

The New Zealand mud snail *Potamopyrgus antipodarum* (Gray, 1843) is colonising the artificial lakes of Kaliningrad City, Russia (Baltic Sea Coast)

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Abstract

In 2008, the New Zealand mud snail *Potamopyrgus antipodarum* was detected in artificial freshwater lakes of Kaliningrad City (Russia), developed in sand and gravel extraction sites. *P. antipodarum* records along the Baltic coast were previously located in open sea and estuary sites and this is first species' record, in this type of man-made freshwater habitat, for the Baltic Region.

Key words: alien species, *Potamopyrgus antipodarum*, molluscs, Baltic Sea Region

The New Zealand mud snail, *Potamopyrgus antipodarum* (Gray, 1843), was first observed in the western Baltic Sea in 1887 (Lassen 1978). Later it was also reported in the North Baltic archipelago (Aland Islands), Wismar Bight (Germany), the Swedish island Gotland, Bothnian Bay, Gulf of Finland, Odra Estuary, Vistula Lagoon, and Curonian Lagoon (Hubendick 1950; Gruszka 1999; Orlova et al. 1999; Leppakoski and Olenin 2000; Ezhova et al. 2005; Gasiunaite et al. 2008).

In Russia, *P. antipodarum* was known in the eastern Gulf of Finland and the Lower Don Basin (Orlova et al. 1999; Son et al. 2008).

In 2008, this species was found in the littoral zone of artificial freshwater reservoirs of

Kaliningrad City. They represent a group of artificial lakes situated along the SW Kaliningrad Gulf (Lake Forelevoje and Golubyje Lakes) that have recently arisen due to the extraction of sand and gravel in places which are now used for recreational purposes (see Figure 1).

The snails were found in some localities in various littoral habitats (see Annex 1). In some sampling points, they were found in high abundance (up to 1884 ind./m²).

Until this study, this species was found mostly in the open sea or estuaries along the Baltic coast, with the exception of isolated freshwater coastal lakes in Finland (Carlsson 2000). The snail can be transported along Baltic coast mostly by birds (Lassen 1978), but to these

coastal reservoirs snails can penetrate from the Kaliningrad Gulf by natural spread. This species was not previously reported on the Kaliningrad coast of the Baltic Sea coast, probably due to its similarity to local species of Hydrobiidae.

It is interesting, that even though in the natural habitats in the Baltic Sea two morphologically differing lines of *P. antipodarum* are known to occur (Son 2007), only one of them has been found in these artificial lakes (compare Figures 2 and 3).



Figure 1. New records of *Potamopyrgus antipodarum* in Russia



Figure 2. *Potamopyrgus antipodarum* from the artificial lakes situated along SW Kaliningrad Gulf (Russia) (Photo: D.P. Filippenko)

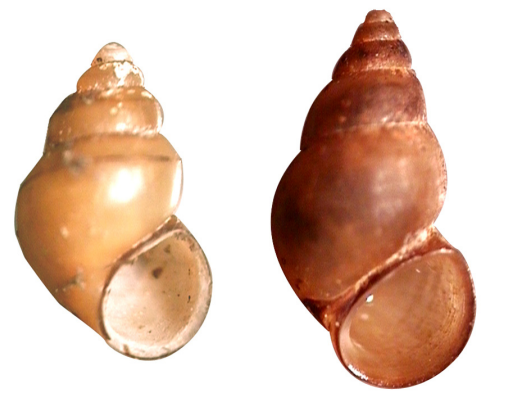


Figure 3. Two distinct lines of *Potamopyrgus antipodarum* from Baltic Sea (Hanko Peninsula coast, area of Tvarminne Zoological Station, Finland), scale bar = 0.5 cm (Photo: M.O. Son)

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Annex 1

Records of *Potamopyrgus antipodarum* (Gray, 1843) in the artificial lakes situated along SW Kaliningrad Gulf

Location	Record coordinates		Date of record	Substrate	Collector
	Latitude, °N	Longitude, °E			
Lake Forelevoje. Site 1	54°39'06"	20°22'20"	07.06.2008	sand, gravel	D.P. Filippenko
Lake Forelevoje. Site 2	54°39'24"	20°22'20"	07.06.2008	sand, gravel	D.P. Filippenko
Lake Forelevoje. Site 3	54°39'52"	20°23'45"	07.06.2008	sand with an impurity of softened plant fragments	D.P. Filippenko
Golubyje Lakes. Site 1	54°39'12"	20°22'07"	16.06.2008	sand, gravel	D.P. Filippenko
Golubyje Lakes. Site 2	54°39'13"	20°22'01"	16.06.2008	filamentous algae	D.P. Filippenko
Golubyje Lakes. Site 3	54°39'02"	20°21'25"	18.06.2008, 08.07.2008	sand, filamentous algae	D.P. Filippenko
Golubyje Lakes. Site 4	54°39'01"	20°21'28"	18.06.2008, 08.07.2008	sand with an impurity of softened plant fragments	D.P. Filippenko
Golubyje Lakes. Site 5	54°38'56"	20°21'23"	18.06.2008, 08.07.2008	filamentous algae, wood	D.P. Filippenko