

QUARTERLY NEWSLETTER

Newsletter No. 165

Spring 2019

*Chorley and District Natural History Society is a
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EDITORIAL

As I write these words towards the end of May, bird migration is virtually complete. There is the usual anxiety as to whether Swift, Swallow and House Martin numbers have reduced again, although all three species have now arrived in the area. It would be useful if all members who are aware of nesting sites of Swift and House Martin would let us have the records so we can monitor their populations and pass the information on to the relevant agencies.



Information on House Martin Nesting Sites Requested

Our 40th Anniversary year is fast heading to the half-way point. To date, 50% of the nest boxes proposed have now been made. Thanks to Paul West for constructing them and to all those who gave donations for the materials. Trees have been potted up ready for planting out as suitable sites are identified. We have made contact with local schools in this regard. We held a Bio-blitz in Astley Park during the May Day bank holiday. Sadly, adverse weather meant that very few members of the public were in the park on the day. Nevertheless, several of us covered the site, and we successfully recorded over one hundred species, which had been set as a notional target. Details will be published in the next newsletter. We hope to re-run it at the end of August in hopefully better conditions, and probably with more of an emphasis on insects.

This Newsletter sets out the remainder of the Evening Walks programme, and the full programme of next season's indoor meetings, which looks to contain plenty of variety including Gordon Yates 40th Anniversary talk. See you all there.

Neil Southworth (Editor)

FLORA REPORT

I did my usual check of which flowers were out on January 1st. I had gorse, common daisy, hazel catkins, a single wood avens, groundsel and some snowdrops.

The snow in mid-February and the very cold March slowed some flowers down. Plants are quite hardy, so in February it didn't stop Dog's Mercury, Butterbur, Lesser Celandine and Primrose.

In March we had wood anemone, ramsons, moschatel, garlic mustard, red campion, marsh marigold, fritillaries outside the Barn in Cuerden Valley Park, opposite-leaved golden saxifrage, ivy leaved toadflax and wavy bittercress. At the end of winter (21 March) at least three bluebells were in flower, which is the earliest I can remember. Hopefully all these early blossoming flowers will have helped our bees. The photo is of garlic mustard one of the food plants of Orange Tip butterflies



David Beattie

FUNGI REPORT

This time of year is not the best for fungi, however there are always some species that have fruiting bodies at this time of year. January was by far the best month with a few fruiting species still hanging on from 2018

January



Velvet Shank amongst the species recorded at Roddlesworth

From Roddlesworth Woods were reports of Grass Oysterling, Jelly Ear, Velvet Shank, Purple Jellydisc and Clustered Brittlestem. In Chorley Cemetery the Clouded Funnel, Yellowing Knight and Oyster Mushroom were still fruiting and Stinking Dapperling made a brief appearance. From Tanhouse Brook Woods at Great Knowley Scarlet Elfcup, Velvet Shank, Winter Polypore, Blackleg Polypore, Jelly Ear and Purple Jellydisc were noted. At Lead Mine Clough, Scarlet Elfcup, Turkeytail and Jelly Ear were seen. From Heatherlea Woods Jelly Ear, Turkeytail and Winter Polypore were reported. However the top fungi for the whole 3-month period was a Dog Stinkhorn seen near the River Darwen in Hoghton Bottoms. This species is usually recorded between June and October, so a January appearance is most unusual.

February – There were many fewer species seen in February following the frosty weather in late January, but In Chorley Cemetery the Clouded Funnel and Oyster Mushroom were still hanging on. Elsewhere reports of Scarlet Elfcup came from Yarrow Valley Park, Withnell Fold Nature Reserve and near Adlington Reservoir.

March – fungi were again hard to come by, but in the wetter first part of the month there were plenty of Yellow Brain Fungus and some Crystal Brain Fungus, along with Jelly Ear, Scarlet Elfcup, Velvet Shank and Fragrant Funnel seen in Tanhouse Brook Woods.



Fragrant Funnel

Len Poxon

BIRD REPORT

January

Two Waxwings were still feeding on the rowans behind the council offices on New Year's Day, but by the 2nd they'd moved on. Two were seen in Adlington on the 2nd, but didn't stay, so may have been the same birds heading south.

Another New Year's Day bird was Little Egret, seen along Syd Brook at Eccleston. In fact, it was the first of multiple sightings during the month, perhaps indicating that the species is now established in the area. Sightings came mainly from the west, including Bretherton Eyes, Croston Moss and the Eccleston area, but there was also one at Upper Rivington Reservoir on 23rd and 26th.

Whooper Swans were seen feeding on the mosses with a peak count of 17 on Bretherton Eyes on the 19th. A party of 6 flew over Lower Healey heading east on the 12th. Pink-footed Goose records were mainly of skeins flying over including approximately 1000 over Bretherton Eyes on the 6th. Around 100 were down feeding on the site on the 13th. Scarcer duck species included a Shoveler on the E-shaped Pond on the 3rd and another on High Bullough Reservoir on the 4th.



Three Gadwall were on Park Hall lake on the 30th.

