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### A small collection of caddisflies (Insecta, Trichoptera) from western Kazakhstan.

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According to a recent review (SMIRNOVA & al. 2016), the Trichoptera fauna of Kazakhstan comprises 149 species from 59 genera and 17 families. These numbers are small for such a big country, so many new additions are to be expected. Previous samples were obtained mostly from easily accessible parts of the country, especially from the southern and southeastern regions. Western Kazakhstan has been studied very insufficiently except for limited data from the Ural River (BEHNING 1938, STALMAKOVA 1954).

The present paper describes a small collection of adult Trichoptera given to us by Eu. Tsvetkov, a lepidopterist who collected insects, mostly by light-trapping, in May and June 2017 in the Mangystau and Atyrau regions, western Kazakhstan. He used a traditional light trap equipped with a bulb lamp positioned near a white screen. The adults were collected dry along with other insects. The Trichoptera material is kept in the collection of the Department of Entomology, St. Petersburg State University.

The Mangystau and Atyrau regions are located in western Kazakhstan and include the Mangyshlak Peninsula and the North Caspian Region with the greater part of Kazakhstan's Caspian shore. These regions border the neighbouring countries of Turkmenistan in the south and Uzbekistan in the southeast, and Russia in the northwest (Fig. 1). The total area of these regions is 284200 square kilometres (10.4% of the total area of the country). The highest point is Otpan Mountain (556 m a.s.l.); the lowest is the bottom of the Karagie depression, 132m below sea level. The climate is continental arid with average temperatures of –5°C in January and +27°C in July. The average annular precipitation is 120 – 150 mm, mostly in spring. Typical landscapes of these regions are deserts and semi-deserts. The Ural (Zhoiyyk) and Emba (Zhem) Rivers are the former and the current border lines between Asia and Europe; sample localities 3, 4 and 5 were below falls in between these rivers so their position in Europe or Asia is disputable; other localities are in Asia. The climate is sharply continental and extremely arid (ISACHENKO & SHLYAPNIKOV 1989).

### List of sampling localities in Western Kazakhstan

(h: height above sea level in metres).

Locality 1: Mangystau Region, 5 km SW vil. Sai Otes, 44°17'54"N, 53°28'38"E, h = 136m, 4 June 2017.

Locality 2: Mangystau Region, Mangystau Ridge, Akmysh, 44°14'51"N, 51°59'17"E, h = 129m, 16 June 2017.

Locality 3: Atyrau Region, Lake Inder, 48°31'37"N, 51°54'26"E, h = 11m, 31 May 2017.

Locality 4: Atyrau Region, 50 km NW Kulsary, Akkergeshen plateau, 47°18'09"N, 54°23'22"E, h = 10m, 1 June 2017.

Locality 5: The place is the same as in loc. 4, but the date and trap orientation were different. 20 June 2017.

Locality 6: Mangystau Region, 40 km SE Shetpe, 43°46'47"N, 51°57'29"E, h = 122m, 8 June 2017.

### Species list:

*Ecnomus tenellus* (RAMBUR, 1842) (Ecnomidae). Loc. 2: 2♂; loc. 5: 1♂; Loc. 6: 1♀. – The species is widespread in Eurasia.

and widely distributed across Kazakhstan, including Western Kazakhstan (Ural River Basin; Aktober District).

*Hydropsyche contubernalis* MCLACHLAN, 1865 (Hydropsychidae). Loc. 4: 7♂, 2♀; loc. 5: 1♂, 3♀. – This species includes several subspecies in Europe and Asia and is represented in our samples by the subspecies *iranica* MALICKY, 1977. A single previous record in Kazakhstan was from the Ural River at Taipak settlement close to our locality 3.

*Astratodes turanus* MARTYNOV, 1928 (Limnephilidae). Loc. 1: 6♂; loc. 2: 1♀. – The species is known locally from Russia (Dagestan), Iran and Turkmenistan. This is the first record for Kazakhstan.

*Limnephilus griseus* (LINNAEUS, 1758) (Limnephilidae). Loc. 3: 1♂. – The species is widespread in Russia and Europe. This is the first record for Kazakhstan.

