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## TWO NEW SPECIES OF GENUS *PHAENOSERPUS* KIEFFER, 1908 (HYMENOPTERA, PROCTOTRUPIDAE) FROM THE SIBERIA AND RUSSIAN FAR EAST

V. A. Kolyada

*Paleontological Institute, Russian Academy of Sciences, 123 Profsoyuznaya st.,  
Moscow, 117647, Russia. E-mail: proctos@gmail.com*

*Phaenoserphus chernovi* Kolyada, **sp. n.** from Siberia and *Ph. kurilensis* Kolyada, **sp. n.** from Kuril Islands and Magadan region are described and illustrated.

KEY WORDS: Hymenoptera, Proctotrupidae, *Phaenoserphus*, taxonomy, new species, Siberia, Russian Far East.

**В.А. Коляда. Два новых вида рода *Phaenoserphus* Kieffer, 1908 (Hymenoptera, Proctotrupidae) из Сибири и с Дальнего Востока России // Дальневосточный энтомолог. 2012. N. 239. С. 1-9.**

Описываются и иллюстрируются *Phaenoserphus chernovi* Kolyada, **sp. n.** из Сибири и *Ph. kurilensis* Kolyada, **sp. n.** с Курильских островов и Магаданской области.

*Палеонтологический институт, Российская Академия наук, Профсоюзная ул., д. 123, Москва, 117647, Россия.*

### INTRODUCTION

The genus *Phaenoserphus* Kieffer, 1908 includes 26 species worldwide; six of them have a wide Holarctic area (Johnson, 1992). There are 10 Palaearctic species including ones describe below (Kolyada, 1998; 2000). The members of the genus are distributed mainly in a moderate forest area but also can be found in high latitudes

and arctic tundra. They can penetrate far into the south and east (mountains of Central Asia) through the highland habitats and can reach the Oriental area: India (Kashmir, the Kerala mountains), Nepal, South China, Northern Thailand (Koyada, unpublished data). The biology of this genus is poorly studied, but all available data confirm its endoparasites in larvae of Carabidae (Critchley, 1973; Townes, 1981). The systematic of the genus is complicated and confused because of the reason of its strong variability and large species areas.

While preparing the keys for the "Key of the insects of Russian Far East" (Kolyada, 2000) it was supposed that new taxa should be described earlier. However, it has not been happened. I describe these taxa from genus *Phaenoserphus* below.

## MATERIAL AND METHODIC

All photographs were obtained with a stereomicroscope Leica M165 and camera Leica DFC450. The montage of the image layers was performed with Helicon Focus 5.1. The material used in the paper: collections of Zoological Institute, St. Petersburg (ZISP) and Zoological Museum of Moscow State University (ZMMU). The author expresses sincere gratitude to the curators of these collections. I am most grateful to L. Masner, Canadian National Collection of Insects, Ottawa, Canada (CNCI) and D. Wahl, American Entomological Institute, Gainesville, Florida, USA (AEI) for the loan of comparative material.

