

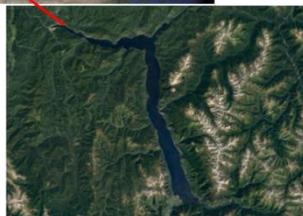
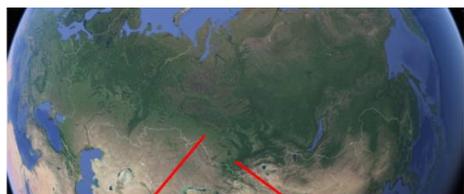
Diversity of *Diplostomum* (Digenea: Diplostomidae) in fishes from Western Siberia according to the results of DNA barcodes

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Trematodes of the genus *Diplostomum* are important fish pathogens. The data on their diversity in water bodies of Siberia are inconsistent, which may be due to the complexity of species identification. This study is aimed at identifying the species diversity of metacercariae of *Diplostomum* spp. from fishes of the two largest lakes in Western Siberia based on analysis of partial *cox1* mtDNA gene sequence.



Lake Chany

Lake Teletskoye

Fig. 1. The sampling localities in Western Siberia. These are lakes with sharply different conditions: Chany is a flat eutrophic lake with depths of up to 10 m (mean depth 2.2 m), Teletskoye is an oligotrophic mountain lake with a maximum depth of 325 m (mean depth 181 m). Both lakes lie on the migration route of waterfowl, which are the final hosts of *Diplostomum* spp.

Material and Methods. In total, the nucleotide sequences of 75 metacercariae from ten fish species of three families from Lake Chany and 33 metacercariae from six fish species of five families from Lake Teletskoye were obtained. The *cox1* gene region was amplified using the primers described by Steenkiste et al. (2015). Received sequences were used for molecular identification of the isolates using the BLAST program.

Tab. 1. Host fish species and the number of studied metacercariae.

Fish species	Lake Chany	Lake Teletskoye
<i>Abramis brama</i>	6	1
<i>Carassius carassius</i>	10	-
<i>Cyprinus carpio</i>	4	-
<i>C. gibelio</i>	9	-
<i>Coregonus lavaretus</i>	-	3
<i>Cottus sibiricus</i>	-	6
<i>Esox lucius</i>	4	1
<i>Phoxinus phoxinus</i>	-	4
<i>Leuciscus idus</i>	9	-
<i>L. leuciscus</i>	5	-
<i>Lota lota</i>	-	7
<i>Perca fluviatilis</i>	12	6
<i>Rutilus rutilus</i>	10	-
<i>Sander lucioperca</i>	7	-

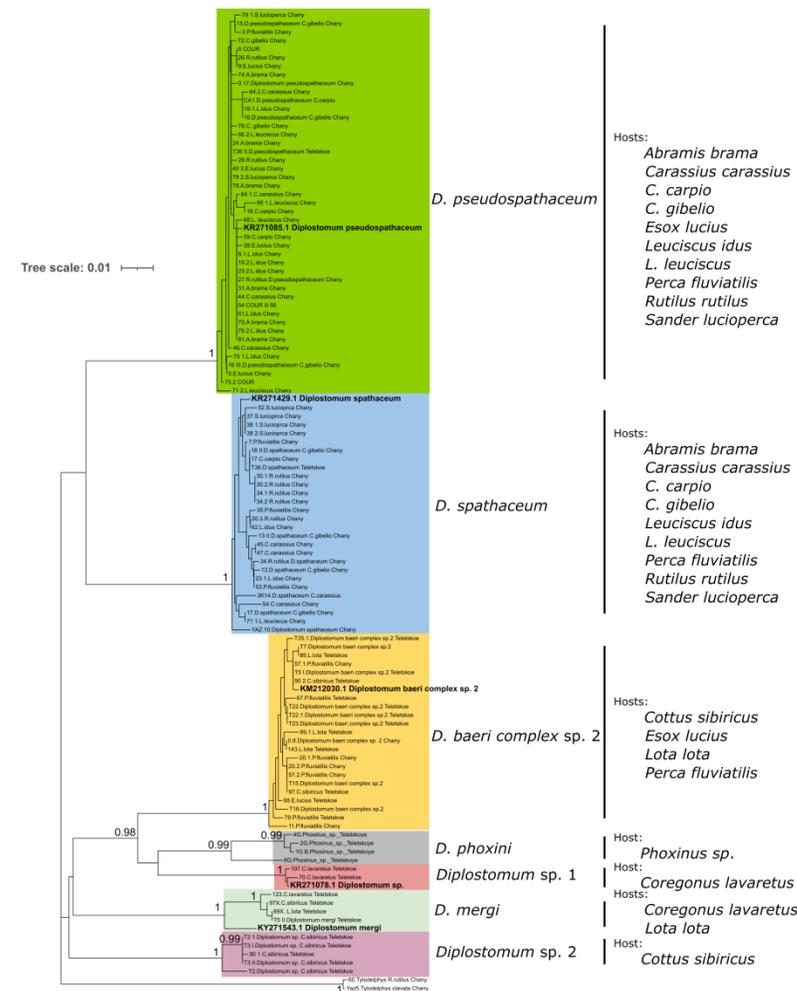


Fig. 2. Neighbour-joining phylogram reconstructed using 108 newly generated and 5 *cox1* reference sequences obtained from GenBank. Nodal support values > 85% are shown. Registered hosts are listed for each species of *Diplostomum* spp.

7 species of trematodes of the genus *Diplostomum* were recorded in the fish of the two largest lakes in Western Siberia.

