

## LAND SNAILS FROM BRITAIN'S MOST NORTHERLY NATURAL WOODLAND

The most northerly natural woodland in the British Isles occurs at Berriedale on the island of Hoy, Orkney (Grid Reference HY200015) at a latitude of 58°54'N. Naturally established trees do occur further north but only as isolated individuals and continuous tree cover is confined to managed plantations. This has not always been the case. Pollen analytical studies undertaken on Orkney indicate that woodland vegetation consisting of willow, birch, alder and hazel began to expand around 8000 <sup>14</sup>C yr BP (Bunting, 1996). It is thought that such mixed woodland vegetation persisted on both Shetland and Orkney until about 5000 <sup>14</sup>C yr BP, although some post-Neolithic woodland has recently been demonstrated in North Hoy (M. Farrell & J. Bunting, unpublished data). It is not clear whether the subsequent disappearance of trees on these islands was due entirely to human disturbance or whether climatic or other factors might have been involved (Bennett *et al.*, 1992; Bunting, 1996).

The small area of woodland at Berriedale appears to be a relict of more continuous mixed scrub woodland of unknown extent. The wood fills a sheltered southeast facing gully from 70–150 m OD; a photograph of the site is reproduced by Berry (2000: Fig. 3.4). The regional climate is relatively mild but is hyper-oceanic and the exposure is extreme and several trees have been stunted and deformed by the wind. The bedrock consists of breccias, conglomerates, sandstones and flags and is of Devonian age. The valley adjacent to the gully has been glaciated and is floored by hummocky moraine on which peat and heathland has now developed. Sheep have been absent from northern Hoy since 1950 and this has allowed the woodland at Berriedale to regenerate (Chapman & Crawford, 1981) but despite the absence of grazing there is little evidence of tree colonization beyond the gully. Birch (*Betula pubescens* subsp. *odorifera*) is the dominant tree with aspen (*Populus tremula*), rowan (*Sorbus aucuparia*) and willows (*Salix cinerea* and *S. aurita*) occurring as subordinates. There is a rich ground flora of tall-herbs and ferns (Prentice & Prentice, 1975). Wood rush (*Luzula sylvestris*) is particularly common. The woodland floor is strewn

with moss-covered boulders, which border a small stream.

Given its status as the most northerly remnant of natural woodland in Britain, a survey of the land snail fauna occurring in Berriedale Wood seemed worthwhile. Sieving of ground litter produced the following species: *Discus rotundatus* (O.F. Müller), *Euconulus* cf. *fulvus* (O.F. Müller), *Cepaea hortensis* (L.), *Leiostyla anglica* (Wood), *Aegopinella nitidula* (Draparnaud), *A. pura* (Alder), *Nesovitrea hammonis* (Ström), *Oxychilus alliarius* (J.S. Miller), *Vitrea contracta* (Westerlund), *Punctum pygmaeum* (Draparnaud), *Spermodea lamellata* (Jeffreys), *Columella aspera* Waldén and *Vitrina pellucida* (O.F. Müller). Two species of slug (*Arion ater* agg. and *Lehmannia marginata* (O.F. Müller)) were also found under logs. The list is probably not comprehensive, especially for the slugs, but it is nevertheless instructive. Compared with similar woodland elsewhere it is obviously depauperate and lacks several species, such as *Carychium tridentatum* (Risso), that one might reasonably expect in such natural woodland at sites on the Scottish mainland. However, it does include *Leiostyla anglica*, a species otherwise known on Orkney from just one other locality (Kerney, 1999) and *Spermodea lamellata*, a new record for the Orkney islands. *S. lamellata* is often considered to be an indicator of 'ancient woodland' (e.g. Kerney, 1999), so its occurrence at Berriedale Wood is especially noteworthy. It can now be removed from the list of woodland species that were previously thought to have failed to reach the Orkney islands (cf. Cameron, 2002).

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