

# Desmoulins' whorl snail

A rare European snail

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# Desmoulins' whorl snail - a rare European snail

Desmoulins' whorl snail *Vertigo moulinsiana* is a tiny wetland snail, about 3 mm tall. It is quite rare in mainland Europe but can still be found in a number of suitable habitats in south and east England. The United Kingdom therefore has particular responsibility for looking after it, and has included it as a priority species in the UK Biodiversity Action Plan.

Desmoulins' whorl snail can easily be muddled with similar looking species, such as marsh whorl snail *Vertigo antivertigo* and the toothless chrysalis snail *Columella edentula*. However, a close examination will reveal a series of four 'teeth' around the inside edge of the shell's mouth. The marsh whorl snail has six teeth,



Thompson Common, Norfolk. English Nature.

and, as the name suggests, the toothless chrysalis snail has none.

For most of the warmer part of the year, Desmoulins' whorl snail lives on the leaves of tall wetland plants, such as reed sweet-grass, greater and lesser pond sedges and, at some sites, tussock sedge and saw sedge. When the plants die down in winter, the snails probably spend the winter among the plant litter. In spring, they climb back up the growing plant leaves, where they feed by rasping micro-flora (fungi, bacteria and algae) from the surfaces of the leaves. The snails live for about one year and lay eggs throughout the summer. Both full-grown and young snails can be found together for most of the time but in late summer and early autumn, adult snails die off leaving a higher proportion of younger snails.

The snails appear to need very humid conditions, and are found only at the edges of rivers, wet fens, swamps and around the swampy margins of ponds and ditches where the ground water is near the surface. The snail's distribution closely follows lowland rivers and floodplains. Nearly all its colonies are in the limestone or chalk areas of southern and eastern England,



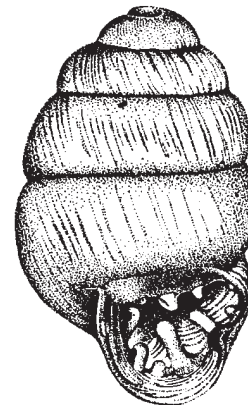
Reed sweet-grass beside a chalk stream. Martin Drake.

although there are isolated sites in Cornwall, Cheshire and the Llyn Peninsula.

The snail is classified as 'rare' in the British Red Data Book, but recent surveys by English Nature indicate that the species is more widespread than previously thought, and sometimes numerous in suitable swampy places. This does not mean

that the snail is on the increase, but was previously overlooked in these new localities, and overall its range has declined. With over half of the records in the last 30 years coming from Sites of Special Scientific Interest, the future of Desmoulins' whorl snail depends on successfully protecting its preferred habitat from intensification of agriculture, development, drainage and pollution.

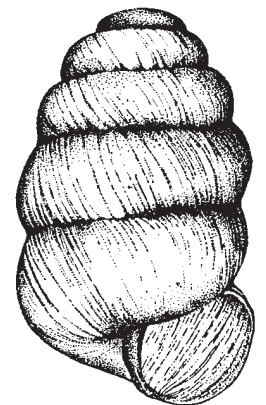
*Vertigo antivertigo*



*Vertigo moulinsiana*



*Columella edentula*



English Nature wishes to thank Insitute Royal des Sciences Naturelles de Belgique for permission to reproduce the figures from Adam (1960) *Faune de Belgique: Mollusques*.

Desmoulin's whorl snail is listed on Annex II of the Habitats and Species Directive as a species for which Special Areas of Conservation (SAC) need to be designated. The SACs where the snail has been a factor for designation are The Broads, the Norfolk Valley Fens, Waveney & Little Ouse Valley Fens, River Wensum, River Avon, Kennet & Lambourn Floodplain and Stodmarsh. It has been found on other SACs (Fenland, Cothill Fen and the River Itchen).

### Management

As swampy, unshaded ground with tall waterside plants is the snail's basic requirement, management should be directed at maintaining these conditions.

- ◆ The groundwater level must remain close to the surface so that the ground remains at least moist for most of the summer, although some seasonal drying appears to be acceptable. The snail will disappear from areas where conditions become dry enough for plants such as common nettle and great willowherb to become frequent. Conversely, conditions must not

become so wet that aquatic plants such as watercress and foals watercress take over. High groundwater will contribute to maintaining a high humidity in the vegetation.

- ◆ Ideally there should be no grazing by domestic stock, although the snail does live where grazing intensity is low and patchy.
- ◆ Cutting or mowing will remove the tall vegetation that the snail requires. Tidy river banks or heavy trampling will eradicate the snail. Some fens that are infrequently mown continue to support the snail since the plants are given chance to grow up for most of the time.
- ◆ The snails can cope with a little shade but scrub, tall trees and tall reed that cast deeper shade will discourage them. Scrub on fens may also lead to faster drying out in summer. The snail is found less commonly on reed, so this plant should not be encouraged where a good population of the snail lives.

Few other snails are found together with Desmoulin's whorl snail on the

tall vegetation, and there is greater diversity where it is absent. Therefore, while Desmoulin's whorl snail needs to be looked after, management of its sites should not concentrate on it alone as it would be at the expense of other species.

### Further reading

Drake, C. M. 2000. A review of the status, distribution and habitat requirements of *Vertigo moulinsiana* in England. *Journal of Conchology* 36: 63-79.

