

The first record of *Polydesmus inconstans* Latzel, 1884 (Diplopoda: Polydesmida: Polydesmidae) in the Asian part of Russia

Первая находка *Polydesmus inconstans* Latzel, 1884 (Diplopoda: Polydesmida: Polydesmidae) в азиатской части России

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КЛЮЧЕВЫЕ СЛОВА: *Polydesmus*, *inconstans*, антропохор, фаунистика, интродуцент, Сибирь.

ABSTRACT. Based on the latest review of the anthropochore millipede fauna of Asian Russia, 9 species from 7 genera, 5 families and two orders of Diplopoda are known to occur there as anthropochore introductions [Nefediev et al., 2014]. The present record of the polydesmid millipede, *Polydesmus inconstans* Latzel, 1884, which is new to the millipede fauna of the Asian part of Russia, increases the number of invasive diplopod species in the territory to ten.

РЕЗЮМЕ. Согласно последнему обзору антропохорной диплоподофауны азиатской части России на данной территории известно о 9 интродуцированных человеком видах из 7 родов, 5 семейств и двух отрядов Diplopoda [Nefediev et al., 2014]. Настоящая находка многосвязя *Polydesmus inconstans* Latzel, 1884, который оказался новым для азиатской части России, увеличивает количество инвазивных видов двупарноногих многоножек этой территории до десяти.

Introduction

The first anthropochore polydesmid millipede in the Asian part of Russia, *Polydesmus denticulatus* C.L. Koch, 1847, has been recorded by Mikhailjova and Nefediev [2003] in the University Grove at the Tomsk State University, Tomsk City, Tomsk Area, southwestern Siberia. The species could have reached the grove from the nearby hothouses of the Siberian Botanical Garden [Nefediev et al., 2014]. It has also been introduced to the Baktin Cemetery in the suburbs of the city of Tomsk, presumably with flower seedlings [Nefediev, Nefedieva, 2011], as well as to some other open man-made grounds [Nefediev et al., 2014]. The second invasive polydesmidan species from the study area, *Brachydesmus superus* Latzel, 1884, has been reported

very recently from hothouses of the South Siberian Botanical Garden and from open hand-made grounds in the environs of the city of Barnaul, Altai Province, southwestern Siberia [Nefediev et al., 2014]. Therefore, before the beginning of the present study two anthropochore millipede species of the family Polydesmidae had been recorded in Asian Russia, both found in habitats associated with human activity. During our ongoing studies on the millipedes in anthropogenic habitats in the cities of western Siberia, one more polydesmid millipede, *Polydesmus inconstans* Latzel, 1884, has been found.

Material and methods

Millipedes were collected by the first author using hand sampling and preserved in 70% ethanol. The material treated herein has mainly been deposited in the collection of the Altai State University, Barnaul, Russia (ASU), partly shared also with the collections of the second author (PK), of the Zoological Museum of the Lomonosov Moscow State University, Moscow, Russia (ZMUM), and of the Institute of Biology and Soil Science, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia (IBSS), as indicated in the text.

Taxonomic part

ORDER POLYDESMIDA
Family Polydesmidae

Polydesmus inconstans Latzel, 1884
Figs 1–2.

MATERIAL EXAMINED. 1 juv. (ASU), Russia, southwestern Siberia, Altai Province, Pervomaiskii District, Beryozki Railway Station, 53°33'35.8" N, 83°44'48.7" E, 225 m a.s.l., gardens, open



Fig. 1. *Polydesmus inconstans* Latzel, 1884. Habitus in dorsal view. Live photograph, taken not to scale.

Рис. 1. *Polydesmus inconstans* Latzel, 1884. Общий вид сверху. Сфотографирован живым, без масштаба.

hand-made grounds, 25.05.2014; 2 juv. (ASU), same locality, 7.06.2014; 2 ♂♂, 2 ♀♀ (ZMUM), 2 ♂♂, 2 ♀♀ (IBSS), 7 ♂♂, 2 ♀♀, 8 juv. (ASU), same locality, 6–20.09.2014; 2 ♂♂, 2 ♀♀ (PK), 5 ♂♂, 1 ♀ (ASU), same locality, 11.05.2015, all leg. P.S. Nefediev.

DISTRIBUTION. Great Britain, including the Shetlands, the Orkneys, the Hebrides, and also the Isle of Man and Northern Ireland, Iceland, Ireland, Austria, Belgium, the Netherlands, mainland France, Germany, mainland Italy, Luxembourg, Switzerland, mainland Spain together with Alboran Island, mainland Portugal, Bulgaria, the Czech Republic, Slovakia, Poland, Ukraine, Denmark together with Bornholm Island, mainland Norway, Sweden together with Gotland Island, Finland, Estonia, Lithuania, Latvia [Blower, 1985; Enghoff, 2013]. Widespread in the European part of Russia from the Kaliningrad Area in the north and west to the Saratov Area in the south, and the Republic of Bashkortostan in the east [Lokšina, 1969; Golovatch, 1984; Farzalieva, 2008]. The species is also known as introduced to the Nearctic region (USA and Canada) [Blower, 1985] and to the Australian region (New Zealand) [Johns, 2010].

REMARKS. This species is here reported from the Asian part of Russia for the first time, taken from only one, anthropogenous locality, i.e. open hand-made grounds in the Altai Province where it obviously is capable of overwintering and surviving outdoors. *Polydesmus inconstans* differs from *P. denticulatus*, the sole congener which has also been reported from the Asian part of Russia, by the absence of a long leaf-shaped plate on the secondary branch of the gonopod, showing instead a tiny spine at its inner edge (Fig. 2), and in the epigyne bearing a well-developed thorn-shaped outgrowth.

Conclusions

This paper represents the first formal report on *Polydesmus inconstans* Latzel, 1884, basically a widespread European species [Kime, Enghoff, 2011], from the Asian part of Russia. The species is confined to

anthropogenous habitats. So at the present at least 10 invasive species from 7 genera, 5 families and two orders of Diplopoda are known to occur in Asian Russia.

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Fig. 2. *Polydesmus inconstans* Latzel, 1884. Left gonopod in lateral view. Photographed not to scale.

Рис. 2. *Polydesmus inconstans* Latzel, 1884. Левый гонопод при виде сбоку. Без масштаба.

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