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Rapid Communication

First record of the Ponto-Caspian stellate tadpole-goby *Benthophilus stellatus* (Sauvage, 1874) from the Dnieper River, Belarus

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Abstract

The alien Ponto-Caspian gobiid *Benthophilus stellatus* was recorded in November 2011 for the first time in the lower reaches of the Dnieper River (Republic of Belarus). This species was captured in off-shore macrophyte beds, on a silty sand substrate, at a depth of approx. 0.6 m. A second individual was captured in August 2012. *B. stellatus* has invaded the Belarus waters from the Kiev Reservoir (Ukraine).

Key words: alien species; Gobiidae; *Benthophilus stellatus*; distribution

Introduction

To date, four Ponto-Caspian representatives of the Gobiidae family have been recorded in the Dnieper River basin in Belarus (Semenchenko et al. 2011). The first of these was the monkey goby *Neogobius fluviatilis* (Pallas, 1814) which was observed in 1936 in the Dnieper and Sozh Rivers (tributary of the Dnieper) (Vorontzov 1937). In the 1990s the racer goby *Neogobius gymnotrachelus* (Kessler, 1857) and round goby *Neogobius melanostomus* (Pallas, 1814) were recorded in the Dnieper (Gulugin and Kunitsky 1999) and Pripyat Rivers (tributary of the Dnieper River) (Kunitsky 1999). The last species, the tubenose goby *Proterorhinus marmoratus* (Pallas, 1814) was found in 2007 in the Prypiat River (Rizevsky et al. 2007) and later in Vistula River (Grabowska et al. 2008). All species spread to the Belarus territory from the Kiev Reservoir (Ukraine).

This is the first record of another gobiid species for Belarus; the stellate tadpole-goby *Benthophilus stellatus* (Sauvage, 1874).

Methods

Material was collected during biological surveys of two sites in the upper Dnieper River (Figure 1) in November 2011 and August 2012, using a hand net (60×60 cm, mesh size 5 mm) and a beach seine (mesh size 10 mm). The first site substrate was characterized by silty sand with numerous *Unionidae* shells and macrophyte beds, while the second site was characterized by a sandy substrate, with macrophyte beds.

Results and discussion

The first stellate tadpole-goby *Benthophilus stellatus* was recorded in the upper Dnieper River in Belarus on November 10, 2011 using a hand net at a depth of 0.6 m. On August 25, 2012 a second individual of stellate tadpole-goby was caught using a beach seine from a depth of approx. 2 m (Figures 2 and 3).

The individual caught in 2012 was 30 mm long and weighed 0.4 g and displayed the following meristic characteristics: D1 4, D2 9,

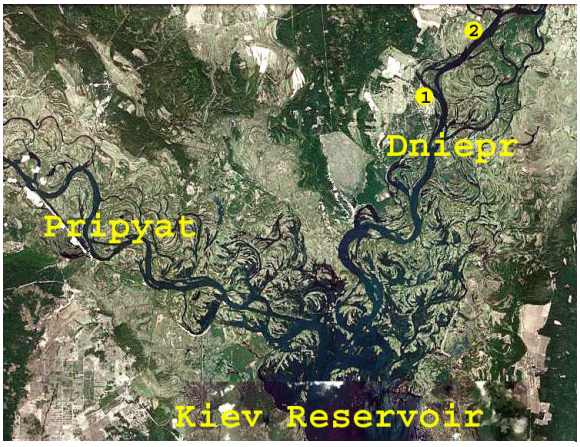

Figure 1. Sites where stellate tadpole-goby *Benthophilus stellatus* were captured, Dnieper River: (1) November 10 2011, (2) August 25 2012 (see also Appendix 1).

Figure 2. Male stellate tadpole-goby *Benthophilus stellatus*, caught in the upper Dnieper River on November 10 2011 (Photo by V. Lukin).

Figure 3. Male stellate tadpole-goby *Benthophilus stellatus* (30 mm total length), caught in the upper Dnieper River on August 25 2012 (Photo by I. Lukin).

A 9, P 17, V 12, tubercles in dorsal row 26 and in ventral row 21. These values are the same for specimens of *B. stellatus* captured in its native area (Kottelat and Freyhof 2007).

As a rule, adult stellate tadpole-gobies generally occur in muddy reaches of rivers, generally at a depth greater than 3 m. They have a characteristic short life cycle, with both female and male dying shortly after spawning. This species is therefore difficult to find during inshore surveys.

In recent years stellate tadpole-goby *Benthophilus stellatus* has become widespread in the Volga, Don and the Dnieper River basins (Copp et al. 2005). Stellate tadpole-goby has been recorded in all Dnieper reservoirs in the Ukraine, including the Kiev Reservoir (Zymbalevskaja et al. 1989).

Findings of this species upstream of the Kiev Reservoir indicate the ongoing spread to Belarus, and an increasing number Ponto-Caspian gobiids in the Dnieper River basin. Its successful spreading and naturalization in Belarus confirms the important role of the Central Invasion Corridor as a significant invasion route for Ponto-Caspian species (Panov et al. 2009; Semenchenko et al. 2011).

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Supplementary material:

Appendix 1. Records of *Benthophilus stellatus* in the Dnieper River, Belarus in 2011–2012.

Site no. (Map Ref.)	Location	Record coordinates		Date of record	Biotope	Number of specimens collected	Collector
		Latitude,°N	Longitude, °E				
1	Dnieper River	51°17.846'	30°34.030'	10.11.2011	River: silty sand substrate, numerous shells and aquatic vegetation depth 0.6 m	1	A. Leschenko
2	Dnieper River	51°19.633'	30°36.605'	25.08.2012	River: sandy substrate and aquatic vegetation depth 2.0-2.5 m	1	A. Leschenko, I. Ermolaeva, V. Rizevsky