

Living Woods

No.50 WINTER 2018

MAGAZINE

The Tree Champion

On a mission to
reforest England

PLUS Christmas with the Foragers
Make a Swedish fire torch
Moisture meters on test
Le Shack is back!

CONTENTS

We live in uncertain times, but at least the seasonal changes in our woodlands provide an element of stability and reassurance. We are delighted to welcome back Nick Gibbs, who has supplied an update on work at Le Shack. Petra Billings advises on managing dormice populations in woods and David Alty guides us through making a Swedish fire torch. Literary offerings include an extract from Bob Gilbert's *Ghost Trees* and reviews of new books by Ben Law and Julian Evans.

Living Woods Magazine has benefited from the wit and wisdom of so many writers and readers this year: we send you all best wishes for the Christmas season and the new year.

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judith@livingwoodsmagazine.co.uk



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IBRAHIM RIFATH/UNSPLASH

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LivingWoodsMagazine.co.uk



Published by Living Woods Magazine Ltd, 19 Half Moon Lane, London, SE24 9JU

@Woodland News

MARK FRITH – A LEGACY OF ANCIENT OAK, KEW GARDENS

'At times the tree appeared to draw itself' says Mark Frith in describing his three-year project to draw 20 veteran oak trees. This series of 20 highly intricate, large-scale graphite drawings by Mark Frith depicts Britain's most characterful veteran oaks, many of which are more than 1,000 years old.

Each breathtaking portrait shows the tree in winter, highlighting the architectural beauty of its trunk, bark and branches – the results of up to a millennium of growth.

The exhibition continues at Kew Gardens until 17 March 2019. Read a review of the exhibition on the **Woodlands blog**. More details are on the **Kew Gardens website**.



OFFA'S OAK, WINDSOR GREAT PARK, MARK FRITH © KEW COLLECTION, BEQUEATHED BY THE ESTATE OF FELIX DENNIS

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MILLION
CHRISTMAS TREES
SOLD IN UK
IN 2017

BUY BRITISH

Grown in Britain has launched a campaign to encourage British consumers to purchase more British-grown Christmas trees. With over £3 million worth of trees coming from abroad, Grown in Britain has created a Christmas tree licensing scheme

that operates throughout the supply chain from growers to retailers and provides an assurance that trees are fresh and grown sustainably in the UK. Chief Executive Dougal Driver says: 'The UK has a flourishing Christmas tree-growing sector and our auditing process checks that trees are definitely from the UK, grown responsibly and meet a strict "forest floor to shop floor" freshness test.'

The **Forestry Commission** provides a useful list of their Christmas tree sale sites – and they include a free sapling with each tree sold for purchasers to plant out.



TIP TOP CHRISTMAS TREES

1. Needles should be flexible and should not fall off if you run a branch through your hand.
2. Raise the tree a few inches off the ground and drop it on the butt end. Very few green needles should drop off.
3. Once home, cut about half an inch off the butt in order to open up the pores of the tree. Keep it outside in a cool place, standing in water, until it is required indoors.
4. Indoors, mount it in a water-holding stand away from direct heat. Keep the container topped up with water.

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Give me six hours to chop down a tree and I will spend the first four sharpening the axe.

Abraham Lincoln

”



DAN EDWARDS / UNSPLASH

PLANT TREES TO SAVE THE PLANET

The Committee on Climate Change (CCC) is an independent statutory body which advises the government on preparing for climate change. It published *Biomass in a low-carbon economy* in November, a report which assessed the role of biomass (woods, plants and organic waste) in the global strategy to tackle climate change.

Not surprisingly, the report recommends that the UK should increase the volume of carbon stored in our forests and land – in other words, we need to plant more trees.

Industry experts reacted with what appears to be a resigned shrug, applauding the report's recommendations and pointing out yet again that it must be backed up by government action. The CCC suggested the government must increase tree-planting from 9,000 hectares per year on average, to 20,000 hectares by 2020 and 27,000 hectares by 2030, with further extensions to 2050. This should be accompanied by planting energy crops on low-quality land.

Stuart Goodall, Chief Executive of Confor, which represents 1,500 forestry and wood-using bodies in the UK, said: 'This independent, expert report reaffirms, yet again, that we

need to get serious about planting more trees if we are to meet our commitments to mitigate climate change.

'It's also fantastic to see broad support for the tree planting conclusions from farmers to environmentalists, though the latter recognise that the UK Government is doing far too little and needs to massively up its game.

'Climate Change is regularly held up as the greatest existential threat to our planet and our way of life and I would encourage the CCC to be even bolder in its reports and recommendations.'

Simon Lloyd, Chief Executive of the Royal Forestry Society, said 'We welcome the emphasis the Committee places on the role of woodland in land use in the future and recognition that not only do we need more tree planting but improved forest management to support Green House Gas reductions and improve resilience to climate change.

'These tree-planting targets are only achievable with a radical reform of land use policy. . . Land managers should be incentivised both to plant more productive woods and to manage woodland well throughout its lifespan.'

Biomass in a low-carbon economy is available on the **CCC website**.

EXCELLENCE IN FORESTRY AWARDS COME TO THE SOUTH-EAST

The Royal Forestry Society (RFS) brings the Excellence in Forestry Awards to London and the south-east.

Awards coordinator Dr Rachel Thomas says: 'In a region which is home to more than 18 million people, we are looking to showcase the best of woodland management and woodland learning, to celebrate how woods can benefit health and wellness as well as local economies and the environment.

'We want to show how community woodland and small woods are important to areas which are relatively built up; how larger well managed woodland can bring benefits to an area over many generations and to uncover woodland learning projects which will inspire others around the country.

'We urge all woodland owners and organisations to enter, to help us spread the important messages of the benefits of healthy, resilient and well managed woodland.'

The Awards are open until **5 March 2019** for applications from London and from Bedfordshire, Berkshire, Buckinghamshire, Essex, Kent, Hampshire, Hertfordshire, Isle of Wight, Middlesex, Oxfordshire, Surrey, Sussex (East and West), and Wiltshire.

There are five categories:

- Award for Silviculture Excellence (Sponsored by Tilhill Forestry)
- Duke of Cornwall's Award for Resilient Multipurpose Forestry (Sponsored by Savills and TreesPlease)
- Small and Farm Woodland (Sponsored by Forest Stewardship Council)
- Community Woodland
- Education and Learning Award for schools, colleges, universities and other training providers (Sponsored by Forestry Journal and PEFC)

Full details are available on the **RFS website**.

VIEW THROUGH THE TREES

JULIA GOODFELLOW-SMITH takes the plunge and prepares her beech woodland for the rigours of climate change 50 years hence.

I took a deep breath, shook the can and sprayed. 131. It had taken half a dozen visits to the woodland to mark up the trees for felling and I was emotionally exhausted. I know that thinning the trees is the right thing to do, but that doesn't seem to make it any easier.

Now on to the next stage – firming up our long-term management plan so we can apply for a felling licence. The recently published **Climate Change Adaptation of Forests, Woods and Trees in England** has provided useful advice.

Several of the significant issues they have identified are relevant to small woodland owners, including us. The first is lack of management. If woodlands are left to fare on their own, they may not adapt fast enough. Increasing the intensity of management can significantly improve the chances of successful adaptation.

The report stresses that we need to consider the impacts of climate change when drawing up management plans. Among other things, we need to plant trees with a greater genetic diversity and consider the benefits of continuous cover forestry.

The main objectives of our woodland management plan are to improve both the age structure and tree species diversity while producing good quality timber and wood. So, it appears to be in line with the report's recommendations.

The Forestry Commission's Ecological Site Classification (ESC) provided more detailed information. They have maps, freely available online, that indicate the suitability of different trees by area, in relation to the existing climate and anticipated climate change.

For our woodland, beech - the predominant tree, is expected to be marginal by 2050 and unsuitable by

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Beech is expected to be marginal by 2050 and unsuitable by 2080.

”

2080. This gives us a clear timeline for harvesting and replacing these trees.

Pedunculate oaks and ash are expected to remain suitable as the climate changes, so our plan to create glades to allow natural or supported regeneration of our oaks seems to be sound. Sadly, we have Chalara in our woodland, so we will have to keep a watching brief regarding ash.

Before doing any planting, we will look at the latest ESC to determine the most likely trees to do well.

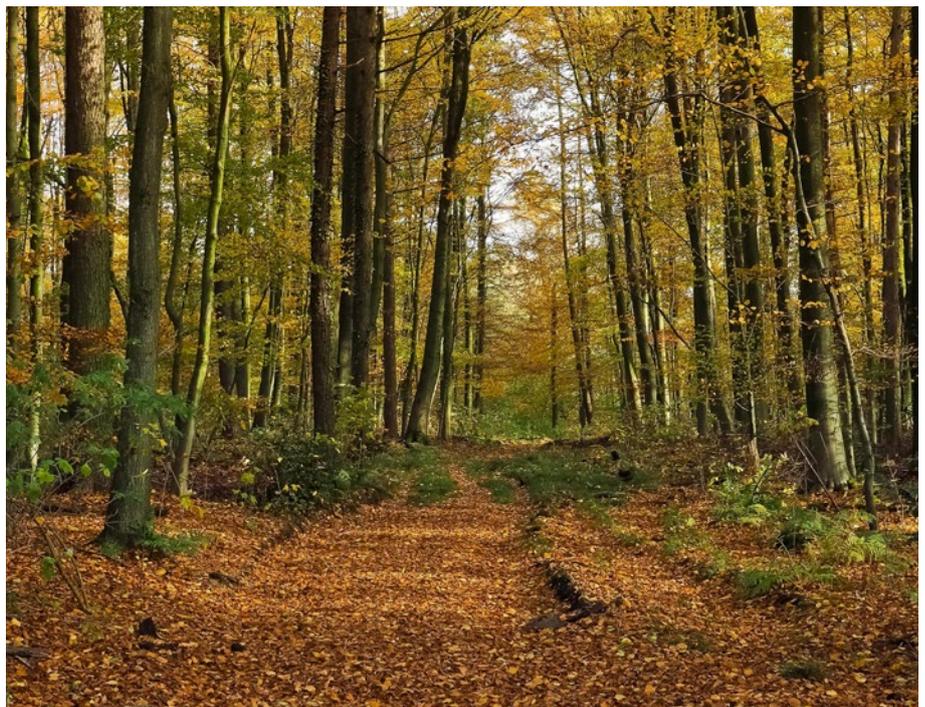
We have a small area of badly

damaged trees that we are clear-felling and replanting this winter to create some coppice woodland. Deer and squirrel populations are both expected to benefit from climate change, so we are looking for trees that are less attractive to these pests, such as field maple and wild service tree. We are also considering some non-natives such as holm oak and walnut to increase the diversity – and therefore potential resilience – of the woodland.