Mandarin Duck records included 13 at Croston (15th), 10 on Common Bank Lodge (17th) and 4 at Arley nature reserve (19th). Shelduck numbers on Bretherton Eyes increased from one on the 3rd to 3 by the 30th. Surprise of the month however was a female Mallard with 4 ducklings at Ulnes Walton on the 24th.

Six species of wader were seen – Lapwing, Redshank, Green Sandpiper, Snipe, Jack Snipe and Woodcock.



Snipe was one of the six wader species seen

The largest lapwing flock was one of 140 on Croston Moss on the 19th with one of 100 at Hic Bibi on the 3rd. The Redshank (up to 3) and Green Sandpiper were seen throughout the month on the Douglas at Eyes Lane. A Water Rail was in Yarrow Valley Park throughout.

Merlin were well recorded with birds on Bretherton Eyes, at Belmont and at Withnell Fold. A couple of Peregrines were around Morrison's chimney during the first week, but all other records came from the mosses. Buzzard continues to be the most recorded raptor with sightings from 8 locations across the area. Barn Owls were noted at Bretherton, Croston, Eccleston and Mawdesley, indicating that the species is thriving out west.

Several sessions at the Lower Rivington gull roost produced sightings of Yellow-legged Gull, Mediterranean Gull, Kittiwake and a possible Caspian Gull. A feature of the winter has been the massive flock of Stock Doves which commuted between Croston Finney and Bretherton Eyes and which numbered over 200 on several dates. It seems to be the prevailing view that the 'Beast from the East' back in 2018 took a toll of Kingfishers. We received records from Astley Park, Common Bank and Cuerden Valley Park, but tellingly, there was no record from Yarrow Valley Park during the month despite good coverage. There seems to have been no such problem with Dipper with records from Euxton, Lead Mines Clough, White Coppice and Yarrow Valley Park. Great Spotted Woodpeckers were well recorded with sightings from six locations. Two Ring-necked Parakeets were seen flying north towards Astley Village on the 20th.

Double figure flocks of Redwing and Fieldfare were noted at several locations with the best being 40 of the former on Croston Moss (20th) and 120 of the latter on Bretherton Eyes on the 2nd.



Records of Brambling were received from members' gardens but the most impressive flock was one of 40 from Alance Bridge, Yarrow Reservoir on the 13th.

3 Crossbill were in Lead Mines Clough on the 19th and 3 Siskin were at Common Bank on the 26th. A flock of 15 Lesser Redpoll was in Heatherlea Woods on the 7th. A flock of 130 Linnet was on Bretherton Eyes on the 2nd. Other noteworthy flocks included 20 Corn Bunting on Bretherton Eyes (3rd) and 50 on Crosston Finney (20th). 300 Starling were at Charnock Richard on the 12th. Finally, Willow Tits were noted at Hic Bibi and Welch Whittle, and Stonechat on Croston Moss and White Coppice.



Siskins seen at Common Bank

February

Multiple records of Little Egret were again received with the best being 6 together in a field at Eccleston with other sightings from Bretherton Eyes and Croston Finney, and just one from the east at Heapey No.3 lodge. The three Gadwall remained on Park Hall lake throughout, the attraction appearing to be the surface pond weed. A Wigeon was on Croston Twin Lakes (9th) and 4 Pochard were there on the 24th. Goldeneye were on High Bullough Reservoir (2nd) and Croston Twin Lakes (17th).

Nine species of wader were recorded. Three of these were from the plover family including a Ringed Plover on Croston Finney on 24th & 25th. 25 Golden Plover were on Bretherton Eyes (1st) and 12 were on Croston Moss (3rd). Flocks of Lapwing included 120 on Bretherton Eyes (1st), 103 at Euxton (1st), 300 at Brindle (5th) and 115 on Gale Moss (13th). Oystercatcher and Curlew put in their first appearances of the year with 2 of the former on the Douglas at Bretherton (10th) and 2 of the latter on Tincklers Lane Fields (22nd). Green Sandpiper and Redshank were again seen regularly on the Douglas at Bretherton.



Golden Plovers

Raptor records were confined to the four regular species – Buzzard (70< Sparrowhawk (2), Kestrel (3) and Peregrine (3). The first Little Owl record of the year was received from Withnell on the 21st, whilst Barn Owls were noted at Great Knowley and Bretherton.

The Lower Rivington gull roost contained Yellow-legged Gull and 9 Mediterranean Gulls on the 17th. The Stock Dove flock at Bretherton Eyes numbered 250 on the 16th. Over 40 Magpies were seen going to roost in Buckshaw Village on the 5th. Dippers were recorded at 4 sites and Kingfisher also at 4, but none yet at Yarrow Valley Park. Great Spotted Woodpeckers were again conspicuous, being noted at 8 sites.

