West Berkshire Countryside Society

# UPSTREAM

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Lambourn Drying at Maidencourt in Spring © Tim Johns

# A Winterbourne – a tale of two rivers

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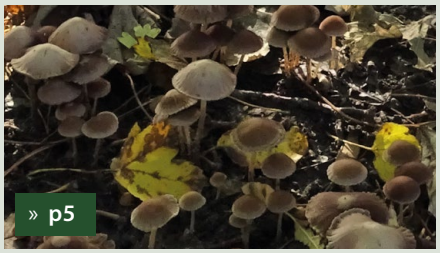

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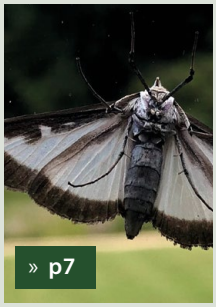

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West Berkshire is home to some of the country's best known and well-studied chalk streams. Rivers, such as the Kennet, Lambourn and Pang, together with the Dun, Shalbourne and Winterbourne make up the county's contribution to this globally rare habitat, supporting a rich array of wildlife of high conservation value.

The headwaters of these streams are naturally ephemeral (flowing intermittently) and are often named 'winterbournes', flowing in the winter months when groundwater is highest. The stark contrast between flowing waters and a dry river channel, typically through the summer and autumn months, has resulted in these intermittent reaches developing their own peculiar ecology that responds to the different conditions throughout the year.

One of the defining characteristics of the lower reaches of chalk streams is their steady flow of clear, cool water that is derived from the constant supply of groundwater from the underlying chalk aquifer. The aquifer acts like a sponge soaking up rainfall that percolates into the rock. There it is held in pores and fissures as groundwater. In winter to early spring, when groundwater levels are at their maximum, water gushes from springs along the length of the river supplying 'base-flow'. This phenomenon was not lost on our ancient ancestors, with many springs and winterbournes thought to have a spiritual significance in pre-history. In the summer, groundwater levels naturally recede as drier conditions prevail. Consequently, springs near the head of the river, at higher elevations, stop flowing, the stream becomes ponded and then dries, initiating ecological transformations.

The wet and dry states of the ephemeral reaches of chalk streams create a mosaic of flowing, ponded and dry habitats as water either recedes or starts to flow. In turn these conditions support different biological communities, including both terrestrial and aquatic species that "time-share" the habitats, adding to the overall biodiversity of the chalk stream environment.

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# West Berkshire Countryside Society

The aim of the West Berkshire Countryside Society is to promote the understanding, appreciation and conservation of the West Berkshire countryside… furthering these objectives through practical conservation work and guided walks and talks from local experts. It was formed in 2012 by amalgamating the Friends of the Pang, Kennet & Lambourn Valleys; the Bucklebury Heathland Conservation Group; the Pang Valley Conservation Volunteers & the Barn Owl Group.

Upstream is our quarterly publication designed to highlight conservation matters in West Berkshire and beyond and to publicise the activities of the Society.

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|---|---|
| **Chair, Webmaster & Enquiries:** | **Tony McDonald** |
| **Membership Secretary:** | **Jathan Rayner (membership@westberkscountryside.org.uk)** |
| **Upstream Editor:** | **John Salmon (upstreameditor2017@btinternet.com)** |
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Initial contact for all above and for the Barn Owl Group, Bucklebury Heathland Conservation Group and West Berks Conservation Volunteers should, unless otherwise stated, be made via enquiries@westberkscountryside.org.uk