When we bought our beautiful beech woodland, we had no idea that we would need to manage it through such a difficult and significant transition. We are going to have to completely change the nature of the woodland if we want it to survive, which means applying some tough love now, however hard it is to do.

RESOURCES

- Forestry Commission Climate Change Adaptation Summary
- Forest Research Ecological Site Classification (ESC)



PROTECTED SPECIES PART 2



Hazel dormouse
(*Muscardinus avellanarius*)

Photo: Danielle Schwarz / WikiCommons.

DORMICE

In the summer edition, **PETRA BILLINGS** wrote about how to deal with protected species in woodlands. This month, she provides a more detailed overview of managing woodland for the common dormouse.

The common dormouse (also known as the hazel dormouse) is no ordinary mouse.

Compared to woodmice, for example, the dormouse is long-lived at around six years and it is our only ‘mouse’ to hibernate. In fact, this is probably how it got its name – from the Latin *dormire* or French *dormir*, ‘to sleep’. In appearance, it must surely win the ‘cutest mammal’ prize, being a rich orange/brown colour with a blunt muzzle, big eyes, small hairy ears and a distinctive bushy tail.

Dormice are vulnerable to woodland and hedgerow management operations and it is important to understand their ecology and habitat requirements in order both to improve the habitat for them and to minimise the risk of disturbance by forestry operations.

The dormouse is a nocturnal animal that lives mainly in deciduous



Dormice are vulnerable to woodland and hedgerow management operations.



Hazelnuts nibbled by dormice. Hazelnuts are a staple food source for dormice before they hibernate.

woodland and scrub, though they are sometimes found in mixed conifer plantations, especially those on ancient woodland sites. They may also be present along ride edges, in shrubby glades, in scrub and thick hedgerows connected to woodland and, temporarily, have even been found in open areas within plantations. In these woodland habitats, dormice lead an arboreal life, rarely descending to the ground except for hibernation. Their diet varies through the seasons and includes flowers (nectar and pollen), fruits (berries and nuts) and some insects (especially aphids and caterpillars). As the name suggests, hazel is often an important component of the diet but oak, bramble and honeysuckle are also valuable food sources.

In ecological terms, the dormouse is a particularly important species

because it is an indicator species. In other words, if dormice occupy a given habitat, then that habitat is likely to support a wide range of other species too. Also, as dormice are particularly sensitive to habitat fragmentation, their presence is an indication of habitat integrity.

Dormice breed from May to September. Litter size varies between two and seven, but females usually give birth to four or five young, mainly in July or August. Sometimes they have a second litter but if young are born too late in the summer, they may be unable to reach a viable hibernation weight and may not survive. Hibernation occurs from about October until March or April. Summer nests are built in thick scrub or in tree holes and hibernation nests are built deep in tree hollows or in shallow depressions on the ground. The nests are the size of a grapefruit, often woven from stripped honeysuckle bark.

Dormouse distribution

Following recently published research, the dormouse is one of twelve species that have been put on the first “red list” for wild mammals in Britain. By International Union for Conservation of Nature criteria, it is classed as ‘vulnerable’. Dormice used to be widespread over most of England and Wales but they are now

It is illegal to handle dormice without a licence from Natural England. (Photo: Steve Cheshire/ Warwickshire Wildlife Trust.)



A summer nest. (Photo: Petra Billings.)

only patchily distributed across Wales and the southern half of England. They are absent from Scotland, Northern Ireland and the Republic of Ireland. Because male dormice are territorial in the breeding season, even the best habitats may not support more than three to five adult males per hectare.

European Protected Species

The common dormouse is a European Protected Species which is protected under Annex IV of the European Habitats Directive. It is protected from deliberate killing, injury or

disturbance and its breeding sites and resting places are absolutely protected with no requirement to show that their destruction was deliberate or reckless. It is illegal even to search for a nest where there is a risk of disturbing an occupied nest, and a licence is required from Natural England to survey for dormice with nest-tubes or nest-boxes. Nut hunt surveys based on looking for hazelnuts which have been opened in the distinctive dormouse manner are not illegal, however, and are great fun.

Woodland management for dormice

To improve your woodland for dormice, you need a wide range of deciduous tree species and a broad age structure which includes fruiting age trees, especially hazel or sweet chestnut. Coppice management is ideal. Developing a thick understorey with a good shrub diversity is important, especially with hazel, honeysuckle or bramble (brash can be a component of this structure). Species-rich scrub on woodland margins, ride edges or in patches is especially important and can be achieved by good two-tier ride and



glade management, with shrubby margins cut in rotation. It's important to retain some canopy connections across the rides. The key is continuity of habitats over time.

As well as retaining connectivity within the woodland, it is important to improve habitat connections across the landscape. For example, linking fragmented or isolated woods with new species-rich woodland creation or hedge-planting is essential where woodlands are too small to support a viable dormouse population on their own.

The Forestry Commission provides detailed guidance on how to minimise disturbance and the killing of dormice during forestry operations. Best practice operational plans depend on three things: the size and landscape context of the woodland to be managed, the quality of the habitat for dormice, and the time of the 'dormouse year' in which the woodland activity is to take place. For this purpose, the dormouse year is divided into four periods: May to mid-September (core breeding season), mid-September to end of October (pre-hibernation and active), November to end of March (hibernation) and April (post-hibernation and active).

Different types of woodland operations need to be scheduled to take place in different periods of the dormouse year: coppicing, for instance, in a wood where dormice are present is best done while they are hibernating deep in hollows among tree roots in the winter between November and March.

A key principle is to leave some areas of the woodland undisturbed during forestry operations to act as reserves or 'refugia' from which the local population can recolonise the worked areas as they become more suitable. Larger woods with contiguous areas/compartments with different ages and types of woodland structure are particularly suitable for dormice.

If you follow the best practice guidance, you will usually be able to minimise disturbance to dormice or damage to their habitat. However if this is unavoidable, you need to apply for a licence from **Natural England**.

The golden rule is that if you come across a dormouse in your woodland in the course of forestry operations, stop work straightaway and seek advice from Natural England.

RESOURCES

People's Trust for Endangered Species

Dormouse Conservation Handbook

Forestry Commission guidance

Natural England

DR PETRA BILLINGS is a Chartered Ecologist who has worked in conservation management in Sussex for more than 25 years. Petra offers a range of ecological services, specialising in woodland management plans, Countryside Stewardship grant applications, ecological surveys and in providing training courses. Visit her website www.sussexwoodlands.co.uk

Ideal habitat in West Sussex. (Photo: Petra Billings.)



INTERVIEW WITH THE TREE CHAMPION

Sir William Worsley was appointed by DEFRA to be England's Tree Champion in June. He began his career as a land agent and is familiar with the issues that face both woodland managers and farmers. Chairman of the National Forest Company, Sir William has also served on the Forestry Commission's advisory panel.

Do you think England needs a Tree Champion?

I have always loved trees and woods and am lucky to own some beautiful woods in North Yorkshire. Indeed I was lucky as I had a father and grandfather who both loved trees so I was brought up with this love from a very early age. From a personal perspective I have argued that we need someone to champion our trees, woods and forest for some years, so the answer is yes.

Could you explain a little more about the nature of the job and how you were appointed?

The government proposed appointing a Tree Champion in the 25-year Environment Plan. I was asked by Michael Gove, the Secretary of State for DEFRA, to take on the role with the Prime Minister's approval. The terms of reference are very broad: I have the challenge of planting 11 million trees plus a further million in our towns and cities, bringing in a duty for local authorities to consult on street trees, inputting into the proposed Environmental Land Management schemes post Brexit and an overview on plant health.

What do you see as the greatest challenges facing woodland owners and managers?

There are many challenges: economics are one. A profitable industry would make management and engagement easier.



You have probably already received a great deal of trenchant feedback from woodland owners and managers.

How likely is it that you will be able to translate this into positive and lasting action at DEFRA?

There are many challenges and bureaucracy is one. We have now opened up Countryside Stewardship applications year round rather than having an application window; that's a start. We need to make it easier to plant trees, whilst taking into account good land management. Forestry Investment Zones are another initiative and I was pleased to launch a pilot zone in Cumbria.

What do you think can be done to support woodland owners?

In Germany there are many small woodland owners and they regularly work together in partnerships to manage their woods. I would like to

see small, and indeed larger woodland owners, working together.

And in turn, how can small woodland owners help improve planting rates?

All landowners can play their part. We need to encourage owners large and small to plant trees. There is grant support to do so; what we need to do is make it easier to do so.

Do you think more needs to be done to encourage natural regeneration as a way of growing trees, rather than planting?

