

# Wyre Forest Study Group

## The Hidden World of Wyre's Stumps *Cladonia caespiticia* & *Cladonia parasitica*

TREVOR DUKE



Stump with *Cladonia caespiticia*, Wimberhill, 4 December 2016

Trevor Duke

Whilst embarking on a lichen survey of the local Triassic sandstone I decided to take a look at the roadside cuttings at Drakelow. I did not have any great expectations, being heavily shaded, adjacent to the road and therefore petrol fumes, and being near vertical cuttings rather than a natural exposure. Nine species (4 *Cladonia* spp, 3 *Lepraria* spp, *Baeomyces rufus* and *Psilolechia lucida*) therefore seemed reasonable. It compares with 25 species on the exposures of the adjacent Kingsford Forest Park and 51 on the Giants Grave at Habberley Valley.

However, of the four *Cladonia* spp one stood out. There were no podetia or fruiting bodies, just a sward of well developed and distinctive squamules, forming crowded upright circular tufts of much divided squamules. Something I was not familiar with. A search of the books came up with one possibility, but without the characteristic fruits or pycnidia I could not be sure. It turned up on various local sandstone exposures, and then finally at Habberley Valley, on the Giants Grave, I

saw the same species with pycnidia. These were tiny dark brown to black, top shaped structures which were just about visible with a x10 lens. *Cladonia caespiticia* was confirmed.

About this time I started going out with the Wyre Forest Study Group and on a solo visit I found *Cladonia caespiticia* growing beside the track opposite Unclyls. Here it was growing on the earth bank and on two stumps. What's more fruiting bodies were present in several places. Since then it has turned up on every visit to the forest, never common but widespread throughout the forest, requiring well rotted oak stumps or suitable earth banks.

The diagnostic features of *Cladonia caespiticia* are the small salmon pink to brown pink fruiting bodies arising either sessile or short stalked directly off the tiny leaf shaped squamules. The 'short stalks' are white to slightly translucent and lack any algae. Also diagnostic is the presence of tiny dark brown to black top shaped pycnidia scattered over the upper surface of the squamules. When both fruiting bodies and pycnidia are lacking then *C. caespiticia* may be difficult to identify. Although the squamules, especially when well developed, form cushions of distinctive small delicately divided lobes, the difference from other squamules is not always so clear, particularly with the less familiar eye. Chemical test p+red.



*Cladonia caespiticia* with apothecia

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*Cladonia caespiticia* with pycnidia

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*Cladonia caespiticia* apothecium

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Another species on rotten stumps, which is seldom recorded, and new to the Wyre Forest, is *Cladonia parasitica*, which despite its name is not parasitic. It too has very small squamules which can be mistaken for *C. caespiticia* but are more deeply divided, narrower and with coralloid cylindrical extensions to the tips of the lobes. Where squamules are small and dense these coralloid extensions give a powdery soresiate appearance and in some cases may be difficult to distinguish visually from a *Lepraria*. *C. parasitica* is rarely fertile but when it is fruiting bodies and pycnidia develop on the tips of small distorted, often decumbent podetia. Chemical tests p+yellow, k+yellow.

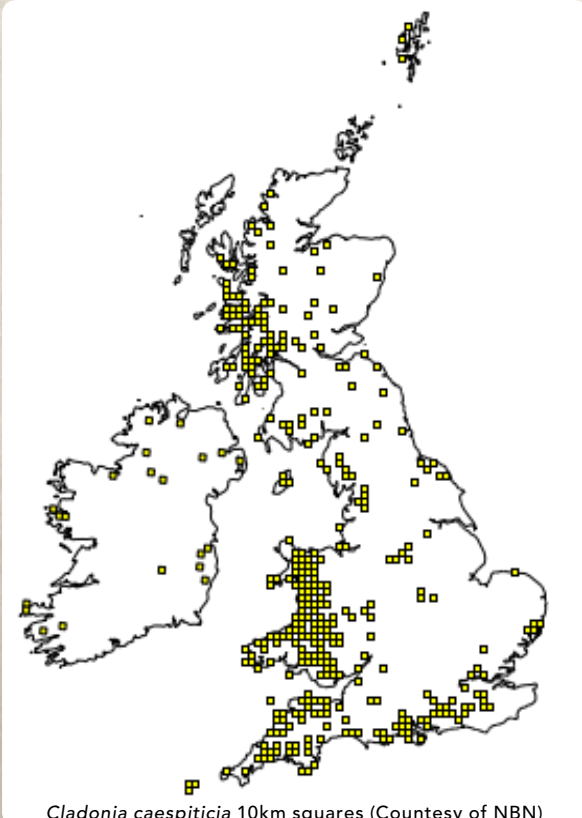
It will be seen from the 10 km square maps below that both species are widespread across England, Wales



