



Lichens in the Garden

A short guide to some lichens at the Edinburgh Garden

Evernia prunastri ▶
The strap-shaped branches of 'oak moss' are green and wrinkled above and white below, common on twigs.



A typical lichen community found from trunks to twigs in Britain, with the crust ***Lecanora chlorotera*** (left) and ***Parmelia sulcata*** (below).



◀ ***Ramalina farinacea***
The strap-shaped branches have oval powdery areas, with no distinct upper or lower sides.



Opening Times

Open daily from 10am except 1 January and 25 December. Closing: January 4pm; February 5pm; March to September 6pm; October 5pm; November & December 4pm. (Late opening on 21 June until 10.30pm). Glasshouses close 30 minutes before Garden with last admission 1 hour before.

Admission

Garden admission free. Charges for Glasshouses; RBGE Members admitted free of charge. Adult £4.50, Concessions £3.50, Child £1, Family £9 (2013 prices). Discounts available for groups of 11 or more, providing payment is by a single transaction. Call 0131 248 2909 to pre-book. Multi-visit ticket - permitting the holder to make three visits: Adult £11, Concession £9, Child £2, Family £22.

Activities

- The Garden runs events throughout the year including family activities, guided walks and exhibitions. For a full programme call 0131 248 2909 or visit www.rbge.org.uk
- Garden Guide tours depart from the John Hope Gateway daily at 11.00am and 2.00pm between April and October
 - The Terrace Café for light self-service refreshments
 - East Gate Coffee Shop for quick snacks
 - The Gateway Restaurant for elegant dining at breakfast, luncheon and afternoon tea (also available for private events: contact 0131 552 1974)
 - The Botanic Shop for fine gifts, books and plants
 - Facilities for disabled visitors
 - Assistance dogs welcome

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Azaleas

The study of lichens at the Royal Botanic Garden Edinburgh

◀ In winter, the stunning display of lichens on the azaleas is worth a close look. ***Physcia adscendens*** and a suite of 'twig lichens' clothe the branches of many deciduous shrubs.

Lichens are stable symbiotic associations between fungi and photosynthetic algae or cyanobacteria. They are found in almost all clean-air habitats and provide rich and colourful patterns in cultivated gardens, as draperies on twigs and mosaics on bark and old stones.

As primary producers, lichens add nutrients to the ecosystems where they live, through the fixation of carbon and sometimes nitrogen. They provide an important link in food webs through the provision of food and shelter for invertebrates.

Lichens can produce leafy rosettes, bushy three-dimensional forms or sometimes relatively simple crusts. Many produce secondary chemicals, which have long been used in dyeing textiles. In lichens, these compounds probably function to deter herbivores, shield them from UV radiation, or regulate water balance.

Building on a long legacy of floristic and taxonomic research, the active team of lichenologists at RBGE continues to study the processes that shape lichen communities and the patterns of diversity in Britain and across the world.

Hypogymnia physodes ▶

This leafy lichen is hollow, and the ends often turn up, covered in powdery soredia, a method of clonal reproduction. Common on exposed twigs and branches.

