

**Subspecies structure of *Brachyta interrogationis* (Linnaeus, 1857)  
in European Russia (Coleoptera: Cerambycidae)**

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**Key words:** Russia, Kazakhstan, Coleoptera, Cerambycidae, *Brachyta*, taxonomy, new subspecies.

**Abstract:** The type locality of *Brachyta interrogationis* (Linnaeus, 1857) is accepted to be situated in Scandinavia. The area of the nominative subspecies *B. i. interrogationis* is limited by Scandinavian Peninsula. *B. i. russica* (Herbst, 1784), **stat. nov.** is accepted for European Russia (without northern Urals with neighbor areas), West Siberia (including Altay) and Kazakhstan. *B. i. zubovi* **ssp. nov.** is described from northern Urals with neighbor areas.

All Scandinavian populations consist of moderately pale form. Each specimen usually has central“( )-shaped” band and several black spots. Specimens with mostly yellow spotted elytra or rather black specimens are known but very rare. Nine specimens of the nominative subspecies are available at my disposal (Figs 1-2): 8 from Sweden (3 males, 3 females, “Dir. Mora, Fulåberg, 6.6.1978, B. Cederberg”; 1 male, “Skrövån; Lu. Lpm. 28.6.1998 Hentrik Wallin”; female, Sweden, Province Dalarna, Transtrand, Mornäs, 24.6.1995, Lars Hole leg.”), one from Finland (female, “FIN, Oulanka N.P. 30.6-1.7.1998, Hentrik Wallin”).

All populations from European Russia (including populations from northern areas) consist of smaller specimens, which are generally paler.

Two subspecies in European Russia could be accepted.

**Abbreviations of collections:**

AK - collection of A.Kryukov (Kirov)

MD - collection of M.Danilevsky (Moscow)

ML - collection of M.Lazarew (Moscow)

ZMM - Zoological Museum of Moscow University

ZIN - Zoology Institute (Sankt-Petersburg)

***Brachyta interrogationis russica* (Herbst, 1784), stat. nov.**

*Leptura russica* Herbst, 1784: 102, Taf. XXVI. Fig. 27 - "Rußland".

**Type locality.** Central Russia.

*Brachyta interrogationis* (Linnaeus, 1758: 398) was described (as *Leptura*) from "Europa" (most probably from Scandinavia) on the base of light specimens ("elytris lividis, fascia longitudinali arcuata maculiscue quator nigris" - elytra yellow with black arcs and spots). Such design is typical for Scandinavian, Russian and Caucasian populations, but in Siberia and South Europe most of local forms are rather darker. A great level of geographical variability can be observed in each part of its area. Each local population is characterized by unique proportions of certain color forms. So, the populations from Central Russia could be accepted as a subspecies with the oldest name *Brachyta interrogationis russica* (Herbst, 1784).

Very light subspecies, forms with separate elytral spots (without arc-like stripes) are very often, more than a half of Moscow population, but forms with only four elytral spots unknown; elytra with arc-like stripes (more or less wide) are also rather often; melanic forms (with totally or partly black elytra) are known, but as very rare single specimens; 5<sup>th</sup> antennal joint is about as long as 3<sup>rd</sup> or a little longer (male from Kazan; that male has partly reddish abdomen and reddish apices of femora); body length in males: 9.3-15.5 mm, in females: 10.3-16.5 mm; body width in males: 3.4-5.2 mm, in females: 4.3-6.0 mm.

**Distribution.** European Russia (without northern Urals with neighbor areas), West Siberia (including Altay) and Kazakhstan; the most south locality in European Russia is definitely known in Saratov Region (Danilevsky, 2014); it was recorded for the north of Rostov Region (Kazanskaya Station, Chiganaki - Arzanov et al., 1993), known from many localities of Orenburg Region (Shapovalov, 2012: Tashla, Orenburg env., Akchura, Maloe Churaevo, Blyava); once in XIX century it was recorded from Kharkov Region (Krynicky, 1832); the records for middle of Dnepr area and Poltava Region were cited by Bartenev (2009).

