THE FIRST RECORD OF A FAR EAST STONEFLY (PLECOPTERA) FROM CENTRAL ASIA

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ABSTRACT
The first record of Amphinemura coreana Zwick from Kazakhstan is given. The species was hitherto known only from Korea and the Russian Far East, the new record represents an unusually large range extension for a Plecoptera species. Terminalia of the Kazakh specimens and the known distribution of the species are shown on figures.

Keywords: Plecoptera, Amphinemura coreana, Kazakhstan, new record

INTRODUCTION
The Plecoptera fauna of Central Asia is rather peculiar, being species poor but with a high level of endemism (Surenkhorloo 2009, Zhiltzova 1997, 2009). Hitherto only 51 species of 15 genera reported from the Central Asian Subregion, 41 species and one genus (Zhiltzozvia) are endemic and most of the remaining species and three genera (Kypheopteryx, Filchneria, Mesoperlina) are restricted to mountainous Asia (Zhiltzova 1997, 2009). The fauna shows weak contact towards the Far East, an example is Yoraperla altaica Devyatkov 2003 that belongs to a genus having Korean, Japanese and Nearctic species beside this Central Asian one (Devyatkov 2003).

Amphinemura coreana Zwick 1973 is a large sized, rather distinct species of its genus. It was reported only from Korea and the Russian Far East (Teslenko & Zhiltzova 2009, Zwick 2010), and was regarded as an East Asian (Palaearcharctic or Manchurian-Chinese) mainland species (Teslenko 2009, Zhiltzova 1997). Now a series of two males turned up from a sample collected at light in East Kazakhstan, showing an unusually large range extension for a stonefly species, and being the only non-endemic Amphinemura in addition to the seven species known from Central Asia.

MATERIAL AND METHODS
The Kazakh specimens were caught at a light near the Ili River, stored in 70% ethanol and housed in the Hungarian Natural History Museum, Budapest, Hungary (HNHM). Examined type material from the People’s Republic of Korea is also housed in the HNHM.

Drawings were made with the aid of a drawing tube on a Nikon SMZ800 microscope. Occurrences shown on the distribution map were compiled from the following works: Levanidova & Zhiltzova (1979), Teslenko (1986, 2011), Teslenko & Zhiltzova (2009), Zhiltzova (2003) and Zwick (1973, 2010). Terminology follows Baumann (1975).

RESULTS AND DISCUSSION

Amphinemura coreana Zwick 1973 (Figs. 1-4)

(description of male and female from People’s Republic of Korea); Zhiltzova 2003:179. (monograph, with the
original figures); Teslenko & Zhiltzova 2009:113. (key, with the original figures); Zwick 2010:76. (additional description of female).


**Morphology (Figs. 1-4):** Habitus of the Kazakh specimens agree with the Korean types, being large and dark nemourids. Their genital organs differ slightly in two aspects: The outer surface of the paraproct median lobe bear more spines than shown for the holotype (Zwick 1973: Fig. 3), and the epiproct has a shorter fold of the lateral arms above the denticulate crest of the ventral sclerite (Zwick 1973: Fig 4). Nevertheless, the paratypes also show some variability in these features, and the small differences of the Kazakh specimens should be regarded as individual variability more than a geographical race.

Figs. 1-4. Male terminalia of a Kazakh specimen of *Amphinemura coreana* Zwick 1973. 1: dorsal view; 2: ventral view; 3: lateral view; 4: epiproct, dorsolateral view (scales 1 mm; scale a: Figs.1-3, scale b: Fig. 4).

Amphinemura coreana is regarded as an inhabitant of submontane rivers and streams (Zhiltzova 2003), its flight period extends from May to August (Zhiltzova 2003, Zwick 2010). Its Kazakh habitat is a large river with sandy bottom, flowing through a steppe vegetation on the foothills of the Tien San. The two males were found together with a Nemoura female (probably N. lepnevae Zhiltzova 1971). It is worth mentioning that the Trichoptera species collected during the same light trapping resulted in additional unexpected data of species hitherto known exclusively from the Far East (Wormaldia niensis, Plectrocnemia wui, Goera japonica, Lepidostoma iloae); however, they were found together with typical Central Asian species (e.g. Psychomyia usitata Potamyia straminea) (Oláh 2010).

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