

## *Orobanche alba* (Thyme Broomrape) on *Thymus vulgaris* (Garden Thyme) in Caernarvonshire (v.c. 49): a first record for Wales

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Here we report the first sighting of *Orobanche alba* Stephan ex Willd. in Wales. In 2022, we (MFF, MWC and MJMC) planted *Thymus vulgaris* L. (bought at a local garden centre) in our herb garden in v.c. 49 (Trefor, Gwynedd). In June 2024, we were surprised to find four shoots of a reddish broomrape emerging in this plant.

Given the colour and host plant, our putative identification was *O. alba* (Thyme Broomrape), and this was confirmed based on the cylindrical-campanulate corolla with dark glands, reddish stigma and the faint clove-like scent, following discussions with CJT and EJR. According to the account for this species in the BSBI online Plant Atlas 2020 (Foley & Rumsey, 2020) and BSBI Handbook No. 22 (Thorogood & Rumsey, 2021), this species has not previously been recorded in Wales, although it occurs elsewhere in western Britain and Ireland.

*Orobanche alba* is a monocarpic biennial or perennial. It occurs on a wider range of Lamiaceae in other parts of its range (Thorogood & Rumsey, 2021). It is a European Temperate element of the British and Irish flora, and its range extends to North Africa and the Himalayas (POWO, 2024). It mostly grows on base-rich rocky coastal slopes, but it is also found locally on vegetated scree below limestone outcrops in northern England (Foley & Rumsey, 2020; Thorogood & Rumsey, 2021). In Britain, this plant is almost always strongly red-tinted [*O. alba* forma *rubra* (Sm.) Beck, originally described as *O. rubra* Sm.] and it occurs on *Thymus drucei* (Wild Thyme) in rocky habitats, especially sea cliffs (Thorogood & Rumsey, 2021).

Elsewhere in Britain, there have been three discoveries of *O. alba* in gardens since the 1970s.

In 1977 it was found in a garden in Lower Clent, Worcestershire (v.c. 37). It was thought that it must have arrived with its host, plants of which had been transplanted from the Burren (Co. Clare) some years previously, a known hotspot for this species (Maskew,



*Orobanche alba* (Thyme Broomrape) growing on planted *Thymus vulgaris* (Garden Thyme), Trefor, Caernarvonshire (v.c.49). Mike Fay



*Orobanche alba* (Thyme Broomrape) – close-up of inflorescence. Maarten Christenhusz

2014). The following year (1978), several plants were found on *Thymus* sp. in a garden in West Porlock, South Somerset, v.c. 5. The owner considered it likely to have been introduced with its host and noted that the broomrapes were of the native red-flowered type. The only other confirmed garden occurrence known to the authors was of two plants in a garden in Sutton Abinger, Surrey, v.c. 17 in 1991.

The species is more variable (often pale-coloured) on the continent, but plants at the north-western extreme of its range are more-or-less uniformly intensely red-coloured. The form reported here from v.c. 49 matches these intensely coloured plants native to Britain and Ireland; given the cultivated source of the host plant, this makes the provenance of the parasite mysterious. It is possibly the product of wind-swept seed from somewhere in the native range of *O. alba* (imported material would likely be paler in colour). *Orobanche* plants of unknown (but presumably wind-dispersed) origin do occur from time to time, e.g. a transient occurrence of the South European *O. gracilis* was reported from the Wiltshire/Hampshire border in 2015 (Thorogood & Rumsey, 2021). Introduction via the purchased plant of *T. vulgaris* is also a possibility.

*Thymus drucei* is a common plant in the same area as this new record for *O. alba*, and a potential concern is that *O. alba* might ‘jump over the garden wall’ (e.g. see Jones, Toth & Dehnen-Schmutz, 2024, and references therein) and infect the native thyme populations (notwithstanding the presumed native origin of the *O. alba* – see above). We discussed this with the Vice-county Recorder, and her advice was that its origin should be noted so that future botanists would be aware of the source if this transpires (Wendy McCarthy, pers. comm.). In addition, we note that the parasite would have little impact on the thyme, and *O. alba* has no history of invasiveness; therefore, at the current time, we consider it an unusual, and perhaps casual, curiosity.

### Acknowledgements

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