
ORIGINAL ARTICLE

New data on the distribution of *Pachymerium ferrugineum* (C.L. Koch, 1835) (Chilopoda: Geophilomorpha: Geophilidae) in Central Asia

Yu.V. Dyachkov

Altai State University, pr. Lenina 61, Barnaul, 656049, Russia

E-mail: dyachkov793@mail.ru

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The present work lists the genus *Pachymerium* C.L. Koch, 1847 and species *P. ferrugineum* (C.L. Koch, 1835), as well as the family Geophilidae and the order Geophilomorpha, to which they belong, as new to the fauna of the Khovd Aimag in Mongolia. This species is also new to Kyrgyzstan and to the East Kazakhstan and Almaty Regions of Kazakhstan. Distribution map is provided.

Key words: centipedes, Geophilidae, *Pachymerium*, faunistics, Kyrgyzstan, Mongolia, Kazakhstan.

Pachymerium ferrugineum (C.L. Koch, 1835) is a Trans-Palaearctic polyzonal species (Europe, N Africa, Russia, western and Central Asia, China) (Sergeeva, 2013; Bukhlo et al., 2014; Nefediev et al., 2017), also known as anthropochore introductions: North and South America, Japan and Hawaii isl. (Simiakis et al., 2013; Volkova, 2016).

In Central Asia, it is known from Uzbekistan (Kessler, 1874), Tajikistan (Verhoeff, 1930), Kazakhstan (Vsevolodova-Perel, 2009) and Mongolia (Ulykpan, 1988) while the considerable part of this large region has never been investigated. Basing on new material from Mongolia, Kazakhstan and Kyrgyzstan, I provide new data on the distribution of *P. ferrugineum* in Central Asia.

Materials and methods

Material was collected in Kazakhstan, Kyrgyzstan and Mongolia in 2015–2018. Specimens were taken by hand and preserved in 70% ethanol. Material is deposited in the collection of the Altai State University, Barnaul (ASU).

Results

Pachymerium ferrugineum (C.L. Koch, 1835)

Material examined: 1 female (ASU No 16), **Mongolia, Khovd Aimag**, Baitag-Bogd-Uul Mt. Range, Baruun-Khargaityn-Gol River Valley, stony desert, N 45°16'00.26", E 90°56'59.98", 1900–2000 m a.s.l., 18–21.V.2015, leg. A.A. Fomichev; 1 male (ASU No 17), same place, N 45°17'01.59", E 90°57'00.78", 1900–2000 m a.s.l., 21.V.2015, leg. A.A. Fomichev; 2 female (ASU No 10), **Kazakhstan, East Kazakhstan Region**, Ayagoz District, 43 km NW Ayagoz Town, Kyzylzhar Mts, stony mountain steppe, N 48°13'00.13", E 79°57'00.12", m 900–1000 m a.s.l., 14.IV.2016, leg. A.A. Fomichev; 3 female (ASU No 11), same District, 18 km W Aksaule, Karaultobe Mts, meadow, N 47°28'00.13", E 80°39'00.02", 700 m a.s.l., 20.VI.2016, leg. A.A. Fomichev; 1 female (ASU No 12), **Almaty Region**, Zhambyl District, 15 km NNW Karabastau Village, Tyrnakty, stony mountain steppe, under stones, N 43°53'00.42", E 75°30'00.50", 850–950 m a.s.l., 20–22.IV.2016, leg. A.A. Fomichev; 1 female (ASU No 82), **Kyrgyzstan**, 20 km N Bishkek, Ala-Too state farm, man-made ground, 30.VII.2015, leg. Yu.V. Dyachkov.

General Distribution. This species is known from Europe (Attems, 1929; Zapparoli, 2002; Volkova, 2016; Bonato et al., 2005; Zuev, Evsyukov, 2016), Russia (European part, the Urals, western Siberia and Far East) (Zalesskaja et al., 1982; Farzalieva, 2008; Sergeeva, 2013; Bukhlo et al., 2014; Nefediev et al., 2017), Western Asia and N Africa (Zapparoli, 2002) to Central Asia and China (Kessler, 1874; Wang, Mauriès, 1996). *P. ferrugineum* is also known as anthropochore introductions, e.g. North America (USA, Alaska and Mexico), Chili, Hawaii Isl. and Japan (Attems, 1929; Bonato et al., 2005; Simiakis et al., 2013; Volkova, 2016).

Distribution in Central Asia. Uzbekistan (Tashkent and Samarkand (Kessler, 1874; Sselivanoff, 1884; Attems, 1904; Verhoeff, 1930)); Kazakhstan (West Kazakhstan (Vsevolodova-Perel, 2009), East Kazakhstan and Almaty Regions); Kyrgyzstan (Bishkek); Tajikistan (Khujand) (Verhoeff, 1930); Mongolia (without accurate indication of the collection locality) (Ulykpan, 1988).

Remarks. *P. ferrugineum* inhabits dry, xerophyte habitats (Zalesskaja et al., 1982; Sergeeva, 2013). In the Tomsk Area and Altai Province it is recorded in indoor anthropogenic habitats (hothouses) (Nefediev et al., 2017).

