Woodland Heritage

2022

£5

Lewis Scott
1956-2021

Patron HRH The Prince of Wales

WOODLAND HERITAGE

for the future of British woods

Whitney Sawmills

Specialists in cutting and manufacturing UK grown timber

Based in Herefordshire, Whitney Sawmills is well established as a leading British sawmill. For many years we have supplied fresh sawn Oak and Douglas Fir beams as well as air and kiln-dried timber including Oak, Ash, Sweet Chestnut, Sycamore, Cherry, Elm, and Poplar.

We are also renowned for providing unusual and specialist hardwoods and softwoods for particular restoration projects as well as furniture making and house-building.

Our aim is to continue to source an increasing amount of our log supplies from well-managed UK woodlands and estates, helping to promote the sustainability and longevity of our native timber.

Oak provided for Shenmore Lodge

Green Oak beams supplied for Dumfries House project

Ash used by Twmpa Cycles for a gravel bike frame

Sweet Chestnut used in the Duchy garden furniture range

WHITNEY SAWMILLS

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Contents

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Chief Executive
Guy Corbett-Marshall

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Fine timber doesn't just grow on trees

Back to basics with our Founders' Appeal 2022

by Simon Burvill, Woodland Heritage Chairman

In the very first edition of this Journal, in 1996, our co-founder and managing trustee Lewis Scott wrote:

"The popular belief that one can plant a tree, walk away and nature will take care of the rest must be discredited. Trees, once planted, must be nurtured and given aftercare. You do not rescue a woodland by buying it, but by managing it. Only the active management and production of quality trees can ensure that gains in tree cover are maintained and consolidated."

On November 24th last year I received the sad news that Lewis had died suddenly at home. Lewis's demise, like the passing of our other co-founder Peter Goodwin in 2017, has left a huge void at the charity they jointly created almost thirty years ago. His infectious energy and enthusiasm for working for positive change were inspirational and established the charity's successful evolution.

It is a testimony to the vision of the two founders, both rooted in furniture making, that their movement not only lives on, but goes from strength to strength for the "future of British woods". Our motto is deliberately ambiguous: we fight for the good management of native British woodlands but also the production of fine wood and timber.

Today Lewis's words still ring true. In the UK, a mere quarter of England's woodlands are managed to the UK Woodland Standard, many of them ancient productive woodlands, left dark and neglected. Former coppice stools of oak, hornbeam, sweet chestnut and wild service: overstood and suppressed in over-shaded unproductive environments. What a terrible waste of this most renewable resource and cause indeed for Woodland Heritage, and our mission, still to continue its campaign.

In the course of the 20th Century, as we neglected our woods, we took heavy losses not just of quality hardwood supply, but also biodiversity, wildlife and half of our woodland bird species. Somehow, in so many places, we abandoned proper management and restoration of our existing broadleaf woodlands, which had been cut, coppiced and sustainably managed for plentiful supplies of quality British timber for centuries.

In recent years, there has been an increasing interest in planting new trees and of wood-lotting and woodland ownership. Our greatest challenge will be to educate these new woodland owners to care for them in the best way possible.

So we now begin a new era and, inspired by the original vision of our founders, the baton has passed to us. We have taken positive action and invested in tangible assets which will allow us to show people how they can make a difference. By investing in the future, Woodland Heritage is creating a legacy to pass on to future generations in the next stage of the relay.

As we go to print this journal, the ink is barely dry on our purchase contract for our very own sawmill. Whitney Sawmills, near Hay on Wye, is no museum piece; but a living, working and profitable business supplying fine British timbers to craftspeople, furniture makers, joiners and carpenters alike. And we have also recently purchased our own land which will become James Wood in Somerset, thanks to a generous and visionary bequest. There we intend to plant native broadleaves as well as experiment with other species for future proofing against climate change, and restore the existing woodland on the site to being managed.

We are living up to our motto of "action not words". As far as possible we will try to adopt the principle of "locally grown, locally used."

As Woodland Heritage has developed and grown, it has become clear that promoting forestry management to grow

Simon Burvill at Whitney Sawmills

fine timber, albeit a massive endeavour on its own, is only part of the challenge. We have to strengthen the whole wood supply chain right through to the user, and to provide the motivation for people to manage woods better.

Ours is not the easy path. We have struggled as trustees with elevator pitches and clear simple messages to use as a rallying cry. After all, trees are complex organisms and woodlands are complex ecosystems, the environmental challenges surrounding harvesting are complex and even the routes to market for the fine timber which it is our goal to create are complex.

Fine timber doesn't just grow on trees; it needs nurturing, as Lewis said in his early editorial.

