



# Wyre Forest Study Group

## WYRE FOREST LICHENS

Joy Ricketts

During the past two years regular visits have been made to various sites in the Wyre Forest in order to gather base-line data on the distribution of lichen species to be found in this area. Dense coppiced woodland is a poor habitat for lichen growth for there is no continuity of habitat. They are also out-competed by the more vigorous growing vegetation. Some of the best lichen sites found to date, can be found along the now dismantled railway track.

For a hundred years steam-powered trains ran regularly through the forest, the track closely following the Dowles Brook valley. We all seem to be rather nostalgic when it comes to steam trains conveniently forgetting the unattractive aspect of this type of power - smoke. The Wyre Forest area is very near to other sources of air pollution, that is, the nearby industrial areas.

Smoke contains a number of pollutants, however, its sulphur content causes the greatest problem for it cannot be tolerated by many biologically sensitive organisms such as mosses, liverworts and lichens.

The lichen thallus has no protective mechanism. Pollutants falling onto the thallus in a dry form are absorbed by the thallus with the next rainfall. In the case of sulphur dioxide the resulting acid uncouples the algal photosynthetic mechanism, so killing the lichen.

Lichen records for the Wyre Forest are few and far between, so it cannot be proved or disproved that lichens were present on the bridges during the railway's working lifetime. However, present day surveys show only a few scraps of very stressed specimens are occasionally found on bridges crossing an active line. It seems reasonable to assume that for a hundred years daily doses of smoke enveloping the Dowles Valley railway bridges have inhibited lichen establishment and development.

Lichens have simple needs, they require a stable and suitable substrate on which to grow, adequate light, moisture, limited competition from rapidly growing vegetation, and a degree of tolerance to pollutants. Providing that these conditions are met they can grow on almost anything. Their radial growth is limited, ranging annually from millimetres to a few centimetres, consequently a small patch may well have taken a decade to have reached that size.

There are many varieties of crustose lichen generally associated with rock outcrops. The Forest has only a few outcrops, generally the stone is soft and rapidly becomes colonised by mosses and other organisms. Important alternative habitats for lichen are long established man-made stone structures such as church buildings. With the railway now dismantled, over the decades the Wyre Forest sandstone bridges have become an ideal substrate for many species of lichen.

The survey area starts near Park House and ends with the standing pillar next to the River Severn. The substrates examined include wooden posts, trees lining the trackway, remnants of clinker and ballast, as well as the bridges.

Many of the wooden fencing posts found near Park House have charred patches. Growing directly out of these hollows, small patches of the upright stick-like lichens can be seen, these are the *Cladonias*. In the more open areas the green grey leafy lichen, *Parmelia sulcata* has managed to become established on the tops of a few posts.

The oak trees lining the trackway have limited cover of both crustose and leafy varieties. The crustose *Chaenotheca ferruginea* indicates its presence by a pale orange streak amongst dove-grey patches. On the approach to the Lodgehill Farm bridge a small clinker patch can be found amongst the many ant hills. The dead leaves found are worthy of careful examination for amongst them the lichen *Peltigera lactucifolia* will be found.

Lodgehill Farm bridge is a lichenological treasure house. No lichens are to be found at the track level. It is necessary to use the footpath to access the upper sections. The coping stones and walls on both the west and east sides are well covered. The crustose varieties dominate, and by using a hand lens many different species can be seen. For example, the pieces that resemble cracked dried river mud are the thallus of *Acorospora fuscata*, the dull orange granular patches are *Candelariella vitellina* and so the list goes on. To date 42 different crustose varieties have been identified, the overhanging tree branches support a further 9 species and the nearby rather creaky stile having an additional 4 species.



# Wyre Forest Study Group

The hardwood fencing lining the track leading to the bridge nearest to the car park has not suffered from burning. There are many posts with patches on their sides, which appear to be rather like small green-brown, overlapping scales, this is the lichen *Hypocenomyce scalaris*.

The sandstone bridge nearest to the car park has also no lichen cover from the asphalt roadside. The top of the bridge can be relatively easily accessed, however, the lichen cover is disappointing in comparison with Lodgehill Farm bridge. Only 8 crustose species have been found to date. The effects of screening out by the nearby overhanging vegetation can be clearly seen. If a policy of no active management is maintained then these lichens will be lost.

The last site surveyed was the 1913, blue engineering brick and sandstone pillar, standing next to the River Severn. This is a very poor site for lichens with only 4 of the most pollution-tolerant species being found scattered on the mortar.

Although only a small section of the track has been surveyed, it has yielded some interesting finds giving a tantalising glimpse of what treasures may be to come in the future if the air quality continues to improve. It is hoped that regular repeat surveys will be undertaken.

## Lichen List for Dismantled Railway Area from Park House to the River Severn in 2000

Acarospora fuscata	Lepraria lesdainii
Acarospora impressula	Leprocaulon microscopicum
Acarospora smaragdula	Leptoloma membranaceum
Caloplaca crenulatella	Leptoloma vouauxii
Caloplaca holocarpa	Leptogium gelatinosum
Caloplaca teicholyta	Parmelia caperata
Candelariella aurella	Parmelia glabratula ssp fuliginosa
Candelariella vitallina	Parmelia glabratula ssp glabratula
Cladonia chlorophaea	Parmelia saxatilis
Cladonia fimbriata	Parmelia sulcata
Cladonia macilenta	Pertusaria albescens var. corallina
Dirina massiliensis form solediata	Physcia tenella
Hypogymnia physodes	Physconia grisea
Lecania erysibe	Phlyctis argena
Lecanora albescens	Porpidia tuberculosa
Lecanora campestris	Protoblastinia rupestris
Lecanora chlarotera	Psilolechia lucida
Lecanora confusa	Rinodina teichophila
Lecanora conizaeoides	Sarcogyne regularis
Lecanora crenulata	Scoliciosporum umbrinum
Lecanora dispersa	Tephromela atra
Lecanora expallens	Toninia aromatica
Lecanora polytropia	Trapelia coarctata
Lecanora soralifera	Trapelia involuta
Lecidea fuscoatra	Trapelia placodioides
Lecidella scabra	Trapeliopsis flexuosa
Lecidella stigmatea	Verrucaria viridula
Lepraria incana	Xanthoria parietina
	Xanthoria polycarpa