Best of the winter thrush flocks were 50 Fieldfare on Bretherton Eyes (10th) and 40 Redwing at Tincklers Lane fields (14th). The only Brambling record was of 2 in an Euxton garden on the 23rd. Over-wintering summer visitors included Blackcap at the Gillibrands (3rd), at Euxton (23rd) and at Great Knowley (23rd) and Chiffchaff at Croston sewage works (17th) and one singing at Croston Twin Lakes (24th). A flock of 25 Crossbills was at Lead Mines Clough on the 1st. Siskins were well recorded at 4 sites, and a flock of 225 Linnet was on Croston Moss on the 1st. Other flocks included 100+ Skylark on Bretherton Eyes on the 2nd and 500+ Starling at the same site on the 16th. Encouraging numbers of Corn Bunting were seen including 20 on Croston Finney (2nd), 40 near Croston Twin Lakes (3rd) and 40+ on Bretherton Eyes (10th).



Corn Buntings seen around the Croston Moss Areas

March

A Great White Egret at a pond in Tincklers Lane fields on the 5th was a very pleasant surprise for the observer. Unfortunately, it didn't linger, unlike Little Egret which could be found throughout the month on the mosses, particularly Bretherton Eyes, where 2 were seen on the 30th. After a blank month in February, Whooper Swans reappeared on Croston Finney, peaking at 25 on the 20th. Pink-footed Geese were also feeding at the site for much of the month with a best count of 30 on the 25th. Gadwall numbers at Park Hall increased to 6 for a few days from the 3rd and at least 4 were still at the site on the 26th. A Shoveler was on Smith's lodge at White Coppice on the 29th.

Nine species of wader were recorded. A Ringed plover was again on Croston Finney on the 2nd, then 2 Little Ringed Plover appeared on Bretherton Eyes on the 31st. A Dunlin was also on the small flood on Croston Finney on the 5th, and 2 flew over Hartwood on the 9th. The Green Sandpiper was last recorded on the 3rd on the Douglas at Bretherton. Redshank numbers at Bretherton Eyes peaked at 5 on the 17th. Oystercatcher and Curlew were dispersing to their breeding territories with the former recorded at 5 sites and the latter at 6, with a count of 35 at Belmont on the 5th.

A Merlin was near Croston Twin Lakes on the 1st, with all other raptor records relating to the resident four species. Buzzards were recorded at 7 sites, Sparrowhawks at 5, Kestrel at 4 and Peregrine just on Bretherton eyes on a couple of dates. Unfortunately, the pair which bred in Chorley for the past few years appear to have changed their allegiance to a site at Wigan. A Little Owl was on Croston Finney on the 20th, as was a hunting Barn Owl. A pair of the latter was at Mawdesley on the 31st. Tawny Owls were noted at Anglezarke, Croston and Eccleston.



A flock of 100 Fieldfare was noted on Croston Finney on the 5th, but had reduced to 25 by the 25th.

40 Redwing were at Brindle on the 11th and 12 were still along Syd Brook on the 28th. Summer visitors were starting to arrive with the first (3) Sand Martins at Cuerden Valley Park on the 11th, and 25 counted over Croston Twin Lakes on the 30th.



The first Swallow was over the E-shaped Pond on 31st.

Two Wheatear were on Winter Hill on the 23rd, 2 were on Withnell Moor (24th) and 3 were above Lead Mines Clough (31st). 2 Chiffchaff at Croston sewage works were probably over-wintering birds with the favourite for the first new arrival being one singing at Ecclestone on the 9th. Blackcaps at Coppull (23rd) and Ecclestone (25th) were probably still over-wintering birds.

Crossbill were again noted at Lead Mines Clough, but on this occasion (30th) just 2 birds were seen. A feature of the winter has been the sizeable flocks of Corn Bunting which have been recorded, but one of 78 on Bretherton Eyes on the 6th was exceptional.

Many thanks to the following for submitting records:-

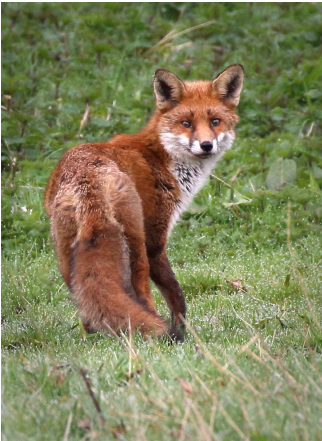
I.Ball, D.Beattie, D.Beevers, P.Brennan, M.Cookson, B.Derbyshire, P.Djali, D.Downing, T.Dunn, J.Edwards, M.Fishwick, J.Frankland, M.Graham, M.Greenhalgh, L.Griffiths, P.Hodson, J.Howlett, R.Hoyle, C&T.Johnson, P.Kirk, J.Kirkham, P.Krischkiw, E.Langrish, A.Leach, G.Lilley, S.Martin, M.Nightingale, D.Morrison, D.North, L.Poxon, J.Riley, P.Rhodes, V.G.Rhodes, N.Root, L.Rose, P.Ross, P.Rowlands, N.Southworth, R.Spencer, M.Stuart, J.Sutton, C.Thistlethwaite, N.&T.West, P.West, T.Westhead, K.Woan.

Please continue to send your records to the forum or the editor.

