First Records of the Genus *Paraleuctra* Hanson (Plecoptera: Leuctridae) and *Isoperla flavescens* Zhiltzova et Potikha (Plecoptera: Perlodidae) for the Stonefly Fauna of Mongolia

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Abstract

Two species of stoneflies, *Paraleuctra zapekznae* Zhiltzova and *Isoperla flavescens* Zhiltzova et Potikha are recorded as new for the fauna of Mongolia as well as the genus *Paraleuctra* is firstly recorded in Mongolia. Redescriptions of the two species are given.

Key words: Plecoptera, *Paraleuctra*, *Isoperla flavescens*, first record, Mongolia

Introduction

Forty-seven species of stoneflies were listed for Mongolia by Zhiltzova & Varykhanova (1988). Since 1998, the stonefly fauna of West Khentii (Northern Mongolia) is investigated in order to assess the effects of gold mining on the stream benthos in the region (Purevdorj et al., in preparation). During this study, two species were discovered that are new to the fauna of Mongolia, namely *Paraleuctra zapekznae* Zhiltzova and *Isoperla flavescens* Potikha et Zhiltzova. Including these species, the stonefly fauna of Mongolia comprises now at least 50 species (including a rediscovery of *Diura nanseni* (Kempny)) of stoneflies, of which four species (but no genera) are endemics of Mongolia.

Identifications were carried out at the Department of Ecology, National University of Mongolia and Hydrobiological laboratory of Freshwater, Institute of Biology and Soil Sciences, Far Eastern Branch of the Russian Academy of Sciences. The redescriptions of the new recorded species are adapted from Zhiltzova and Zapekina-Dulkeit (1986) and Shimizu (2000).

Redescriptions of Species

*Isoperla flavescens* Potikha et Zhiltzova, 1986  
(Figs. 1-7)

The adults fly from June to August (Zhiltzova & Zapekina-Dulkeit, 1986). In the present investigation, only males were collected in mid of June, along the banks of upper reaches of the Eroo river.

Previous distribution. Russian Far East, Primorie Region.

Paraleuctra zapekinae Zhiltzova, 1974 (Figs. 8-10)

Paraleuctra zapekinae Zhiltzova, 1974: 360.

Hanson (1941) proposed Paraleuctra as a Nearctic genus embracing seven species. Stark and Kyzar (2000) reviewed the genus and placed seven species in three groups of Nearctic Paraleuctra. The large number of Asian species is known from Japan. Eight species of the genus Paraleuctra are recognized in Japan (Shimizu, 2000) and three species in Russia (Zhiltzova and Zapekina-Dulkeit, 1986). This is the first record of the genus Paraleuctra for the Stonefly fauna of Mongolia.


Males. Body 6.0-7.0 mm, forewing 6.3-7.2 mm long. Segment IX interrupted ventrally by distinct subgenital plate. Winged, subgenital plate tapered, with concave hind margin. Cercus forked, with a tapered dorsal and ventral arms (Fig. 8). Dorsal arm of cercus distinctly longer than ventral one, with bifurcate tip (Fig. 9).

Female. Body length 7.5-8.5 mm, forewing 8.0-8.5 mm long. Winged and subgenital plate widely expanded posteriorly and well sclerotized and dark. Subgenital plate with angulate hind margin on either side of medial cleft and tapered posterolateral margins (Fig. 10).

Distribution. Wide-spread North-East Asian species known from the south-west coast of the Sea of Okhotsk, Ulukan River, Bolshoi Shantar Island, mouth of Amur River, Amgun; Sakhalin Island, Khor River in the Ussuri River Basin, to the Sayan Mountains in Eastern Siberia (Zhiltzova and Levanidova, 1984). Before the present recovery
family Leuctridae was represented in Mongolia only by the Transpalaearctic species, *Leuctra fusca* L. (Zhiltzova, 1976; 1982).

**Discussion**

Both the species are studied here have been considered as elements of the Russian Far East. The records of these species in Mongolia document up to now the Western border of their distribution. The occurrence in the rapid flowing upper Eroo river shows an obvious wide range of habitat use in streams and rivers for these species.

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