P. ferrugineum is new to the fauna of Kyrgyzstan, the East Kazakhstan and Almaty Regions of Kazakhstan and the Khovd Aimag of Mongolia.

Conclusions

To date, the Central Asian fauna of the family Geophilidae is still poorly known; most of species are endemics from Uzbekistan and Kyrgyzstan (Kessler, 1874; Pocock, 1891; Lignau, 1929; Verhoeff, 1930; Folkmanová, 1958; Ulykpan, 1988; Jones, 2001; Vsevolodova-Perel, 2009; Bragina, 2012, 2016), while *P. ferrugineum* is spread in Uzbekistan, Tajikistan, Kazakhstan, Kyrgyzstan and Mongolia (Fig. 1).

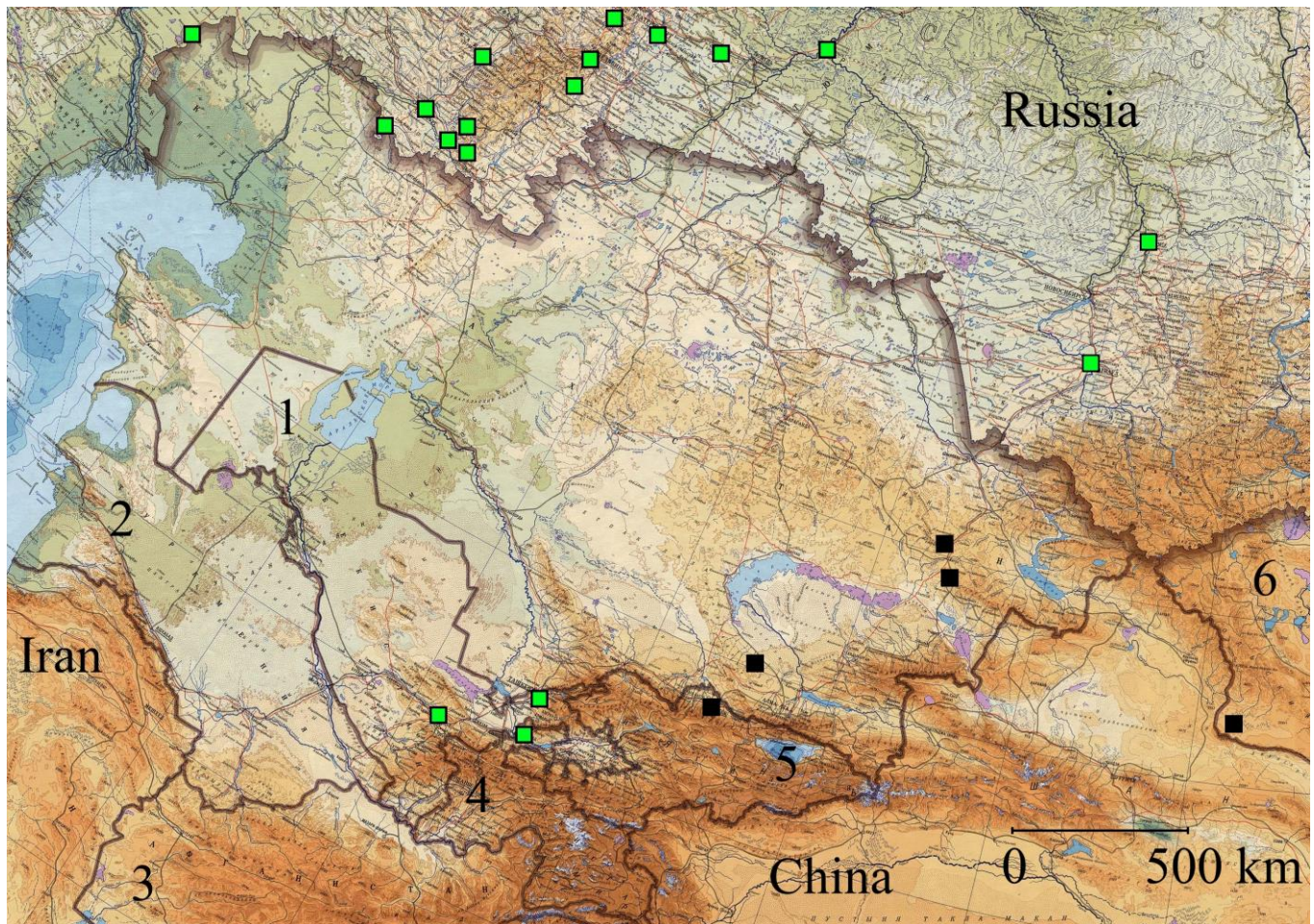


Figure 1. Map. Distribution of *Pachymerium ferrugineum* (C.L. Koch, 1835) in Central Asia and adjacent territories. Green coloration indicates literature data, black coloration concerns new data. 1 – Uzbekistan; 2 – Turkmenistan; 3 – Afghanistan; 4 – Tajikistan; 5 – Kyrgyzstan; 6 – Mongolia.

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