Neil Southworth

MAMMAL REPORT

I'm sure that mammals are finding our mixed-up seasons just as confusing as we are. After a late February that resembled April and a March that resembled January, they had uncertainty about where some of their food was coming from. We had several reports of **Roe deer**. Cuerden, Rivington, Hoghton, and Anglezark all reported sightings but the maximum number of reports came from the former quarry at Great Knowley.



Foxes were less conspicuous but records again came from similar places:- Brindle, Astley Park area, Great Knowley and Cuerden. This may be where our main recorders visit as much as the mammals.

A few sightings of **Brown Hare** from Bretherton and the E shaped ponds, which I guess are reasonably close to each other.



We even had a report of a **common pipistrelle bat** on March 20. This was when the weather returned to typical March type. We have also had a report of a new badger sett, the location of which is confidential, but has been sent to the Lancashire Badger Group. To those who send records, many thanks. Keep up the good work

David Beattie

CLIMATE CHANGE AND TREES

There are those who deny that our climate is currently changing and we are becoming warmer, despite the scientific evidence to the contrary. But my garden says differently. For some years my *Viburnum bodnantense* 'Dawn', despite the RHS saying it is a December to March flowering shrub, has flowered earlier than this. In 2018 it started flowering in early September and this season, in mid-December, it was definitely at the end of its flowering period. Also, for many years after my return in 1964 from East Africa, I used to take plants to AGS May shows to display some of my collection of dwarf alpine Rhododendrons. Now I no longer show the same plants as their flowering is over by the end of April. This type of evidence can be repeated by gardeners and horticulturalists throughout the British Isles.

The climate gets warmer, the climate gets colder. This has been the pattern in Britain for more than a million years. There have been some six major Ice Ages in this time with several milder cold periods and five major warm Interglacial periods. We are currently climbing out of the Devonian Glaciation which, at its peak about 27,000 years ago, covered Britain almost as far south as the River Thames in a great expanse of ice. This great volume of water locked up as ice meant the level of the sea dropped markedly and it was only when the ice began to melt that the sea level rose. One consequence of the rising sea was that Ireland became an island sometime between 18,000 and 14,000 BC whilst Britain separated from the European mainland around 6,000 BC. Up until then humans were able to walk across the chalk ridge which joined the southern chalk downs of England with the chalk hills of France that extended into what is now Champagne country. How warm and how long the current interglacial will be we cannot say but all the evidence is that, because of excess production of CO₂, it will be a much more seriously warm period than any past interglacial even though in some we experienced a warm climate in which sub-tropical plants and a selection of tropical animals such as hippopotamus and rhinoceros flourished. Some climate scientists are warning that the melting of the Arctic and Antarctic icecaps will lead to the sea level rising by around 50 feet.

Parallel to the increase in warmth has been an increase in Carbon Dioxide (CO₂) in the atmosphere. In the very earliest days of the Industrial Revolution, around 1750 AD, the level of CO₂ in the atmosphere was around half of the level it has reached today of some 400 -410 parts per million. This product of our profligate burning of fossil fuels, coupled with the quantities of Methane produced by ruminants such as cattle, has produced a great layer of these gases in the upper atmosphere surrounding our planet and acting as a blanket to keep heat from dissipating. It could be worse as about 20 – 30% of the world's CO₂ production is locked up in the different carbohydrates found in trees across the world.

Sadly, we are heedless and demand energy to be freely available, regardless of the environmental cost. A proportion of our energy requirements are produced by means which do not involve, at least directly, the release of CO₂ consequent on the burning of fossil fuels with a high carbon content. These carbon free energy resources need to be even more widely developed. Nuclear power is attractive in the CO₂ free production of energy but it entails massive problems with the disposal of spent fuels. But there are

alternatives without these problems. Water power leading to the production of Hydroelectricity has long been practised especially in Scotland. Wind power has become increasingly important in producing pollution free power – earlier this year, on one day, over 30% of all our power requirements were met by wind power. Sadly, planning protests have meant that only a small proportion of our wind generated power comes from land-based installations as developers have been forced to move to wind power farms located out of sight out at sea – an unnecessarily expensive solution. A third source of pollution free power has been solar panels, but again this means covering land, which could be used for other valuable purposes, with not particularly beautiful panels.

Another source of energy which has been neglected is the sea, whether it is tidal power or wave power. It has a great advantage compared with solar or wind power of always being with us – the tides roll in and the tides roll out – and are capable of generating electricity whichever way they flow.

In parallel, we need to look at means of carbon capture to reduce, as much as we can, the level of free CO₂ in the atmosphere. This is something which can easily be achieved by planting many more trees. The wonderful process of photosynthesis carried out by all green plants means that they use the energy from the captured sunlight to split apart water (H₂O) and combine it with atmospheric carbon dioxide (CO₂) to make organic carbon, initially in the form of glucose (C₆H₁₂O₆). In trees this may be converted into complex carbohydrates which make up the main bulk of the tree so that the CO₂ is locked away for a great many years. If the timber, when finally available, is not burnt but used to make buildings or furniture this CO₂ is not freed to escape into the upper atmosphere and increase the blanket effect that keeps the earth warm.

