

7. Learn about Lichens



This sheet explains what lichens are and how to look after them.

Lichens often form mosaics of colour, especially on stonework. These vary in form from simple, powdery scatterings and crusts to more elaborate leafy or even bushy structures. Lichens are particularly rich and varied in unpolluted sites.

What are lichens?

Lichens are two or more organisms living together as one. A fungus forms the visible part of the lichen and within, protected by threads of the fungus (hyphae), are cells of algae and/or cyanobacteria which can photosynthesise, giving food to the whole lichen.



Lichens reproduce through microscopic fungal spores which, if they find a suitable partner, can colonise any surfaces which are stable and not too shaded or too smooth. These spores are released from reproductive disc-shaped structures which look rather like tiny jam tarts, flasks or pimples. Lichens also spread by producing powdery outgrowths, minute projections or fragments which are scattered in the wind and rain, or moved by animals.

Where are they found?

Provided there is enough light and moisture lichens are able to grow on surfaces unsuitable for other plants. Some grow very slowly, sometimes less than half a millimetre per year; others grow more quickly. Many lichens are long-lived. An individual lichen may be almost as old as the gravestone it is growing on.

The importance of burial grounds

Churchyards and burial grounds are of supreme importance for lichen conservation, particularly where there are no natural outcrops of rock.

Of the 2000 UK lichen species, over 700 have been found in burial grounds. Almost half of these are rare and seldom if ever occur in other places.

Many burial grounds have well over 100 species of lichen in them. They can be thought of as lichen sanctuaries.

Burial grounds are also excellent sites for looking at lichens and for learning about them. Try looking at lichens through a hand lens or magnifying glass, or taking photographs.

Different rocks and building materials can have distinctive lichen communities: limestone, sandstone, ironstone, marble, brick, mortar, slate, granite. Also the various types of stonework: gravestones, walls and buildings will vary from rough to smooth, shaded to exposed, damp to dry, horizontal to vertical. All of these provide different niches for lichens and may have different species growing on them. The lichens on the shaded north side of a wall are different from those on the sunny south side.

Micro-habitats are also provided by recessed lettering, soil crevices in walls, sills stained with iron and copper, granite chippings within a kerbed grave. Again, these may have different species growing on them.

Lichens are also found on trees, wooden structures like fences and gates, grassy areas, pathways and even rubber dustbin lids!

How to help lichens

Lichen colonies have been described as 'minute, self-maintaining gardens that provide a natural cladding for the stone'. They are beautiful, endlessly fascinating, especially when viewed through a hand lens or magnifying glass.

A balanced approach is good for lichens:

- Do not spray around memorials as this will damage lichens and also leave unsightly stains.
- If memorials become smothered in bramble, ivy or cow parsley, the lichens will die from a lack of light.
- Remove grass cuttings to a compost heap. Do not leave them to rot leaning against stonework as this will also kill the lichens.
- Walls and monuments built of good quality stone that have lichens on them, have shown little deterioration other than that caused by natural weathering. Indeed a good covering of lichens may protect stone. Certain lichens, however, can damage susceptible stone types. Seek advice if you are concerned.
- Try not to clean lichens off monuments or memorials. If you do need to for some reason, then seek advice first and use a soft brush and plain water.

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- Some lichens are very susceptible to change such as repositioning of stones. If stones do need to be moved then lichens are more likely to survive if the north – south alignment of the stone stays the same. This is true for gravestones, repairs to walls and buildings.
- If old walls or buildings need repointing then use the same mortar type and, if possible, avoid damaging lichens. If the pointing work cannot avoid damaging the lichens then try not to do it all at once and consider having a survey of the lichens in advance.
- The British Lichen Society is a membership organisation which has been surveying churchyards for lichens since the 1990s. Check their website to see

sites already surveyed and contact them regarding your site.

Lichens and their uses

Lichens have been used by human beings for centuries. In ancient Rome lichens were used to make purple dye for togas. In the Outer Hebrides lichens are still used to dye wool from orange through to brown in the making of Harris Tweed. Lichen is also used in the manufacture of perfume; the 'moss' and 'leather' fragrance comes from lichen.

Birds, such as long-tailed tits, use lichens to help camouflage their nests and some invertebrates feed on lichens.



Cladonia

Useful contacts

British Lichen Society, www.britishlichensociety.org.uk

Useful reading

Churchyard Lichens - Field Studies Council fold-out chart

Grasses, Ferns, Mosses & Lichens of Great Britain and Ireland – Roger Phillips, Macmillan

Lichens on Twigs - Field Studies Council fold-out chart

Urban Lichens 1 (on trees and wood) - Field Studies Council fold-out chart

Urban Lichens 2 (on stone and soil) - Field Studies Council fold-out chart