Perccottus glenii DYBOWSKI, 1877 CONQUERS NEW WATERS. FIRST RECORD IN A DANUBE TRIBUTARY FROM OLTENIA REGION, SOUTHERN ROMANIA

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Abstract. *Perccottus glenii*, an invasive fish species, was identified in the autumn of 2015 in the small Balasan River, in the Danube floodplain, southern Romania. It seems that, in this region, *P. glenii* left the Danube and started to colonize its tributaries, spreading upstream.

Keywords: invasive species, upstream distribution, Danube floodplain.

Rezumat. *Perccottus glenii* Dybowski, 1877 ocupă noi teritorii. Prima semnalare într-un afluent al Dunării din Oltenia, sudul României. *Perccottus glenii*, un peşte invaziv, a fost identificat în toamna anului 2015 în râul Balasan, în bazinul Dunării, sudul României. Se pare că în această regiune *P. glenii* a depăşit cursul Dunării şi a început să colonizeze afluenţii acesteia, răspândindu-se spre amonte.

Cuvinte cheie: specii invazive, distribuţie în amonte, lunca Dunării.

INTRODUCTION

Perccottus glenii is an invasive fish, which has colonized a large part of the Danube basin, starting from a distribution centre in western Ukraine (see in: RESHETNIKOV, 2013). Alongside this, a new distribution centre has recently been found in the Upper-Danube, in Germany (RESHETNIKOV & SCHLIEWEN, 2013; RESHETNIKOV & KARYAGINA, 2015; NEHRING & STEINHOF, 2015). Situated in the Danube basin, Romania was not bypassed by *P. glenii*, but the area occupied in this country is smaller than the one from the surrounding countries (e.g. RESHETNIKOV, 2013). Until now, *P. glenii* was recorded in western and eastern Romania (NALBANT et al., 2004; POPA et al., 2006; COPILAŞ-CIOCIANU & PÂRVULESCU, 2011; NĂSTASE, 2012; LUCA et al., 2014; COVACIU-MARCOV et al., 2011). It seems to be absent from the Danube floodplain, although it probably reached the Danube Delta also along the river (RESHETNIKOV, 2013). Until now, in the Danube floodplain, *P. glenii* was recorded in Bulgaria (JURAJDA et al., 2006; PEHLIVANOV et al., 2011), in Romania being mentioned only at Drobeta Turnu-Severin (POPA et al., 2006) and in the Danube Delta (e.g. NĂSTASE, 2012). This note is a step in filling this apparent gap in the species invasion range.

MATERIALS AND METHODS

In the begining of October 2015, we made a two day field study in Oltenia region from south-western Romania. Our main objective was amphibians, but also other groups. To investigate the small watercourses we used a round net with two meters metallic handle operated from the banks. As, in the last years in Romania, some unusual data upon fish were obtained with this type of net (COVACIU-MARCOV et al., 2011; TELCEAN et al., 2014a, b; SAS-KOVÁCS et al., 2015), we gave attention also to fish not only to frogs we were searching for. The native fish captured accidentally were released in their habitat immediately after they were determined.

RESULTS

On the 3rd of October, 2015 we encountered a *P. glenii* population near Catane locality (43°54'55.10"N / 23°25'37.93"E), in the Balasan River, Oltenia region, southern Romania (Fig. 1). The Balasan River is a direct tributary of the Danube, having maximum two meters width and clear water with fast flow. The aquatic vegetation is rich, with a lot of reed on the banks. The river is surrounded by agricultural areas (Fig. 2). In the content of only 10 nets, we captured six *P. glenii* individuals with a total length between 32 mm and 61 mm. Also, we captured 20 *Proterorhinus semilunaris* (Heckel, 1837) individuals, one *Rhodeus sericeus* (Bloch, 1782), one *Cobitis sp*. and one juvenile cyprinid. The native species were immediately released in the water. Among herpetofauna, *Bombina bombina* (Linnaeus, 1761), *Hyla arborea* (Linnaeus, 1758), *Pelophylax ridibundus* (Pallas, 1771) and *Natrix natrix* (Linnaeus, 1758) were present.