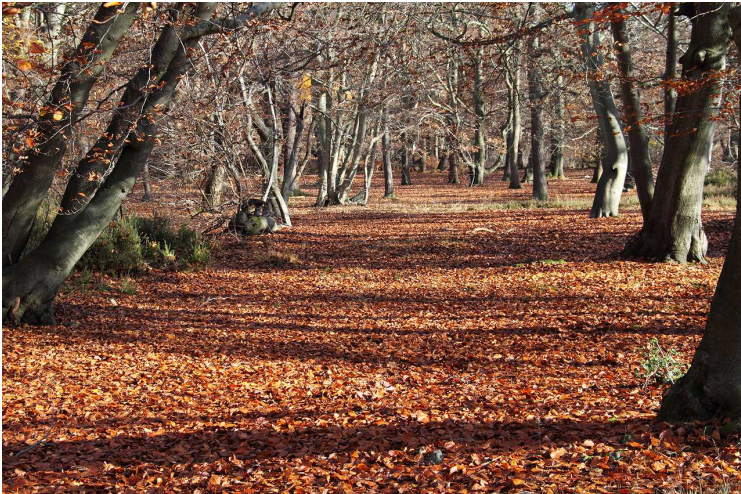
The United Kingdom currently has one of the lowest acreages of land devoted to forests in all Europe. A great deal of marginal land, not required for intensive agriculture or horticulture, could be planted with native tree species to the benefit of our wildlife and landscape. An improving warmer climate gives the prospect of more tender species being able to flourish more widely than at present. I have grown *Arbutus unedo*, the Strawberry Tree, in the shelter of my garden in the foothills of the western Pennines for more than 40 years. It is a wild plant in south and western Eire and rarely naturalised in England and Wales but with only a small warming of our climate it should be able to flourish without protection at least in wetter western areas. The Beech tree, *Fagus sylvatica*, favours chalk and soft limestone in the south of England and Wales where it can flourish and reproduce but in the harsher north of England and Scotland it is generally a planted tree as natural reproduction is fairly rare. But again a warming climate gives the opportunity for beech to become a naturally reproducing member of our forests. Other trees which struggle to survive include the Walnut *Juglans regia*, a native of south eastern Europe, which will grow in the southern half of England but struggles to produce viable seed and is only rarely self-sown, and the Sweet Chestnut *Castanea sativa*, again a native of southern Europe, which will in the southern parts of England even set seed, but fails to expand its territory. All, with a warmer climate, could flourish more widely than they do at present.

Pre-eminent amongst native British forest trees is the oak which, in one of its two species, *Quercus petraea* the Sessile Oak and *Quercus robur* the Pedunculate Oak, is capable of growing everywhere in the United Kingdom up to an altitude of about 300 metres. Above this level the Birch comes into its own. The Silver Birch *Betula pendula* on heathland, the Downy Birch *Betula pubescens* on wetter and more peaty soils and the Dwarf Birch *Betula nana* on upland areas are all good trees for absorbing CO₂ as is the Rowan or Mountain Ash *Sorbus aucuparia* especially on upland acid soils. These are all trees which could return our hills to the wooded landscapes they were before the last Ice Age scraped them clean. Tree cover naturally re-established with the end of the last Ice Age but the coming of man led to another period of deforestation. A new period of tree planting would greatly help to reduce the free CO₂ in our atmosphere and so helping to contain the rapid warming we might otherwise have to endure.

Unless we are content to see our climate steadily warming and accept the consequences, unpleasant though they may well be, we must dramatically reduce our use of fossil fuels and even peat, timber and biomass fuels. Burning such fuels inevitably releases CO₂ into the atmosphere and adds to the blanket in the upper atmosphere which prevents heat loss. In addition, we must plant a great many more trees and add 15 – 20% to our existing meagre forest cover so that CO₂ can be locked up long term and is no longer available to limit heat loss into the outer atmosphere.

We must plant a great many more trees, both as individuals in our gardens and as a society. We must impress on our Parish and Town Councils, our Borough Council and our County Council Councillors the vital importance of large-scale planting of trees.

Robert Yates



“A warming climate gives the opportunity for beech to become a naturally reproducing member of our forests.”

LICHENS IN THE CHORLEY DISTRICT

Including Notes on the Lichen Survey in Astley Park as part of the 'Bioblitz' in the Park, April 2019.

Lichens have been largely ignored by the society's recorders since the formation of the society as they only have Latin names and can be quite difficult to identify, some requiring chemical tests for positive identification. Nevertheless, they are beautiful when observed closely and are remarkably versatile plant species. A lichen is a unique dual organism, made up of a fungus and one or more algae living together as partners to their mutual advantage. The fungus forms most of the body of a lichen (called the thallus) forming a layer round the algal partner protecting it from extreme conditions of temperature or drought. This relationship leads to the formation of a plant varying from large leafy plants up to a metre across, to minute species with fruits a mere ½ mm in diameter. Lichen species can grow on rocks, trees, peat, sand, in rivers, in the intertidal zone and even on rubber dustbin lids and old polystyrene!