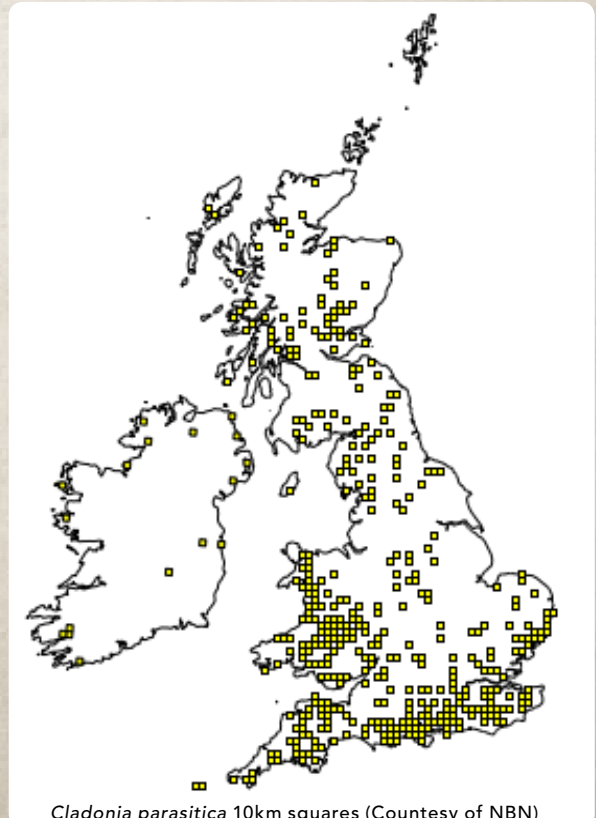
*Cladonia parasitica*

Trevor Duke

and Scotland but with a concentration toward the south and west. This is particularly the case with *Cladonia caespiticia* where there is a strong concentration in the Atlantic facing areas - W Scotland, W Wales, SW peninsular, New Forest and Kent/Sussex Weald. Records are somewhat sparse to the east and north of this belt and also in the lee of Ireland (SW Scotland and Cumbria down to Merseyside). It should also be borne in mind that the maps below show 10 km square records. When the interactive map of the NBN is drilled down to the 1 km square basis even the solid distribution of records in West Wales becomes dramatically more sparse, even allowing for the fact some records have only been provided to the NBN at a 10 km square resolution. The distribution of these records is no



*Cladonia caespiticia* 10km squares (Countesy of NBN)



*Cladonia parasitica* 10km squares (Countesy of NBN)

doubt determined by two factors; presence of suitable habitat (well rotted stumps or suitable earth banks) and of course the level of recording.

Looking more locally, there is a 1989 British Lichen Society record for *Cladonia caespiticia* in the SO77 10 km square, the location given as "near Bewdley". (This may even have been my own record on a 10 km mapping card, from my early days of lichenology). Otherwise it was recorded by The Worcestershire Naturalists Club in Malvern and listed in Amphlett and Rea. I have so far recorded it from six tetrads within Wyre, from Habberley Valley and from three tetrads on the Kingsford / Drakelow sandstone.

The distribution of *Cladonia parasitica* also shows a concentration toward Wales and the south western and southern counties of England, although less marked than that of *C. caespiticia*. Drilling down to 1 km squares again shows a dramatically more sparse distribution of records than shown in the NBN map on page 15, even in the more densely covered areas. *Cladonia parasitica* is new to Wyre Forest (6 tetrads) and I have recorded it also from Redditch. There is a modern British Mycological Society record from the SO78 10 km square, which adjoins Wyre. There are two modern British Lichen Society records from the Malverns and also one from Spetchley Churchyard. The Worcestershire Naturalists Club recorded it in Crown East Wood (SO85), also mentioned in the appendix to Amphlett and Rea.

It is clear that Wyre is a local hotspot for these two species, and on the fringe of their currently recorded distribution. More work is needed to better define the local distribution and ecology. Whilst studying the

local sandstone it was apparent that the colonies of *C. caespiticia* seemed to shrink or even disappear if the sandstone dried out, returning in more moist conditions. Why was *C. caespiticia* richly fruiting in just one area of Wimperhill Wood and on the sandstone restricted to pycnidia, themselves very localised and not even seen in Kingsford / Drakelow? If present as only squamules with scarce or absent pycnidia does this dramatically reduce the chance of it being recorded? These are just some of the questions to be answered.