**Materials.** 1 male, 2 females, Moscow Region, Podolsk, Vatutinki,

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N. Plavilstshikov - ZMM; 1 male, Voronezh Region, Shipov Forest [50°46'N, 40°20'E] - ZMM; 1 male, Kazan, Spassk, Lebedev - ZMM; 2 males, 1 female, Pinega, Arkhangelsk Gouv., 23.6.1899, Keller - ZIN; 1 female, Moscow Region, Pravda, 1901, S. Nikulin - ZMM; 1 male, 2 females, Sankt-Peterburg, Gatchino, 07.05-12.05.1901, 31.05.1902 - ZMM; 1 female, Moscow, 24.05.1917, S. Nikulin - ZMM; 1 male, Moscow, Petrovsko Razumovskaya, 07.05.1919, N. Plavilstshikov - ZMM; 1 male, Moscow, Petrovsko Razumovskaya env., 26.05.1920 - ZMM; 1 female, Vladimir Region, Rovenskoe, 07.06.1920 - ZMM; 1 male, Moscow, Petrovsko Razumovskaya env., 13.06.1920, N. Grositstsky - ZMM; 1 female, Moscow, Ostankino, 27.05.1925, S. Nikulin - ZMM; 6 males, Moscow Region, Petrovka, 16.06.1929, S. Nikulin - ZMM; 1 male, 2 females, Neminga, Onega District, Arkhangelsk Gouv., 3.7.1929, Vorob`eva - ZIN; 1 male, 2 females, Maloshuyka, Onega District, Arkhangelsk Gouv., 11.7.1929, Vorob`eva - ZIN; 1 female, Moscow Region, Petrovka, 19.06.1929, S. Nikulin - ZMM; 1 male, Moscow, 24.06.1929, S. Nikulin - ZMM; 1 male, Moscow, Losiny Ostrov National Park env., 14.06.1930, O. Kryzhanovsky - ZMM; 2 males, 1 female, Vud'yavr Lake, Khibiny Mts., Kol'sk Peninsula, 4.7.1930, 29.6.1931, Fridolin - ZIN; 1 male, Vud'yavr Lake, Khibiny Mts., Kol'sk Peninsula, 30.6.1931, V.Rudolf - ZIN; 1 female, Vud'yavr Lake, Khibiny Mts., Kol'sk Peninsula, 9.7.1931, G.Novikov - ZIN; 2 females, Moscow, Timiryazev Agricultural Academy, 03.07.1933 - ZMM; 1 male, Moscow Reg., Nikolina Gora, 06.06.1936, S. Nikulin - ZMM; 1 female, Moscow Region, Chashnikovo. 16.07.1965, M. Danilevsky - MD; 1 female, Moscow Region, Chashnikovo. 22.06.1965, Shchekoldina - MD; 1 male, Moscow Region, Chashnikovo. 24.06.1965, Volyakina - MD; 1 male, Moscow Region, Chashnikovo. 06.06.1969, E. Minina - MD; 1 male, Moscow Region, Chashnikovo. 05.06.1969, A. Zhdanov - MD; 2 females, Ryazan Region, Solotcha, 04.06.1973 - ZMM; 1 male, Leningrad Region, Stary Petergof env., 10.06.1976 - MD; 1 female, Ivanovo Region, Rudskoe Lake, VI.1984, A. Tikhomirov - MD; 1 male, Leningrad Region, Elizavetino env., 26.06.1984, A. Pushenkov - MD; 1 female, Central Russia, Samara Region, Pestravka, 30.05.2008, V. Senyutin - MD; 3 males, 2 females, Komi, Ukhta, 1955, K. Sedykh - ZMM; 2 males, Sverdlovsk Region, Vasinsky