In medieval times lichens were used for many ills using the 'Doctrine of Signatures'. Some lichens looked like lung and were therefore used to cure pulmonary infections. Others were yellow and supposed to cure jaundice. In recent years lichens have been found to contain powerful chemicals with anti-tumour and anti-histamine properties so the curative properties attributed to these plants by people in medieval times were not entirely misplaced. Years ago lichens were also often used to produce dyes for clothes whilst one of the main uses of lichens at the present time is to monitor the health of our environment.

Two major pollutants affect lichens. In the past sulphur dioxide from coal burning and industry was the main pollutant as sulphur dioxide is a major cause of 'acid rain'. Lichens are sensitive to sulphur dioxide and when this exceeds a certain figure there will be no lichen growth at all. Away from polluted air they can flourish and the west of Scotland, west Wales, the Lake District and Devon and Cornwall often have trees 'dripping' with lichens. In Lancashire the results of air pollution in the 18th and 19th centuries are still very evident. Although this situation is slowly improving, many walls are still devoid of lichens and trees in the local woods often still carry only the green cracked crust of the so called 'pollution lichen' *Lecanora conizaeodites* and the grey-green pollution tolerant *Lepraria incana*. Today nitrogen compounds from intensive farming activities and dense traffic are becoming the main pollutant. Although many lichens are killed by pollutants, some species are acid-tolerant whilst others are nitrogen tolerant. Where there are pollution sensitive lichens on tree trunks, there is likely to be no intensive farming, dense traffic or heavy industry. In contrast, in areas where nitrogen-loving species (like *Xanthoria* and *Physcia*) are abundant, levels of nitrogen-containing pollutants are likely to be higher.



This Sycamore tree at the edge of Heatherlea Woods shows how some nitrogen-sensitive lichens have grown where the air is relatively clean.

In contrast, on a tree where there is more nitrogen pollution, *Xanthoria parietina* is more common.



The main forms the lichen takes are crusts (crustose), leafy (foliose) and shrubby or 'beard-like' (fruticose). Each genus normally has one particular growth form and this aids identification. Further clues to the identity of a lichen species are the fruiting bodies which range from discs with coloured centres to small 'flask-shaped' bodies. All are best viewed with a x10 hand lens. A unique feature of these plants is that they produce lichen acids which can be detected using chemicals that can be carried in the field. One is bleach which will turn some lichens red when applied and the other is a dilute solution of potassium hydroxide which gives purple and yellow reactions. Although most society members would be reluctant to carry such chemicals, I, as a former chemist who worked in a laboratory, am very interested in this aspect of identification.

Lichens are no different to other plants in their choice of habitats. Some only grow on trees with the texture of the bark giving important controls on lichen growth. Others grow only on rocks, where the differences between calcareous rocks such as limestone and non-calcarious rocks such as sandstone and slate are important. Around Chorley,

older walls and a few of the vernacular buildings that remain are made of the local gritstone. This is non-calcareous and typically carries the leafy grey-green *Parmelia saxatilis*, a plant that cannot tolerate lime and would never be found on limestone. The only calcareous materials around Chorley are man-made ones such as mortar, cement and concrete. An examination of concrete posts will often reveal an orange foliose lichen *Xanthoria parietina* and also *Lecanora dispersa*, a species with small, circular greenish-grey fruits with white rims.

I first became interested in lichens in the 1990s when my late husband and I were studying geology and our tutor was Mike Gosling who at that time was also the Lichen Recorder for Lancashire. We went on a few lichen courses and field trips with Mike and when I was the society's Fungi Recorder, I recorded lichens in the area as part of that role. I persuaded Mike to carry out a lichen survey in the Chorley area in 1992 and his findings are summarised in the society's Annual Report for 1992. In 1991, only 24 species of lichen were in the society's records but after his survey in July 1992 a much more respectable total of 113 species had been recorded. In his article for the 1992 Annual Report entitled 'Lichens of the Chorley District', Mike Gosling wrote a general introduction to lichens followed by a list of the species recorded at the 12 specific sites where he recorded and comments about each site.

We are fortunate as a natural history society to have such a wide range of habitats within the Chorley District varying from the mosslands in the west to the moorlands in the east and Mike found in his survey that this was reflected in the variation of lichen species. To the west of the society's recording area, the flat plains of West Lancashire are open to any pollution carried by the wind and the lichens were then very poorly developed. The trees were either bare or carried only the 'pollution lichen' *Lecanora conizaeodites* and since there are few natural rock outcrops the only places to look for species growing on stone is in the churchyards or graveyards. Mike found on his survey round the churches of Mawdesley that the lichen species were surprisingly poorly developed. However, since 1992, the levels of sulphur dioxide pollution have been falling so I wonder if the situation is still the same. It is certainly worth investigating.

To find trees with lichens growing on them Mike visited Duxbury Woods and the nature reserve at Withnell Fold. As with other places he was at that time surveying as county recorder, he found that recolonisation by lichens was taking place, albeit at a slow rate and the best places to look are the valley bottoms where there is shelter from airborne pollution. The preferred trees in 1992 seemed to be Willow and Poplar whose bark is not too acid and so buffers the effects of acidic pollution. Also Willows often grow near water and this enhances humidity which promotes lichen growth. In view of the findings in 1992, it is interesting that the tree I found best for lichens in Great Wood, Astley Park (see notes on 'Bioblitz' below) and also the one Phil Kirk found at the White Coppice end of Heather Lea Woods in April 2019 were both Sycamore!



