



A NEW RECORD OF AN ALIEN SPECIES, TRUMPET RAM'S-HORN, *MENETUS DILATATUS* (GOULD, 1841) (GASTROPODA: PLANORBIDAE) IN POLAND

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ABSTRACT: So far in Poland, the North American snail *Menetus dilatatus* (Gould) has been recorded from the Konin lakes only and, quite recently, from one site in the middle Odra River. One individual of this species was found in each of two sites in the near-shore zone of Lake Kamionkowskie (an isolated oxbow lake) in Skaryszewski Park, Warsaw in June 2014. Possible routes of its expansion and its potential presence in other waters are discussed.

KEY WORDS: alien species, Gastropoda, *Menetus dilatatus*, oxbow lake, Warsaw

Menetus dilatatus (Gould, 1841) is a North American snail of the family Planorbidae, known in Europe (Great Britain) since 1869 (BERGER & DZIĘCZKOWSKI 1979, STRZELEC 2011). Since 1994 it was known from the Czech Republic and in 1980 it appeared in France and Germany (STRZELEC 2011 after various authors). In Poland (Fig. 1) it was first recorded in 1970 in the artificially heated Konin lakes (BERGER

& DZIĘCZKOWSKI 1979). PIOTROWSKI (1999) found one individual in the Domiąza (a channel of the lower Odra River near its outlet to the Szczecin Lagoon) in 1996, but this site was not accounted for in later papers by STRZELEC (2011) and PIECHOCKI & SZLAUER-ŁUKASZEWSKA (2013). The latter authors found the species in one site in the middle Odra River near its junction with the Oder-Spree Canal. Spreading of

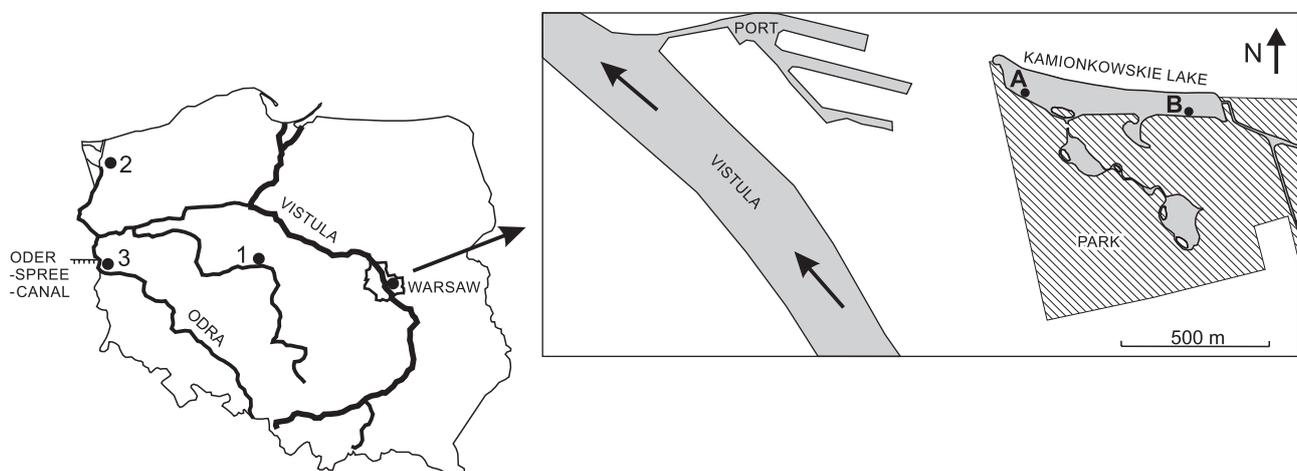


Fig. 1. Sites of *Menetus dilatatus* in Poland: 1 – Konin lakes; 2 – Domiąza; 3 – middle Odra River; A and B – sites in Lake Kamionkowskie (site A – $52^{\circ}14'41.7''N$, $21^{\circ}03'02.5''E$, site B – $52^{\circ}14'41.5''N$, $21^{\circ}03'27.6''E$)



this species is being observed in the Czech Republic (BERAN 2003, 2005) and in Germany (MÜLLER et al. 2005). However, this snail was already found in 1991 and 1994 far in the East, in two reservoirs in Ukraine (STADNYCHENKO 2014).

Samples for studying invertebrate macrofauna in water bodies of Skaryszewski Park were collected in the near-shore zone with a 20-cm wide bottom scraper driven along 1 m stretch of bottom sediments. On 19 June 2014, single live individuals of *Menetus dilatatus* were found in samples from each of two (out of the eight studied) sites on the southern shore (Fig. 1) of a small (8 ha) Lake Kamionkowskie (Fig. 2). The sandy bottom at these two locations was covered with moderately decomposed allochthonous detritus (tree leaves and branches). The snails were identified according to the keys of MACAN (1977) and PIECHOCKI (1979). Description of the collected individuals: site A – shell with ca. 2.5 whorls and strong rusty coating, 2.70 mm wide and 0.95 mm high (Figs 3–4); site B – shell with ca. 2.5 whorls, pale coating and distinctly visible radial striation, clearly marked umbilicus, the width of the shell is 2.49 mm, the height 0.81 mm (Figs 5–7). The frequency of *M. dilatatus* in Lake Kamionkowskie was

small (only two sites out of the eight studied), and its density amounted to about five individuals per 1 m². *M. dilatatus* constituted a low (<1) percent of all snails found in Lake Kamionkowskie.

Menetus dilatatus could be brought to the Konin lakes, as suggested by BERGER & DZIĘCZKOWSKI (1979), with the grass carp fry. The lakes host numerous alien and invasive species and may be considered a source of biological invasions in Poland since many species started their expansion to waters of a natural thermal regime just from there (NAJBEREK & SOLARZ 2011). This snail could migrate to the middle Odra River through the Oder-Spree Canal from Germany, where it appeared in 1980 (STRZELEC 2011, after various authors) and till 2002 was already present in the eastern part of the country (MÜLLER et al. 2005). The presence of *M. dilatatus* in a small, isolated water body so distant from other places of its occurrence is, however, difficult to explain. Lake Kamionkowskie is an oxbow lake of the Vistula River. Till the 1920s and 1930s it was connected with the Praga Port and further with the Vistula. Since then, the lake is separated and practically isolated from the Port.

The appearance of *M. dilatatus* in such a water body might be associated with waterfowl which is



Fig. 2. Lake Kamionkowskie; Park Skaryszewski is on the right. Photo: A. KOŁODZIEJCZYK



numerous in city parks and attracted there by higher temperature, food abundance and relative security. Waterfowl may carry various invertebrate species, like leeches, crustaceans or snails, on their body, in plumage or in nasal or oral cavity. Based on experiments performed in simulated flight, BOAG (1986) calculated that small individuals of pulmonate snails

may be dispersed in waterfowl plumage within a distance of about 10 km. It means that *M. dilatatus* could not be brought to Lake Kamionkowskie, the easternmost site of the species in Poland, directly from the Konin lakes. It is possible that the tiny and hardly recognisable snail may occur in many still unknown sites in Poland.



Figs 3–7. Two individuals of *Menetus dilatatus* from Lake Kamionkowskie: 3–4 – larger specimen from site A (apical and side view), 5–7 – specimen from site B (apical, side and bottom view). Photos: A. OCHOCKA (3, 5, 7), A. SIKORA & T. KARASEK (4, 6)



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