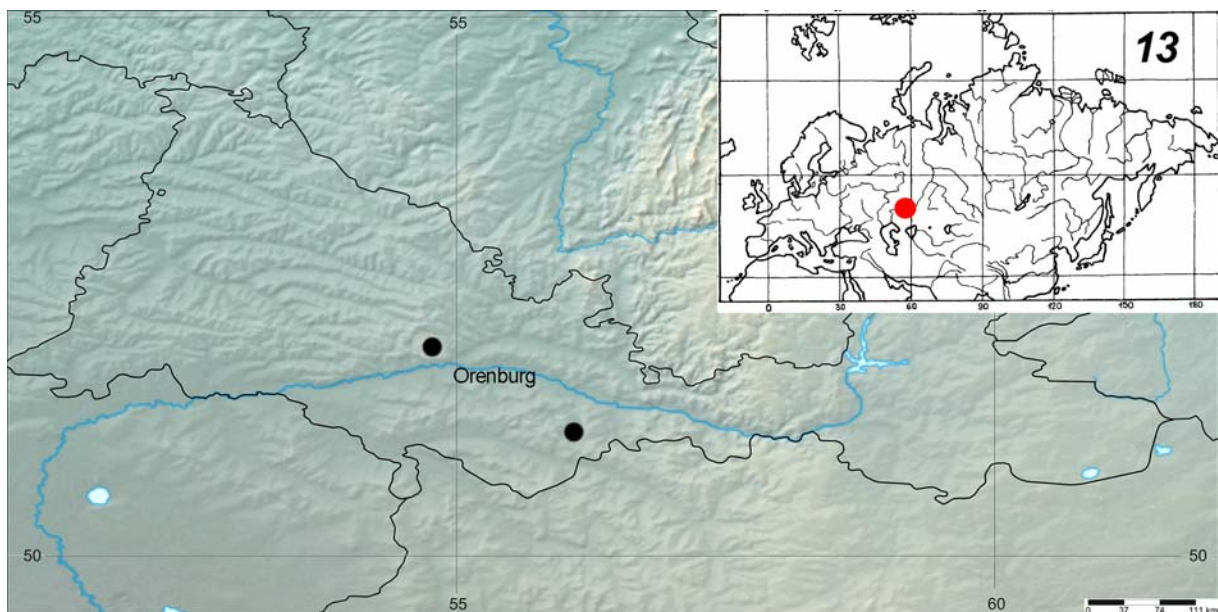


Fig. 13. Collecting localities of *Stemonyphantes cus* sp.n.

Рис. 13. Места сборов *Stemonyphantes cus* sp.n.

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