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Nature reserve, VII. 1982 - MD; 4 males, 1 female, Ilmensky Nature reserve, Bolshoe Miassovo Lake, 23.06.1985, Nesterov - MD; 8 males, 3 females, S Ural, Yuryuzan, Iremel Mountain, 800 m, M. Danilevsky - MD; 1 female, Gorno-Altaysk, Artybash, 08.06.1990, M. Krivosheina - MD; 10 males, 2 females, Altay, Artybash, 19.06.1981, S.Aksentev - MD, ML; 1 male, Altay, Artybash, 21.05.1982, Kompantsev - MD; 3 males, 2 females, Artybash, Teletskoe Lake, 10.06.1985, A.V. Esenin - MD; 1 male, Altay, Katun River, 12 km N Katanda, 22.06.2003, A.&V. Menshikov - MD; 1 male, 2 females, Altay, Zmeinogorsk, Cherepanovskiy, 10.06.1990, D.Obydov - MD; 3 males, 1 female, Altay, Ust-Kan distr., Churilka River, Talitsa River, 51°10'16"N 84°20'51"E, 1020m, 17.07.2008, V.Kadnikov - ML; 1 male, 1 female, Altay, Ust-Kan distr., 12 km SW Karakol, Karakol River, 51°15'48"N 84°24'58"E, 1601m, 22.07.2008, V.Kadnikov - ML; 1 female, Altay, Ust-Kan distr., Bashelakskiy Ridge, 1800 m, 10.07.2008, V.Kadnikov - ML; 1 male, Khakassia, Abakan, 15.07.1993 - MD; 1 male, E Kazakhstan, Semipalatinsk, South Karaula, 27.06.1978, Nikolaev - MD; 2 males, 2 females, E Kazakhstan, Putintsevo env., 20 km N Zyryanovsk, 12.6.1994, 49°53'N, 84°24'E, M. Danilevsky - MD; 5 males, Kazakhstan, 40 km S Ust-Kamenogorsk, Sibinka River, 500 m, 49°35'N 82°30'E, 01.06.2005, M. Danilevsky - MD; 1 males, 1 female, E Kazakhstan, Putintsevo env., 20 km N Zyryanovsk, 475 m, 49°53'N 84°24'E, 08.06.2005, 20.06.2005 M. Danilevsky - MD; 18 males, 6 females, E Kazakhstan, Putintsevo env., 20 km N Zyryanovsk, 475 m, 49°53'N 84°23'E, 08-20.06.2005, M. Danilevsky - MD, ML.

**Biology.** Imagoes are active from the end of May to the beginning of July with maximum activity in June. The taxon is rather rare in Moscow Region, and a little more numerous near Sankt-Petersburg. Single specimens are known from near Samara, Saratov, Voronezh.

*Brachyta interrogationis zubovi* ssp. n.

**Type locality.** Polar Urals, Bolshaya Paypudyna riv., 160 m, 67°3'22"N, 65°23'33"E.

Relatively light subspecies with about same color variations as in Central Russia, but paler forms are distinctly more numerous, and melanic forms are totally absent; about 1/3 of the population has yellow elytra with several black spots, sometimes only 4 spots present on each elytron (including one near scutellum), usually 6 spots are distinct (including apical one); a form with joint two central spots forming bracket-like black line is the most numerous, but usually elytra look rather pale; wide black elytral stripes are very rare; body is relatively small; besides 5<sup>th</sup> antennal joint is distinctly shorter than 3<sup>rd</sup>, while in the nominative subspecies both are about equal; body length in males: 10.0-12.5 mm, in females: 10.0-13.5; body width in males: 3.5-4.3 mm, in females: 4.0-4.8mm.

The populations from Central and North Russia (without North Urals and neighbor areas) accepted bellow as *B. i. russica* (Herbst, 1784), **stat. nov.** are represented in my materials by specimens from several regions: Moscow, Leningrad, Ivanovo. Rather light specimens are also present here, but not so numerous. Specimens with rather wide black elytral stripes are often dominating in a number of populations and melanic specimens with about totally black elytra are known.

**Distribution.** North-east of European Russia from about centre of Komi Republic to Polar Urals.

**Materials.** Holotype, male, Polar Urals, Bolshaya Paypudyna riv., 160 m, 67°3'22"N, 65°23'33"E, 11.7.2008, A. Zubov leg. - ML; 79 paratypes; 30 males, 13 females, with same label - MD, ML; 7 males, 4 females, Polar Urals, Sob' station, 260m, 67°3'37"N, 65°31'53"E, 18.7.2008, A. Zubov leg. - MD, ML; 2 males, 2 females, Polar Urals, Polarnyi Kholm, 12.7.2008, A. Zubov leg.- MD, ML; 1 male, Yamal Peninsula, Shchuchye, 27.7.1968, Yu. Korshunov leg. - MD; 3 males, 2 females, Komi Republic, Ukhta environs, 1955, K. Sedykh - ZMM; 4 males, Kirov Region, Sidorovka, 08.06.1997, A.Kryukov leg. - AK; 2 males, 1 female, "Synya River, Polar Urals, 13.6.[19]08, Zhuravsky" - ZIN; 2 males "Nothern Urals, B. Synya, Voy-Vozh (sours of Synya River), 15.6.[19]08, Zhuravsky" - ZIN;