Natural regeneration plays its part; however, for this to be successful we need to control deer and rabbits.

Do you think we do enough to protect our ancient woodlands?

The new National Planning Policy Framework has raised the protection of ancient woodlands, so a lot of work has been done here.

What are your favourite tree species for planting in view of ongoing climate change?

We need the right tree in the right place. Climate change raises many questions as to what we should plant and my view is that we should always plant a mixture and never a single species. From a commercial conifer point of view I like a mix of Douglas Fir and Sitka Spruce. From a hardwood view I like oak, but they are very slow-growing. As a favourite tree I do love a Horse Chestnut.

FESTIVE FORAGING



Above: the Foragers, George Fredenham and Richard Osmond.
Below: *Grifola frondosa*, hen of the woods, in abundance at the base of an oak tree.

The Foragers are George and Richard: a pair of hunter-gatherers passionate about foraging for wild food.

The hefty mushroom hen of the woods, *Grifola frondosa*, grows on the roots of oak trees and pops out at the base of the trunk.

This mushroom (as well as looking like a fat hen squatting at the bottom of a tree) tastes delicious: it sizzles and browns in the oven like the tenderest leg meat of a cornfed fowl. So what else could we do? We roasted it in the oven.

Here's a recipe for a quintessentially Christmassy roast-up of our favourite forest mushroom, featuring a splash of another favourite ingredient – our homemade sea buckthorn and rosemary liqueur. Sea buckthorn is an amazingly zesty winter fruit with an unbeatable orangey tang that's very useful for cutting through the sweetness of Christmas.



HEN OF THE WOODS RECIPE

1. Leave the hen whole, but carefully clean the bugs and twigs from its fronds and lobes.
2. Unlike most mushrooms, you can rinse a hen in water without losing much flavour or consistency.
3. Brown the hen in a hot pan of sizzling oil and season with salt and pepper and wild sage. Set aside.
4. In a roasting tray, toss cross-sections of Brussels sprouts until brown.
5. Add a glug of sea buckthorn liqueur, flambé it, toss it, and move it all around.
6. Crumble in blanched chestnuts and a handful of cranberries. Season to taste.
7. Add a splash of apple cider vinegar and work it in. Then put the hen on top of the sprouts and roast in an oven heated to 180°/gas mark 4.
8. Check after 30 mins and serve when it's golden brown and cooked through – about 40 mins in all. Serve the roasted hen on a bed of all the other Christmassy goodies.

(Buckthorn liqueur is available from Polish delis, or substitute any orange liqueur.)



SEARCHING WITH THE FORAGERS

The Foragers offer wild experiences and foraging workshops to anyone looking for a taste of the wild. They also run a pub, the **Verulam Arms** in St Albans, which serves a menu of wild food, foraged from local woodlands.

The Foragers are always seeking new woods and wilds to forage in. If you're a woodland owner, get in touch with them at www.the-foragers.com and they'd be glad to discuss visiting your wood to identify the edible delights growing there. They might even cook you a slap-up campfire feast of delicious foraged food. Take a look at more of the Foragers' finds on **Woodlands TV**.



Squirrels: a blessed release?

On a shopping trip, Rod Waterfield of the Woodland Skills Centre inadvertently exposed a worrying loophole in the law regarding the release of grey squirrels.

On a rare weekend off we were in York wandering around the shops and I went into the cosmetics store Lush to buy a birthday present for a friend. At the till I was invited to buy a 'charity pot' for £2.49 with all the proceeds going to a charity. 'What a nice idea,' I thought, until I looked at the pot and saw that my money would go to Urban Squirrels who 'rescue' grey squirrels.

I had a discussion with the staff who were horrified by what I told them about the impact of greys on red squirrels and on the woodland environment. It wasn't their fault so I didn't make too much of it, chose another charity pot and left. In the evening I decided to put a post on Facebook with a photo of the offending pot. I had no idea what would happen: over 10,000 people reached, with over 3,600 engagements and 35 shares within the next two days. These are the kind of statistics that the **Woodland Skills Centre** never had before.

Comments were varied, with a few defending the rights of grey squirrels, but the majority were horrified about the activities of the Urban Squirrels charity. It is illegal to release grey squirrels once they have been caught, but the legislation allows Natural England to issue a licence to Urban Squirrels to catch grey squirrels which are injured or at risk, rehabilitate them and release them back into the wild.

I don't blame Lush. The wish to support charities is admirable, but they should have taken better advice. For me, the real issue is why Natural England has chosen to grant the licences.

The extraordinary response to our original post shows how much feeling there is about this. The Woodland Skills

Centre is passionate about woodlands, all the wildlife in them, what woodlands do for us and what we need to do for them. This has to include respecting the delicate balance between all species – plant, tree, vertebrates and invertebrates – that has evolved over millennia. It is people who threaten this balance by thoughtlessly introducing non-native species of plants and creatures and an array of diseases. We cannot just ignore the consequences – whether it's Himalayan balsam, Japanese knotweed, oak processionary moth, ash die-back, grey squirrels or any of the other things we have done to upset the balance in our natural environment. We have to try to control the damage and limit the spread. The alternative is the destruction of our natural environment as we know it.



Having inadvertently started this off, I now hope that Lush will reconsider their sponsorship of Urban Squirrels and Natural England will reconsider licensing this work – rescuing grey squirrels which would normally die, rehabilitating them and then releasing them into the wild.

In the meantime, thank you to everyone who has joined in the discussions. If you wonder what the Woodland Skills Centre is, look at our website, like our Facebook page and, if you can, come on a course and take the opportunity to see how we manage our woodlands for the benefit of all our native species.

On the Monday, before heading for home, we went for a walk through a park by the river in York. We were twice confronted by a large and self-confident grey squirrel which stood its ground and tried to stare me out until I was less than two metres away when it strolled off. Do grey squirrels do Facebook?

SQUIRRELS' LAW

Natural England responded to protests about their actions by detailing the legislation behind licensed release. They noted that, 'For grey squirrel release, licences are strictly conditioned to control where the animals are released, and do not permit release where red

squirrels are, or may be, still present. There is a presumption against the issue of licences except to allow rehabilitated animals that were originally taken from the wild to be re-released in the same area that they were taken from.'

'Release', they say, 'will have neutral

or beneficial impact on biodiversity and socio-economic interests.'

Read a full guide to the **law about the release of grey squirrels here**.

Finally, those saddened by the whole debate may like to know about the research into **grey squirrel contraceptives**.



BIOCHAR

IS IT THE NEW WOODLAND WONDER STUFF?

Phil Greenwood is the founder of Sacred Earth, an environmental project in East Sussex that specialises in nature education and ecotherapy for adults and children.

When I set up Sacred Earth in 2011, I took on the stewardship of a 40-acre rural site that had formerly been a brickworks. It had been abandoned for years, but I've worked hard to regenerate it, by sustainably managing the woodlands that cover most of it, digging ponds, constructing walkways and encouraging biodiversity.

From day one I've spent a lot of time coppicing and pollarding the trees, which are a mix of oak, ash, hornbeam and goat willow. As a conservationist, it quickly became obvious to me that I had to do something useful with all the



resulting wood offcuts. I knew about the eco-friendly charcoal known as 'biochar' and ended up investing in a kiln, so we could make it on site. For me, making biochar is a fantastic way of closing the sustainable woodland

management loop, as it takes waste material and turns it into something useful that you can use to boost the health of your land and trees – or even sell to make your woodland more economically viable.

What is biochar?

Biochar is made by burning wood and other organic biomass at much lower temperatures than those used to make standard charcoal. The other difference is that it's made in a low oxygen environment, in a process called 'pyrolysis'. Due to this processing technique, lots of nooks

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We don't need plantations or crops planted for biochar, what we need is a charcoal maker on every farm so the farmer can turn his waste into carbon.

”

James Lovelock, 2009

and crannies are created in its surface – making it much more porous and absorbent than common charcoal.

What is it for?

You dig it into your soil! Biochar was first discovered by the indigenous people of ancient Amazonia. They worked out that adding charcoal to the poor soils of the tropical rainforest enriched them and made them viable for agriculture. The ‘terra preta’, or ‘black soils’ they bioengineered still cover an estimated 10% of the Amazon basin today.

Although biochar has been around for thousands of years, it has only recently become of scientific interest, because of its apparent usefulness in the face of climate change and widespread soil infertility. The UK Biochar Research Centre opened at the University of Edinburgh in 2009. Professor Peter Smith of the University of Aberdeen, and also Director of Scotland’s Climate Change Centre of Expertise, has written a paper advocating biochar as part of the solution to runaway carbon emissions. In the UK alone, research into biochar is also being undertaken at Coventry University, Reading University and the University of Newcastle. Professor James Fairhead of the University of Sussex has conducted research into rural African farmers using biochar to make their agricultural practice more sustainable.

Scientists are clearly interested in

investigating the properties of biochar to see whether it really is the new wonderstuff capable of boosting soil fertility and therefore improving the health and strength of plants and trees. It also assists the growth of mycorrhizal fungi, bacteria and other microorganisms that are essential to soil health. Due to its sponge-like structure, it also keeps the soil stable, to ensure nutrient and water retention. So far, the evidence seems strong.

But biochar does so much more than rejuvenate the earth at a microbial level. It also ‘locks’ carbon into the ground. Environmental leaders as disparate as Al Gore, Gaia Hypothesis originator James Lovelock and NASA scientist Jim Hansen have all cited the widespread

addition of biochar to our soils as one way to help curb runaway emissions.

How to make it

You need a special kiln – it cannot be produced in a standard charcoal kiln. Ours is a SuperChar Mark 1 modified ring kiln, which costs around £5,600. We got it from biochar specialists Carbon Gold and I named it ‘Aunt Betty’, after one of my favourite aunts, an incredibly warm-hearted person. ‘Betty’ can provide around 150kg of quality biochar from 500kg of wood offcuts.