## TAXONOMY

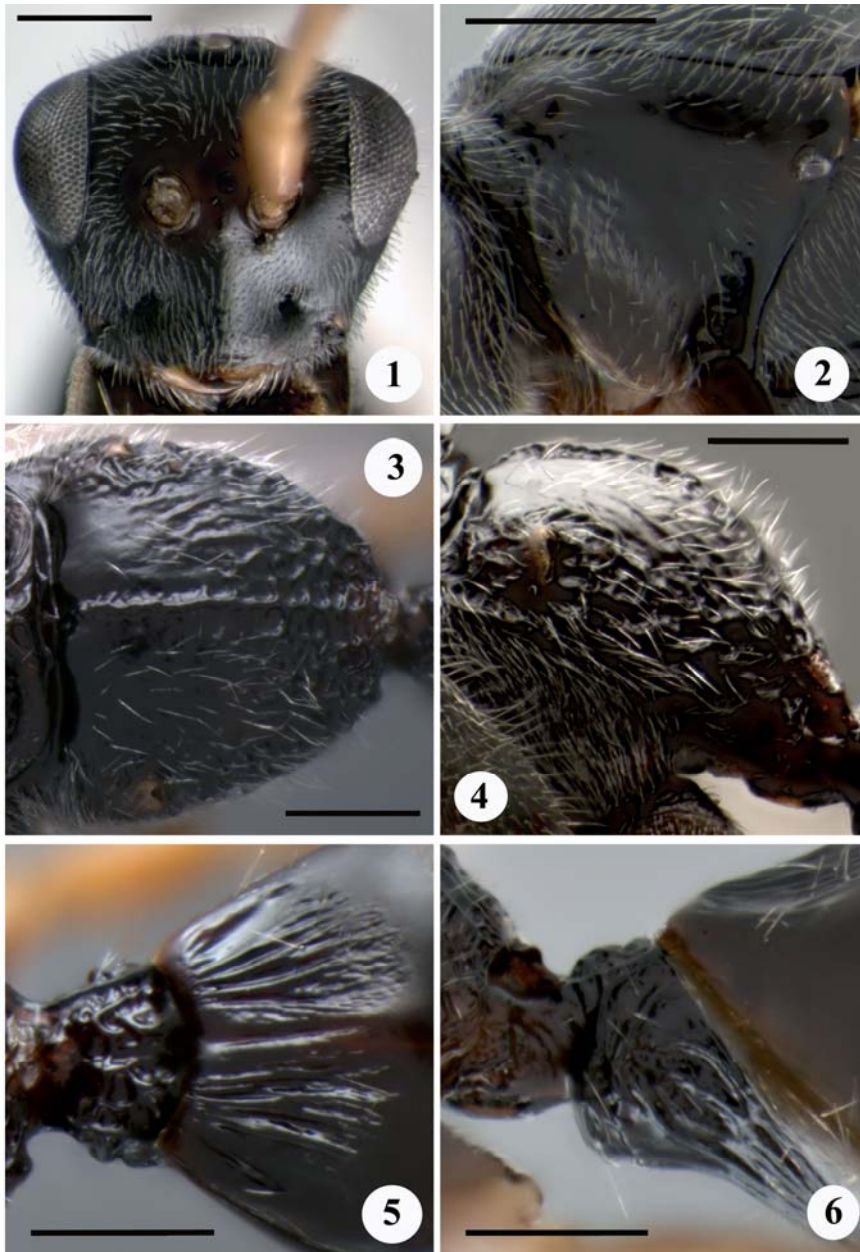
### Genus *Phaenoserphus* Kieffer, 1908

#### *Phaenoserphus chernovi* Kolyada, sp. n.

Figs 1–13

*Phaenoserphus chernovi* Kolyada, 2000: 578, nom. nud.

TYPE MATERIAL. Holotype – ♀, Russia: **Yakutya (Sakha)**, Yakutya, Tiksi / 31.VIII 1980 (D. Kasparyan) [ZISP]. Paratypes: 1 ♂, with same label as holotype; **Krasnoyarsk reg.**, 1 ♀, Yeniseysk Governorate / Lower Tunguska River / above Vivi River / 28.VII 1873 (Chekanovski) [ZISP]; 2 ♀, 2 ♂, Taimyr Peninsula / Agapa River head / Pyasina River tributary, 28.VI 1960 / "conclusion" [probably reared] from larva of *Carabus* / (Yu. Chernov); 1 ♀, Taimyr, Khatanga / mouth of Yantardach River / 7.VII 1971 (A. Rasnitsyn & A. Ponomarenko); 1 ♀, Taimyr, Khatanga / Kotuj River, Kresti village / 24.VII [19]71 (I. Sukacheva & V. Zherikhin); 1 ♀, Evenkya / Stat. Nat. Biosphere Res. "Tsentralnosibirsky" / mouth of Ayachta River / 6–11.VII 2007 / pitfall (A. Kuvaev) [ZMMU]; **Tyumen reg.**, 1 ♀, YNAO, Polar Ural / Sob' River / 50 km NW Labitnangi / 14.VII 1994 (D. Kasparyan); 13 ♂, the same place, but 17–18.VII 1994 (D. Kasparyan) [ZISP].



Figs 1–6. *Phaenoserphus chernovi* sp. n., paratype, female: 1 – head, front view; 2 – pronotum; 3 – propodeum, dorsal view; 4 – propodeum, lateral view; 5 – stalk, dorsal view; 6 – stalk, lateral view.



Figs 7–13. *Phaenoserphus chernovi* sp. n., paratypes, female (7, 8, 10, 11, 13) and male (9, 12): 7 – ovipositor sheath; 8, 10–12 – antenna; 9 – tyloids on antenna; 13 – habitus, lateral view.

