

# Nature's patterns

Lichens are not the most obvious subject for the macro photographer, but as **Robert Thompson** explains, winter is the prime time for focusing on the intricate and colourful patterns of these overlooked life forms



**Caloplaca flavescens** This is a fairly common species, which forms colourful rosettes on calcareous stones, walls and headstones in old churchyards. It has a conspicuous white circle within the rosette. Shooting on a tripod is a must for species on rocks if you want to render the finest details sharply  
*Nikon D3X, 105mm macro lens, ISO 100, f/16*

## Macro Matters

The peak of the winter may seem an unusual time to begin a regular column on macro photography since the flowers and insect life have long past their best. However, unlike some other photographic disciplines, which may be seasonal, macro photography is not. Of course, the choice of subject material changes as the seasons progress, but this is what I enjoy about the miniature world, the diversity that nature has to offer throughout the year. Winter is that bit more challenging; many photographers at this time of the year enter what I call “seasonal dormancy” or “diapause” – emerging again in spring when the nights are brighter and the weather warmer.

The downside to this, of course, is the fact that you lose a certain degree of familiarity with the workings of your equipment. Any progress that you have made in terms of fieldcraft or refining your techniques is compromised due to inactivity and lack of practice. After all, you would not expect a professional footballer to play 90 minutes on the field if he had spent the last few months lying about. This is equally true in photography; it is important to keep up your interest during the less productive months; it keeps you in

**Ochrolechia parella Pertusaria pertusa & Porpidia crustulata**  
Old churchyards are a great place to explore for lichens.  
Older headstones usually contain many different species,  
which form all sorts of patterns in the stone  
*Nikon D3X, 200mm macro lens, ISO 100, f/16*



touch with your equipment, techniques and fieldcraft skills. Remember the camera is the last link in the photographic process – knowledge and fieldcraft are the tools that create the opportunity.

### Unknown potential

Lichens don't receive that much attention in the macro world in comparison to flowers and insects. This is a pity because many are indeed photogenic, and the diversity among species in terms of colour and structure is amazing. They are a fascinating group of organisms and a familiar part of our landscape that for the most part largely go unnoticed.

Lichens are at their best during the winter months when the trees are devoid of leaves and the moisture level in the air is higher. Many species have a colourful vibrancy to them at this time of the year, particularly after rain. These remarkable organisms are the result of a successful partnership between a fungus and an alga, or a cyanobacterium, or both, existing together in a symbiotic relationship. The fungus provides the structure (or thallus as it is known) and the alga, or cyanobacterium, through photosynthesis provides the essential nutrients. This is a highly successful partnership that stems back millions of years. Many lichens are also sensitive to pollution and are important biomonitors of the health of our environment. They grow in some of the most unlikely places and manage to survive in the most inhospitable places on earth.



The larger eye-catching species form patchworks of colour on rocks and decorate the trunks and branches of trees, and gravestones. They also have many other applications and are used in medicines, perfumes and as dyes to colour wool and other fabrics. They are also an important food source for snails and slugs and many insects including the larvae of some moths. There are over 1700 species of lichen described in the British Isles and probably many more awaiting identification and discovery.

### Ideal habitats

Most people are more aware of lichens in a coastal environment. The vibrant orange and yellow colours of *Caloplaca* and *Xanthoria* are some of the most common species seen on coastal rocks. This is a good place to begin your explorations. Old native woodlands also contain a large number of species, but a little more diligent searching of the trunks and branches of trees are required to find some of the most interesting species. Some lichens form patterns and mosaics on certain trees such as holly and hazel and these should be examined, especially the older specimens. Heaths and bogs are good for *Cladonia* species, which resemble redheaded matches and deer antlers.

Old churchyards are also excellent habitats for Crustose species – these are lichens that spread and embed themselves into the rock and cannot be removed from the surface. Many thrive on the various types of gravestones and monuments forming patterns. The most productive are those that are

**Above: *Xanthoria aureola* *Ramalina siliquosa* & associated species** A typical coastal rocky shoreline with a wide diversity of species. The rocks in the foreground were only several inches from the front of the lens. Using a perspective control lens allowed me to maintain sharpness in the foreground through to infinity  
*Nikon D3X, 24mm PCE lens, ISO 100, f/16*

well weathered and have been neglected for many years. If you plan a photographic trip to a churchyard choose a day with no rain as many of the species that inhabit rocks are better photographed in dry conditions. This also applies to upland mountainous areas as well.