The mountains and plains are mostly dry and lakes are salty making it difficult to explain the opportunities for Trichoptera development in the region. Sometimes, small springs were noted as in locality 1, but no larval material was found to prove the development of caddisflies. Some specimens can migrate from remote localities to the light trap, especially females, although the presence of males suggest the presence of local biotopes for aquatic freshwater larvae. This small collection, comprising four species, adds two species new to the country's fauna. It can be assumed that new records and new species will be found in the country in future, which can substantially increase the number of caddisfly species known for this country.

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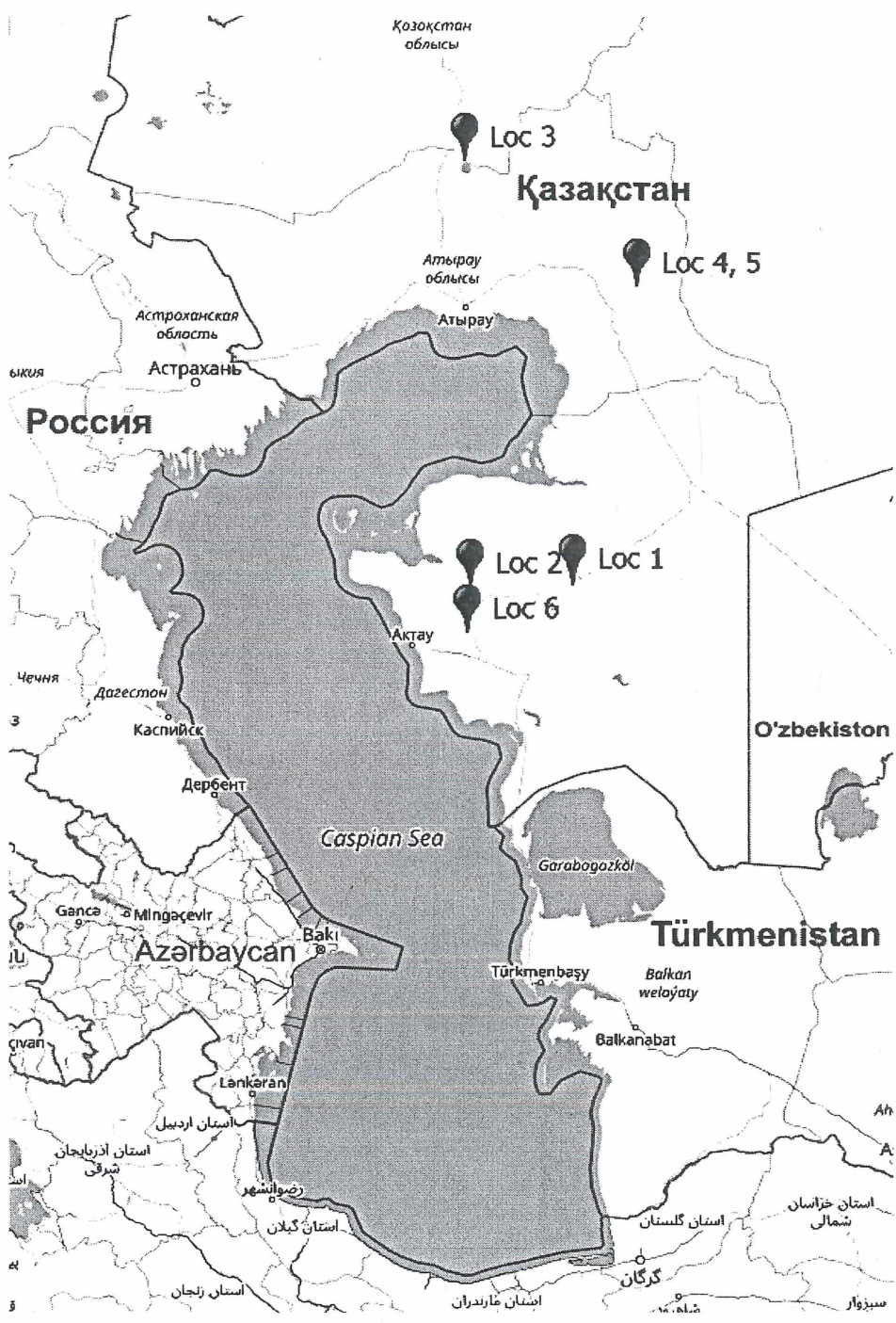
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**Figure 1** (page 32): Map of the sampling localities 1 – 6.



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