

Cladonias



Cladonia pocillum above, *Cladonia portentosa* below.

Cladonia squamosa above, *Cladonia polydactyla* below.

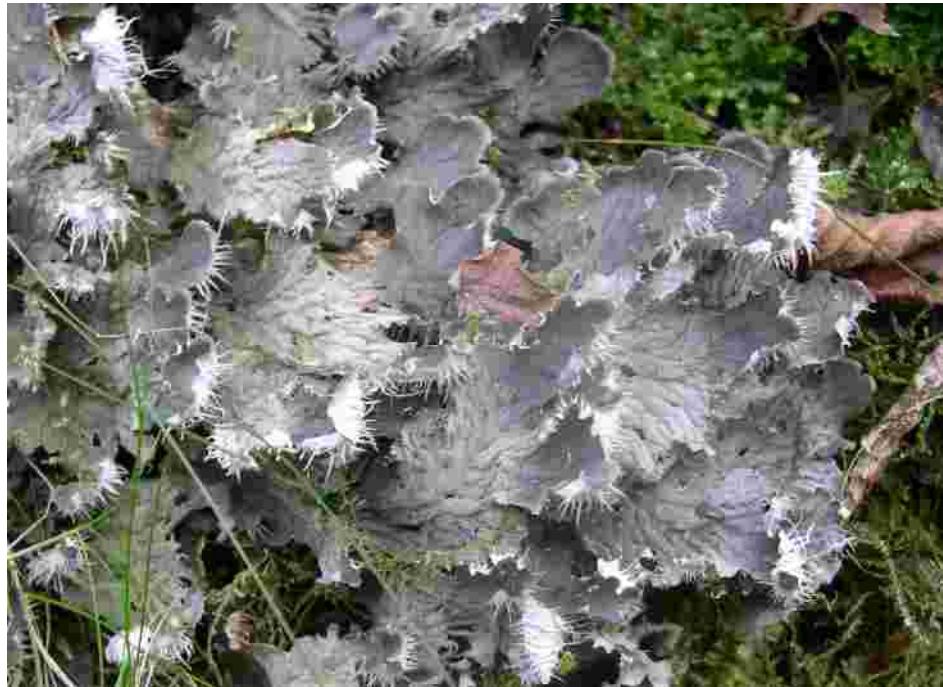
Cladonias are a common, diverse and fascinating genus of lichens. The classic *Cladonia* comprises two components, a number of small leaf-like basal squamules, from which grow upright structures called the podetia, which carry the fruiting bodies. *Cladonia pocillum* (top left picture) is an example of such an arrangement. Young *Cladonias* start by developing squamules and then develop podetia, but some species do not develop podetia when mature. The podetia can take many forms including cups, as in *Cladonia pocillum* (top left figure), irregular uprights, as in *Cladonia squamosa* (top right figure), or become highly branched, *Cladonia portentosa* (bottom left figure). Most have brown fruits on the podetia but some have red fruits and look like matches, as in *Cladonia polydactyla* bottom right.

Most *Cladonias* grow on acid substrates. While some grow directly of tree bark, others grow on rotting wood, among moss, or directly on bare soil surfaces. Further, many can be found as pioneer species on recently disturbed sites, such as quarries, road cuttings etc. They are important components of lowland heaths and upland moors.

Unfortunately from the point of view of identification there are numerous species, too many to be separated in this project. Some individual species can be quite variable and their diagnostic features quite subtle. Further, several species often grow together. However, it is difficult to resist their extraordinary appearance, and that coupled with their widespread occurrence, makes them fascinating lichens.

Record all as *Cladonia*.

Peltigeras



Peltigera membranacea.

P. horizontalis above, *P. canina* below.

*Peltigera*s are typical leafy (foliose) lichens and are among the largest of the commonly occurring lichens, growing to 20-30 cm in diameter. They are also different from all the other lichens described here in that in most *Peltigera*s the fungus is associated with a blue-green alga (now called a cyanobacterium) rather than a green alga. This results in most of them having a grey to grey brown colour which becomes darker and more glossy when wet. The few, rare *Peltigera*s with a green alga present are bright green when wet.. *Peltigera membranacea*, left-hand figure is typical of the common *Peltigera*s ,with large, rounded, thin, partly overlapping lobes. A feature of the *Peltigera*s is long hairs (rhizines) on the underside which anchor the lichen, bottom right figure. The rhizines often grow along raised or dark coloured 'veins' on the underside. The red / red-brown / brown fruiting bodies (apothecia) are born on extensions around the margin of the lobes, top right figure.

Many *Peltigera*s appear to be fast-growing compared to other lichens, and often occur as pioneer species, colonising bare soil, or among turf or moss, on recently disturbed sites, such as quarries etc. They are also found growing on soil in lowland heaths and upland moors, on mossy tree trunks and moss-covered walls. Some species are typical of ancient woodlands. One of the few types of lichens that can grow amongst grass and fast growing mosses.

Record all as *Peltigera*.

Usnea



Usnea florida



Usnea subfloridana

Lichens belonging to the genus *Usnea* have a characteristic stringy or fibrous appearance. They are typical bushy (fruticose) lichens, usually found on tree bark, where they may grow upwards or hang down. They are found in areas of low atmospheric pollution. There are too many species to include here. However, if you come across *Usnea florida*, with its large round fruiting bodies (upper left figure), please make a record, as this lichen appears to be under pressure from pollution and its current distribution is poorly known.

Try to resist collecting these beautiful lichens as many are quite uncommon.

Record all as Usnea, unless you find the distinctive Usnea floridana.

Script lichens (lirellate lichens)



Graphis scripta growing on smooth tree bark.



Graphina anguina growing on smooth bark.

Script lichens (lirellate lichens) have long drawn-out apothecia that may branch and curve giving the appearance of hieroglyphics or handwriting. They are quite common on smooth-barked trees, especially those in shade. Different script lichens can occasionally be found growing on rock surfaces. They make a fascinating find, however, their identification usually needs a microscope.

Record as Script Lichen.