

Colura calyptrifolia in Wales

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Introduction

Away from its heartlands in south-west Ireland and western Scotland, *Colura calyptrifolia* has been regarded as a rare and exciting species. Its highly distinctive appearance makes it unlikely to be widely overlooked and gives it a mystique that makes the bryological novice long to see it. This would generally involve a pilgrimage to the humid ravines of north Wales or the Lake District, the Lizard Peninsula, or the west of Scotland or Ireland. Recent observations in Wales suggest that this situation may be changing.

Recent records of *Colura* in Wales

On an excursion following the 1985 paper-reading meeting of the British Bryological Society in Cardiff, Tom Blockeel found small amounts of *Colura* on sallows in Hensol Forest, Glamorgan (v.-c. 41) (Perry, 1986). This was regarded at the time as a most unexpected find as the nearest stations for the species were in West Cornwall (v.-c. 1) and Merioneth (v.-c. 48). However, it was followed by records from damp woodland in North Somerset (v.-c. 6) (P. Martin in Corley, 1987), a *Notobefagus* trunk in woodland on Dartmoor, South Devon (v.-c. 3) (R.C. Stern in Long, 1999), an oak trunk in humid woodland in southern Breconshire (v.-c. 42) (M. Newton, unpublished survey for the Countryside Council for Wales), and two ash trunks in mixed woodland in eastern Monmouthshire (v.-c. 35) (S.D.S. Bosanquet in Blackstock, 2002). These records suggested that *Colura* might now be more widely scattered over south-west Britain.

Tetrad-bashing in Carmarthenshire (v.-c. 44) turned up the first county record of *Colura* early

in 2002. A strong colony, of several hundred tufts, occupied sallows in the unremarkable Afon Pib valley in Brechfa Forest (SN53), a Forestry Commission conifer plantation stretching over 150 km² of hill country. Over the next year, I found nine further colonies of *Colura* in Carmarthenshire, between Cwmdud (SN33) in the west and Cwm Twrch (SN64) in the east. Some of these colonies supported just a few tufts, but most had hundreds or even thousands. All were, like the first, on willows in shallow-sided valleys surrounded by planted conifers. Associated species were common epiphytes of humid western woodlands, such as *Metzgeria temperata*, *Microlejeunea ulicina* and *Ulotia crispata*. There was nothing unusual about the sallows, and their position in the middle of conifer plantations might well have led to them being ignored by bryologists. By early 2003, *Colura* had become almost predictable, and few searches of suitable habitat were unsuccessful. This was illustrated by the first Pembrokeshire (v.-c. 45) and Cardiganshire (v.-c. 46) records; both came from the first suitable willows that I searched, the latter site being spotted from a moving car.

The majority of known colonies of *Colura* in south Wales are in Brechfa Forest, an area with some exceptional bryophyte habitats, at least in a south Wales context. Its humid gorges hold locally abundant *Metzgeria conjugata* and *Plagiochila spinulosa*, several colonies of *P. punctata*, and single sites for *P. exigua*, *Hygrobiella laxifolia*, *Jamesoniella autumnalis* and *Tritomaria exsecta*. But *Colura* is absent from these situations and, instead, favours willows surrounded by conifers; similarly, its other south Wales sites are either in or close to conifer plantations. This contrasts with a generally saxicolous habit in north Wales

Table 1. Records of *Colura calyptrifolia* from conifer plantations and quarries in Wales.

Vice-county	Conifer plantations		Willows in quarries	
	No of 10-km square records	No of tetrad records	No of 10-km square records	No of tetrad records
35 Monmouthshire	2	2	-	-
41 Glamorgan	4	4	-	-
42 Breconshire	6	6	-	-
44 Carmarthenshire	5	11	-	-
45 Pembrokeshire	2	2	1	1
46 Cardiganshire	5	5	1	1
50 Denbighshire	1	2	-	-
52 Anglesey	1	1	-	-

and Scotland, although *Colura* also occurs quite frequently as an epiphyte in these areas. Willows in deciduous woodland, in carr and on riverbanks are all regularly searched during recording in south Wales and *Colura* has not been found in these habitats, despite its striking appearance. The association with conifers does, therefore, appear to be genuine.

The distribution of *Colura* in Wales is illustrated in Figure 1. Table 1 shows the number of records of *Colura* from conifer plantations and quarries in Welsh vice-counties. All of the records from conifer plantations have been made in the last 25 years, and all but two have been made in the last three years.