Many of you who read this will already know and understand both the importance of silviculture in this country and demand the use, wherever possible, of our own home-grown timber.

We know that when you work wood with your hands and you understand about the trees that it came from, it becomes an emotional connection with the past. Personally, I can't pick up a piece of wood without looking at the patterns of its grain and the end grain which reveals its story.

Milling wood is also a magical and sensual experience: a log reveals its life story when it is cut wide open, and often how well it was cared for with human hands decades and centuries ago, in order to give us the fine timber that we use today.

Climate change has now ramped up the urgency of our cause significantly. When forests are left unmanaged, they do not provide the carbon sequestration to nearly the same level as productive woodlands. Wood products, built to last, are the very best form of carbon sequestration.
Time is now of the essence, and we need to up our game. We urge you to get behind and actively support our Founders' Appeal, which will allow us to take on the staff to communicate and deliver our vision to a wider audience.

We must now all act as founders, with Lewis and Peter's passion and commitment, to get our message out and any who are willing to help with raising the £250,000 of funding which will allow us to make a difference, please get in touch.

After all, that timber will not grow all by itself.
Best wishes,
Simon

PS This journal is one of our major means of communicating our purpose and vision, please share it and/or ask Kelly for more copies to distribute and spread the word. Our membership needs to grow and this is one way in which you can help us. Thank you.

What Woodland Heritage does

As a champion of the timber supply chain, from planting saplings in the ground to making fine items in wood, Woodland Heritage's work covers many areas. Here are some examples:

ACUTE OAK DECLINE

Raising over £2.5m since 2009 to advance research into the causes and management of Acute Oak Decline (AOD), a feat matched by no other charity, and which aims to safeguard the nation's favourite tree for future generations.

ACTION OAK

Bringing the experiences and successes of tackling AOD to the benefit of the Action Oak initiative of which Woodland Heritage has been a member since its inception in 2018.

WOODLAND TO WORKSHOP

Creating and running the unique 'Woodland to Workshop' course, staged 25 times since 2009, helping over 300 UK tree growers and timber users to understand each other's needs, with the aim of growing high quality trees.

WHITNEY SAWMILLS

Buying and running Whitney Sawmills in Herefordshire since 2016, a relatively rare example of a UK hardwood sawmill still in operation and which acts as a fulcrum for the hardwood supply chain; Whitney hosts 'Woodland to Workshop' and is run as a demonstration site for the whole industry, as well as fulfilling a vital economic role for its suppliers and consumers.

RESEARCH PROJECTS

Backing other research projects such as 'free growth of Oak', extending the shelf-life of acorns, and determining the most suitable provenances of Wild Service Tree to grow in the UK.

ADVANCING KNOWLEDGE

Advancing technical and educational learning about trees, timber and its usage, whether by giving grants to individuals and organisations to aid their development or to recognise the quality of their work, through the running of Field Weekend and other events for the charity's almost 500 members, or reaching a wider audience via an annual Journal, other publications and films that together raise awareness and boost knowledge.

JAMES WOOD

Acquiring an 85-acre landholding in Somerset in March 2022 at which to demonstrate Woodland Heritage's woodland management techniques and philosophy first-hand.

Please support our £250,000 Founder's Appeal at **www.woodlandheritage.beaconforms.com/form/ea1eb09c** to help us to continue our work above and to do so much more.

If you are not a member, you can find out about the benefits and join at **woodlandheritage.org/join-us**

This article is available as a digital copy on our website so you can share with family, friends and colleagues **woodlandheritage.org/about-woodland-heritage**

Lewis Scott
1956 - 2021

It was with much sadness that the Trustees, staff and members of Woodland Heritage were informed of the passing of the Charity's co-founder, Lewis Scott, in November 2021.

Woodland Heritage was the product of Lewis' and Peter Goodwin's passion for trees and timber and their combined desire to 'make a difference' within the British woodland sector.

Both these inspirational characters are no longer with us and those connected with the charity feel a profound sense of loss.

A most fitting tribute, written by Arwyn Morgan, a longstanding member of Woodland Heritage, featured in January 2022's Forestry Journal and which is reproduced below, reflecting the impact that Lewis' work for the Charity had on its members and supporters.

It was with profound sadness that I heard that Lewis Scott, one of the founders of Woodland Heritage, had passed away at the end of November.

Some 30 years ago, Lewis, along with the late, great Peter Goodwin, were discussing the poor state of the nation's broadleaf forests. While there was considerable demand for high-quality broadleaf timber, much of what was being planted would only produce squirrel and deer food, and, eventually, poor-grade firewood.