If you want to make biochar on a smaller scale, you need what’s known as a ‘biochar rocket stove’. Unfortunately, these aren’t yet commercially available, but you can download instructions for how to make one from the net (try the **Soil Carbon website**).

My personal advice for making biochar would be always to ensure you use only waste materials – almost anything will do, from woody offcuts to agricultural waste materials. You should never grow anything specifically to make it. We mainly use goat willow coppice and leylandii offcuts. I’d also recommend taking it slowly. Set aside a day for a biochar burn and make sure there are at least two people involved, for health and safety reasons. Never forget that a slow burn produces more char. Our kiln is set in a clearing among the



trees and I think it's good to enjoy the experience of making char within a natural environment.

What can woodland owners do with biochar?

At Sacred Earth we make it into an enriched soil booster, by grinding it up and then adding other earth-enhancing ingredients like seaweed, comfrey and biodynamic compost preparations. Some of this we dig in and around the roots of our trees, to ensure our soil is as rich an ecosystem as possible and our trees stay healthy and strong. The rest, we sell as a garden product via our website and, soon, through local farm and independent shops.

Biochar and woodland management

I am firmly against the industrial production of biochar, in which trees are grown specifically to make it. I believe that biochar should only be made using naturally-arising organic tree and plant waste as part of a sustainable system. My vision is of a world in which there is a biochar kiln

on every woodland – or landowners link up with local, small-scale biochar manufacturers to create something environmentally regenerative with their wood waste.

In this regard, I am in the process of setting up a roving woodland management service for Sussex and Kent, with plans to invest in a portable biochar kiln. I want to help local woodland owners by sustainably managing their sites for them and then making biochar from the arising wood waste.

Finally, there is also some promising research that suggests the application of biochar to ash tree roots might help combat the scourge that is ash dieback – which is currently ravaging our woodlands. This is something I'm exploring. The fungal disease is already on the Sacred Earth site and I have been applying biochar to both affected and unaffected trees. I will be watching the results closely.

All in all, biochar really is an amazing substance that I believe should be an integral part of all eco-friendly woodland management. In truth, we are only just beginning to understand its vast potential.



PHIL GEENWOOD

founded Sacred Earth in 2011, an environmental project in East Sussex that specialises in nature education and ecotherapy for adults and children.
www.sacredearthland.co.uk

RESOURCES

Build your own biochar rocket stove
www.soil-carbon-regeneration.co.uk

UK Biochar Research Centre
www.biochar.ac.uk

University of Sussex
www.sussex.ac.uk

University of Edinburgh
UK Biochar Research Centre

“
Minimal waste gases are emitted, as our kiln is designed to complete its burn. Once it reaches a temperature, of around 350-450°C, the gases ignite and burn on through to complete the charring phase.

”



SEASONED STACKS?



Winter is all about logs – chopping, stacking and burning. Check that your firewood is adequately seasoned with a moisture meter.

Damp firewood is not only bad for your fire and the environment, it's about to be outlawed.

So how do you check that your logs are dry enough to burn efficiently?

Firewood must be dried properly in order to burn cleanly. For most of us, this means stacking and drying the wood.

When wood is freshly cut in winter, the moisture content can be up to 50%. The amount of moisture affects the calorific value, or amount of heat emitted. Put simply, the moisture in logs burns off as steam before the wood will burn, which reduces the useful heat emitted by the log. The moisture content should be less than 20%.

Wood density also affects the calorific value of timber: Hard woods, such as ash, oak or birch, for example, are denser than soft woods – evergreen conifers. Denser wood burns for longer than soft wood, while soft wood burns fast, brightly and hot.

SPLIT

Split wood dries more quickly than round wood, because a split log has a larger surface area, which will allow moisture to evaporate more efficiently. Some owners prefer to split long lengths of cordwood, while others cross-cut logs to a usable size and split them before stacking. It's an entirely personal choice.

STACK

Stacks will depend on how you harvest your logs and how much space is available to stack it. A good log stack must allow air to circulate so that moisture in the logs can evaporate



Put simply, the moisture burns off as steam before the wood will burn, which reduces the useful heat emitted by the log.



efficiently. Protection from rain and snow is not vital, but it is important to put the stack on risers to keep the bottom layer off the ground. Birch, willow and even hornbeam will rot quickly if left in contact with the ground.

STORE

Trees vary in their density, so different species have different drying times. A good rule of thumb is at least a year for well-stacked, air-dried split wood, but two years' seasoning is more likely to result in really dry logs. Then simply use a moisture meter to check that the moisture content is less than 20%.

STOCK – ROTATE IT

To get the most out of all your firewood, it's important to rotate your log supplies. The ideal log store has a couple of compartments, each able to hold supplies for one winter. Be disciplined about where you stack new supplies.

Thanks to Zevék (www.zevék.co.uk) and Stovesonline (www.stovesonline.co.uk) for supplying test units.



From left to right: Stihl, Brennenstuhl, Stovesonline, Tack, Zevek, Proster

BRENNENSTUHL Moisture Detector MD	PROSTER Digital Wood Moisture Meter	TACK WM01 Classic LCD Damp Meter	STIHL Wood Moisture Meter	ZEVEK Moisture Meter	STOVESONLINE 2.0 Moisture Meter
£17.54 *	£14.99 *	£11.99 *	£18.40 *	£12.97 *	£19.68 *
141g	200g	127g	50g	50g	50g
9-volt battery (not supplied)	9-volt battery (supplied)	3 x AAA batteries (supplied)	4 x LR44 (supplied)	4 x LR44 (supplied)	4 x LR44 (supplied)
Backlit LCD display	LCD display (no backlight)	LCD display & backlight switch	Backlit LCD display	Backlit LCD display	Backlit LCD display
<ol style="list-style-type: none"> 1. Hold switch to record reading. 2. Auto-off after 3 minutes. 3. Solid unit. 4. Large display and beeps when ready. 	<ol style="list-style-type: none"> 1. Settings for different species of wood, marked on the unit. 2. Three buttons - simple to use. 3. Solid unit - less likely to mislay it. 4. Large display with hold function. 5. Auto-off - but only after 15 minutes. 6. 18-month warranty. 	<ol style="list-style-type: none"> 1. Useful backlight option on big display. 2. Buttons are not intuitive - must scroll through options. 3. Sensitive calibration for four different hardnesses - would be helpful to print types on the unit. 4. 24-month warranty. 	<ol style="list-style-type: none"> 1. Prong cap retained with loop and wrist strap. 2. Handy pocket size. 3. Bright orange - hi-vis. 4. Auto-off after 15 seconds. 5. Screwdriver needed to access battery compartment. 	<ol style="list-style-type: none"> 1. Handy pocket size. 2. Auto-off after 15 seconds. 3. Easy to use. 	<ol style="list-style-type: none"> 1. Handy pocket size. 2. Auto-off after 15 seconds. 3. Easy to use.
*All prices are approximate, and vary from retailer to retailer.	All units show the air temperature and can be used to test building materials in addition to timber. Readings between the six units on the same log varied by 1-2%.		Stihl, Stoves and Zevek are essentially the same item, with tiny badging differences. The units are the same, with the same operating system. The only real difference is that Stihl has a retaining strap for the prong guard and requires a screwdriver to install the batteries.		

MAKING A SWEDISH FIRE TORCH

We've all seen them on sale in garden centres: 'Swedish fire logs' for a fiver. **DAVID ALTY** explains how to make one.



Tradition has it that the Swedish fire torch was invented in the Thirty Years War (1618–48), when soldiers roamed across Europe foraging for food and shelter. It enabled them to have a camp fire using only one log and was unaffected by wet ground or snow.

They are a great way to provide a self-contained fire for cooking, light, warmth or simply revelling in the primeval pleasure of a living flame. Making one is simplicity itself.

1. Take a well seasoned log. Size is not especially important but around 30 cm tall and 12 cm across is a good starting point.

2. Using a chainsaw, make at least two cuts crosswise, down the length of the log, stopping about 7 cm from the bottom. The wider the log, the more cuts you will need. If you don't have a chainsaw the log can be split with an axe into four sections and loosely wired back together to give the same structure.

3. Place the log on a firm and level surface, ensuring a good safety zone is around it.

4. Push some flammable material into the top of the cuts, such as shredded birch bark. Build a small fire on the top of the log using small sticks. Keep feeding the fire until the top of the log has caught and the flames have started to spread down the cuts.

Light the log well before dark as they can take a while to get going. If you want to use the fire torch for cooking, it is best to get on with it while there is still a good solid base for your pot. Then sit back and enjoy the simplest of pleasures, an open fire, out in the open.



Return to Le Shack

NICK GIBBS, former editor of *Living Woods*, returns to Le Shack after a two-year absence. Le Shack holds many memories and Nick is contemplating its future.

Many readers will know that I stopped visiting Le Shack after my cycle crash head injury three years ago. My damaged brain could no longer cope with the management of Freshwood Publishing and our magazines, and though we tried to keep the titles going, ultimately the company had to be dissolved. The Shack lost its purpose with no outlet for my off-grid experiences and no testing of kit, which had both been significant reasons for the visits. When logs had to be moved, a new portable winch was employed, and examined at the same time. I could never have compared two chainsaw mills without the real-life building of the compost loo. That my WC had been built on the neighbour's land added a piquant touch of humour for the regular reader.