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2 males, 1 female, “Sabli (Nothern Urals), 17.6. [19]08, Zhuravsky” - ZIN; 3 males, “Voykar River, B. Urals, Obdorsk [now Salekhard], 13-15.8.[19]25, Fridol” - ZIN; 1 male, 2 females, “Sob` River, B. Urals, Obdorsk [now Salekhard], 19.7.[19]25, 2.8.[19]25, Fridol” - ZIN; 1 male, 1 female, “Tan-Yu River, B. Urals, Obdorsk [now Salekhard], Tobol Gouv., 15.5.[19]25, Makar`in” - ZIN.

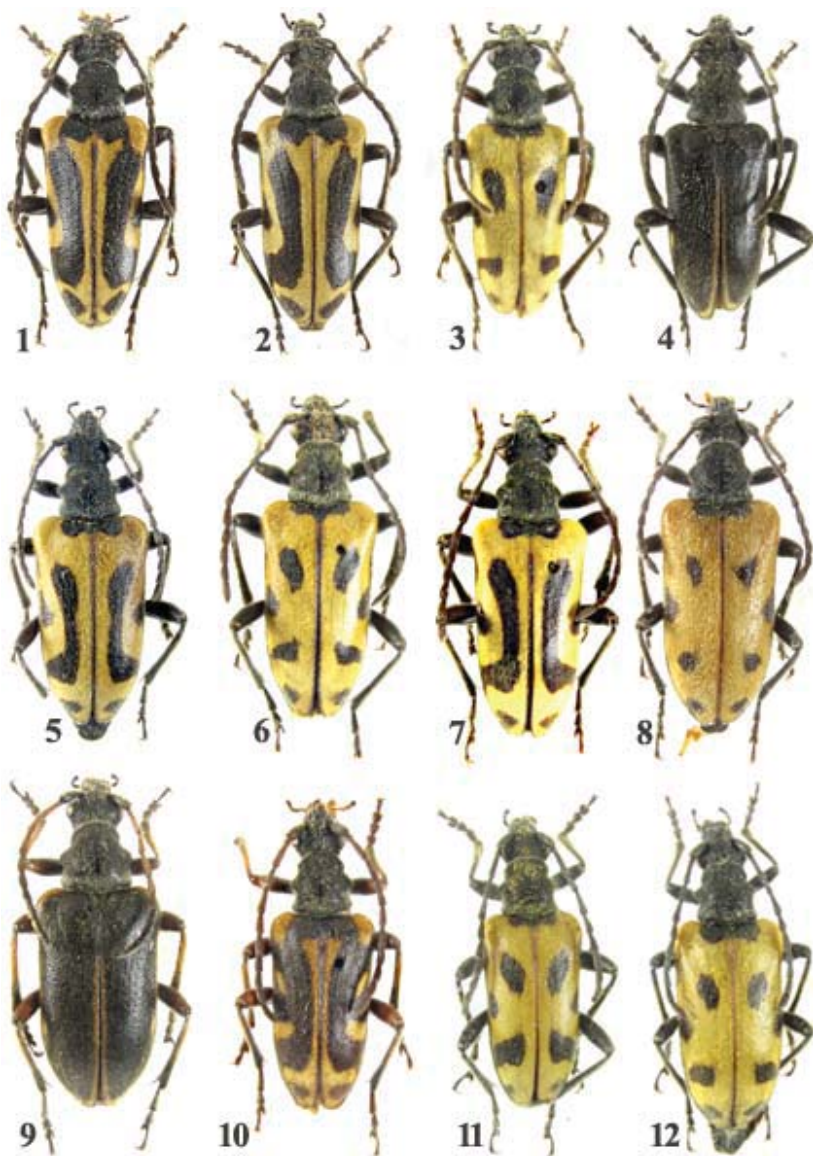
**Biology.** Imagoes are active at about middle of July. The beetles are very numerous at Paypudyna river valley.

**Dedication.** The new taxon is dedicated to my good friend Andrey Zubov (Kishinev, Moldova), who supplied me with the type series for description.