Ramalina farinacea

In 1992, Mike Gosling recorded a total of 19 species on the trees in Duxbury Woods which at that time was quite a respectable total for a suburban park. One of the species he recorded in Duxbury Woods, *Ramalina farinacea* was then recorded at this site only. As Phil's photo shows, this species also now grows well near White Coppice.

At Withnell Fold there are perfect conditions to encourage lichen recolonisation and Mike was delighted to find *Usnea subfloridana* one of the fruiticose species that requires relatively clean air. An unexpected find was *Bacidia delicata* on Elder, which at the time was only the second record for Lancashire.

He found that as he moved eastwards in the district the lichen flora became more luxuriant and diverse and at White Coppice and Stronstrey Bank there were good examples of species typical of gritstone and acid moorland. Here were several species of *Cladonia* growing between the boulders and the rock itself carried large amounts of a very local species *Parmelia incurva*.



Cladonia sp

The most surprising species at White Coppice was the vast amounts of the yellow-green crustose lichen *Ophioparma ventosa* which he had also recorded on similar gritstone around Clougha near Lancaster but never before seen in Lancashire in such large quantities.

Other lichens grow in rather specialised habitats such as decorticate wood or on old mine waste. In 1992 Mike visited the old mines at Lead Mines Cough and scoured some areas of debris on his hands and knees! He eventually found the minute red fruits of *Sacrosgium campestre*, which was the first record of this species for Lancashire. Alongside it was *Verrucaria bryoctona*, again a first for the county. After looking at the lichens in Lancashire for several years, Mike was amazed to find two new species within ten minutes!

On 15th July 1992 when Mike Gosling did his lichen survey in Astley Park, he only recorded a total of 8 species all of which are relatively pollution tolerant, these being *Lecania erysibe*, *Lecanora conizaeoides*, *Lecanora dispersa*, *Lecanora polytropa*, *Lecanora muralis*, *Lepraria incana*, *Micrarea prasina*, *Phaeophyscia orbicularis*. His comment for Astley Park was 'The trees are virtually devoid of lichens due to the past and present atmospheric pollution'.

Stimulated by the 'Bioblitz' in Astley Park being organised by the society on 27th April 2019, although I haven't done much recording of lichens in recent years, I decided to see what lichens currently growing in Astley Park I could identify for the 'Bioblitz'. Although I have never in the past recorded the lichens in Astley Park, I suspected that more species have colonised in the past 27 years as I have recorded species other than the above in my own garden that overlooks the Great Wood section of the park.

As part of my contribution to the Bioblitz, on 17th April I looked at the trees in Great Wood by the 'top path' by Parklands School and as hoped, found that although most of the trees still had a poor lichen flora, with mainly *Lecanora conizaeoides* and *Lepraria incana* growing on the trunks, a few others had more species and one exceptional dying Sycamore tree had on its trunk a good variety of more nitrogen-sensitive species including *Parmelia saxatilis* and *Hypogymnia physodes*.



I was most delighted to see on just one other tree there was a small patch of one of the so-called 'Script Lichens' probably *Opegrapha atra* (or possibly *Graphis scripta*). (Couldn't be observed close enough for positive ID although I did manage to take a poor photo). None of the 'Script Lichens' were recorded anywhere in the Chorley District on the survey carried out in July 1992 by the Lichen Recorder for Lancashire.

Script Lichen

Then on 24th April I looked at the lichens growing on Astley Hall and on the walls of the walled garden and other nearby buildings. Due to scaffolding, only the front of Astley Hall itself was accessible and this seemed relatively 'clean' with virtually no lichens growing on it. The old brick walls in the walled garden area also had less than expected numbers of lichens but the yellow lichen *Candelaria vitellina* has begun to grow and this species was only recorded at St. Peter's Church in Mawdesley in 1992.

If you too become interested in lichens, the place to start is your own garden where the mortar, tiles and bricks, as well as trees, all have characteristic species. All you need is a x10 hand lens, an identification book and patience. The book recommended by Mike Gosling at the time for identification was the new (1992) edition of 'Lichens, An Illustrated Guide' by Frank S. Dobson and although a later edition is now available it is expensive being a specialist book (£50 for hardback and £25 for paperback). When I first started learning about lichens I used more general books covering flowerless plants including ferns and mosses as well as lichens, my favourite still being Roger Phillip's 'Grasses, Ferns, Mosses and Lichens of GB and Ireland' published 1980. Good quality used copies of the paperback version of this book are usually for sale via the internet on 'Amazon' currently with prices from around £8 plus delivery. The Field Studies Council publishes some AIDGAP (Aids to Identification of Difficult Groups of Animals and Plants) charts laminated for use in the field for ID of Lichens. These can be purchased directly from the FSC or a few (but not all) may be available from other suppliers via 'Amazon' at discounted prices. There is also a lot of information freely available on the website of The British Lichen Society at www.britishlichensociety.org.uk

Good lichen hunting. Any records will be very useful towards updating the society's lichen records and even knowledge of good sites for lichens (other than White Coppice, Withnell Fold, etc), especially in the west of the district, would be helpful.