DESCRIPTION. FEMALE. Fore wing length 2.5-3.9 mm. Temple about 0.4 times as height as eye. Genal carina angled to meet oral carina at 80°, usually with short stub of carina originating from angulation. Relation of first flagellar segment width to length 1:3.6, and of 10-12 segments 1:2.2; 1:1.9; 1:2.1 respectively. Hairs on side of pronotum with large median bare spot that 2.5-3.0 times as large as tegula. Epomia present. Mesopleuron with horizontal groove complete, mesopleural furrow foveolate.

Propodeum abruptly sloped posteriorly, with two basal large smooth spots dorsally. Propodeum with moderately obvious but obliterate reticulate sculpture. Metasomal stalk short and wide, relation its length to height and width 1:0.5:0.65. Syntergite basally with median longitudinal groove, somewhat not reaching first pair of thyridiae, with 5-6 additional lateral grooves from each side.

Ovipositor sheath 0.46 times as long as hind tibia, with small longitudinal wrinkles. Ratio of ovipositor sheath width to length 0.4.

Body black; stigma, apical third of antennae fuscous; base 2/3 antennae, tegula, fore coxa, and legs yellowish brown; ovipositor sheath black with yellowish tint apically.

MALE. Differs from female in the following: temple about 0.3 times as height as eye; male antennae cylindrical, not flattened. Tyloids granulose oval. Metasomal stalk longer and narrower.

DISTRIBUTION. Russia: Siberia (Tyumen region, Krasnoyarsk krai, Yakutia).

ETYMOLOGY. The species is named after the outstanding ecologist, researcher of the Arctic, Yuri Ivanovich Chernov.

BIOLOGY. Reared from larva of *Carabus* sp. (Carabidae).

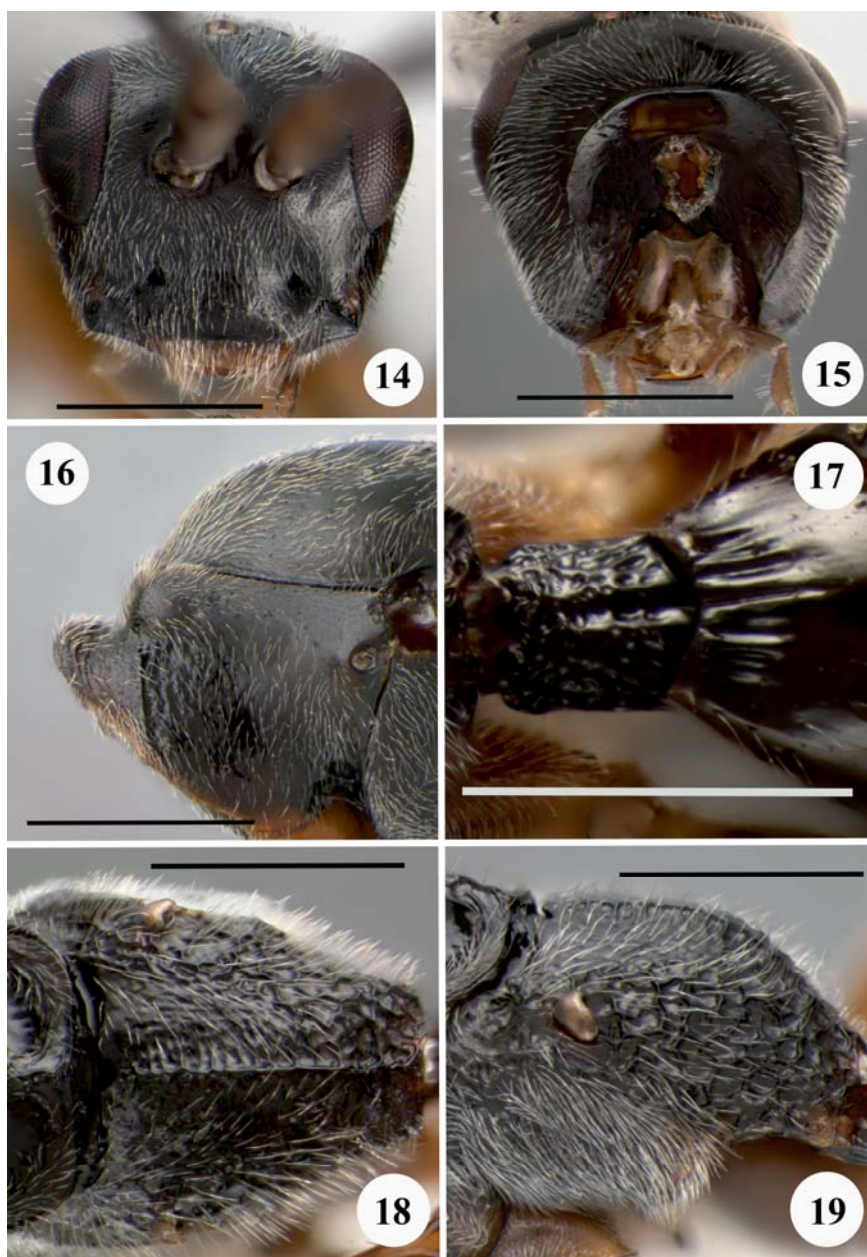
DIAGNOSIS. This species is similar to *Phaenoserphus viator* (Haliday, 1839) by many characters, but differs by having the hairs on side of pronotum with large median bare spot that is 2.5-3.0 as large as the tegula, by propodeum abruptly sloped posteriorly with two large smooth spots basally; by having propodeum with moderately obvious but obliterate reticulate sculpture. The male of this species differs that of *Ph. viator* by having antennae cylindrical, not flattened.