**Acknowledgements.** I wish to express my sincere gratitude to A.A. Gusakov and A.L. Ozerov (Zoological Museum of Moscow University) and A.L. Lobanov for the opportunity to study corresponding collections. I am very grateful to A. Zubov who supplied me with materials for study. My special thanks to M.L. Danilevsky for his regular consultations and enthusiastic inspirations for the current achievement.

## REFERENCES

- Danilevsky M.L. 2014. Longicorn beetles (Coleoptera, Cerambycoidea) of Russia and adjacent countries. Part 1. Moscow: HSC: 1-522. [in Russian]
- Bartenev A.F. 2009. [Longicorn-beetles of Left-Bank Ukraine and Crimea. Kharkov: Kharkov National University]. 405pp. [in Russian]
- Herbst J.F.W. 1784: Kritisches Verzeichniss meiner Insectensammlung. Fortsetzung. Curculio-Dytiscus. - Archiv der Insectengeschichte, herausgegeben von J. C. Fuessly. 5(1): 69-128, pls 24-28.
- Herbst, J.F.W. 1783-1784. Kritisches Verzeichniß meiner Insectensammlung. - Archiv der Insectengeschichte, herausgegeben von J. C. Fuessly. 4 [1783]: 1-72, Taf. 19-23; 5 [1784]: 73-151, Taf. 24-30.
- Krynicky J. [I.] 1832. Enumeratio Coleopterorum Rossiae meridionalis et praecipue in Universitatis Caesariae Charkoviensis circulo obvientium, quae annorum 1827-1831 spatio observavit.- Bulletin de la Société Impériale des Naturalistes de Moscou. 5: [+3pages] 68-179, pls II-III.
- Shapovalov A.M. 2012. [Longicorn-beetles (Coleoptera, Cerambycidae) of Orenburg Region: fauna, distribution, bionomy. Archives of Orenburg Branch of Russian Entomological Society. 3. Orenburg: Orenburg Branch of Russian Entomological Society]: 224p. [in Russian]



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**Figs 1-2.** *Brachyta i. interrogationis*, male and female, Sweden, Dir. Mora, Fulåberg, 6.6.1978, B. Cederberg leg.

**Figs 3-12.** *Brachyta i. russica* (Herbst, 1784), **stat. nov.:**

3 - male, Leningrad Reg., Stary Petergof, 10.6.1976; 4 - male, Leningrad Reg., Elizavetino env., 26.06.1984, A. Pushenkov leg. 5 - female, Ivanovo Reg., Rudskoe Lake, VI.1984, A. Tikhomirov leg.; 6 - male, Moscow Reg., Nikolina Gora, 06.06.1936, S. Nikulin leg. 7 - male, Moscow, Petrovsko-Razumovskoe, 7.5.1919, N. Plavilstshikov leg.; 8 - female, Moscow Reg., Chashnikovo, 16.7.1965, M. Danilevsky leg.; 9 - female, Central Russia, Samara Reg., Pestravka, 30.5.2008, V.Senyutin leg.; 10 - male, Kazan, Spassk, Lebedev leg.; 11-12 - 1 male, 1 female, Altay, Zmeinogorsk, Cherepanovskiy, 10.06.1990, D. Obydov leg.





