

## SHORT COMMUNICATION

***Oxychilus translucidus* (Mortillet, 1853) (Stylommatophora: Oxychilidae)  
found in a British hothouse**DAVE GUNTRIP<sup>1</sup> & BEN ROWSON<sup>2</sup><sup>1</sup> 122 Moulton Rise, Luton, Bedfordshire, UK LU2 0BJ<sup>2</sup> Department of Natural Sciences, National Museum of Wales, Cardiff, UK CF10 3NPCorresponding author: B. Rowson ([ben.rowson@museumwales.ac.uk](mailto:ben.rowson@museumwales.ac.uk))

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Several oxychilid species are currently spreading across disturbed habitats in northern Europe. Detecting and tracking them can be hampered by the close similarity between the shells of many oxychilid snails (e.g. Bronne & Delcourt 2022), even those shown to belong to different subfamilies (Neiber et al. 2020). Over 100 oxychilid species are recognised in Europe (Welter-Schultes 2012). Four species referred to the genus *Oxychilus* Fitzinger, 1833 are present in Britain and Ireland. Only two of them are native, but all four are somewhat tolerant of habitat disturbance and are frequently found in humid microhabitats in parks or large gardens (Kerney 1999; Cameron 2008).

*Oxychilus* (*Ortizius*) *translucidus* Mortillet, 1853 is considered a synanthropic species in Europe (Riedel 1980, 1998; Welter-Schultes 2012). It was described from Trébissonde (Trabzon) on the Black Sea coast of eastern Turkey (Mortillet 1853, 1854). The native range of *O. translucidus* is unknown, but may be in Turkey, Georgia, or northern Iran where it lives under shrubs and stones in humid habitats. Through the later 20th century it was recorded as introduced into parks, botanical gardens, or hothouses in Russia, Israel, Kazakhstan, Tajikistan, Turkmenistan, Uzbekistan, and several eastern European countries (Riedel 1980, 1998; Sysoev & Schileyko 2009; Welter-Schultes 2012). The most westerly record appears to be from a hothouse in Wrocław, Poland (Wiktor 2004). *Oxychilus translucidus* has since been found living outdoors in urban habitats across much of Ukraine (Balashov & Gural-Sverlova 2014), Belarus (Ostrovsky 2022), and even Latvia (Šteffek et al. 2008). If it can tolerate the cold climate of Latvia, it might be able to survive outdoors in north-west Europe.

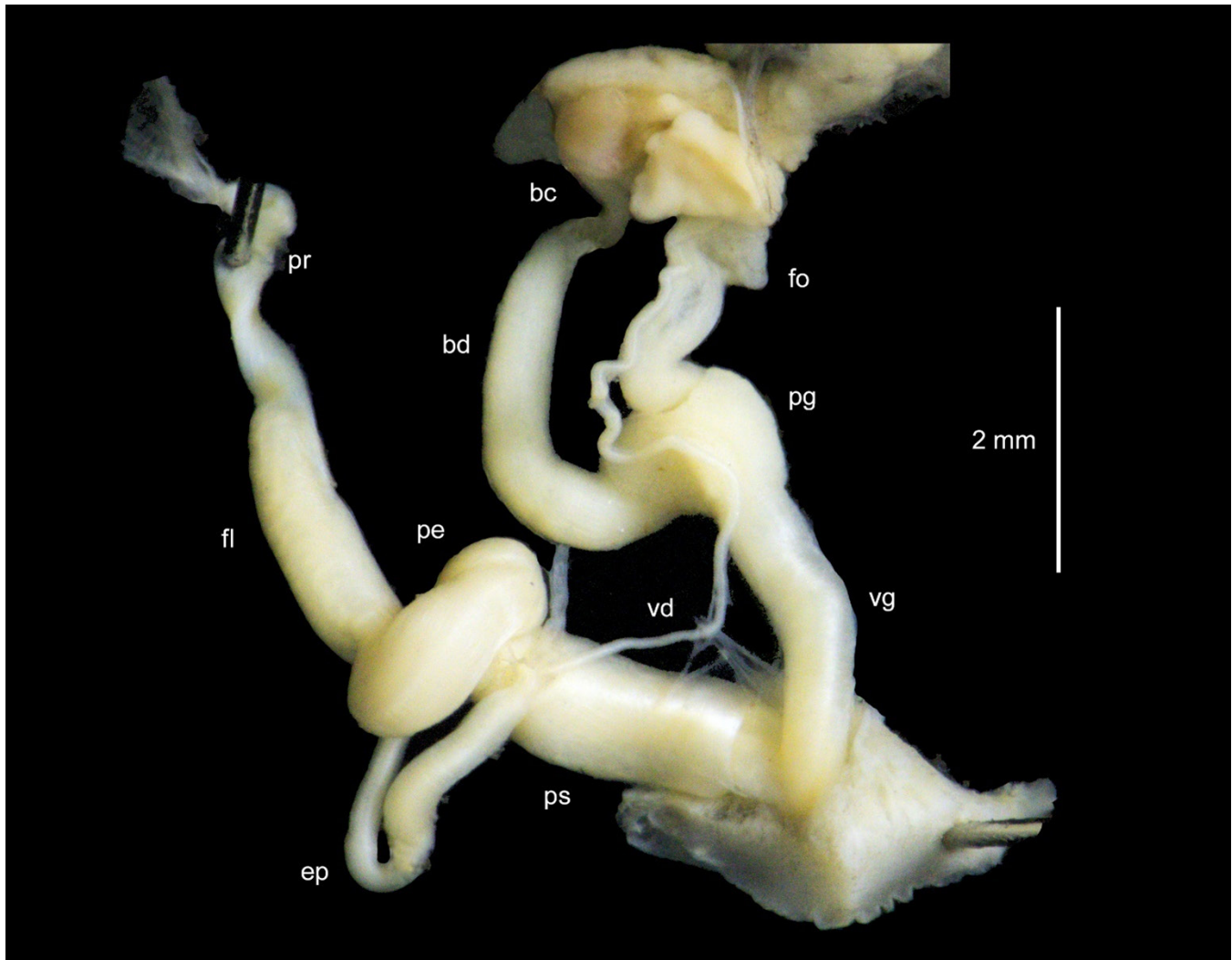
In 2017 an unusual oxychilid was first noted and carefully observed by one of us (DG) in the Butterfly House, a heated glasshouse at Whipsnade Zoo, Bedfordshire, UK (51.84825, -0.54199; OSGR TL005176). A second population was later found in the zoo's Hippo House around 500 m away (51.843, -0.549; OSGR TL000169). Other exotic gastropods established in these buildings include the North American *Zonitoides arboreus* (Say, 1817) and the Italian *Deroceras panormitanum* (Lessona & Pollonera, 1882), as delimited by Reise et al. (2011) (confirmed by dissection by Peter Topley in 2017).

