

First Record of the North American Rotifer *Kellicottia bostoniensis* (Rousselet, 1908) from the Sozh River, Belarus¹

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Abstract—The alien species rotifer *Kellicottia bostoniensis* was recorded for the first time in oxbow at the Sozh River flood plain (Dnieper River basin, Republic of Belarus) in August 2013. This species was found in littoral zone at a depth of about 0.5 m.

Keywords: alien species, rotifer, *Kellicottia bostoniensis*, Belarus

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INTRODUCTION

Now only one species of rotifers of genus *Kellicottia* was recorded in the lakes of Republic of Belarus. It is a native species—*Kellicottia longispina* (Kellicott, 1879) (Galkovskaya et al., 2001).

The rotifer *Kellicottia bostoniensis* is a species of North American origin (Edmondson, 1959). Its appearance in Europe was reported by Carlin in Sweden in 1943 (Arnemo et al., 1968; Pejler, 1998), in the Netherlands (Leentvaar, 1961), Finland (Eloranta, 1988) and France. In Russia the species was found in two lakes of Leningrad region (Ivanova and Telesh, 2004) and in 13 lakes of different types of European

part of Russia (Zhdanova and Dobrynin 2008, 2011). *K. bostoniensis* was found also in the west and the southwest of the Nizhniy Novgorod region (Bayanov, 2014). The history of the spread of *K. bostoniensis* from North America to Europe is not clear. Ballast fresh water may be one of the possible pathways (Arnemo et al., 1968).

In present paper, we report the first records of the American invader rotifer species *Kellicottia bostoniensis* (Rotifera: Brachionidae) in the fauna of Belarus.

MATERIALS AND METHODS

Samples were collected in oxbow at the Sozh River flood plain. This river is the main tributary in the upper part of the Dnieper River. Zooplankton was sampled

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Fig. 1. Sampling site on the Sozh River flood plain.

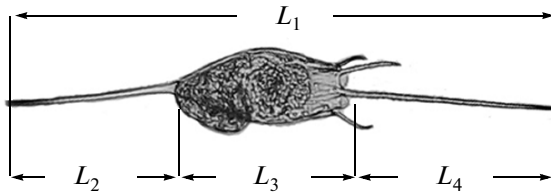


Fig. 2. Photo of *Kellicottia bostoniensis* (female with egg) from oxbow at the Sozh River flood plain, collected in August 15, 2013 (authors' photo).

in littoral zone with higher aquatic vegetation at a depth of about 0.5 m. Sampling site coordinates were as follows: latitude 52°56.663' N, longitude 30°54.922' E. It took place to the north of municipality of Chechersk at the village of Ippolitovka (Fig. 1). Rotifers were collected on the August 15, 2013 by planktonic net (mesh size of 45 µm). Morphological variability of *Kellicottia bostoniensis* was analysed by the use of photographs which were obtained by Jenaval microscope (Karl Zeiss, Jena) with a Canon Power Shot A 710IS digital camera (Fig. 2).

RESULTS AND DISCUSSION

Five individuals of rotifers (one of them with eggs) were found in the studied site. The abundance of *K. bostoniensis* was low. Absolute and relative abundance were approx. 20 ind./m³ and constituted only 0.008% of the total zooplankton community.

A high abundance of this species was recorded in the littoral zone among macrophyte beds in floodplain water bodies in the basins of Pra River and Oka River (Zhdanova and Dobrynin, 2011). The maximum abundance constituted 603 thousand ind./m³ there.

The method of size measurement and photo of *K. bostoniensis* are shown in Fig. 2 and table. The total length varies from 328 to 380 µm. These lengths are the same for the individuals found in different water bodies in Europe and North America (Zhdanova and Dobrynin, 2011).

Morphometrical indices of *K. bostoniensis* (µm)

Number individuals	Length total (L_1)	Length shell (L_3)	Length anterior spine (L_4)	Length posterior spine (L_2)
1	360	112	140	108
2	328	112	124	92
3	372	112	140	112
4	380	112	148	120
Average	358	112	138	108

The invasion pathway of this species to Belarus water bodies is unknown. Probably, *K. bostoniensis* could spread from Russia downstream the Dnieper River.

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