From their initial discussion the seed was sown, and Woodland Heritage was born, with its first members being wood users.

Woodland Heritage's remit has always been to grow high-quality trees, whether broadleaf or conifer, and to emphasise that good forestry, good wildlife conservation, rural employment, and the eventual production of high-value trees are all compatible components of a successful British timber industry.

All of this was achieved on top of Lewis' day job as a regional director of the Department of International Trade.

From its initial small start, Woodland Heritage, through its many members and supporters, has initiated research projects into Acute Oak Decline, and created the well-received Woodland to Workshop course, which has helped many hundreds of individuals from diverse backgrounds start on a firm foundation in the timber and forest industries.

The charity also operates Whitney Sawmills and runs yearly field weekends, which I have to say are exceptional. Lewis would always tend to be more in the background of the field weekends, going around, chatting to the membership, hearing their comments, criticisms, and encouragement, while other, more vocal members might sometimes whip up a hornets' nest of controversy, to the enjoyment of all present.

After the death of Peter Goodwin, Lewis took on the role of chairman of Woodland Heritage, with its considerable workload. But, as the saying goes, behind any great man is a greater woman.

Often at WH HQ, the happy voice answering the phone was Belinda Scott, otherwise known as 'B'. To all during those times, Woodland Heritage felt like a large family, with its share of unique family members. So it would be good to thank Belinda and the children for having shared Lewis with us.

It's worth remembering the scriptures tell us a good reputation is something of high value. Lewis' legacy to the forests of Britain is something which will be treasured by many.

Arwyn Morgan

Donations to a Founders' Appeal in Lewis and Peter's memory can be made at **woodlandheritage.org/make-a-donation**

Field Day 2021

Thursday July 08 – Hooke Park, Dorset

by Alex Mowat

In the workshop

Experiments in wood

Our name is a simple combination of two words : Woodland & Heritage. Our annual Field Weekends, however, often reveal that what might appear as a focused niche is anything but simple. On our annual Field Weekends we have come to expect the unexpected, to see new things, to hear about new ideas and to discuss what might happen next in the UK's woodlands. This year was set up to be full of contrasts beyond the norm.

Our 2021 Field Weekend (in fact a Field Day, being mindful of COVID guidelines) was hosted by long-term WH member John Makepeace along with Zach Mollica and Chris Sadd from the Architectural Association (AA).

John is a statesman of craftsmanship in wood and has been based in rural Dorset for many years. Zach and Chris's organisation is a disruptive, dystopian, digital architecture school based in Bedford Square, London.

We expected the handcrafted, practical and organic to be pitched up against the digital, the parametric and the academic. John, Zach and Chris did not disappoint.

John Makepeace surprised us, in his introduction at the beginning of the tour of Hooke Park. He is associated with intricate and crafted furniture from premium timber which commands premium prices. However he explained how his project at Hooke Park set out to find a use for low-value forest thinnings.

It started when he and Ted Happold invited the famous German engineer, Fie Otto, to design and make the first workshop building at Hooke Park. A building made of low value Spruce thinnings of typically 100-150mm diameter. The gentle organic undulating arch structure is made of two straight poles bent in compression and joined along the ridgeline. In contrast Zach then showed us recent experimental angled, faceted, super-sheds designed and made by students. These are experiments in minimising steel in timber frames, computer generated forms and experiments in angling timber cladding away from the rain.

As if that contrast, in styles and approach, was not enough, in the afternoon we visited "Farrs", John Makepeace's home. A fine 17th century Jacobean stone building with some cleverly restrained pieces of contemporary timber joinery inserted into the old stone.

Bendy pavilion

Zachary Mollica (centre) with Susan and Malcolm Bell in the woodchip store

Chris, the forester at Hooke Park since the mid 1980s, explained how he had inherited a monoculture even-aged Beech forest planted by the Forestry Commission in the 1950s. He eloquently related how clearing patches of woodland and a steady move towards an uneven aged and mixed forest, has brought about its own contrast. He is changing the woodland from a monoculture with an almost sterile, dark and acidic forest floor to a much more productive environment. The woodland now has a growing programme of foraging food for human consumption, an impossible idea only a short while ago.

Zach showed us the AA's newest and most impressive tool: a huge robotic arm that can cut and mill timber to any form that a 3D digital model can describe. It towers menacingly above a human and needs a large safety screen.

During our lunch break Woodland Heritage member Fred Dodson informally showed a few of us his tiny Japanese Kanna planes which he had made himself. They fit in the palm of a hand and are his favourite tools.