In September, I travelled to France with my friend and frequent Shackist, David. I had half a mind to prepare the place for sale, and to find an appropriate estate agent for a valuation. The alternative might be to put it on Gumtree. I had become disillusioned and saddened. On one trip after the accident I burnt a number of books I had been sent for review, hoping to rid myself of the memories of that previous purpose. But David and I arrive to discover that at last the dams on the river are being demolished, and the *vidange* (the pulling of the plug) is nearly complete. The water level is lower than ever before. The mosquito-ridden marshland between Le Shackeau and the river is now dry, and you can walk across the land in espadrilles. We find there is now a short length of rapids about 100 yards upstream, not quite roaring but more than a tinkle, helping to mask the rumble from the nearby quarry. New meaning has emerged.

Overjoyed, David and I visited the dam to view proceedings, and found some posters explaining the plans. If only our French was better. Eventually a local helped us understand the strategy and allayed fears that a series of low barriers might raise the water level again, and the 'waterfall' might disappear and the marsh might return. The demolition teams are having to repair the damage to the natural environment



by grading the build-up of silt and by constructing flood defences along the banks of Le Sélune, before it reaches La Baie de Mont St Michel. I am enthused to see if these walls of caged boulders reach Le Shack, which is all but marked on the plans to be the spot where the reinforcements will end.

With that in mind David and I stuck willow rods into the clay beside the river, hoping they will sprout by spring. I started by selecting some a metre high, still in

leaf, until David reminded me that short stubby ones are said to work better. So we did some of both, and look forward now to see whose idea works best.

One way or another, I do want to tidy up Le Shack, particularly the building, notably by painting the shutters and removing the layers of dust inside. My plan is to take some abrasive, a scraper, some brushes and paint, and a cordless Dyson, rechargeable by generator. The work calls for a week or two in France, which few of my acquaintances are willing to attempt in winter. Nor do I have much time to spare, working as I do now for a small tree services business around my hometown of Cirencester. The five or six days a week working as rakerman and chipperman is therapeutic. I am told what to do and stick to a routine of being picked up every day at 8am and dropped off by 3pm, a bit before dusk. It is good exercise and gives me time to do other things afterwards. It is even amazing how many tiny tasks one can complete before work over a cup of morning tea.

The downside is that I can no longer 'jet' off to France willy-nilly. Christmas seems like the only break when everything stops, and I plan to go for an adventure alone

for some festive spirit *en France*. I can't wait to see how it goes. The Dyson will have to perch on the back of my folding bike for the frosty adventure. The journey by train, ferry, bus and bicycle is always interesting, often exhausting, and sometimes threatened by my habit of napping too long and missing a station or a stop. Perhaps you will learn how it goes, if it goes, next issue.





All I want for CHRISTMAS

Christmas is made up of traditions: food, spending time with your nearest and dearest and, with a bit of luck, some presents. Here are a few suggestions.

This collection of suggestions from the Woodlands.co.uk team reflects the best Christmas customs – there's stoves to cook on, hammocks and tents to sleep in, a few useful tools and some gorgeous chairs to lounge in while reading some of our recommended books.

HEAT

1. Petromax Loki Camping Stove, £220

A hugely versatile stove which can be used for cooking and heating within a large tent to take the chill off a winter's evening. www.petromax.de

2. Kirtley Kettle, from £24

Available sizes from small to massive (2.5 to 10 litres), to suit your catering requirements. Pop it straight on the fire for constant hot water. www.kirtleykettles.co.uk

3. Svante Freden Reflector Oven, £55

In the words of our woodland chef, Liz Watson, 'This is the best thing ever!' Reviewed in the **Summer 2017 edition** of Living Woods (page 24), Liz demonstrated the versatility of this simple, yet effective woodland stove. www.proadventure.co.uk

4. Ecozoom Versa Rocket Stove, £110

For those who might like to spend Christmas Day in the woods, this has a dual function: it is both a highly efficient portable stove, and more importantly during the festive season, also has a chimney.* Rocket stoves use 60% less fuel than traditional cooking methods, and the efficient combustion method ensures 70% less smoke. They are available via www.keeperscopping.co.uk/shop

** Disclaimer we cannot promise it will suit the requirements of the big man in red.*





6.

SLEEP

5. DD Hammocks, from £20

Who doesn't love a hammock? Perhaps better suited to summer in the woods, they are really comfortable, and the better ones include zip-up bug protection. These DD Hammocks are great for kids for under £20. www.ddhammocks.com

6. Three-man tree tent, £706.59

According to their marketing details, Tentsile 'combines the comfort and versatility of a hammock with the security and multi-person-occupancy of a tent'. Tentsile tents were devised to work as a portable treehouse – they're strong, lightweight and eco-friendly tents which can be suspended between trees and have an army of enthusiastic users. They're not cheap, but they are extremely high-quality. www.tentsile.co.uk



5.

RELAX

7. Coffee filter, around £8

For those like techie Tom, who believe that ‘roughing it’ cannot include substandard coffee, try Ortlieb’s foldable heat resistant filter holder; which enables preparation of freshly brewed coffee wherever you are. It is set up with pins, sticks or tent pegs which are inserted through the loops, and placed above the kettle or cup. Simply insert the paper filter and coffee, and enjoy.

www.ortlieb.com



8. Robin Duckmanton’s Windsor Chairs

Based in North Yorkshire, Robin Duckmanton makes handmade, ‘heirloom’ American-style Windsor chairs, using wood sourced within 20 miles of his house. The chairs are built in the traditional manner; using hand tools and a pole lathe, leaving a unique finish to each piece. Beautifully made, prices start at £800.

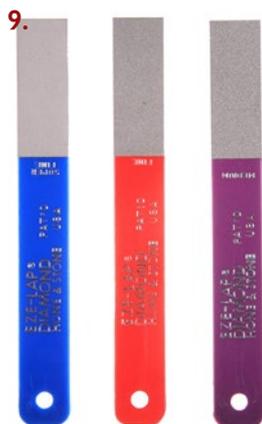
www.redwoodchairs.co.uk



TOOLS

9. Diamond sharpening stones, £22.95

Small stones to quickly put an edge back on your tools, whilst out in the woods. Various suppliers including www.woodlandcraftsupplies.co.uk



10. Log-lifting tongs, £25–£40

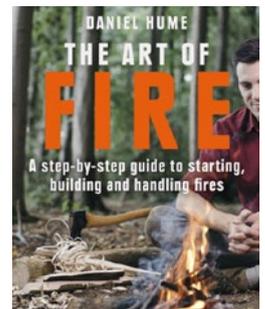
Perfect for helping to lift those awkward logs. Log tongs are available from many retailers – illustrated are the Husqvarna tongs, winner of a 2018 Woodlands Award.



BOOKS

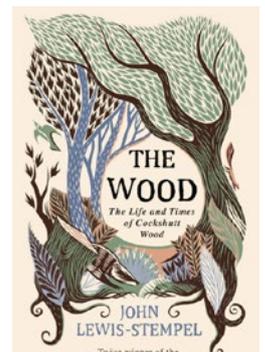
11. The Art of Fire Daniel Hume, £9.99

For thousands of years, at every corner of the globe, humans have been huddling around fires, but this is more than just a simple fire-lighting guide. It’s part travelogue and part practical fire-making manual – a fascinating and delightful read for anyone interested in history, indigenous traditions and the natural world. (Read the review in Autumn LW 49.)



12. The Wood: the Life and Times of Cockshutt Wood John Lewis-Stempel, £14.99

A lyrical evocation of the passing seasons and the management of a small Herefordshire woodland, peppered with snippets and facts from history, folklore, and woodland knowledge. The diary format gives it shape, rising through spring to summer and then falling away into autumn and winter – a narrative arc that reads satisfyingly like a novel. (Read the review in Spring LW 47.)



GHOST TREES

Writer **BOB GILBERT** moved from north London to Poplar in 2009. A keen observer of the natural world, he has written a column for the *Ham and High* newspaper on urban wildlife for two decades. In his new book, *Ghost Trees*, he turns his attention to the urban landscape of East London, telling the story of this inner city area through its trees, past and present, and drawing on history, natural history, legends, poetry and painting.

In this extract, Bob chronicles a year in the life of the plane tree in his garden: its constancies and inconstancies; its furlings and unfurlings; its aspects in every weather; its moods at different times of day. A storm hits and Bob is curious about the sheer number of leaves on the tree...

“The high winds rise and fall, the stronger gusts shaking the thinning leaves of the plane into a frenzy. They are quaking as if spirit-possessed and speak in loud, hissing tongues. Leaves are stripped from outer branches and hurtle vertically across the garden. The same scouring wind leaves the seed balls in place, though they bob up and down in agitation like oats on a stormy sea. The hawthorn beneath the plane, which still shows little sign of seasonal colour, shakes dementedly, whiplashed to one side as the gusts pass through it.

Plant pots and compost bins are overturned and my fine Cape gooseberry is snapped in several places. Twigs and branches are scattered across the garden and the cabbages lean collectively to one side like a performing dance troupe frozen in mid-manoeuvre. When the storm subsides, the tree settles back into itself as if exhausted. It has also passed a milestone in the year, for it has clearly lost more leaves than those it has remaining. Rather than a full tree that is thinning, it has become a bare tree with a few last leaves attached.

As I rake and sweep this shedding, and load leaves by armfuls into bins



Map of London poverty 1889. WikiCommons and garden sacks, I can't help but wonder at their sheer quantity. It is perhaps only in this ritual of clearing that I really begin to understand the tree's profligacy of production. I search in books and online for an estimate of how many leaves a tree may bear but it is hard to find a source that would be foolhardy enough to put a figure to something so variable. A large spruce, I learn, can bear three million, but these are the narrower 'needles', held in bunches, and they are shed continuously across the year rather



than in a single season.

