Short note
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Marionfyfea adventor Jones & Sluys (2016), a non-native land planarian new for Belgium (Platyhelminthes: Tricladida: Geoplanidae)

Jan Soors¹*, Jan Mees², Damien Sevrin³ & Tom Van den Neucker⁴

¹Research Institute for Nature and Forest (INBO), Herman Teirlinck Havenlaan 88 bus 73, 1000 Brussels, Belgium.
²Flanders Marine Institute (VLIZ), Wandelaarkaai 7, 8400 Ostend, Belgium and Ghent University, 9000 Ghent, Belgium.
³Natagora, Traverse des Muses, 1, 5000 Namur, Belgium.
⁴University of Antwerp (UA), Department of Biology, Ecosystem Management Research Group, Universiteitsplein 1C, 2160 Wilrijk, Belgium.

*Corresponding author: jan.soors@inbo.be

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Thus far, 25 species of non-native land planarians have been found in Europe [1][2][3]. Eight non-native land planarians have been reported from Belgium. Five of these have only been observed in greenhouses [4], while three others were reported exclusively from outdoor environments, including Caenoplana variegata (Fletcher & Hamilton, 1888) [5], Obama nungara (Carbayo, Álvarez-Presas, Jones & Riutort, 2016) [6] and most recently Marionfyfea adventor Jones & Sluys, 2016. In this note we provide detailed information regarding the first Belgian records of M. adventor, a species that can easily be distinguished from any other native and non-native planarian based on its unique colour pattern, consisting of a brown body with randomly scattered pale blue patches [7]. A single specimen of M. adventor found in Merendree (51°05′13,9″ N, 3°35′08,2″ E) on February 20th, 2021 constitutes the first record of the species in Belgium. It was found under dead wood in a wet pasture surrounded by agricultural land, close (approximately 20 m) to a 25-year-old hedgerow, orchard and garden. On October 28th, 2021, two specimens of M. adventor (Fig. 1) were found in a garden in Baronville (50°07′38.3″ N, 4°56′55.0″ E), approximately 215 km southeast of the first locality (Fig. 2). The species was repeatedly observed in Baronville. After the initial find, single specimens were collected on November 5th and November 8th, 2021 and two more were observed on November 17th, 2021. All specimens from Baronville were found after sunset on a limestone wall that was partly covered with Hedera helix and Parthenocissus vitacea. Since all the Belgian observations occurred in or near private gardens, M. adventor may have been introduced with fruit trees or ornamental plants. The first records from both localities and the subsequent observations, including photographic evidence, are stored in Waarnemingen.be [8][9], an online data
platform for citizen scientists that has proven to be a particularly useful tool for monitoring non-native species in Belgium [10].

*Marionfyfea adventor* was only recently described from European specimens, although its exact origins are unknown. It is considered to be non-native in Europe, since the only other species of the genus – *M. carnleyi* (Fyfe, 1953) – occurs in New Zealand [7]. In Europe, *M. adventor* has thus far been recorded from Ireland, the United Kingdom, France, the Netherlands, Germany and Denmark [1]. The presence of viable populations in NW Europe shows that it is a cold-hardy species, capable of surviving cool temperate winters [1]. Multiple observations of *M. adventor* in Baronville may indicate that the species is already firmly established in Belgium and could be more widespread than the reported finds suggest. *Marionfyfea adventor* can easily be overlooked, because of its small size [7] and because most Geoplanidae live hidden under wood, stones and litter [11].

At least some non-native planarians may have adverse effects on native ecosystems [11], although Thunnissen et al. [1] consider *Marionfyfea adventor* to be a low-risk species in the Netherlands, mainly because its diet remains unknown [1][12]. Nonetheless, *M. adventor* should be carefully monitored, since non-native planarians are generally known to feed upon native invertebrates [11]. The rapid

Fig. 1 – One of two specimens of *Marionfyfea adventor* found in Baronville on October 28th, 2021. Stretched length of the depicted specimen was approximately 10 mm.
spread of the species in Europe may be facilitated through passive dispersal by horticultural activity [7]. Therefore, phytosanitary measures should be implemented in order to prevent its further spread.

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References


Fig. 2 – Recorded distribution up to November 17th, 2021 of Marionfyfea adventor in Belgium on a 5 km UTM grid.


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