

SHORT COMMUNICATION

FIRST RECORD OF *EOBANIA VERMICULATA*
(O. F. MÜLLER, 1774)
(GASTROPODA: EUPULMONATA: HELICIDAE)
IN ROMANIA

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ABSTRACT: *Eobania vermiculata* (O. F. Müller) is recorded for the first time in Romania. Other Mediterranean and Balkan species have entered the south of Romania – Dobrogea, or will do so in the near future. We expect the rest of Romania to be invaded, because the Danube is not an insurmountable barrier for some of these species.

KEY WORDS: *Eobania vermiculata*; alien species; land snail; anthropochory

A northward expansion of some terrestrial gastropod species has been observed for the last two decades; the spread has been accelerated by the intensification of trade, tourism development and cross-border freight transport. Among the regions of Romania, Dobrogea has the most favourable condi-

tions for the invasion of Balkan and Mediterranean species. The climate and calcareous substrate of the coastal area in south-eastern Dobrogea favour acclimatisation of the new arrivals.

As early as four decades ago, Alexandru V. Grossu anticipated the occurrence of this phenomenon in the

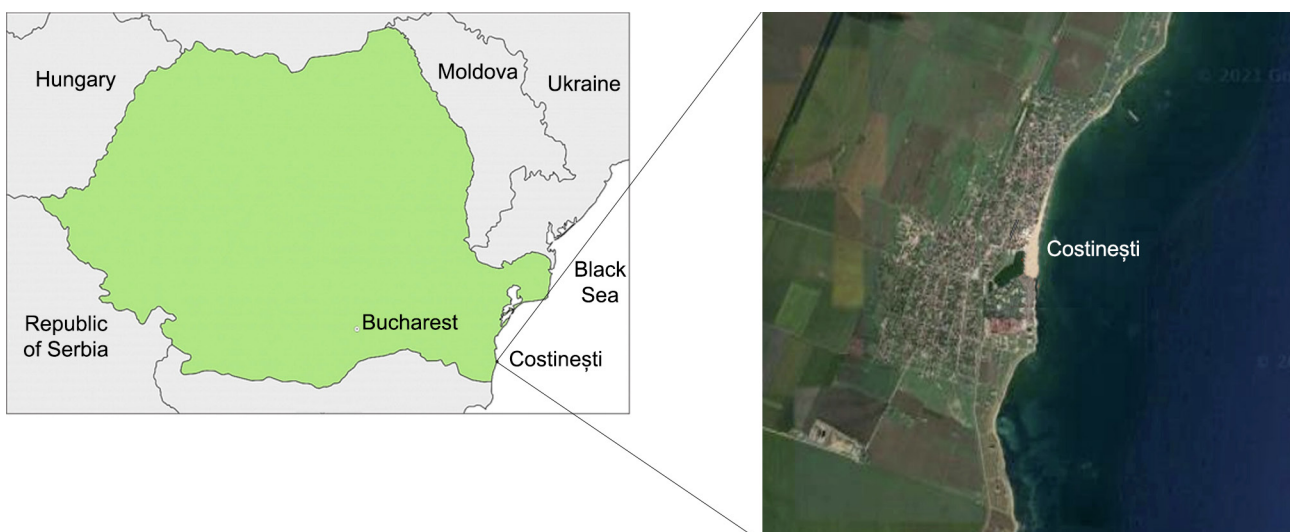


Fig. 1. Map of Romania with the locality in Costinești



Fig. 2. Mature individuals of *Eobania vermiculata* in Costinești

near future (GROSSU 1983). In the last two decades, there has been an expansion of the Mediterranean species both in the east and in the northwest of their original range (MIENIS 2002, UESHIMA et al. 2004, AL-KHAYAT 2010, PELTANOVÁ et al. 2012, AL-KHAFAJI et al. 2016, RONSMANS & VAN DEN NEUCKER 2016, PÁLL-GERGELY et al. 2020). The purpose of this short communication is to confirm with certainty the first record of *Eobania vermiculata* (O. F. Müller, 1774) in the Romanian mollusc fauna.

The terrestrial gastropod fauna of the Dobrogea region has been studied since the 19th century, being the subject of numerous works until the last decade of the 20th century (MONTANDON 1887, LICHERDOPOL 1900, GROSSU 1972, ZEISSLER 1983, NEGREA 1994). During the period 1990–2020, the region was monitored annually in April–May and September–October. On April 30th 2015, on the seafront of Costinești Town (Fig. 1), 22 mature specimens of *E. vermiculata* were found in the Flutist Girl Statue Park (43°56.62'N, 28°38.29'E).

The habitat in which the snails live is located on a terrace, 6 metres above sea level, right on the seafront, 20 metres from the sea shore. The bedrock is composed of Sarmatian limestones, covered by a loess deposit and consolidated sands and clays. The habitat is a wasteland, bordered by a hedge of *Ligustrum vulgare*, with *Elaeagnus angustifolia* and an association



Fig. 3. The largest shell of *Eobania vermiculata* from Costinești

of perennials (*Cichorium intybus*, *Convolvulus arvensis*, *Echium vulgare*, *Elymus repens*, *Crupina vulgaris*, *Phleum pratense*, *Malva pusilla*, *Teucrium polium*, *Juncus maritimus*, *Taraxacum officinale*, *Plantago major*). More than 100 specimens were collected in the period 2015–2019; their diameter was 25–35 mm and height 16–23 mm (Fig. 2).

Taxonomic identification and morphometric measurements were done at the Malacological Documentation and Research Center (Neamt County, Romania), using classical methods (HESSE 1913, NEUBERT 1998) as well as recent ones (RAȚA et al. 2012, WELTER-SCHULTES 2012, BOUAZIZ-YAHIAITENE et al. 2017, HOLYOAK et al. 2020). Comparative material from Greece, Turkey, Bulgaria and Croatia, was used for verification.

One of the shells had the largest hitherto recorded diameter, D 35.2 mm (Fig. 3). It exceeded the one recorded from Gavdos Island (Greece), D 33.5 mm (LAZARIDOU-DIMITRIADOU & KATTOULAS 1981).

The Circum-Pontic climate has undergone significant changes in recent decades, such as the increase of the average annual temperature in the Dobrogea region (BANDOC & PRĂVĂLIE 2015). The population of *E. vermiculata* from Costinești seems to be fully adapted to the environment and is developing; it is currently subject to an ecological study which will be published this year.

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