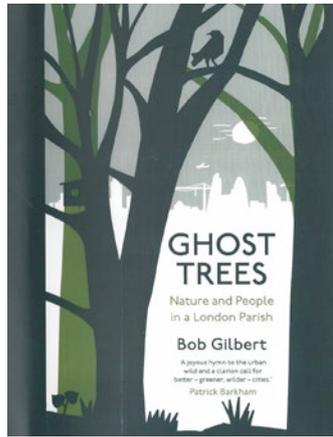
The oak is the most commonly studied of the deciduous trees and its leaves, on a large, healthy specimen, are variously estimated at somewhere between 200,000 and 250,000. Working on the unscientific assumption that my plane tree must carry something similar, I bring some of the fallen leaves indoors and weigh them. Using twenty leaves of various sizes I come to an average of two grams each for the dry, dead leaves. Taking the higher of the two estimates of leaf number gives me a weight of 500 kilos, or around eighty stone, for the leaves fallen from my plane. Add to this the three planes that stand on the other side of the churchyard wall and some two tons of leaves are being dumped annually in and around my garden.

Though no part of the garden is immune from this onslaught, there is one spot where the leaves assemble in great quantity. Blowing down the blind alley at the back of the house they collect at its far end, as if the sheer weight of numbers might give them some sanctuary against sweeping.

Their propensity to flee down this eastward extension of the garden seems affirmation of a basic geographic fact: that our prevalent winds are westerly. The 'national' winds are those that have crossed the great expanse of the western oceans, that have reached us across open salt sea, high waves and swelling tides, and that carry on towards the narrow North Sea and across to the continental land mass. It is not only a physical force but a sociological

one as well for it has played a part in shaping London, and this part of it in particular.

When the city became tired of its ‘noxious’ industries – the smelly, the smoky, the messy or the downright dangerous – it passed an ordinance expelling them from within its boundaries. And so they came here; the slaughterhouses, oil boilers, gut spinners, varnish makers, chemical plants, calico printers, glue makers, distilleries and manufacturers of gunpowder. They concentrated on the east side of town where the westerly winds would carry the smell and



the smoke away, rather than blow them back over the city that had expelled them. It was wind direction that first brought this toxic concoction, and with it the concentration of poverty and deprivation, to what was to become the East End. In the social mapping of the city it became a rough rule that wealth declined from west to east, and the wind had helped make it so. The storm-torn leaves, as they congregate at the untidy eastern end of our alley, are re-enacting social history. ”

BOOK REVIEW

Londoner **ANGUS HANTON** reviews *Ghost Trees*, which he thinks will be as ‘popular as the poplars in Poplar’.

GHOST TREES NATURE AND PEOPLE IN A LONDON PARISH

Bob Gilbert
Saraband Books
ISBN 978-1912235278
RRP £14.99

Bob Gilbert was parachuted into Poplar in the East End of London because his wife Jane was appointed there as a vicar. But Bob wanted to know all about the place and has a hawk-eye for spotting things and an elephantine memory for detail. Instead of discovering his new territory by beating the Parish boundaries he decided to walk along all the streets in the parish pacing down every one, including the noisy, dirty A-roads. What he observes is remarkable. Although London has a lot of concrete and tarmac, life keeps squeezing its way out and biodiversity is there in abundance. Expanding beyond his very local sightings, he considers the wider world of biodiversity and explains the five great extinctions the planet has experienced, and marvels at why the trees we still have are the survivors.

Poplar trees present many ironies – one of which is that they are resistant to fire, yet for a long time their main use was making matches. Mr Bryant and Mr May, two Quakers, started selling their matches in 1843 and they planned to create a model factory making safety matches that would avoid the workers getting poisoned by the phosphorus (‘phossy jaw’). But mostly the market wouldn’t pay the extra for the safety – as Gilbert observes, the market does not have a conscience. Poplar trees have also played

an important role in warfare: their wood was used for arrows because they are unlikely to snap, and they are light to carry. The *Mary Rose*, Henry VIII’s flagship which sank in 1545 and was raised from the seabed in 1982, had 2,300 iron-tipped arrows and most of them were made from poplar wood.

Gilbert, like most people who live a good part of their lives outdoors, is acutely aware of the seasons and devotes much of the book to ‘A Year Observed’, from Sylvia Plath’s ‘ring doves chanting’ in January, to the ‘canopy thinning like a balding man’ in October, and by December he sees that the hawthorn resembles a Christmas tree with its berries like baubles. Other themes are the London plane tree, mulberries, and exploring the Black Ditch – the East End’s own river. The title, *Ghost Trees*, could be a reference to the distinctive silhouettes of trees in winter, or the way nature seems to appear just when least expected and sends shivers down your back, or to the fact that trees will outlive humankind.

This is the book for those that enjoy a mashed-potato mix of learned natural history, historical anecdotes and dry humour. Bob Gilbert concludes nicely with a version of ‘everything, in time, will pass’ by quoting from Badger in *Toad of Toad Hall*, who described how the ants feel about life: ‘We may move out for a time, but we wait. We are patient. And then we return. So, it will ever be.’

It’s a cliché to describe a great book published in time for December as the ideal stocking-filler, but the recipient of *Ghost Trees* may well feel a desire to tramp their own streets, like Gilbert, and observe trees for themselves. So the book will truly end up being, in a different way, a ‘stocking filler’.

CLARE GIBSON enjoys the arboreal and the artistic in this wide-ranging and beautifully illustrated survey of trees in art.

TREES IN ART Charles Watkins

Reaktion Books

256 pages

203 illustrations, 201 in colour

ISBN 978-1-780239-309

Hardback RRP £35.00

No coffee-table book this, all flashy pictures and minimal text, which is not to say that *Trees in Art* isn't aesthetically pleasing, because its thick pages and exquisite colour reproductions make it a delight to leaf through. Unlike many coffee-table books, the carefully selected images actually correspond to those discussed in the text, each chosen to illustrate a pertinent point about humankind's relationship with trees.

At first sight, *Trees in Art* is, then, a cut above its competition, being a proper academic book complete with references, bibliography and index. Don't let that put you off, though, because it is also immensely readable. Maybe this is because the author, Charles Watkins, is a professor of rural geography rather than a highfalutin' art historian, but it certainly means that anyone who cares about trees will find much to learn from his unique take on arboreal art.

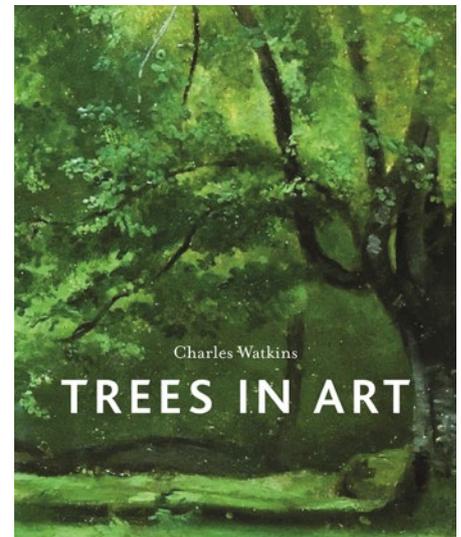
A wide-ranging historical survey of humankind's portrayal of trees (mainly in Western art), the book's ten chapters take us from the rock art of Late Stone Age Zimbabwe to Ai Weiwei's recent tree sculptures. During this journey, the text touches on the magical and mythical, the sacred and symbolic, while never losing sight of the mundanities of wood management. Indeed, the author's in-depth knowledge of rural landscapes provides the reader with a fascinating overview of the history of tree and land management as depicted in art. One chapter is devoted to lops and pollards, for example, another's focus is forest

interiors, while a third is devoted to trees and timber.

The most compelling chapters, for me, though, touch on the magical properties with which humans have always endowed trees. In 'Trees and ancient stories', the arboreal myths told in Ovid's *Metamorphoses* are introduced, most famously the transformation of the nymph Daphne into a laurel tree. 'Sacred trees' surveys some of the trees that have been credited with having supernatural qualities, and traces the link between trees and Christianity, be it through church pillars carved with leaves, stained-glass Jesse trees or Catholic wayside shrines.

The historical chapters are equally interesting. 'Nationality, revolution and war' starts with a discussion about the trees carved on Trajan's Column and stitched into the Bayeux Tapestry and goes on to outline how the depiction of trees has reflected national events and preoccupations. The drily titled 'Western art abroad' turns out to be a rather riveting exploration of how arboreal art was often a by-product of Western expansionism and imperialism – and of the adventurousness of intrepid artists.

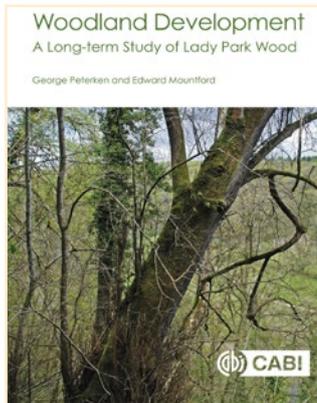
Art is the focus of the final chapter, which presents images of weird and wonderful trees, from the monstrosities imagined by Bosch to the conceits of contemporary conceptual art, touching along the way on the uses of wood itself in the making of art. Art aside, the great strength of this book is Watkins' text, which brings a forester's eye to arboreal art through the ages and provides an illuminating insight into the contexts in which it was made.



“
*Watkins' text brings
a forester's eye
to arboreal art.*

”

Woodland owner **DUNCAN DAVIDSON** is inspired by the long-term study of Lady Park Wood.



**WOODLAND DEVELOPMENT:
A LONG-TERM STUDY OF
LADY PARK WOOD**

**George F. Peterken and
Edward P. Mountford**
CAB International, 2017
302 pages with colour illustrations
ISBN 978-1780648651
Paperback RRP £35

This book is about an unmanaged, ancient wood in the lower Wye Valley. Among books on woodlands, this one is unique. Here are observations made over the course of 70 years on 21,000 individual trees and interpreted in a beautifully rounded way by two leading forest ecologists who have been involved in the study for many years.