**Below: *Schismatomma niveum* & *Lecanactis abietina*** Many lichens form patterns on the bark of trees. This old holly tree produced a number of different possibilities  
*Nikon D3X, 200mm macro lens, ISO 100, f/16*





## Identification

Most photographers do not set out specifically to photograph lichens, but encounter some of the richly coloured species by chance and can't resist the opportunity to photograph them, especially if there is little else about. Identification is the major problem for many photographers, but there are a number of publications and websites devoted to the study of lichens, which include photography to assist in the identification of many commonly encountered species. Unfortunately, only a small number of lichens have established common names. Below are a list of websites and publications, which provide information on lichen biology, identification and species information and distribution

**Below: *Teloschistes chrsophthalmus*** This is one of Britain's rarest lichens, which was only rediscovered in England in 2007 and subsequently in the west of Ireland in 2008. The specimen is about the size of a one pence piece. We drove seven hours on a very cold January day to the southern tip of Ireland to get the first images. I carried a set of steps, which were absolutely critical as the specimen was about seven feet up on a branch. My large studio Benbo tripod was at full height including the central column. The terrain was extremely wet and soft, to reduce vibration the upper part of my pond net was attached to the branch and then tied it to the centre column to stabilise the whole assembly  
*Nikon D3X, 105mm macro lens, ISO 100, f/16, flash*

## Photographic approach

Believe it or not photographing lichens can be a frustrating business. I often find the most interesting specimens grow in extremely awkward places. My interest in this group was purely casual, up until ten years ago when my involvement in a high profile photographic contract, along with some of Britain's leading lichen experts, changed my opinion. Having to photograph subjects from half a centimetre upwards in the field in all sorts of conditions was indeed challenging. I ended up devising all manner of devices that would make the process easier, especially when dealing with smaller species. There were times I had to climb steps to reach specimens on branches, or lie flat on my chest in bogs.

Vibration can be a problem at higher magnifications, even when using a focusing rail. Making sure the tripod is absolutely secure is a critical factor as the terrain is not always

**Above: *Cladonia floerkeana*** This lichen is sometimes referred to as the devil's matchsticks and inhabits moors and bogs

*Nikon D3X, 105mm macro lens, ISO 100, f/16, fill-flash*

that solid. I have had my large Benbo in every conceivable position and in some of the most difficult environments just to get the shot. I learned a lot about these organisms during the eight-year contract. It convinced me that the combination of a natural history specialist working in partnership with his/her photographic equivalent produced a far more successful outcome as they each brought their own level of expertise to the project.

## Light and lenses

I shoot the majority of lichens using natural light and always on a tripod. I prefer the 105mm macro as it gives me



**Right: Orange-finger Lichen *Caloplaca thallincola* & *Caloplaca verruculifera*** Known as orange-finger lichen, this vibrant species is found on rocks in coastal localities. Aligning the camera back parallel to the rock face was essential in this case to maintain sharpness right to the edge of the frame  
*Nikon D3X, 200mm macro lens, ISO100, f/16*

a comfortable working distance between the lens and subject. When light is strong and directional, I attach a diffuser via a gooseneck, which clamps to my tripod leg. I can position it to soften the light and reduce the shadows. All macros are corrected for flatness of field and will deliver edge-to-edge sharpness, which makes them ideally suited to this type of photography.

Most macro lenses have continuous focusing up to 1:1 (lifesize), which saves having to add and remove extension tubes in the field. However, if you don't own a macro you can still take excellent close-ups of lichens using a short telephoto lens around 100mm combined with extension tubes. The curvature in the glass in non-macros makes it difficult to retain sharpness right to the edge of the frame. You are better reducing the magnification of the image on screen to take this into consideration and then crop. ○

### Useful websites

British Lichen Society

[www.thebls.org.uk](http://www.thebls.org.uk)

Lichen Ireland

[www.habitas.org.uk/lichenireland](http://www.habitas.org.uk/lichenireland)

Alan Silverside's Lichen Pages

[www.lichens.lastdragon.org](http://www.lichens.lastdragon.org)

### Publications

*Lichens: An illustrated Guide to the British & Irish Species*, by Frank Dobson. Richmond Publishing.

*Lichens*, by William Purvis. Natural History Museum

**Robert Thompson** is an accomplished natural history photographer, writer, and naturalist living in Ireland. He is an acclaimed macro specialist and author of a number of books on natural history and photography. His work is widely published in the UK, Ireland and internationally. To view more of his work, visit [www.robertthompsonphotography.com](http://www.robertthompsonphotography.com)