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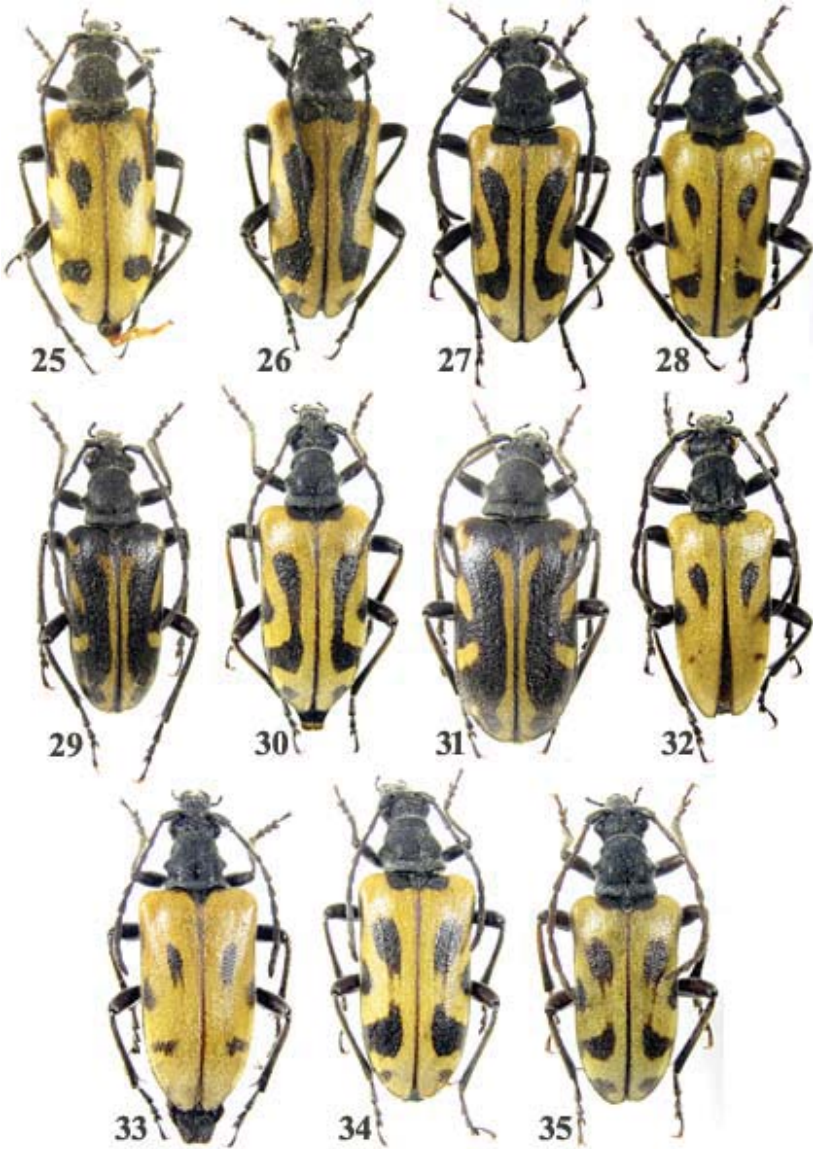


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**Figs 13-24. *Brachyta i. russica* (Herbst, 1784), **stat. nov.:****

13 - male, Altay, Zmeinogorsk, Cherepanovskiy, 10.06.1990, D.Obydov leg.; 14 - male, Altay, Artybash, 21.5.82, A.Kompantsev leg.; 15-17 - 2 males and 1 female, Altay, Artybash, Teletskoe Lake, 10.6.1985, A.V. Esenin -MD; 18-19 - male and female, Altay, Artybash, 19.6.1981, S.Aksentev leg.; 20-22 - 3 males, Kazakhstan, 40km S Ust-Kamenogorsk, Sibinka riv., 49°35'N, 82°30'E, 500 m, 1.6.2005, M.Danilevsky; 23-24 - 2 males, E.Kazakhstan, Putintsevo env., 20 km N Zyryanovsk, 11-12.6.2005, 475m, 49°53'N, 84°24'E, M.Danilevsky leg.



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**Figs 25-26. *Brachyta i. russica* (Herbst, 1784), **stat. nov.:****

2 females, E.Kazakhstan, Putintsevo env., 20 km N Zyryanovsk, 11-12.6.2005, 475 m, 49°53'N, 84°24'E, M.Danilevsky leg.

**Figs 27-35. *Brachyta i. zubovi*, **ssp. nov.:****

27 - male, holotype, Polar Urals, Bolshaya Paypudyna riv., 160 m, 67°3'22"N, 65°23'33"E, 11.7.2008, A. Zubov leg.; 28-31 - 3 males and 1 female, paratypes, Polar Urals, Bolshaya Paypudyna riv., 160 m, 67°3'22"N, 65°23'33"E, 9-11.7.2008, A. Zubov leg.; 32-33 - male and female, paratypes, Polar Urals, Sob' station, 67°3'37"N, 65°31'53"E, 260 m, 13-18.7.2008, A. Zubov leg.; 34 - female, paratype Polar Ularls, Polyarny Kholm, 12.10.2008, A. Zubov leg.; 35 - male, paratype, Yamal Peninsula, Shchuchye, 27.7.1968, Yu. Korshunov leg.

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