The Field Weekend (or Day) is a chance to share knowledge and provoke debate. The setting of Hooke Park and Farrs combined with three inspiring hosts stimulated us all. We had time for conversations about mental health, climate change, building regulations, education, tradition, experimentation, elegance, form, biodiversity, rewilding, garlic pesto, meditation and economics.

In spite of the apparent contrasts in this year's visit, each part of the conversation about our Woodland Heritage returned to a simple core: the huge latent value of productive woodland in the UK. Perhaps it is simple after all: Woodland Heritage has the knowledge, support, connections and vison to demonstrate this value.

Robotic arm

Field Day 2021

Thursday July 08 – Farrs, Dorset

by Guy Corbett-Marshall

John Makepeace talking to WH members outside Farrs

Open timber-drying barn

With minds buzzing after the visit to the experimentation and innovation that had been demonstrated at Hooke Park, Woodland Heritage members were soon in the heart of the West Dorset town of Beaminster, admiring the many properties built in mellow Ham Stone, a prime example of which is Farrs, the home of John and Jennie Makepeace, our kind and generous hosts for the second half of the 2021 Field Day.

John Makepeace is internationally recognised for design and for making fine furniture, and members were given the chance to admire a range of his work that although contemporary, sits beautifully in its 17th century domestic setting. In small groups, John introduced his guests to individual pieces and explained the processes that had led to the creation of many of them.

Outside, it was no surprise to find a neat store of firewood ready for the coming winter, but the open drying barn was not what every household has, reinforcing the fact that John continues to design new items of furniture, with every sign that he will continue to do so for many years to come.

'B' and Lewis in the garden, designed by Jennie Makepeace

Looking at Farrs from the road, two things are concealed that members were most privileged to enjoy: firstly that its town centre garden is as large as it is, but also how stunningly designed and tended it has been by Jennie Makepeace who guided groups around each of the distinct parts of the garden explaining how they were created and how they are kept in such pristine condition.

The visit to Farrs ended with a presentation to John and Jennie to thank them for a wonderful visit topped off with tea and delicious homemade cakes; truly, a Field Day to remember!

John Makepeace OBE

Winner of the 2022 Peter Savill Award

The Peter Savill Award *for a significant contribution to British Forestry*

THE PRIZE

Each year Woodland Heritage awards a prize to recognise the contribution of an individual who has significantly benefited British forestry.

CRITERIA

The contribution to forestry made by the selected individual must be in sympathy with the objectives of Woodland Heritage and in one of the following areas of forestry: silviculture; research; wood processing; marketing; education.

Normally the prize will focus on a contribution to one of the above with an emphasis on Britain, broadleaves and lowland forestry, although not exclusively so.

Woodland Heritage is delighted to announce that the winner of this year's Peter Savill Award is John Makepeace OBE.

An internationally recognised designer and furniture maker, the latter shown by his having received Lifetime Achievement Awards from the American Furniture Society in 2004 and the Furniture Makers Company, London in 2010. As the eighteenth sole or joint winner of the Peter Savill Award, John Makepeace's background may at first seem as though he is more maker than grower, but when one looks further, his work over many decades in the disciplines that the Peter Savill Award covers would be hard to match.

Through a furniture commission for Longleat House, John was introduced to the excellent forest estate there. Having seen the benefits of forestry integrated with the construction and manufacturing industries in Europe, he resolved, rather than training more individual designers and makers, to explore the better use of our indigenous forest produce in the UK.

In 1976, John purchased Parnham House to provide larger studios

John Makepeace OBE

for his furniture making business, a residential College for aspiring furniture designers and makers, and to show the visiting public contemporary art and design in a historic house; it was an extraordinarily symbiotic combination.

In 1982, the Parnham Trust that John Makepeace established, purchased from the Forestry Commission Hooke Park, a 350-acre broadleaves and conifer forest nearby, and under John's direction working with forester, Andrew Poore, and a team of eminent architects and engineers, he built the new campus there using the low value thinnings for all the structural components. This involved cross-disciplinary research at five European Universities to develop the new technologies and to secure Building Approval. International recognition and several architectural and conservation awards followed. In 2001, the Trust amalgamated with the Architectural Association, the international school of Architecture, which now runs its 'design and build' courses at Hooke Park, which was also the venue for Woodland Heritage's 2021 Field Day.

Most recently, John Makepeace has created a co-ordinated programme of work with partners such as the Architectural Association, the Victoria & Albert Museum (V&A) and the Royal Society of Arts (RSA), the collective theme being to inspire people to bring wood into their lives as a way to solve contemporary issues.