DISCUSSION

The record of *P. glenii* at Catane extends the species known distribution range in the Danube tributaries from Romania. It is also its first mention in Oltenia inland waters, a region where the only previous record was in the Danube, at Drobeta Turnu-Severin (POPA et al., 2006). In the Danube, *P. glenii* was also recorded in some localities in

Bulgaria (JURAJDA et al., 2006; PEHLIVANOV et al., 2011), the closest one from Catane being Lom (JURAJDA et al., 2006), only 20 km far. The presence of *P. glenii* at Catane confirms the fact that this species uses the Danube only as a distribution route, large rivers being not its favorable habitats (e.g. JURAJDA et al., 2006; RESHETNIKOV, 2013). Not only *P. glenii* identification on a tributary, but the high number of the identified individuals suggests that the species had colonized the waters directly connected to the Danube in Oltenia region a couple of years before our findings. Thus, *P. glenii* spread into the small waters of the floodplain from the Danube.

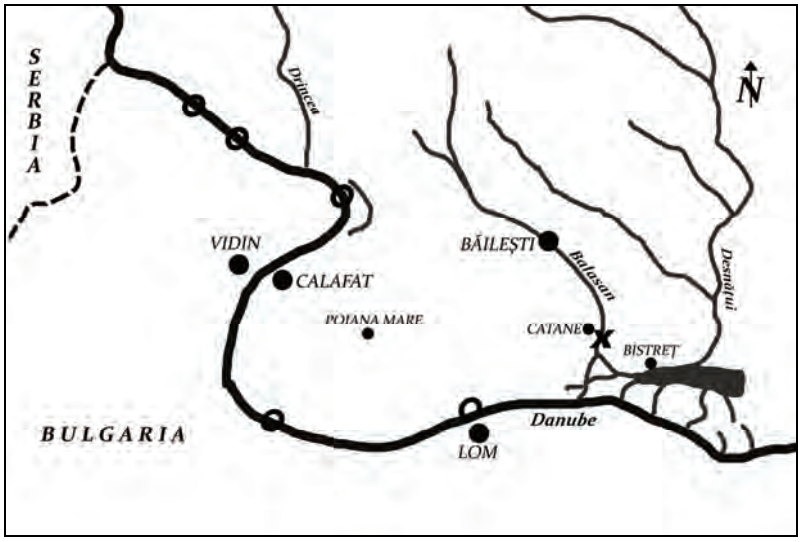

Figure 1. – Distribution of *P. glenii* in Oltenia region, Romania:
o – old records from the Danube (JURAJDA et al., 2006); x - new record at Catane.

Figure 2. Habitat of *P. glenii* near Catane, Oltenia, Romania (original).

The fish community from Catane seems reduced both as species number and with two exceptions (*P. semilunaris* and *P. glenii*), also as number of individuals. This is probably the effect of *P. glenii*, which also in other regions in favorable habitats became dominant or even it is the only present fish (e.g. KOŠČO et al., 2003; RECHULICZ et al., 2015). Although it was recorded that *P. glenii* can feed on *P. semilunaris* (KATI et al., 2015), at Catane *P. semilunaris* seems the only species that was not affected by *P. glenii*. The length of *P. glenii* individuals from Catane is close to the one of the individuals captured with the same method in south-western Romania, but their numbers is higher (COVACIU-MARCOV et al., 2011).

The habitat from Catane corresponds with *P. glenii* demands, being a small watercourse, with rich aquatic vegetation (e.g. JURAJDA et al., 2006; RESHETNIKOV, 2013; RECHULICZ et al., 2015). In such habitats, the species was also captured in other areas with nets operated from the banks (RESHETNIKOV & KARYAGINA, 2015; PUPINA et al., 2015). As there passed only 10 years between the record of *P. glenii* in the Danube at Lom (JURAJDA et al., 2006) and its identification in the Balasan, it is clear that the species moves quickly in the watercourses of the region. The high speed generally characterizes this species invasion, which is usually observed late in a colonized watercourse (e.g. RESHETNIKOV, 2013). Thus, probably the situation from the Balasan had already repeated in

southern Romania in other waters directly connected to the Danube, but in the absence of studies this fact is not known. The high speed distribution of *P. glenii* and establishment of large populations will affect the biodiversity from the Danube floodplain, like it had happened in other areas (e.g. RESHETNIKOV, 2003, 2013).

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