

What is a lichen?

Lichens are a special partnership between fungi and algae (or bacteria). The fungal partner provides protection from the elements and the algae provides food through photosynthesis. Neither can survive alone. You can find lichens everywhere, except where the air is heavily polluted.

Why are Lichens important?

First colonists

These primitive organisms are the first to colonise bare rock. They produce a weak acid and by gradually eating away at the rock, gain anchorage and develop niches in which windblown soil can gather. Soon seeds and spores of plants fungi and fern can settle here. Within a couple hundred years a forest has sprung up.

Pollution

Lichens are sensitive to pollution in the air. Some are more sensitive than others. Studying which lichens grow where, allows us to gauge the level of pollution quite accurately.

Dyeing

For thousands of years lichens have been used for colouring wool and woven fabrics. The dyes were once as valuable as the rarest spices. The Imperial Purple of a Roman nobleman's robes needed lichen to produce impressive colour, which indicated wealth and status. Another lichen dye produced the bright red uniform of the British Soldier which was standard issue from the Napoleonic war (1803 –15) to 1900.

Food

For microscopic organisms, tiny insects, molluscs and large mammals, lichens are a vital source of nutrition. Reindeer and Caribou rely on the lichen known as "Iceland moss" as a major part of their winter diet.

Want to find out more?

FSC Fold-out charts: *Guide to Common Churchyard Lichens*

F. Dobson: *Lichens in Churchyards*

Lichens are Amazing!

There are over 1700 species in Britain. They are tiny worlds with a marvellous variety of colour and form. They are best seen using a magnification of x10 and above. Most people are astonished when they first see a lichen close-up in all its complexity.

These are the main lichen forms



Foliose:
Loosely lobed



Crustose
Crusty, margin firmly attached to stone



Fruticose
Like a tree or antlers

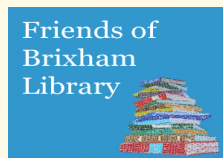


Leprose
powdery and formless

Saint Mary's Graveyard Project



'Cow Town' St Mary's Grave Yard Project 1850-1900

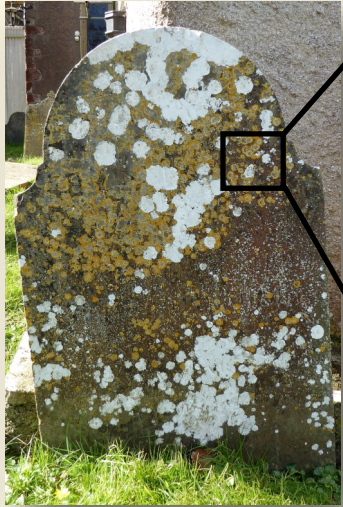


An Introduction to the Lichens of St. Mary's Graveyard Brixham

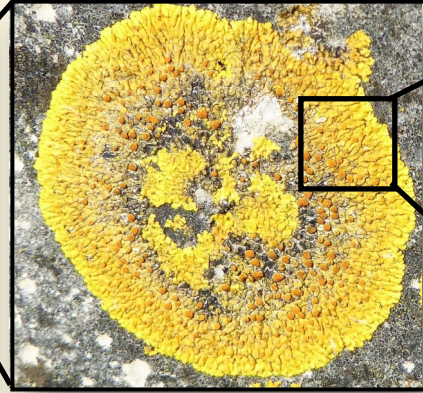


The Wildlife of St Mary's Graveyard : Introduction to Lichens

The closer you look—the more is revealed



a. More than 90% of this gravestone is covered by a variety of lichens. There are two white species, an orange, a lime green and a black lichen. See how many different ones you can find?



a.2 A very common yellow lichen *Caloplaca flavescens* on the gravestone. This is shown about half life size. Some lichens can live for hundreds of years and grow at the rate 1mm a year



a.3 The same Lichen x 10. You can now see the darker orange fruiting bodies. These produce thousands of microscopic spores carried by the lightest winds until they settle in a suitable place on another grave stone a wall or an island in the middle of the ocean.