In February 2022, John and the V&A launched *Make Good: Rethinking Material Futures*, a ten-year project that encompasses an annual display, a symposium and a programme of acquisitions dedicated to looking at the use of renewable, natural materials and the future of sustainable forestry in connection with design and architecture.

With a lifetime of accomplishment for forestry, yet still with the vision and drive to do more, John Makepeace is indeed a worthy recipient of the Peter Savill Award.

Daniel Hofgartner

Woodland Heritage grant recipient and Prince of Wales Award winner for top Woodland to Workshop student 2021

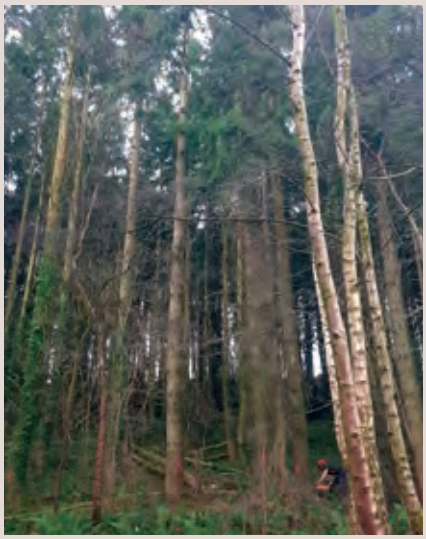
by Daniel Hofgartner

Sitting in the classroom at Whitney Sawmills we go round the room with the obligatory introductions to each other - it is the first day of the 'Woodland to Workshop' course.

The group is an interesting mix of individuals - a furniture maker; an ecologist; a coppice worker; a forestry undergraduate; a green woodworker - fifteen or so strangers who in some capacity shared a connection to our woodlands through their work or study.

Then there was myself - a mental health support worker, an unlikely candidate for the Prince of Wales Award! Although I had no direct occupational experience within the industry, the path that led me here was volunteering.

For six years I volunteered at The Cherry Wood Project run by Tim Gatfield, a sustainable woodland management project within a mixed broadleaf coppice in Wiltshire. The project introduced me to everything from green woodwork and the many traditional skills relating to forestry, to extraction, horse logging, and milling. It was these years spent volunteering at Cherry Wood, as well as the people I would meet there,



Felling and storage at Priors Wood

that would later inspire a change of direction for me.

The eventual closing of Cherry Wood as a volunteer project left a significant void in my life. I became aware that it was important for me to remain involved in woodland environments and thus I started to seriously consider pursuing a career path of some kind within forestry.

Unsure where to start, I self-funded and gained my City & Guilds NPTC Level 2 in Ground Based Chainsaw Operations. This happened to coincide with former Cherry Wood apprentice, and fellow Woodland Heritage member, David Wilkins, purchasing a 35-acre Douglas Fir plantation and milling operation in Herefordshire - Priors Wood.

After gaining my chainsaw ticket, David gave me an opportunity to do a few weeks' felling work at Priors Wood. Those weeks became months, and soon I became actively engaged in all aspects of the operation. My involvement quickly evolved to the role of apprentice.

A milestone in the development of the project was our first large order from an eco-building company based in Bristol. At this stage I began to appreciate the many stages of the process: from our management approach to tree selection, from felling to extraction, and finally through to the sawmill to process this timber for the end-client, recognising how each step within this chain affects the other.

Timber processing at Priors Wood

Daniel Hofgartner outside the workshop at Priors Wood

Following this, I began looking at how I could develop my own education, skills and learning across the forestry sector, and how to start to formulate how I could pursue this as a future career.

David pointed me in the direction of Woodland Heritage and its 'Woodland to Workshop' course. The opportunity to attend was timed perfectly with both the expansion of milling operations at Priors Wood and my own developing role in undertaking this work as an apprentice, especially with the recent investment in a new commercial sawmill able to process the increased volume of timber that we are being asked to supply.

As a volunteer, the training opportunities I was able to access were largely dictated and limited by the cost. I was extremely fortunate in qualifying for Woodland Heritage grant assistance whose financial support was critical in my being able to attend the course.

I was hopeful that at least some of the content would be directly relevant to our operations at Priors Wood. In fact, the course far exceeded my modest expectations.

This was an invaluable opportunity to go to Whitney Sawmills and learn this exact process from people in the industry. This will directly benefit our long-term aims at Priors Wood.

I'd like to thank all the tutors, particularly Dermot and Will and, of course, Kelly.

The Prince of Wales Award is presented each year to the most outstanding participant on our 'Woodland to Workshop' courses.

Choosing the annual recipient of The Prince of Wales Award is never an easy task for the 'W2W' tutors because we are privileged to have such wonderfully enthusiastic and talented individuals attending our courses from across the UK. We are, however, delighted to announce that the recipient of the Award for 2021 is Daniel Hofgartner.