***Phaenoserphus kurilensis* Kolyada, sp. n.**

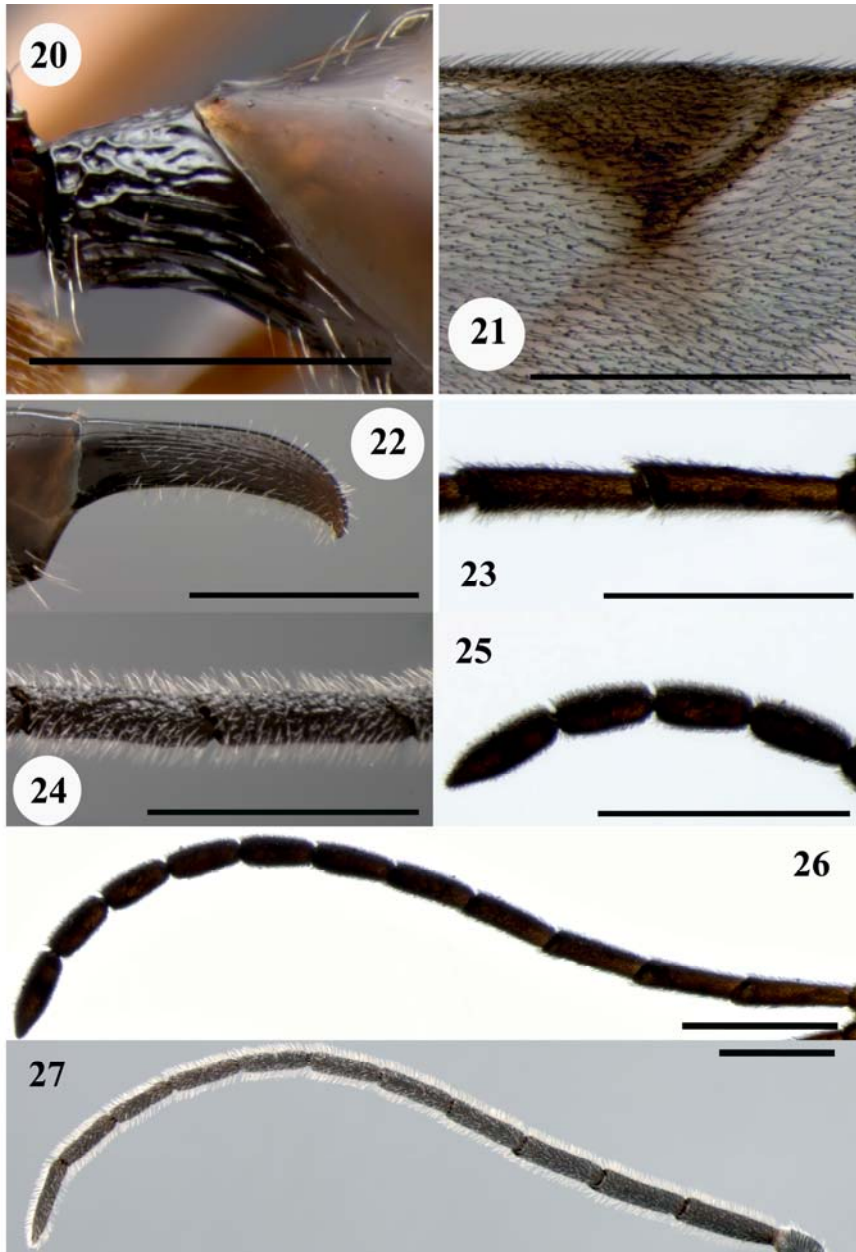
Figs 14–29

*Phaenoserphus kurilensis* Kolyada, 2000: 578, nom. nud.

TYPE MATERIAL. Holotype – ♀, Russia: **Kuril Islands**, Paramushir Is. / 4 km NW Severokurilsk [50°44'22"N, 156°08'43"E] / 5.VIII 1997 (A. Lelej & S. Storozhenko) [ZISP]. Paratypes: 1 ♀, the same place as holotype, but 27.VIII 1976 (G. Anufriev); 2 ♀, Ekarma Is. [48°57'55"N, 153°55'17"E], 10.VIII 1996 / volcano slope, sweeping on grass and bushes of *Alnus fruticosa* (A. Lelej) [ZISP]; 1 ♀, Iturup Is., Kurilsk / 11.VII 1976 (V. Ermolenko); 4 ♀, Shikotan Is., Malokurilsk / 27.VII 1976 (V. Ermolenko); **Magadan Reg.**, 2 ♂, 50 km N Magadan / 13-18.VIII 1975, (V. Marshakov) [ZMMU].



Figs 14–19. *Phaenoserphus kurilensis* sp. n., paratype, female: 14 – head, front view; 15 – head, back view; 16 – pronotum; 17 – stalk, dorsal view; 18 – propodeum, dorsal view; 19 – propodeum, lateral view.



Figs 20–27. *Phaenoserphus kurilensis* sp. n., paratypes, female (20–23, 25, 26) and male (24, 27): 20 – stalk, lateral view; 21 – stigma; 22 – ovipositor sheath; 23, 25–27 – antenna; 24 – tyloids on antenna.



Figs 28–29. *Phaenoserphus kurilensis* sp. n.: 28 – holotype, female; 29 – paratype, male.



DESCRIPTION. FEMALE. Fore wing length 4.0 mm. Temple about 0.4 times as height as eye. Genal carina curved smoothly and evenly toward oral carina, without distinct angulation, meeting oral carina at less than 80°. Relations of first flagellar segment width to length 1:4.3, and