The shells from Whipsnade (Fig. 1) are very glossy when fresh, translucent, warm yellow to warm brown, and up to 8 mm in diameter, with a moderately depressed spire and very shallow sutures. Characteristically the umbilicus is very narrow, only around 10% of the maximum width of the shell. The last whorl is slightly expanded, to an extent that remains fairly constant throughout growth. The shell is very thin, but in some individuals the parietal callus is slightly thickened. As in other *Oxychilus*, the microscopic sculpture consists only of smoothed, irregular radial growth wrinkles with no trace of a spiral element. The shells therefore resemble those shown for *O. translucidus* in all references here cited.

The animal is dark ashy grey, paler towards the foot fringe. There is sometimes a yellow tinge to the foot, and the body mucus is yellow. The mantle edge is very dark, but lacks a sharp border, and the dark colour extends along the rectum for up to 50% of the body whorl. Animals have been maintained in captivity for two generations on a diet of oatmeal flakes and will also eat small slices of freshly killed earthworm. They have been observed to lay eggs in batches



Figure 1. A, *Oxychilus translucidus* (Mortillet, 1863) Butterfly House, Whipsnade Zoo, Bedfordshire, 2017 (width 7.6 mm). B, *O. alliarus* (J.S. Miller, 1822) near Sheffield Park, East Sussex, 1975 (width 6.3 mm).



**Figure 2.** Genitalia of *Oxychilus translucidus* (Butterfly House, Whipsnade Zoo, Bedfordshire). bc, bursa copulatrix; bd, bursa duct; ep, epiphallus; fl, flagellum; fo, free oviduct; pe, penis; pg, perivaginal gland; pr, penial retractor muscle; ps, penial sheath; vd, vas deferens; vg, vagina.

of seven once their shell reaches 6–7 mm in diameter, and they can produce a second batch 4 weeks later.

The genitalia (Fig. 2) conform to those shown for *O. translucidus* from hothouses in Poland (Riedel 1980; Wiktor 2004) in urban localities around Ukraine (Balashov & Gural-Sverlova 2014). The penis is long and slender, with a long flagellum apically, a constriction in the middle, and a short penial sheath covering the basal 50% of the penis. The internal sculpture of the upper penis consists of mainly longitudinal lamellae. This was formerly considered characteristic of the subgenus *Ortizius* Forcart, 1957 (Riedel 1980; Giusti & Manganelli 2002; Balashov & Gural-Sverlova 2014). Opinions differ on the number of species included in *Ortizius*, but MolluscaBase (2023) currently lists 38 species including the British *O. alliarius* (J.S. Miller, 1822) and

*O. navarricus helveticus* (Blum, 1881). Attempts to amplify a COI DNA barcode from Whipsnade specimens were unsuccessful. Our determination is therefore somewhat tentative, but it is important to suggest an appropriate name under which this species can be reported in Britain.

*Oxychilus translucidus* is much too small to be identified as *Morlina glabra* (Rossmässler, 1835), a southern oxychilid species currently spreading in Germany, Belgium, and the Netherlands (Walther *et al.* 2021; Bronne & Delcourt 2022). Shells of *M. glabra* (= *Oxychilus glaber* [sic]) reach 14 mm in width and have an even narrower umbilicus than *O. translucidus* (the genitalia of *Morlina* are also different). The Whipsnade species might, however, be mistaken for the other four British *Oxychilus* species. Its shells can be distinguished from three of them—*O. navarricus helveticus*, *O.*

*cellarius* (O.F. Müller, 1774) and *O. draparnaudi* (H. Beck, 1837)—by being smaller and having a narrower umbilicus. In addition, the last whorl is more strongly expanded in the Whipsnade shells than in *O. n. helveticus*, and the animal lacks the strongly defined black mantle band of that species. Adult *O. translucidus* can be distinguished from the remaining British species, *O. alliarius* (Fig. 1), by being larger, with a narrower umbilicus, and having fewer whorls. It also lacks the characteristic garlic-like smell. However, this is the most difficult comparison given the variability among British *O. alliarius* (Giusti & Manganelli 2002; Cameron 2008), so hothouse populations may need to be carefully checked.

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