

The New Zealand Mud Snail *Potamopyrgus antipodarum* (Gastropoda: Prosobranchia) – a New Invader Species in the Bulgarian Fauna

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Abstract: Five empty shells of *Potamopyrgus antipodarum* were gathered from rock crevices filled by river deposits on the right bank of the Vacha River, north of Teshel Town, Western Rhodope Mountain, about 500 m a.s.l., UTM-grid KG 82 on 06.09.2004. This is the first finding of this freshwater invader species in Bulgaria.

Key words: introduced species, freshwater, Bulgaria

Introduction

The freshwater New Zealand Mud Snail *Potamopyrgus antipodarum* (GRAY, 1843) (Gastropoda, Prosobranchia, Hydrobiidae) is an indigenous species to New Zealand and its adjacent islands (WINTERBOURN 1970). It has been introduced in Europe (BONDESEN, KAISER 1949), Australia (PONDER 1988), North America (BOWLER 1991) and Asia (KUMIKO, MISAKO 2003). It is widely distributed in various European countries, as for example in Denmark (BONDESEN, KAISER 1949), Germany (JUEG, ZETTLER 2004), Portugal (SOUSA *et al.* 2007), Poland (LEWIN 2007), Czech Republic (BERAN 2007), and many others. The species is highly invasive and has a wide range of tolerances: it lives in rivers, reservoirs, lakes, and estuaries. Densities are usually highest in systems with high primary productivity, constant temperatures, and constant flow. In rivers it is found in all habitat substrates: silt, sand, gravel, cobbles, and vegetation. *P. antipodarum*

is invading to new locations with human help. It is transported by waters in long distances. The inter-basin transfer of this species is mainly by water users as anglers or swimmers (RICHARDS, 2002). The introduction of *P. antipodarum* in some areas was negatively affecting the macroinvertebrate assemblages. Its influence was mainly by competing with them for the algal food sources (KERANS *et al.*, 2005).

Material and Methods

Five empty shells of *P. antipodarum* were gathered by D. Georgiev and S. Stoycheva from rock crevices filled by river deposits on the right bank of the Vacha River, north of Teshel Town, Western Rhodope Mountains, about 500 m a.s.l., UTM-grid KG 82 on 06.09.2004. The material was deposited in the collections of the authors: A. Irikov (4 shells), and D. Georgiev (1 shell).

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Fig. 1. A shell of *Potamopyrgus antipodarum* gathered on the right bank of the Vacha River, Western Rhodope Mountains on 06.09.2004. Photo: D. Georgiev and S. Stoycheva.

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Results

This is the first finding of this freshwater invader species in Bulgaria. The specimens gathered had rather elongate shells, resembling those of the Bulgarian *Hydrobia* – species. The shells were dextral, 4-5 mm long, without a keel on the mid whorl specific to some populations of *P. antipodarum* (Fig. 1).

Conclusions

We consider that detailed studies are needed to determine the consequences to aquatic communities of the invasion of *P. antipodarum* into the aquatic ecosystems in Bulgaria. Also a research on possible control and species containment methods is very important.

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Новозеландският сладководен охлюв
***Potamopyrgus antipodarum* (Gastropoda: Prosobranchia)**
– нов интродуциран вид в българската фауна

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(Резюме)

Съобщава се първото находище на интродуцирания новозеландски сладководен охлюв *Potamopyrgus antipodarum* в България. На 06.09.2004 г. са събрани 5 празни черупки от вида в речни наноси на река Вьча, северно от град Тешел в Западните Родопи (UTM-grid KG 82). Препоръчват се детайлни изследвания върху този силно инвазивен вид в страната с цел ограничаване на негативното му въздействие върху екосистемите, в които се среща.