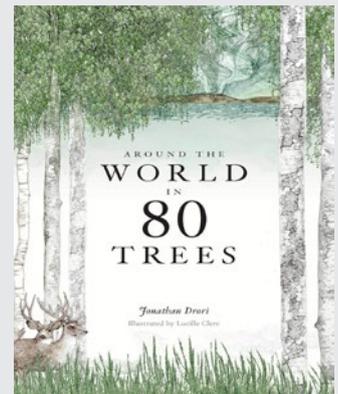
Lady Park Wood was set aside by the Forestry Commission in 1944 for long-term ecological study: 36 ha of mixed beech, sessile oak, ash, lime, wych elm, birch and yew. The wood had been coppiced until 1870, then allowed to grow with light thinning until 1942 when part was felled and allowed to regenerate naturally. The 'old growth' stand developing since 1870 and the 'young growth' stand have lived without human intervention since 1944 (the reserve was deer-fenced in 2007). Observations on the two stands combine (approximately) to give a picture of woodland development over 145 years. For comparison, 8 ha of adjacent, unfenced wood was added in 1984, managed by periodic thinning and natural regeneration. The Nature Reserve Agreement extends to 2083.

This is not dry science; the pages are inhabited by people as well as trees. But Peterken and Mountford give no ground to superficiality. They discuss methods for measuring the growth of stands and of single trees, describe overall stand development then deal with each tree species in turn, often illustrating points by reference to the growth and fate of individual trees. There are many excellent colour photographs and the work is fully referenced. Tables of results allow the reader to compare quantitatively, say,

regeneration with mortality or basal area with stem number for different species during successive periods. Build-up of deadwood, changes to ground flora, bryophytes, lichens, fungi and animals are described. All these observations are related to the wider picture, to ways of managing 'natural woodland' and the desirability – or otherwise – of 'rewilding'.

Lady Park Wood will be referred to by foresters and ecologists, but will also inspire those who own small woodlands or simply enjoy being in the forest. As I read it, I became increasingly aware of the story told by the distribution of species, ages and sizes of trees in my small wood. I began to appreciate some of the points highlighted by the study, for example the relative importance of vegetative regeneration for several tree species and the long persistence of beech 'saplings' under closed canopy and their opportunism if the canopy is opened by tree fall. Perhaps most importantly, I saw that, despite my best laid schemes, in the long view the future of my wood is unpredictable. Rare events – drought, storm, disease coming at particular moments in the life history of the wood – may radically change the balance of dominant species as they have done more than once in Lady Park.

This is not a textbook of woodland management or a plea for minimum intervention. It's about getting to know one 'natural' wood in depth over a long time. In doing so, it brings us very close to the key issues for all ecological aspects of management and provides a solid background against which to judge our options. Reading this book will surely change the way you see your favourite wood.

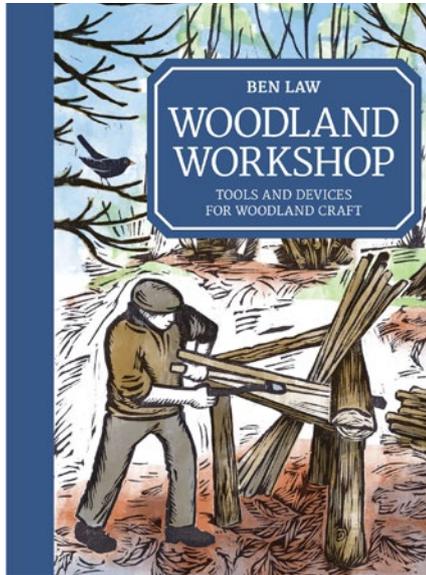


**AROUND THE
WORLD IN
80
TREES**

Jonathan Drori
Laurence King Publishing
240 pages 80 illustrations
ISBN 978-1-78627-161-7
Hardback RRP £17.99

In this thoroughly engaging book – beautifully illustrated with pen-and-ink illustrations by French artist Lucille Clerc – Jonathan Drori makes a selection of 80 of the world's 60,000 tree species, starting in the UK and moving roughly eastwards around the globe. He does not attempt to be comprehensive, but takes what appeals and surprises: how a species has adapted to its environment, the uses of its wood, myths and legends. Its slightly random approach is what gives the book sparkle and readability, with endless fascinating snippets – the bricks of Australian jarrah wood that were used to pave London streets; how gutta-percha "utterly changed the world" as an electrical insulator for telegraph cables, and much more.

Woodland worker and no mean craftsman himself, **RICHARD HARE** casts an admiring eye over Ben Law's new book on green woodworking.



**WOODLAND
WORKSHOP**
TOOLS AND DEVICES FOR
WOODLAND CRAFT

Ben Law

GMC Publications
208 pages
ISBN 978-1784943431
Hardback RRP £25

Ben Law's latest offering is a nicely presented and personal account of the tools and workshop set-up he employs at his workplace in Prickly Nut Wood. The book's cover has an appropriately rural scene of the author splitting pales in the wood. Inside, it is peppered with a mixture of hand-drawn illustrations and photographs which help the reader follow the prose, making his instructions clear and easy to follow. He describes some of the devices in the book as another 'pair of hands'; this together with the chapter on sharpening reminds us that the fundamentals of green woodworking, or any woodworking for that matter, are to have a sharp tool and a good firm method of gripping the work.

Ben is not afraid of modern innovations and the ease and efficiency they can bring to a job. The section on 'Key Tools' gives us an

overview of some of the traditional hand tools which have been around for many hundreds of years whilst acknowledging that modern power tools like the cordless drill have a place, especially for the commercial or semi-commercial craftsman. Particularly inspiring are the detailed instructions for the different types of shave horse he uses. If you've creaked and groaned when dismounting your shave horse after an hour or two in the saddle, you could do worse than try constructing the 'easy rider', a style developed by his friend and colleague Sean Hellman.

The book is a real delight, you might read it straight through, or dip into it as and when needed. Some of the projects are as simple as looking for the right shaped tree to make a chopping block; others like the pole lathe or framing beds for roundwood timber framing will require more resources and skill to complete and may not be relevant to you. However, there are some gems in here and whatever level you are at, you are bound to find something which gives you an 'aha . . . that makes sense' moment. I particularly like the way he relates the modern refinements he has made with the traditional versions which have been around for many years and the potted history he gives us at the end of each section.

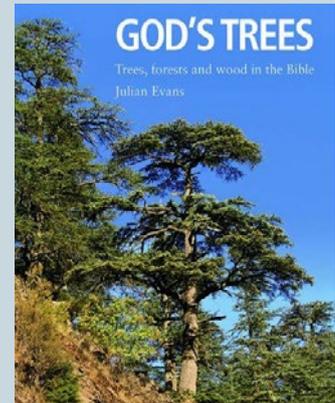
Even if you are already an experienced green woodworker, this volume may help you take another look at how you've been working and how you might improve your efficiency and comfort with some of Ben's ideas. If you are just starting out it will be a valuable addition to your workshop bookshelf.

I just wonder how much extra we would have to pay to have it printed and bound locally rather than in China? It seems a little paradoxical that a book otherwise reeking in sustainability is printed on paper which has travelled half way around the world, but maybe that's a discussion for another time.

GOD'S TREES
TREES, FORESTS AND
WOOD IN THE BIBLE

Julian Evans

Patula Press
198 pages
ISBN 978-1-84625-410-9
RRP £25



The second edition of Julian Evans' absorbing book is slightly revised and updated with extra material. This is the first authoritative book to focus on arboreal imagery in the Bible, how it is used and sometimes abused. Professor Evans, a forester with a distinguished career both in the UK and abroad, has produced a fascinating book, which deals with the trees of the Biblical regions of the Middle East, and their uses, as well as the symbolism of trees in the Bible.

By the time you get to the end of the book, you realise just how important trees are to the whole fabric of Biblical times – with towns and places named after trees (Gethsemane means olive press) and, in an age before plastics, wood was the main material for making objects of everyday life. The vast array of photos give the woodland enthusiast an armchair tour of the Middle East. This book is something to put under the Christmas tree, another of 'God's Trees'.

Woodlands Awards 2018

Congratulations to all the 54 winners of this, the second series of the annual Woodlands Awards, established and run by Woodlands.co.uk. Many names will be familiar to the readers of Living Woods Magazine and we are delighted to see them recognised.



Hazel King used an iPhone 7 to capture this inventive and unusual view of woodland.

WOODLAND BLOGS

David Collier for
melickblog.wordpress.com

Judi Simpson for
[www.redbusnursery.co.uk/news/
this-week-at-forest-school](http://www.redbusnursery.co.uk/news/this-week-at-forest-school)

Martin Garwood for
thecrowwd.blogspot.com

Jasper Sharp for the
Monthly Mushroom on
woodlands.co.uk

SMALL WOODLAND WEBSITES

Anna Grugeon and Pete Grugeon for
www.devoncharcoal.co.uk

Julie and Tony Upson for
www.noorwood.co.uk

WOODLAND TOOL RECOMMENDATIONS

The Samurai c330 saw
The Morakniv knife range
Gränsfors Bruk large carving axe
Classic Hand Tools
The Husqvarna Lifting Tong

WOODLAND PHOTOGRAPHY

Joanne Hedger
Hazel King
Kerry Evans
Julie Moreland

WOODLAND SCULPTURE

Dan Watson
Graham Strong
Robin Wood of Wildchild Designs

WOODLAND HAIR AND/OR BEARD

Isabel and Bethany Whitehead
Barn the Spoon

Visit **Woodlands.co.uk** to read full citations for all the award-winners.