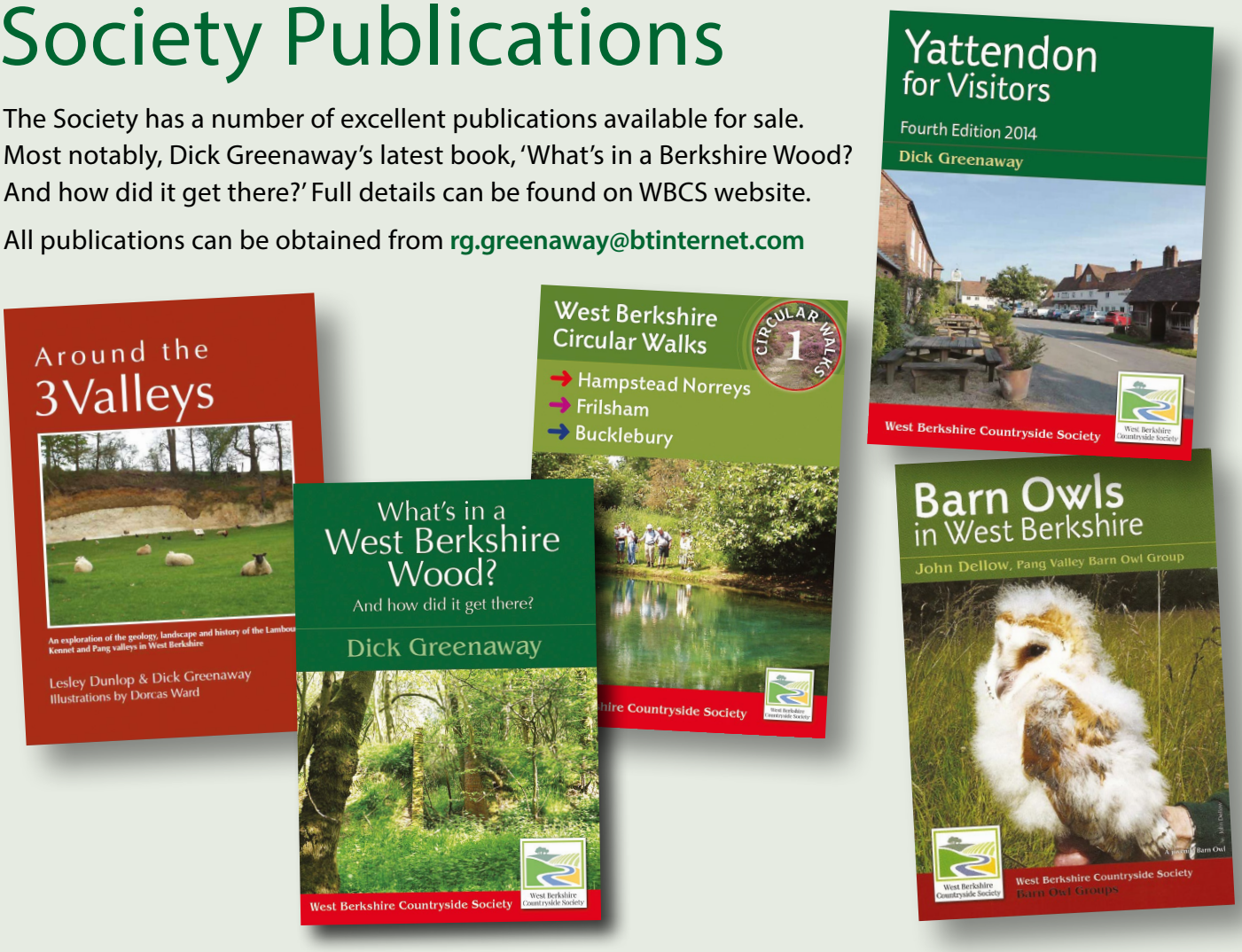
## Future Events

As a consequence of Covid 19 restrictions, this issue of Upstream does not include any diary dates for walks, talks or tasks. If some restrictions are lifted which then enable us to arrange such events before the next issue of Upstream is distributed during March then the events will be publicised on the diary page of our website. So please check the website if there is some easing in the guidance.

## Society Publications

The Society has a number of excellent publications available for sale. Most notably, Dick Greenaway's latest book, 'What's in a Berkshire Wood? And how did it get there?' Full details can be found on WBCS website.

All publications can be obtained from **rg.greenaway@btinternet.com**



Paths & rides cleared at Grove Pit, Leckhampstead © Tony McDonald

# Conservation Volunteers Round Up

With renewed enthusiasm and pent-up energy, we resumed our environmental tasks in mid-August, when the rules concerning voluntary and charitable services allowed us to do so – but not before much time and effort had been devoted to ensuring safe working.

