Looking at Lichens 19/3/2023

17 of us (including a volunteer leader and backmarker from Friends of Troopers Hill) enjoyed a fascinating walk with Dr David Hill. Meeting at the Summerhill Terrace entrance on Troopers Hill Field field lenses were loaned to all the attendees. The purchase of the lenses was funded by a small grant from the East Bristol Liveable Neighbourhood project.

Pausing by the Norway maple tree (Acer platanoides) at the edge of Troopers Hill Field before entering the Hill we had an introduction to lichens and the use of field lenses. David pointed out the foliose lichen, Parmelia perlatum.

Black Stone Flower (Parmelia perlatum)

Walking on to the entrance to Troopers Hill Local Nature Reserve we paused by the "standing" stone that may have been an old stile and looked at the crustose lichen, Lecanora campestris. This lichen is self-fertile so patches will grow and merge together with no discernable boundaries. The edges of this lichen are fimbriate (set with a fringe of hair).

Lecanora campestris

Moving on to Troopers Hill Local Nature Reserve we looked at a rock covered in the dust-like Candelareiella vitellina – Common Goldspeck. There were also patches of the Chewing Gum lichen, Lechanora muralis, so called before its proliferation on paving slabs where people assume it is discarded chewing gum. While this is a crustose lichen its edges are slightly raised and can overshadow competitors.

Chewing gum lichen

Lecanora muralis

Going down in to the gully we looked at bright light green Psilolechia lucida powdering an outcrop of damp, pennant sandstone rock. There was also a grey dusty lichen, Lepraria incana.

Psilolechia lucida and Lepraria incana

David also pointed out the brown Opegrapha gyrocarpa

Climbing out of the gulley we enjoyed the warmth of the sunshine in a sheltered hollow and found fruticose lichens Cladonia portentosa and Cladonia floerkeana (Gritty British soldiers lichen).

Cladonia portentosa

Cladonia floerkeana

The bright yellow of Xanthoria polycarpa was identified on a heather twig, leading to a discussion to the usefulness of this lichen as a pollution indicator showing high levels of nitrogen, most of it, in this area from traffic pollution.

The final lichen discussed was Peltigera membranacea. You can just see its leafy form in the background of this photo of Cladonia floerkeana. This lichen uses a photosynthetic bacterium (cyanobacterium) to carry out its photosynthesis.

Of particular interest were discussions of why some plants do not survive in calcareous soils. Calcium blocks the uptake of iron which is why, in Bristol, where limestone is common, it is unusual to find heather occurring naturally. Troopers Hill, with its pennant sandstone is the only heathland in the area.

Facts that caught the imagination ranged from fungi creating a waterproof coating on an alga and then channelling only as much water as the alga would needed, preventing it from absorbing too much water and dying. The locations where lichens can be found, from the tops of mountains to hundred of metres beneath oceans were also astounding. The variations in reproduction led to discussions about mutation and genetics.

Friends of Troopers Hill are extremely grateful to Dr Hill for talking to us about lichen. We hope he will be back with a group to carry out a survey in summer.

To find out more

The British Lichen Society has a very useful website

https://britishlichensociety.org.uk

Dr Hill told us about a gravestone when only the letters had been highlighted by Psilolechia lucida. This can be seen on

https://britishlichensociety.org.uk/conservation/churchyard-lichen-conservation

The Field Studies Council provided laminated foldout guides to a range of lichens.

https://www.field-studies-council.org/?s=lichen+guides

they also provide courses

The book used by many lichen enthusiasts is “Lichens – An illustrated Guide to the British and Irish Species” by Frank S Dobon.