Thanks to Phil Kirk for taking photos of lichen species at my request, a few in the Yarrow Valley at Euxton but mainly around White Coppice in April 2019. His photos are used throughout the article with the exception of the 'Script Lichen,' which was taken in Astley Park by myself.

Joyce Riley

ACKNOWLEDGEMENTS

Many thanks to David Beattie, Phil Kirk, Len Poxon and the late Colin Smith for photographs used in the Newsletter.

SUMMER EVENING WALKS

Buckshaw Village – Thursday 20th June

A circular walk taking in the lagoons alongside Buckshaw Avenue and Mossfield nature reserve. Meet on the Aldi car park at 7.00 pm

Eccleston and Croston circular – Thursday 18th July

A walk from St Mary's Eccleston along the Yarrow to Croston Corn Mill, then back to Eccleston via Tincklers Lane fields. Meet on St Mary's car park at 7.00 pm



Astley Park – Thursday 15th August

A walk around the park ending up with a search for bats. Meet at Hallgate car park at 7.00 pm

A.G.M. NOTIFICATION

The ANNUAL GENERAL MEETING of the Chorley & District Natural History Society will be held on Thursday, 26th September 2019 at 7.30 pm. This will be held in the meeting room on the first floor at St Mary's Parish Centre, and will be essentially for the business of the A.G.M.

Nominations are invited for all officers and committee. Please ensure that the nominee is willing to stand for election and give written nominations, together with names of proposer and seconder to Mr. P. Brennan, 14 Merton Grove, Chorley PR6 8UR, on or before Thursday 19th September 2019.

Nomination forms are available from Mr. P. Brennan (Tel 01257 275545).

SUBSCRIPTIONS

Will members please note that subscriptions will be due for renewal on 1st September. Subscription rates are to remain unchanged for next season as follows:-

Grade of Membership	2019 / 2020
Adult	£10.00
Family	£15.00
Seniors.	£8.00
Senior Family	£12.00
Junior (under 18)	Free

Members who attend meetings are requested to make a donation at the door. A charge of £2.00 is made for non-members.

Members who are not able to attend meetings may send their subscription direct to:-

Mr Keith Woan,
80 Carleton Road,
Chorley, PR6 8UB

Subscriptions may also be paid by Standing Order. This reduces administration, particularly in enabling the Society, which is a registered Charity, to claim back tax on the subscription of those members who have also signed Gift Aid Declarations, and at no extra cost to the member. For further details, contact the Membership Secretary or the Treasurer. Thanks to those members who have already arranged to pay by Standing Order. Thanks also to those who have signed Gift Aid Declarations.

DATA PROTECTION

Records of name, address, telephone numbers and type of membership of the Society's members are now stored on computer. If you object to this information about yourself being stored in this manner, please notify the Membership Secretary in writing of your objection.

WINTER PROGRAMME 2019/2020

<i>Sep 19</i>	'Wildlife of North Wales'	<i>David Winnard</i>
	Annual General Meeting	
<i>Sep 26</i>	'Birdlife through 40 Pennine Years'	<i>Gordon Yates</i>
<i>Oct 17</i>	'Conservation of Natural History Collections'	<i>Lucie Mascord</i>
<i>Nov 21</i>	Photographic Evening / Bats	<i>David Beattie</i>
<i>Dec 19</i>	'The Wildlife of the Isle of Avalon'	<i>Mike Roberts</i>
<i>Jan 16</i>	'Attracting Wild Bees to Gardens'	<i>George Pilkington</i>
<i>Feb 20</i>	'Pennine Adders, Amphibians and Reptiles'	<i>David Alred</i>
<i>Mar 19</i>	'Wildlife Photography'	<i>Roy Rimmer</i>
<i>Apr 16</i>		

All the above meetings will be held at St Mary's Parish Centre, Devonshire Road, Chorley and commence at 7.30 p.m. Please note that all meetings are on a Thursday evening. Visitors are welcome at all the meetings.

For confirmation of the programme and further information about the Society, please contact the Secretary:- Paul Brennan on 01257 275545 or alternatively visit our Website: www.chorleynats.org.uk. or follow us on Facebook and Twitter! A WhatsApp group has also recently been set up for members to communicate information quickly. If you would like to join please let us know. We will need your mobile phone number to admit you to the group.

DEADLINES

The deadlines for receipt of articles, letters and book reviews for the forthcoming issues of the Newsletter are:-

<i>No 166</i>	Summer 2019	<i>21st July 2019</i>
<i>No 167</i>	Autumn 2019	<i>21st October 2019</i>

All contributions for Newsletters should be sent to the Editor – Neil Southworth, 9, Queensgate, Chorley, PR7 2PX (01257 276065).