Thorough Covid Risk assessments revised many of our working practices to ensure the safety of volunteers and any members of the public whom we might encounter. Measures included: only undertaking tasks at sites that were suited to social distancing, no car sharing from different households, sanitising tools, no sharing of tools or protective equipment, no provision of refreshments & temporarily not accepting new members into activities.

A welcome new site was the **Wildlife Allotment Gardens** in Cold Ash that is a haven for wildlife and rich in wildlife biodiversity. We cleared and burnt wood debris from previous tree-felling, forming the larger logs into eco-piles, and cleared brambles to produce two sites in which some 100 trees will be planted. Work around the allotments aims to maintain a strong relationship between the wildlife areas and allotment holders, recognising the differing, but aligned, needs of each. We thinned over-hanging vegetation from the allotments to aid their productivity and their holders will use residue from the fires to fertilise their plots.

Coppicing at The Malt House © Tony McDonald

We had two wet visits to **Bucklebury Common**, the first one weekend to cut down silver birch, gathering the risings to await later disposal. The second coincided with more rain, despite which we started a small fire and nurtured it using standing deadwood, consuming practically all the birch and scots pine we had cut from a long bund.

At **Grove Pit Common** we cut back growth along the main right-of-way and its side spurs and removing a tree that had fallen onto the path. This will enable the public, including horse-riders, to enjoy easy access. We also cleaned the bench and information boards and repaired and re-erected a footpath signpost that had rotted at the base.

Two visits saw us continuing hazel coppicing along the eastern edge of **Winterbourne Wood**, work that started some 10 years ago. Impressive regrowth on stools coppiced in the past showed that our hard work does pay off. Other stools, untouched for decades, had grown to an impressive size, proving challenging to those working on them.

On two visits to **Malt House Farm** our main task was to renovate a hazel coppice, cutting tall stems to near ground level to produce new shoots or layering them to produce new trees. (Layering is when a long stem is laid on the ground and pegged down until it roots.) We also cut down self-seeded birch trees to allow in more light to the woodland floor and protected hazel stools from deer with wire fencing. On the second visit the larger of two teams continued the coppicing, the other resuming laying a tall hedge along a field boundary nearby.

At **Redhill Wood** we removed plastic guards placed around trees planted several years ago to prevent damage by deer, stacking them along the path for later removal. We also cut down invasive birch trees that had grown tall and were shading the planted trees and then placed them alongside the path to act as a hedge.

Our clearing rhododendron at **Grimsbury Castle** enhanced a large fallen Scots Pine as a feature and exposed fungus identified as either Death Cap or Destroying Angel – both as dangerous to eat as their names suggest.

We resumed clearing rides at **Rushall Farm** to let in sunshine, thus reducing the tracks' muddiness and encouraging wildflowers and plants to grow along the verges.

Unfortunately, towards the end of October, the arrival of Lockdown II brought about a new suspension of our Conservation work.

Terry Crawford

*Continued from page 1.*

As drier conditions prevail, terrestrial plants and invertebrates encroach upon the stream bed as water-loving species are lost. The plant community tends to move to one dominated by more marginal herbs and grasses, brooklime being characteristic of this community. Similarly, terrestrial beetles, other insects and spiders start to occupy the stream bed, although some aquatic species persist, especially when the river gravels remain wet.

The number of truly aquatic invertebrate species declines with stream bed drying. Species that cannot tolerate the loss of flow are simply lost, move downstream or fly away until the flow returns. Some are adapted to persist in patches of pooled water where they must endure higher water temperatures and reduced oxygen levels. These pools may also be colonised by other species who prefer these conditions and can exploit the concentration of prey. Other species have special adaptions or behaviours that help them avoid desiccation and predation.

The area immediately below the riverbed, where groundwater and surface water meet, is termed the hyporheic zone. It provides a refuge for some creatures that can burrow into the subsurface sediments. The freshwater shrimp, some caddis fly larvae water beetles, water snails and dipteran fly larvae (e.g. Chironomids) commonly exploit this habitat. The hyporheic zone is also home to a host of permanent residents, most are worm like in shape, pale in colour and blind. The well shrimp is a good example and is common in the subsurface sediments of chalk stream winterbournes. Specialist species such as the mayfly, use an alternative strategy by laying desiccation-tolerant eggs which lie dormant in the dry conditions, only hatching when flow returns. Similarly, personal observation has witnessed the sudden proliferation in the abundance of the stonefly, following the recommencement of flowing waters.