WOODFAIR TRADE STANDS

Stihl
The Great Big Tree
Climbing Company
Treesource
Woodland Bushcraft and Survival
Neil Taylor
Giles Newman

WHOLE WOOD OWNERS' COORDINATORS

Steve Sangster
Sean Kenyon

WOODLAND CONTRACTORS

Clive Voaden
Mike Sherring of Cricket Landscaping
Ken Earle Forestry
Matthew Pepper & Keith Seymour
Ewan Mitchell

FOREST SCHOOLS

Ace Forest School
Squirrels Forest School
Richard Bonington Forest School
Sticks and Stones

WOODLAND COURSES

Sallerton Wood
Charcoal Making at
Bulworthy Project
Woodland Skills Centre

COMMUNITY WOODS

Coed Craig Ruperra
Wilderness Wood

REGIONAL & NATIONAL WOODLAND ORGANISATIONS

Royal Scottish Forestry Society
Cumbria Woodlands
The Forest School Association
Nottinghamshire Wildlife Trust



A stunning selection of the photographic entries.
Above: Julie Moreland.
Below: Joanne Hedger.
Bottom: Kerry Evans.

WOODLAND BOOKS OF THE YEAR

Around the World in 80 Trees Jonathan Drori (Laurence King Publishing)

Go Wild in the Woods: An Adventure Handbook
Goldie Hawk & Rachael Saunders (Nosy Crow for the National Trust)

The Wood: The Life and Times of Cockshutt Wood
John Lewis-Stempel (Doubleday)

Making Charcoal and Biochar
Rebecca Oaks (The Crowwood Press)

A Wood of One's Own
Ruth Pavey (Gerald Duckworth & Co)

Shinrin-Yoku: The Art and Science of Forest Bathing
Dr Qing Li (Penguin Life)

Forest School Adventure: Outdoor Skills and Play for Children
Naomi Walmsley & Dan Westall (GMC Publications)

Trees in England: Management and Disease since 1600
Tom Williamson, Gerry Barnes & Toby Pillatt (University of Hertfordshire Press)



SYMBOLS IN TREES

CLARE GIBSON analyses the prickliest of seasonal trees, the holly.

‘The holly and the ivy’, ‘Deck the halls with boughs of holly’ – arguably no other tree evokes the spirit of Christmas as powerfully as the holly (*Ilex aquifolium*). Although the ‘Christmas tree’ may be a more obvious symbol of the festival, its emergence as such has been relatively recent, while any number of fir species may be co-opted to play the part. The holly, by contrast, has been accorded a starring role in winter festivities for thousands of years.

Before the Christianisation of the Western world, it was the winter solstice that was the focus of mid-winter celebrations. One of the two dates in the year when the day and night are of equal length, the winter solstice, also known as midwinter or Yule, which falls on or around 21 December, heralds the gradual strengthening of the sun and lengthening of the days, holding out the promise of light, warmth and the rebirth of the natural world in spring. This harbinger of hope was – and is – clearly worthy of celebration at a dark, cold and cheerless time of year.

Bringing the outside in

Holly branches were brought inside as part of the midwinter festivities, and not only for decorative purposes. As an evergreen, the holly’s dark-green leaves symbolise eternal life, while its red berries may represent both blood – the life force – and the blazing sun. According to Druidic lore, bringing holly into the home would lure in protective spirits in search of warmth and shelter in winter. The holly was also believed to be apotropaic: a spiky sprig hung above a door, window or fireplace would, it was thought, drive away any incoming evil influences – lightning, too.

The ancient Romans celebrated Saturnalia between 17 and 23

“
*The holly has
 been accorded a
 starring role in
 winter festivities for
 thousands of years.*
 ”

December. Dedicated to Saturn, an agricultural god, the festivities involved riotous behaviour, feasting and the exchange of gifts, including sprigs of luck- and health-bringing holly. And when Christianity gained its ascendancy, aspects of these midwinter and Saturnalian practices were absorbed into the festival of Christmas, including the decoration of homes with holly.

In mythic tradition, the winter solstice signals the death of the Holly King, whose rule over the waning year began on the summer solstice, or midsummer (around 21 June), with his defeat of the Oak King, who now resumes his reign as the year begins to wax again. This pagan correlation of the holly and oak with midsummer and midwinter has a Christian parallel: because the feast day of St John the Baptist, 24 June, which commemorates his birth, falls on or around midsummer, and the nativity



of Christ, 25 December, roughly corresponds to midwinter, the oak may be regarded as an emblem of St John, while the holly is equated with Christ. (Indeed, some say that ‘holly’ means ‘holy’.)

The holly has long played an important part at Easter in parts of Europe, as is hinted at by the holly’s German name: *Stechpalme* (literally ‘prickly palm’). The stabbing element of the name is obvious, but palm? Well, needs must in a cold climate hostile to palm trees: holly branches are still used in Palm Sunday church services in parts of northern Europe to represent the palm branches with which Christ was welcomed into Jerusalem. It’s a little hard to envisage, but in some traditions, the cross on which Christ was crucified was also said to be a holly tree. It is easier to understand why Christ’s crown of thorns was often pictured as a holly wreath, its berries being equated with the drops of blood drawn by its prickly leaves. Another folk tale relates that the touch of Christ’s feet on the ground caused the holly – ‘Christ’s thorn’ – to spring to life, its thorny leaves and blood-red berries prefiguring his Passion.

Holy holly

The identification with Christ doesn’t end there, nor do the pagan–Christian parallels. In ‘The Holly and the Ivy’, the holly is equated with Jesus, and the ivy, with the Virgin Mary, Christian representatives respectively of the (assertive) masculine and (clinging) feminine principles. The carol concludes, ‘... Of all the trees that are in the wood / The holly bears the crown’. It certainly does in late December, when holly wreaths decorate doors, holly-strewn Christmas cards adorn mantelpieces and, as a final flourish, a holly sprig may top the Christmas pudding.

ROUND-UP

WITH THANKS

We are grateful to the woodland folk who have contributed their writing and photographs to this edition of Living Woods Magazine.

Petra Billings

www.sussexwoodlands.co.uk

Duncan Davidson

The Foragers

www.the-foragers.com

Julia Goodfellow-Smith

www.questforfuturesolutions.co.uk

Richard Hare

Keeper's Coppicing

Nick Gibbs

Clare Gibson, aka

@MrsSymbols

Phil Greenwood

www.sacredearthland.co.uk

Rod Waterfield

www.woodlandskillscentre.uk

Stovesonline

www.stovesonline.co.uk

Zevek

www.zevek.co.uk

PHOTOGRAPHS

Dan Redmond Windsor Chairs

www.redwoodchairs.co.uk

DD Hammocks

www.ddhammocks.com

**David Alty, Chris Colley,
Ruth Feltham, Antony Mason,
Johnny Morris, Tom Ward,
Liz Watson, and the**

Woodlands.co.uk editorial team.

LETTER

Richard Cooper points out that there's nothing new under the sun – forest schools are not a new phenomenon.

Thanks for the latest LWM. Great articles as ever. I just wanted to point out a general error/omission that has appeared in a few articles over the years and is again repeated in Tom Bardon's article. It's a minor thing but does, I think, need mentioning. This is to do with forest schools.

'Forest School was introduced to the UK in the early to mid 1990s' – no it wasn't!

The first 'forest school' was opened by Aubrey Westlake in 1929. His father, Ernest, set up the Order of Woodcraft Chivalry after he split with the Scouting movement because of its brutality.

One of the main ideas of this original forest school was to educate children in nature and to build their self reliance and resilience.

This group still exists and now runs as Forest School Camps. Every year they run 30-40 camps for over 1,200 young people. Most camps are 7-14 days.

The history of FSC is available in their book: *Our Story: 50 years under canvas with Forest School Camps*. Well worth a look.

I suppose the point I try to make is that this is not a new thing that we imported from those hygge Scandinavians in the 1990s. There's been a group of people, in this country, trying to get kids back into nature, and learning in nature, since the 1920s. One could also look to the Garden School Movement, founded by Margaret McMillan which was trying to do a similar thing at a similar period in time.

Keep up the good work.

Richard Cooper

2019

COURSES AND EVENTS

FOREST LIVE 2019

Forest Live is a major outdoor live music series held every summer by Forestry Commission England in seven beautiful forests. Money raised from ticket sales helps to look after the nation's forests sustainably, for people to enjoy and wildlife to thrive.

Acts confirmed so far for 2019 include:

- Paul Weller
- Tears for Fears
- Jess Glynne
- Jack Savoretti

Book tickets: www.forestryengland.uk/music



MALVERN COPPICING COURSES 2019

Phil Hopkinson's coppicing courses are run in Ravenshill Woodland Reserve at Alfrick in Worcestershire, part of a 50 acre privately owned nature reserve within the 200-acre Ravenshill Wood.

Two-day coppicing course £120

This provides an introduction to coppicing for people who have no experience of it and for those interested in traditional woodlands and their management. Good quality sharp tools will be provided. A certificate and full course notes, along with a tree identification guide, are included

Coppice course dates:

- 23-24 Feb 2019
- 28-29 Sept 2019
- 19-20 Oct 2019
- 9-10 Nov 2019

Woodland weekend course

18-19 May 2019 £140

Relax in a woodland setting while learning about traditional woodland skills. Starting with tree identification and the traditional management of the woodland, there is choice of taster sessions on greenwood working, such as spoon carving and whittling. Hot drinks and midday meals are provided and camping is free.

More details about all courses, including one-day sessions and gift vouchers, are on the website www.malverncoppicing.co.uk