Discussion

The combination of an atypical substrate, the small size of some populations (e.g. in Breconshire and Monmouthshire), and the lack of records prior to 1985 suggest that *Colura* is a relatively recent arrival in south Wales. Various explanations for *Colura*'s apparent preference for conifer plantations can be put forward; among the most convincing are that conifer cover protects *Colura* more effectively from harmful frosts than deciduous cover (R.G. Woods, pers. comm.), or that the conifers act as more efficient

spore-traps than deciduous trees. Another possibility is that conifers provide constantly humid conditions; evidence for this is provided by one of the Pembrokeshire colonies, which occupies willows on the east-facing side of a forestry track but not those on the drier, west-facing side.

Judging by the number of recent records of species such as *Cololejeunea minutissima*, *Nowellia curvifolia* and *Ulota phyllantha*, it would appear that several bryophytes characteristic of humid conditions are, or have recently been, spreading in lowland Britain. It appears that *Colura* may be doing the same thing, albeit from a smaller base population. Other bryologists may like to search for the distinctive tufts of *Colura* (as an epiphyte it consistently grows as small, pale yellowish tufts rather than straggling stems) on willows in sheltered woodlands elsewhere in southern Britain. I would be interested to hear of new records of this species from other parts of the country.

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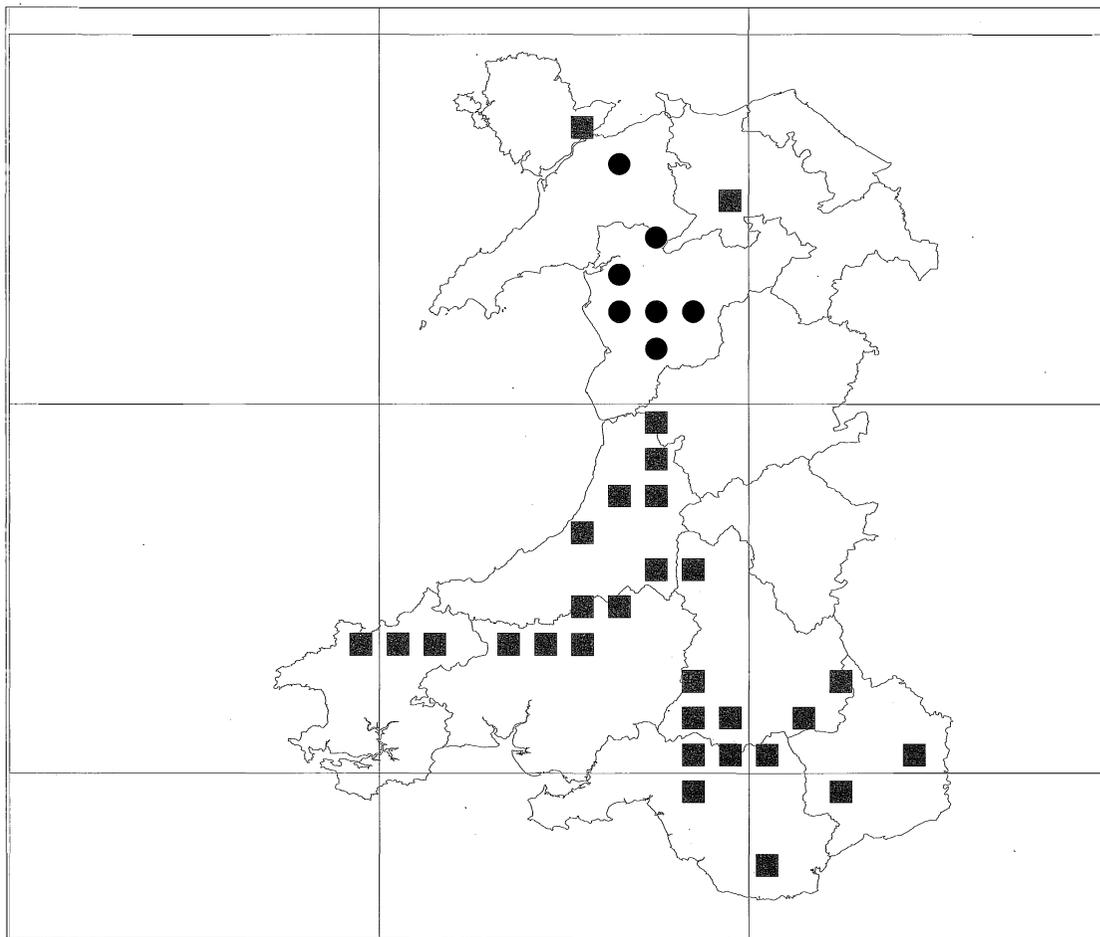


Figure 1. Distribution of *Colura cabyptrifolia* in Wales.

Black dots indicate records from humid gorges and Atlantic woodlands; grey squares indicate records from conifer plantations and quarries.