of 10-12 segments 1:2.4; 1:2.4; 1:2.3 respectively. Pronotum between collar and scrobe with fine weak surface irregularity. Side of pronotum covered with hairs without bare spots. Epomia present. Propodeum dorsally with weak wide reticulation. Hairs on upper face of propodeum of moderate length, their sockets separated by 0.5 length of the hairs. Metasomal stalk quadratic, relation of length to height and width 1:0.9:1. Syntergite basally with median longitudinal groove, somewhat not reaching first pair of thyridiae and also with 5-6 additional lateral grooves on each side. Ovipositor sheath 0.46 times as long as hind tibia, with small and fine longitudinal wrinkles. Ratio of ovipositor sheath width to length 0.25.

Body black; stigma, antennae, tegula, ovipositor sheath fuscous; legs brown.

MALE. Differs from female in the following: temple about 0.3 times as height as eye. Male antennae cylindrical, not flattened. Tyloids present in form of a weak narrow ridge that is 0.5 as long as a segment. Metasomal stalk longer and narrower.

DISTRIBUTION. Russian Far East: Kuril Islands (Paramushir, Ekarma, Iturup, Shikotan), Magadan region.

ETYMOLOGY. The species is named after the Kuril Islands, where the holotype has been collected.

DIAGNOSIS. This species is similar to *Phaenoserphus borealis* Hellén, 1941 by many characteristics, but differs by having obviously shorter metasomal stalk, by shorter and thicker ovipositor sheath. Body larger, forewing length 4.0 mm.

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