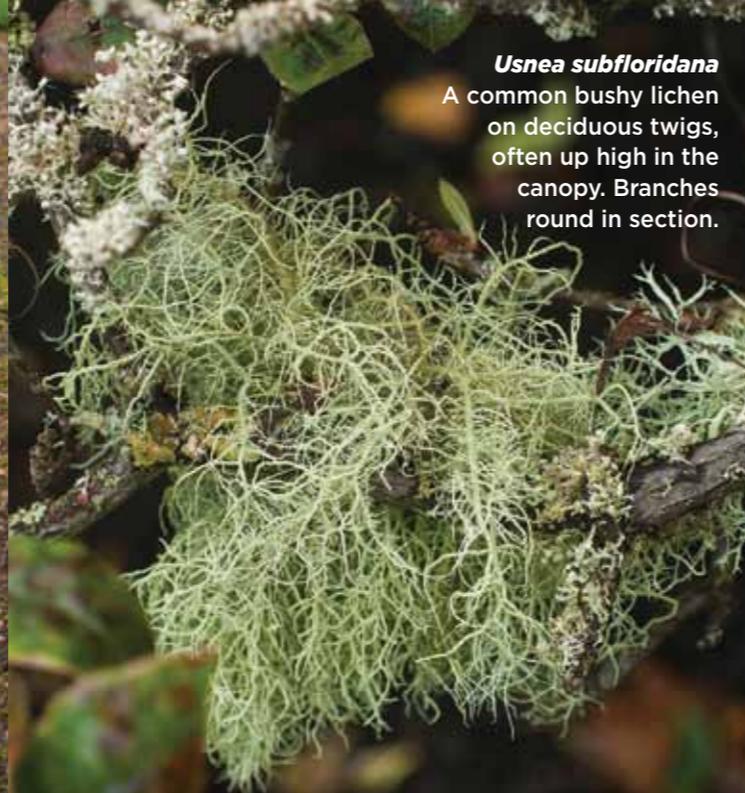


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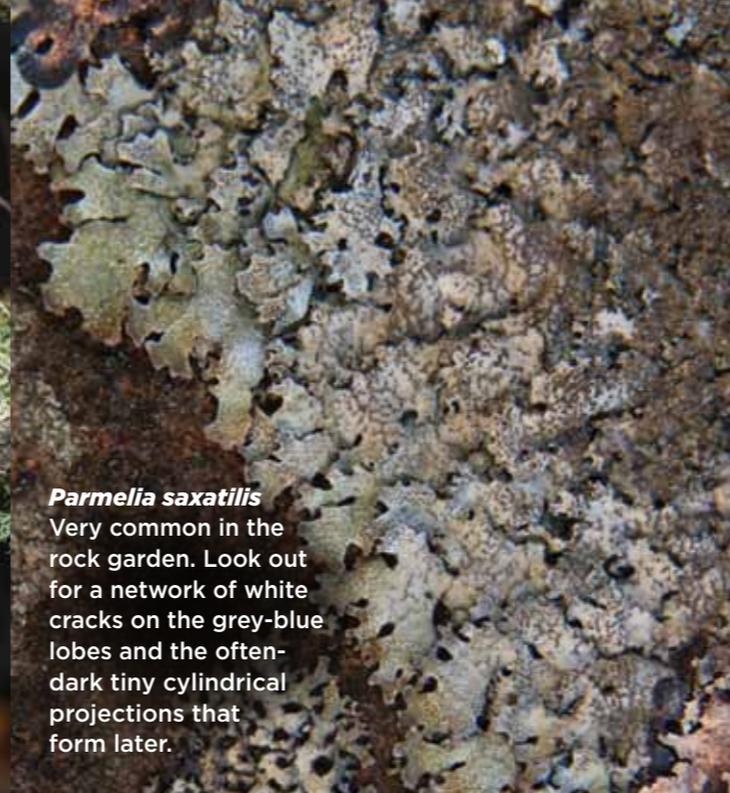
Diversity of habitats for lichens in the Garden

Explore the Garden and see if you can find...