Section x10

f. On the wall at the bottom of the steps there is a lichen *Lecanora campestris* that you could mistake for old thin and dirty bubble-gum. When you look more closely a whole new world appears



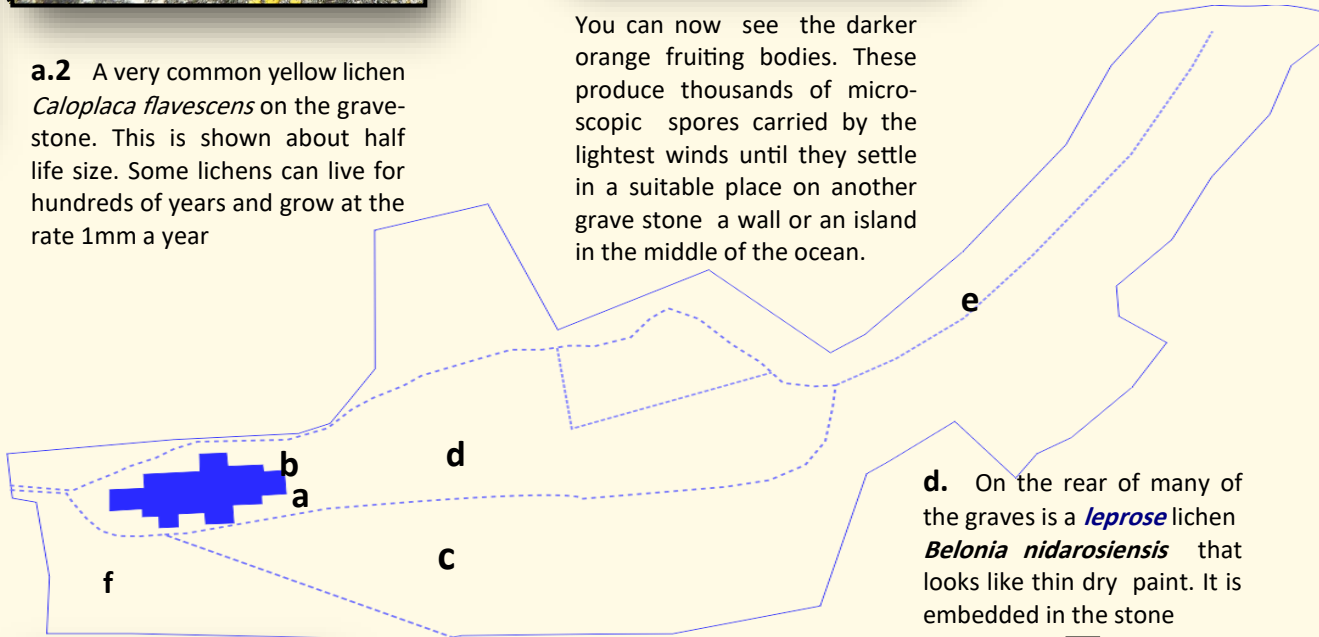
1/4 Lifesize

e. There are few lichens in the newer part of the cemetery. This is because lichen colonies take a long time to establish and more expensive gravestones made of polished granite etc. offer little foothold. This foliose lichen *Parmelia sp.* is an exception. See if you can find it



Section x10

d. On the rear of many of the graves is a *leprose* lichen *Belonia nidarosiensis* that looks like thin dry paint. It is embedded in the stone



b. Now have a look at the rendered wall of the church and look for lichens. They are few and far between and much smaller. This wall was rendered more than 40 years ago. It is easy to see that to produce such a varied and dense colony such as exists on grave **a.** takes a very long time.



Section x10

c. Go west along the main path you will see a greyish tree (A blue-atlas cedar) pass two more rows and turn right Look for the statue of the young girl pictured on the front cover. On her head, in her skirt and on the base there is a crusty white lichen *Aspicilia calcarea*. Look around, you can see it everywhere on the tops of graves and statues where it gains nutrient from bird droppings. Do you think that the lichens add too or spoil the appearance of this statue?