The ephemeral winterbourne stretches of many chalk streams as well as other intermittent rivers globally are under considerable pressure from human activities. Threats include: alterations to the natural flow regime through water abstractions, habitat damage, nutrient enrichment and the spread of invasive non-native species. But perhaps the biggest threat of all is neglect and lack of understanding that a river without water is still a river!

These dangers are set against the background of climate change where we can expect longer periods of drier conditions as well as periods of heavy more intense rainfall. The protection and careful management of chalk streams and their winterbourne stretches is critical to their continued existence. We need to improve our knowledge of the patterns of flow intermittence to understand the ecological response better. We also need to reconsider the way we perceive these streams, revering them again as our ancient ancestors once did.

*Lambourn Flowing at Maidencourt in February* © Tim Johns

Tim Johns & Glen Meadows
Freshwater Ecologists at the
Environment Agency, Wallingford

*Upper Reach of Pang in Autumn* © Tim Johns

*Lambourn Dry at Maidencourt in Autumn* © Tim Johns

For more information on ephemeral streams and ways to get involved in recording patterns in their flow please visit the website:
**https://nrfa.ceh.ac.uk/news-and-media/news/citizen-science-initiative-intermittent-rivers-and-ephemeral-streams**

Fungi amongst leaf litter © Anne Sayer

# Autumn Railway Path Walk

The stark differences between this day and my walk in August is that the chalk grassland flowers are now over apart from a few remnant heads of scabious that provide any late insects with nectar. The frosts, when they come, will finish the flowers. Even ivy, a great source of nectar for insects, is over and the berries are starting to colour up to give birds some winter food. The crab apples, which were starting to colour up in August, now lie on the ground potentially giving food for many birds, animals and insects over the winter. As it was a cloudy day, I saw very few birds or insects.

Since there is now no trace of either blackberries or elderberries, other fruit for the next few months includes haws, sloes, rosehips, snowberry (not native, but is planted beside the village hall next to the track), Woody nightshade (deadly poisonous for humans), spindle bushes (Euonymus europaeaus), privet and dogwood (Cornus sanguinea).

*Rosehips* © Anne Sayer

Dogwood is interesting because, in common with dog rose, it derives its name from 'Dag' – a dagger – rather than Dog. This is because its hard wood was used for making spindles, skewers, needles and other sharp objects. The ripe fruit, which turns black in autumn, is rich in oils and was once used for lighting lamps. Dogwood is common on chalk but is seldom found north of the midlands.

Fungi were prolific along the track. An excellent opportunity for mycologists but less so for gatherers as few of them are edible, apart from the wood blewit and wood mushroom. Most of the remaining fungi were specialists in rotting the stumps and fallen timber; fungi are key to the cycle of converting wood into nutrients for plant growth. A tree stump is now being decomposed by a Dryads Saddle *(Polyporus squamosus)*.

The importance of a railway line as a green corridor for linking both flora and fauna to nearby habitats cannot be overstated. Most birds and mammals have difficulty even crossing fields or roads without being killed by either cars or predators. The Didcot-Southampton line has been redundant for 50 years and has become a vital ecosystem with varying habitats along its route.

The recent clearance and installation of a multi-use track connecting Hampstead Norreys and Hermitage could potentially have caused a great deal of harm to the natural history of the area and, in particular, to the common dormouse and glow worms living there. However, not only was the work carried out with great sensitivity, but measures were also taken to provide nest boxes for the dormice. The result of the project means that the track is in popular use for walkers, joggers and cyclists with the margins performing as a nature reserve, thus being a strong defence against losing any part of the line to development.