The unanimous choice of all the tutors, Daniel was selected due to his positive, can-do attitude which shone through at the sawmill and which he sustained over all three days, remaining highly engaged throughout.

On behalf of the course tutors, congratulations Daniel!
Geraint Richards, Trustee

from woodland to workshop

Trustees' comings and goings

by Guy Corbett-Marshall

Roger Richardson

Alex Mowat

David Cracknell

In November, the Board of Trustees lost its remaining Co-Founder, Lewis Scott, about whom much is written elsewhere in this Journal.

The Trustees' new year started with a further two steps back and then one forward. Firstly after 19 years as a Trustee, Roger Richardson, the longest serving Trustee after Lewis Scott, resigned aged 90. Roger championed communications within the charity and led initiatives such as the new logo and brand identity, the new website and various new leaflets, as well as guiding the creation of the new look for the Journal.

A Past Master of The Furniture Makers' Company, Roger's family firm, Beaver & Tapley, had been his route into the Company. The success of his firm was aided greatly by its selling on design, not on price. So it was not surprising that Roger was driven to improve how Woodland Heritage presented itself to the outside world. A great believer in accuracy and grammar, Woodland Heritage is blessed still to have Roger volunteering his time to proof-read the Journal.

Another sad loss to the Board is Alex Mowat. A Trustee for two years, Alex was most influential over that time, making the successful bid to buy the land for James Wood. This will be a legacy from his time as a Trustee.

Director of London based architects Mowat & Co, Alex brought his own skills and those of his firm to benefit Whitney Sawmills where he attended the Woodland to Workshop in 2019 and was introduced to the work of Woodland Heritage.

Alex and his team created the eye-catching designs for both the conversion of the old saw doctor's shed at the mill into a new office and reception building, as well as the conversion of part of the large barn into a new dried timber store that is more accessible for customers. Leaving another legacy of achievement behind him, Alex's team also supervised the building programme.

The Board welcomed David Cracknell as a Trustee at his first meeting in February. David describes himself as passionate about woodlands, British hardwoods and furniture making. A former Sunday Times writer and founder of public relations firm, Big Tent Communications, he now owns a small woodland in Kent and has undertaken an MSc in Forestry at Bangor, perhaps apt for a former pupil of Forest School, London.

A talented pianist, David has also written several articles for the Journal in recent years, including several in this issue. The breadth of these pieces reflects his wider interest in growing and using wood, all of which will be of great value to how Woodland Heritage communicates its aims and objectives to the outside world in the future.

Whitney Sawmills – Woodland Heritage's first HQ

by Guy Corbett-Marshall

Lewis Scott referred to 'negotiating the next stage of our tenure at Whitney Sawmills' in his 'Leader' article last year; for Lewis, buying the freehold of the mill into which so much of Woodland Heritage's resources had been invested, was vital for the long-term security of the overall charity.

As with James Wood, it is a matter of profound sadness and regret that completion of the purchase of the freehold of the mill could not take place in Lewis' lifetime, but that completion did take place at the end of March, the final piece of the current 'jigsaw' for Woodland Heritage at Whitney Sawmills.

As Lewis reflected upon last year, having the freehold will allow Woodland Heritage to develop and further improve the sawmills site, but for now, what has Woodland Heritage bought and what will that mean for the charity?

As owner of all the buildings at Whitney Sawmills, Woodland Heritage is now landlord to two businesses: W H Timber Limited that runs the mill for the charity and which has carried out the substantial investments described elsewhere in this Journal, and D A Davies and Company, founded by owner David, which is a small group of craftsmen specialising in traditional carpentry and joinery and long-term tenants of the workshop onsite.

As well as the mill itself fulfilling several charitable roles for Woodland Heritage, as a sawmill, as a centre for training, and as a location for awareness raising, rents from the tenants will be applied to advance the charity's wider work, including at James Wood. Whitney Sawmills will also be the charity-group's Registered Office, as well as the charity's correspondence address.

Whilst Whitney Wood that creates the welcoming backdrop to the site will remain in the ownership of mill-founders, Will and Jenny Bullough, the more open slope leading up from the car park has been able to be

Waney-edged boards and some of the land and buildings at Whitney Sawmills

bought by Woodland Heritage thanks to a generous gift by The Mumford Memorial Trust. In so doing, Woodland Heritage is now the owner of the land upon which it established the Stiles & Bates woodland in 2017.

