

## 9. Mosses, Liverworts and Ferns



***This sheet explains what mosses, liverworts and ferns are, where they occur and guidelines on how to care for them in a burial ground.***

The earliest land plants were related to ferns and mosses. They started life growing on the edge of lakes and rivers 400 million years ago. Today most ferns, mosses and liverworts still need to grow in moist places.

With our damp climate many burial sites prove ideal for ferns, mosses and liverworts, particularly in the western areas of Britain and Ireland.

### MOSES AND LIVERWORTS

Mosses and liverworts are known as 'bryophytes'. They are small, green plants which do not have flowers or seeds but produce spores instead. There are over 1000 different species of bryophyte in the UK and they tend to be found in sheltered, damp places as most of them cannot survive drying out. Few mosses or liverworts have English names and a microscope is needed to identify many of them.



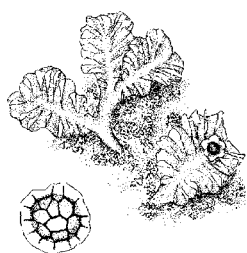
*Thuidium*

### Mosses

Mosses can be found on all types of stonework, roofs and within grassland. A wide variety of mosses can be found within a burial ground often with beautiful colours and shapes.

Mosses attach themselves to the ground, wood, bark or stone by roots called 'rhizoids' and can grow in barren places without nutrients. The amount of shade, shelter and water will affect where mosses grow and which types. Typically a few moss species will grow together, softening stonework with cushions or growing over headstones. Flat stones can quickly be covered with moss which may protect the stone and any inscriptions on it.

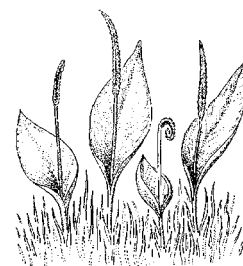
Mosses tend to grow in different places from lichens which need more sun and less water, so mosses and lichens rarely compete for the same space. This is also true in grassland where moss is found in damp, shaded areas, usually with sedges, rushes and fungi.



*Petalophyllum ralfsii*

### Liverworts

Liverworts are similar to mosses but tend to be leafy and are less common. Liverworts are mostly found in woodland and by streams or rivers but can also be found on shady stones and damp soil in burial grounds. They are strange, distinctive looking plants and worth looking at closely or photographing their intricate shapes and subtle colours.



*Adder's-tongue Fern*

### FERNS

In the cool, wet climate of the UK there are 64 types of fern. Look out for ferns on west or north facing walls in particular. The shady areas of burial grounds, and under trees, where grass cutters don't reach, will also be places where ferns can flourish undisturbed.

An amazing fact about ferns is that once established they can survive in quite dry places, such as walls. Unlike mosses and liverworts, ferns tend to have English names and many are quite easy to identify.

Ferns found on walls include spleenwort, wall rue, rusty back, polypody and shield fern.

Species more likely to be found under the trees include lady fern, male fern, hard fern and royal fern, as well as the shield ferns and polypodys also found on walls.

Polypodys can also grow on trees. If your churchyard has calcareous (limy) soil you may find hart's-tongue fern, or even, more rarely, adder's-tongue fern.

### Bracken

Bracken is an invasive fern. It is easy to tell bracken from other ferns as it does not grow in clumps from a central point, but on separate stems. Bracken does have wildlife benefits, particularly for butterflies and moths which use it for shelter and egg laying. A clump of bracken in a burial ground is not a problem but if it is starting to increase then snap off the stems just as they are unfurling. Repeated breaking or 'bracken bruising' will reduce the vigour of the plant.

### How to help mosses, liverworts and ferns

Unless there is a clear problem such as a slippery path, leave these plants alone as they rarely damage stonework and are a natural part of grassland.

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#### **Exception**

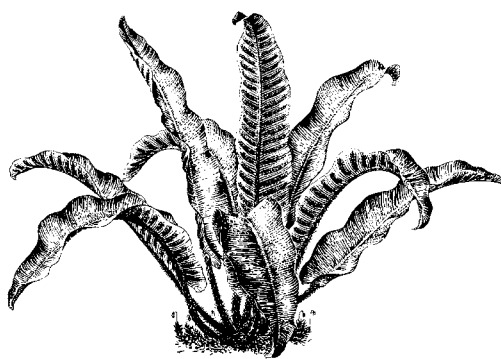
Moss can occasionally accelerate stone deterioration. It may be worth removing moss from the top surface of sandstone as the rhizoids can penetrate downwards into the stone. Other than this moss is not damaging.

If you are repairing a wall which has moss, liverworts or ferns growing on it then try to keep them *in situ*. If this is not possible then remove them carefully, keep damp during work and replace in the same location. Repairing a wall over time, rather than in one go, benefits these plants as it gives them some time to recolonise.

If a damp area of the churchyard supports ferns, then cutting less frequently in the area immediately around the existing ferns could help them to spread naturally, particularly if these surrounds are damp or shaded.

Do not allow invasive plants like ivy to cover mosses, liverworts and ferns. This can happen on a wall, monument or tree. Keep invasive plants in check by regular trimming or removal.

Mosses, liverworts and ferns are particularly susceptible to chemicals, which is one reason why they can thrive in burial grounds. Please do not use herbicides or pesticides.



*Hart's-tongue Fern*

#### **Useful contacts**

British Bryological Society, [www.britishbryologicalsociety.org.uk](http://www.britishbryologicalsociety.org.uk)

Caring for God's Acre, [www.caringforgodsacre.org.uk](http://www.caringforgodsacre.org.uk)

Fern World: British Pteridological Society, [www.ebps.org.uk](http://www.ebps.org.uk)

#### **Useful reading**

A Key to Common Ferns – Field Studies Council fold-out chart

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



*Club Moss*