Charles Gilchrist

*This concludes our series on the transformation of the disused railway line between Hermitage & Hampstead Norreys. Thank you to Charles for 5 most interesting & informative articles, and to Anne for her great photographs – Editor.*

*Snowberries* © Anne Sayer

# Conservation Volunteers Historical Round Up

*The first part of this article, looking at the military history of some of the sites where volunteers work, appeared in the Autumn edition of Upstream.*

In October 1644 Parliamentary troops assembled on "Bucklebury Heath" the day before the Second Battle of Newbury, with dispatches addressed from there being sent to the House of Commons. There had been a local skirmish in the Spring of that year south of the Blade Bone Inn in Chapel Row, with Royalist soldiers and a Parliamentary officer being killed and buried in the local churchyard.

Three hundred years later, the Common suffered a longer, damaging military presence when a large area was cleared for a vehicle repair depot, with the soil accumulated into three very large mounds. As with other wartime sites in West Berkshire, the infrastructure remained far longer than was welcome. In March 1946 Newbury MP Anthony Hurd asked the Secretary of State for War in the House of Commons what progress had been made in clearing the site and when he expected to be able to hand it back in good order for public use. He was told that 3,000 vehicles awaiting repair were still at the depot and that "steps are being taken to dismantle and remove any hutting which is required by the Army elsewhere... The clearance of the site is a task of some magnitude and I cannot yet say when the land is likely to be handed back."

*Bucklebury Common Path* © Terry Crawford

Yet the structures remained for some years and during the post-war national housing crisis were taken over by homeless people, with the first moving there in August 1946. Bradfield Rural District Council declared 63 huts fit for habitation and charged the tenants rent. Some created their own chicken runs on the Common to raise poultry. By 1948 the Council deemed that the huts were in such poor condition that they should be demolished, but a Government inspector ruled that they could be made good to give another two years of life, with the Council permitted to spend £100 a hut on repair and maintenance. In 1951 some huts were still occupied and a fire in one killed a baby and injured his mother.

When the huts were finally removed, invasive vegetation took over. Much work, not least by volunteers in recent years, has been done to restore the Common. Nearly all the concrete hard-standings and roads have been broken up and heather and gorse has returned, although controlling birch remains an ongoing task. One reminder are the concrete reinforcements of some road verges and the "throats" of tracks where they join the highway. (The photograph shows the most visible remains, a concrete road leading off Pease Lane to where the depot's main buildings stood.)

Prior to the Second World War, Furze Hill at Hermitage had been dominated by brickworks on the site where we frequently work, one of our chores being keeping clear the path along the former railway line south of the motorway bridge. During the Second World War the quiet rural line became a crucial transport link and in 1942-43 the track was doubled and then carried large movements of troops and military supplies in the run-up to D-Day.

There are several useful resources for those interested in finding more about their locality, not least WBCS's own archive, a catalogue of which is available on our website. Historic maps of various sites can be found on https://maps.nls.uk and http://www.geograph.org.uk aims to offer photographs for every square kilometre of the British Isles – including of the sites mentioned in this article. Searching it will certainly confirm the claim made at the beginning of the first part of this article: "Wherever one goes, it's usually possible to find something historically interestingly about the place"!

Terry Crawford

# Discovering Moths

For many years I have taken an interest in butterflies, but have not bothered much with moths. So when Lockdown 1 came I thought that would be an opportunity to look at moths and try to learn something about them.

Everybody knows that moths are attracted to a light although nobody really understands why. They are even more attracted to mercury vapour lamps and that is used in moth traps. We bought a simple moth trap which was really a big box with a mercury vapour lamp above it which plugs into the mains. We put this outside the garage in the evening with three egg boxes for the moths to hide under, and then look at it in the morning. The neighbours could not understand what the light was and thought we might be growing cannabis!

Many species are brown or grey and may be hard to identify, but some are more dramatic. The Poplar Hawk Moth does not look like a moth at all when it is settled but when it flies it suddenly shows its bright pink abdomen. Then the Buff-tip looks just like a broken birch twig. I would never know it was an insect at all if I saw it on the ground. But when it flies it reveals the yellowish wing tips which give it its name.

Often moths are quite dopey in the daytime and this makes them easier to look at, but sometimes they unexpectedly decide to fly off and that is why we find odd moths in different parts of the house.