Buying the freehold of Whitney Sawmills has been helped by some major gifts already, that have made such a huge difference, but to take up this unique opportunity now has meant that much of the charity's general financial reserves have had to be invested into the mill.

To restore some of the capital that has been used on the mill, as well as to ensure Woodland Heritage's ongoing charitable activities can be maintained and grow, the £250,000 Founders' Appeal has been launched, information about which is enclosed with this Journal. Both Peter Goodwin and Lewis Scott saw huge potential at Whitney Sawmills, so much of that has been fulfilled already, and so much more can be done with your support.

Please make a donation at **woodlandheritage.beaconforms.com/form/ea1eb09c** Thank you!

James Wood – Woodland Heritage's first landholding

by Guy Corbett-Marshall

On a gloriously sunny spring day on a slope at Gwydir Forest Park outside Betws-y-Coed, in the company of students enjoying the International Forestry Students' Association – Northern European Regional Meeting 2019, Wales, I received a phone call that was to become one of the most significant in Woodland Heritage's history.

A potential donor, James Stratton, had chosen Woodland Heritage to benefit from the financial legacy that he would bequeath soon, that gift intended to create a living legacy for generations to come to enjoy and to benefit from, both in terms of the woodland that he wished to see created, but also from the timber that could be made into the sort of fine items that he enjoyed owning and seeing.

Just a couple of months after that first contact and with just the one chance to meet him subsequently, James died, but having made it very clear what he wanted to see happen in his name in the future; it proved to be the template for James Wood.

Even in pre-COVID times, the same property market that meant that the bequest that James left would be far greater financially than he would have imagined, was the one that pushed land prices up considerably too, with supply always short, and demand steadily high.

Although not averse to letting Woodland Heritage acquire some existing woodland in any land acquired for James Wood, the main ambition was to create a new woodland, ideally of at least fifty acres in size.

Sites came and went; some showed great promise but then problems emerged either fairly rapidly or after some investigation. Time moved on.

James Wood will complement the sylvan scenery of the wider valley

The choice had to be the right one and Woodland Heritage was so lucky to have ample patience and goodwill afforded to us by James' parents, Martin and Suzette, who had become his Executors.

Some two years into the search and a Lot caught the eye of Trustee, Alex Mowat, who with Martin and Suzette bid for 86 acres of largely open ground, but with both some older woodland, and some twenty-year-old plantations in need of management; for a charity keen to demonstrate 'uneven aged silviculture', this was an ideal mix.

Almost a year after the successful bid was made, James Wood established its home in March at what was Lot 4, Water Farm, Castlake, Stogumber in Somerset, rolling countryside set between the Quantocks and Exmoor, just off the Taunton/Minehead road, and with views on a clear day extending over the Bristol Channel into South Wales.

Experience from other sites had made it clear that woodland creation, whilst very much applauded in general, when applied to specific areas invariably brought issues to the fore.

Would a site flood, damaging to both the trees themselves, but also risking backing up water upstream?

Views from James Wood extend to Exmoor, the Quantocks and South Wales

The twenty-year-old plantations will need to be brought into management

Did a site have designations, often relating to being wildlife-rich grassland so not suitable to plant with trees; often, designated sites can be cheaper, whilst versatile arable land can be generally less risky to promote as future woodland but is then more expensive to buy.

The good news about Lot 4 at Stogumber is that the bare ground is a mix of species-poor grassland and former arable. With adjacent, established woodland and recently established woodland as other pockets of the site, the chance to join them up across non-designated open ground made this potential site for James Wood most appealing.

The land is undulating and due to past uses is made up of lots of different 'patches', potentially at least twenty, which is a lot for an 86-acre site. The slopes face in a variety of directions, and whilst much of the land is on a small, fairly free-draining plateau, there is at least one small, wet valley.

James Stratton's legacy has enabled Woodland Heritage to not only buy the land at Stogumber, but also to have funds available to undertake planting and other management works on new and existing woodland for years to come. James Wood will also be helped greatly by securing support under the England Woodland Grant Offer (EWCO), a grant scheme to which Woodland Heritage is in the process of applying with the support of Pryor & Rickett Silviculture (PRS).

At the time of writing, Andrew Pickup, Senior Forest Manager at PRS had already secured grant-aid from the Forestry Commission (FC) under Woodland Creation Planning Grant (WCPG) and using that support had created a proposal for the land that was sent to many consultees locally.

This process went smoothly, the general principle of planting on the land was unopposed, so Andrew is now helping Woodland Heritage through Stage 2 of the WCPG, where the detail of the planting scheme is worked up and submitted for further consultation and approval.