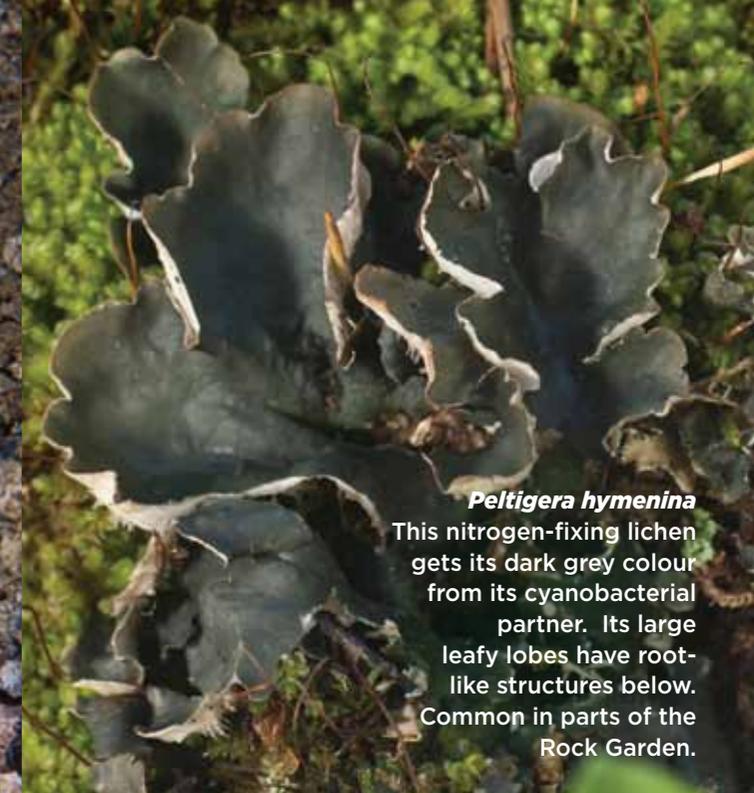
Lecanora muralis ▶
The 'chewing gum' lichen is found on many pavements, especially in front of the main glasshouse range.



Usnea subfloridana
A common bushy lichen on deciduous twigs, often up high in the canopy. Branches round in section.



Parmelia saxatilis
Very common in the rock garden. Look out for a network of white cracks on the grey-blue lobes and the often-dark tiny cylindrical projections that form later.



Peltigera hymenina
This nitrogen-fixing lichen gets its dark grey colour from its cyanobacterial partner. Its large leafy lobes have root-like structures below. Common in parts of the Rock Garden.

Non-natural

Trees & Shrubs

Rocks

Soils



◀ Lichens are not just on twigs and trees. Look out for them on all sorts of stable habitats. Grey ***Parmelia saxatilis*** (left) and brown ***Melanelixia fuliginosa*** are on labels in the rock garden.

Melanelixia glabratula ▶
Common and easy to overlook, with brown or green rosettes and shiny lobe tips. ***M. glabratula*** is common on trunks, while ***M. subaurifera*** is more often found on twigs.



◀ ***Rhizocarpon reductum***
Have a close look on the coping stones near the bridge to see this lovely lichen. It forms tiny concentric rings of spore-bearing discs.

Lepraria sp. ▶
A powdery crust that is common on rocks, bark or soil sheltered from direct rain. Nothing but tiny balls of fungal threads wrapped around a few algae!

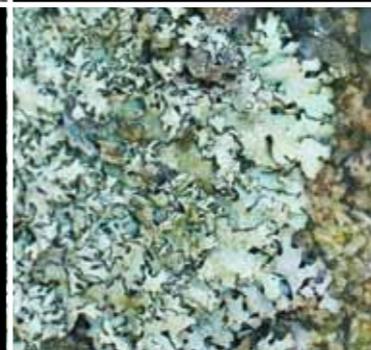


Mortar on old walls ▶ is a good place to find tiny crusty lichens like these, with the cream-colored spore-bearing "o's" of ***Lecanora dispersa*** mixed with yellow ***Caloplaca citrina***.



◀ ***Parmelia sulcata***
Common on twigs, branches and trunks of trees and shrubs. Look out for a network of white cracks on the lobes and the powdery masses that arise from them.

Xanthoparmelia conspersa ▶
This leafy lichen is common on the stones south of the John Hope Gateway. The edges of the lobes are smooth and greenish.



◀ ***Cladonia chlorophaea***
These 'pyxie cups' are common on thin soils or moss over rocks in the rock garden and near the south side of the John Hope Gateway.