Himantariidae Bollman, 1893 (Chilopoda: Geophilomorpha), a new family for the Mongolian fauna

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Abstract
Polyporogaster porosa (Sseliwanoff, 1881), genus Polyporogaster Verhoeff, 1899, as well as family Himantariidae Bollman, 1893 are reported for the first time for the fauna of Mongolia.

Key words: Polyporogaster, biodiversity, fauna, new records, Central Asia.

Introduction
Mongolia is located at the junction of three large biogeographic regions of the Holarctic Kingdom: Ancient Mediterranean, Boreal, and East Asian (Catasian) Subkingdoms (Kamelin 2010). The centipede fauna of this country is still studied fragmentarily. To date, 6 families of 3 orders of Chilopoda are known from Mongolia: Scutigeridae (Scutigeromorpha), Lithobiidae and Henicopidae (Lithobiomorpha), Geophilidae, Linotaeniidae, and Schendylidae (Geophilomorpha) (Sseliwanoff 1878, 1881c, 1881d; Attems 1901; Verhoeff 1934, 1942; Dobroruka 1960, 1970; Loksa 1965, 1978; Zalesskaja 1978; Eason 1986; Ulykpan 1988; Poloczek et al. 2016, 2017; Dyachkov 2017, 2018; Dyachkov et al. 2021; Farzalieva et al. 2017).

The study of the material from western Mongolia (Dyachkov 2017, 2018; Dyachkov et al. 2021; Farzalieva et al. 2017) also revealed specimens of Polyporogaster porosa (Sseliwanoff, 1881). To date, himantariids have never been reported from this region. Family Himantariidae is spread mostly from Macaronesia through the Mediterranean region and Middle Asia to India, known also from the Korean Peninsula and Japan, as well as from western part of N America to central Mexico (Bonato 2011).

Material and Methods
The material was collected by A.A. Fomichev and R.V. Yakovlev in 2015 (Fig. 1) and deposited in the Zoological Museum of Lomonosov Moscow State University (ZMMU). Data on the type locality are given according to original sources; additional information is provided in square brackets. The distribution map was generated using SimpleMappr software (Shorthouse 2010).
Geographical note. The territory spreading from Caspian Sea to China eastwards, and from Aral Sea–Alakol Lake to Northern Iran and Afghanistan, has been referred to as Middle Asia in Russian scientific literature since 20th century. Presently, this territory includes mostly the following countries: Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, and partly Kazakhstan. The use of Middle Asia to refer to these countries eliminates ambiguity between names Central Asia and Middle Asia (Jashenko et Zyuzin 2000; Rachkovskaya et Khramtsov 2003; Cowan 2007).

Results

Family Himantariidae Bollman, 1893

Genus *Polyporogaster* Verhoeff, 1899

Type-species: *Polyporogaster tunetanum* Verhoeff, 1899 (by monotypy) (Bonato et al. 2016).

*Polyporogaster porosa* (Sseliwanoff, 1881)

Type locality: "Chinad place (near Tashkent)" (Sseliwanoff 1881b) and "Chinas [sic!] near Tashkent" (Sseliwanoff 1881a) [Uzbekistan, Tashkent Region, Chinaz City, N40°56', E68°45'].

*Mesocanthus porosus* Sseliwanoff 1881b: 231; 1884: 105–106.

*Mesocanthus porosus* – Attems 1904: 115.

*Polyporogaster porosus* – Silvestri 1919: 90; Lignau 1929: 163–164; Titova 1978: 241.

*Polyporogaster porosa* – Bonato et al. 2016; Bragina et al. 2020: 30; Dyachkov 2020a: 63; 2020b: 81; Dyachkov & Nedoev 2021: 44.

Material. 1 ♂, 2 ♀ (ZMMU Rc 7791), Mongolia, Khovd Aimag, Baitag-Bogd-Uul Mt. Range, Barun-Khargaityn-Gol River Valley, N45°16', E90°57', 1900–2000 m, stony desert, 18–22.V.2015.

**Distribution.** A Middle Asian species: "Turkestan" (Sseliwanoff 1884; Attems 1904); Uzbekistan (Sseliwanoff 1881a, 1881b, 1884; Dyachkov & Nedoev 2021), Kazakhstan (Bragina et al. 2020; Dyachkov 2020a), Tajikistan (Dyachkov 2020b), Turkmenistan (Dyachkov & Nedoev 2021), Mongolia (new).

**Remarks.** Western Mongolia is the easternmost range limit of *P. porosa*. This species has never been encountered above 1300 m (Dyachkov 2020a).

Conclusions

*P. porosa* is mostly spread on plains (deserts and semi-deserts) and partly on mountains (mountain steppes and deserts) in the Middle Asia (Dyachkov 2020a, 2020b; Dyachkov & Nedoev 2021). *P. porosa* is recorded on N slope of Baitag-Bogd-Uul Mt. Range, which is located south of the Barun-Khuray Hollow in Mongolia. Botanist R.V. Kamelin (2017: Fig. 2) considers Middle Asian plain territories as the Turano-Dzungarian Province (Ancient Mediterranean Subkingdom of Holarctic), Barun-Khuray Hollow is one of the easternmost parts of this province (Kamelin 2005: 41; 2010: 7, Figs 1, 2). Thus, it is not surprising to find here this Middle Asian himantariid species.

The Barun-Khuray Hollow was mentioned by R.V. Yakovlev (2012) as a unique place with desert elements of Middle Asian origin in the fauna of Lepidoptera.

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Figures 1–3. Collecting locality of Polyporogaster porosa (Sseliwanoff, 1881) in Mongolia (1), Baitag-Bogd-Uul Mt. Range near Barun-Khuray Hollow (2, 3) (photos by A.A. Fomichev).

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