We had one unwelcome moth which I could not easily identify as it was not in any of the books. It was white with a dark brown surround to its wings. A friend helped me identify it and it was a Box Tree Moth, which is a recent addition to our fauna from South East Asia and not welcome because the caterpillar eats the leaves of box. We decided to kill our specimens in an effort to preserve our box bushes.

Many of the moths have English names evocative of another era. One night we found a True Lover's Knot and several times Hebrew Characters, besides several species of footmen. Most names were invented in the Nineteenth Century; I cannot imagine modern zoologists inventing names like that.

If identifying the larger moths is not enough of a challenge then there are the micromoths which are generally smaller and usually more difficult to identify. They indeed merit a whole extra book and sometimes need a lens to see their markings clearly.


*Box Moth* © Roger Stace

As we get nearer to winter there are fewer moths, but there are some. I caught a November Moth, even though it was the middle of October. More recently we have had one called the Green Brindled Crescent which looks as if it has had some green powder scattered on its wings.

I would never have known that there were so many different species of moth in the district if I had not started trapping them. So far I have identified 128 species, assuming that I got them all right! This includes 29 micromoths. Another surprise was that we caught some fairly large beetles called Cockchafers, which some people call May-bugs. They are reputed to have declined in number recently so that is good news.

Altogether the moths have made the Lockdown much more interesting; indeed I cannot imagine a Lockdown without them!

Roger Frankum

*Thank you to Roger Stace of BBOWT for providing these photos to accompany Roger's article.*


*Lime, Poplar & Privet Hawk Moths* © Roger Stace


*Buff Tip* © Roger Stace

Wokefield Common © BBOWT

# Antisocial Visitors

The Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) has seen a surge in visitors to their nature reserves over the lockdown period. This has led to concerns over the welfare of the habitats on the sites, as well as other environmental concerns that come with more people in nature reserves. It has been a challenging and difficult period. but our staff have handled it well.

When the lockdown first started, we were dealing with livestock as well as health and safety management. A number of team members were furloughed, so those essential responsibilities were shared across a smaller pool of people, which created additional pressure.

As the first lockdown in the summer eased we saw a massive increase of people going to our sites, so all the people on furlough that were bored and stuck in the house were now exploring their local area more and more. BBOWT reserves were seeing huge visitor numbers by people who would not normally visit our sites. This brought a higher proportion of visitor pressures, such as people having picnics and leaving mess everywhere, wild swimming, visitors coming to the site but parking wherever they wanted and not in the car parks.

In Berkshire we have lot of important heathland sites, and we had several increased disturbances relating to the ground nesting birds. It was difficult to respond to all these issues and was a particularly challenging time for the staff. I manage a team of people, and having to do that remotely, you have to have confidence that you're providing the staff with the support they need, as well as making sure their health and mental wellbeing is looked after.

It is depressing to see such a large amount of antisocial behaviour on our sites. You do a job like this to give people the best benefit, but people were either intentionally or unintentionally damaging the sites, and the antisocial behaviour is not the nicest thing to have to deal with. The organisation has coped with it well and we have been working hard to provide support, but it has been difficult.

We normally manage our sites by getting volunteers to come in and do work parties, but the tight restrictions have really hampered this. Our volunteers are a relatively small amount of people managing a large amount of land, and they are a key part of the workforce. When there are lockdowns it hits us hard because the volunteers cannot work. Autumn and winter are when we do the most site work because

BBQs & Litter © BBOWT

all the animals breed in the summer, so we must do work outside of that period.

Our education and community team has been impacted because it has not been able to have events that bring in income. People also have less disposable incomes and are then less likely to support local charities. In the beginning of lockdown, we lost quite a lot of members and it really impacted our financial reserves.

If people do visit our sites, I would ask them to make sure they use them responsibly. We manage our sites as nature reserves, and one of the main objectives is to enhance the sites and protect certain key species. If a path is closed, it is for a good reason. As an individual you might think 'I can just nip over here, it's not that big a deal', but if everyone thinks like that the footprint adds up. Maybe find out where you are going, and why it is an important place. There is plenty of information on our website for that.

Tom Hayward
BBOWT Land Manager