Wyre tetrads	
<i>Cladonia caespiticia</i>	SO7276, 7474, 7478, 7674, 7676, 7678
<i>Cladonia parasitica</i>	SO7474, 7476, 7478, 7674, 7676, 7678
Wyre monads	
<i>Cladonia caespiticia</i>	SO7376, 7575, 7478, 7675, 7676, 7678
<i>Cladonia parasitica</i>	SO7575, 7476, 7478, 7577, 7675

The map on page 17 shows the Wyre monads in which these 2 species have been found. Tetrads close to Wyre where *Cladonia caespiticia* has been recorded on sandstone are SO 8282, 8280, 8080, 8078.

## References:

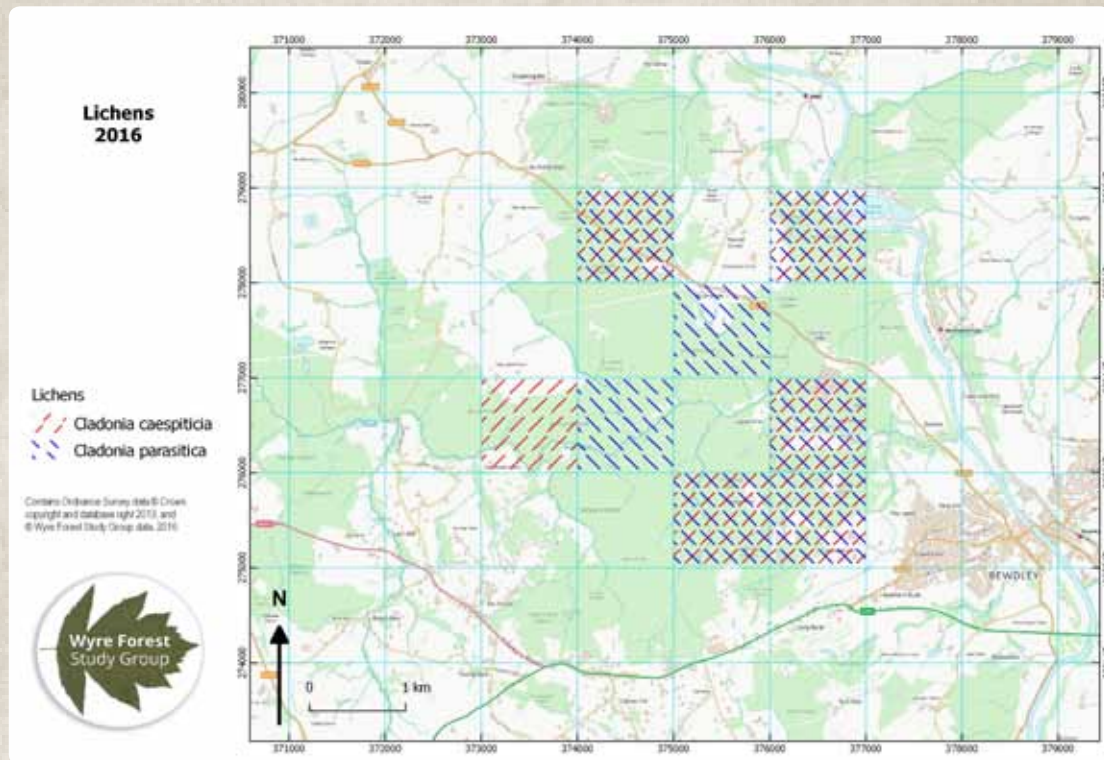
- Smith, CW, et al: The Lichen Flora of Britain & Ireland. (2009)
- Ahti, T, et al: The Nordic Lichen Flora. Vol 5: Cladoniaceae. (2013)
- Brodo, IM, et al: Lichens of North America (2001)
- Dobson, F: Lichens an illustrated guide to the British and Irish species. (2011)
- [www.data.nbn.org.uk](http://www.data.nbn.org.uk)
- Illustrations and further reading:
- Ahti, T, et al: The Nordic Lichen Flora. Vol 5: Cladoniaceae. (2013)
- Brodo, IM, et al: Lichens of North America (2001)
- [www.dorsetnature.co.uk](http://www.dorsetnature.co.uk). (Includes Lichen photos of Dorset LichenGroup)
- [www.lichens.lastdragon.org](http://www.lichens.lastdragon.org) (Lichen photos of Alan Silverside)
- [www.sharnoffphotos.com](http://www.sharnoffphotos.com). (Lichen photos of Stephen and Sylvia Sharnoff, North America)



Trevor Duke examining stump, Wimperhill, 7 December 2016

Rosemary Winnall





Map showing the monads in which *Cladonia caespiticia* and *Cladonia parasitica* have been recorded to date



Stump with *Cladonia caespiticia*, Wimperhill, 4 December 2016

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