Ideas for the planting have developed and are likely to combine a fairly conventional approach with one that tries to establish what novel species could thrive at the site in Somerset that will be beset with a changing climate, as well as an evolving list of threats from pests and diseases.

The first trees will hopefully be planted in winter 2022/23, with management of the existing woodlands to be planned and ideally grant-aided by FC as well, those works to commence as soon as possible too.

James Wood will be a new venture for Woodland Heritage and as a charity that has always promoted management for timber products, it was delighted in February to have been awarded a grant from National Lottery Heritage Fund via the Steps to Sustainability programme to help research the most remunerative way to use the products that will emerge from managing the existing woodland.

The Trustees of Woodland Heritage are indebted to James Stratton for both his vision in wanting to create a new woodland managed for timber, but also to have chosen Woodland Heritage to carry out his wishes for him. James Wood is a project so wanted by James Stratton, supported wholeheartedly by his family, and a great honour for Woodland Heritage to have the chance to bring to life.

Buildings at Whitney Sawmills – improvements by the Power of Three

by Guy Corbett-Marshall

At the centre of the timber supply chain, Whitney Sawmills helps to maintain hardwood sawmilling in the UK, which has declined greatly over recent decades, playing its part in staving off obsolescence for this centuries' old industry. In doing all this, the mill helps to fulfil Woodland Heritage's charitable objectives.

To help Whitney Sawmills to be as effective as possible for the charity, Woodland Heritage has invested substantially in the mill since the business was acquired in 2016.

Thanks to the healthy trading results that were reported in last year's Journal continuing for another twelve months, the mill has been able to invest in itself as well, buoyed by a grant under the Rural Development Programme England (RDPE) Growth Programme of £59,459.56, which is part funded by the European Agricultural Fund for Rural Development.

Under a programme of works at the mill called 'Whitney Sawmills: Sawing to new Heights', an initial investment of £148,648.90 (including grant-aid) was planned, and as reported in last year's Journal.

The aim of the project is to increase the volume and value of largely UK grown timber that is milled and sold at Whitney Sawmills, the mill carrying Grown in Britain certification.

The project has been able to transform three buildings at Whitney Sawmills:

- Firstly, to create a new reception and office from a redundant barn.
- Secondly, to convert part of the air-drying store into a dried timber sales and storage area, which was previously housed elsewhere on site, and
- Thirdly, using the mill's money only, to extend the vacated space where the dried timber was stored previously, to allow a new saw to be installed in spring/summer 2022.

Including the cost of the works on the third building, improvements to the surface of the car park outside the new dried timber store, plus the acquisition of the new saw, investment at Whitney Sawmill will have topped £350,000 from April 2021 to April of this year.

Visitors to Whitney Sawmills can now drive straight onto the site with the new office immediately to the left, and the dried timber store where most orders are selected and bought immediately to the right.

As a result, customers are now away from the busy machining area, which is due to host the new Mebor HTZ 1200 Plus saw, which should be a welcomed boost to the efficiency and productivity of the mill, arriving at a time of continuing record levels of demand for Whitney Sawmills' products.

The new reception and office

Whitney sawing shed extension

One of the conditions of the grant-aid was that two new posts should be created, which due to increased demand have been brought forward ahead of when planned. A Timber Sales Coordinator role was filled in September last year, with a trainee sawyer starting this spring.

The two new members of staff have joined a team that has seen one other change in personnel during the last twelve months, although the remaining staff have battled through all that COVID could throw at them over the last two years, with some also having to meet personal challenges over that time. Huge thanks go to them all, as well as to the Board of Directors, who all give of their time, year-after-year, for the benefit of the mill and as a result the charity, and over recent months has been a bigger commitment following the loss of Lewis Scott, who was a director of the trading company from the outset.

Part of the joy for staff and directors at the mill is seeing what happens to some of the timber that is processed onsite. As well as the article in this Journal about Uniqueworks, many other eye-catching projects have been made possible with timber from Whitney Sawmills, a large number of which then appear on the mill's Instagram site **instagram.com/whitneysawmills**, which has over 2,500 followers.

Due to the relaxing of COVID rules in England and Wales in the autumn, Woodland to Workshop courses resumed in September when two were held at Whitney, with two more planned for May and September of this year; it is also hoped that more public events will be possible as 2022 unfolds. This report on the last year at Whitney Sawmills ends with an example of staff there going the extra mile!

Wishing to be content that he had not missed anything vital from the final specification of the new saw, manager, Dermot Doyne, headed to the Mebor factory in Slovenia

Whitney Combilift outside the new dried timber sales and storage facility

Staff at Whitney

in February. What had not been allowed for was Storm Eunice, preventing return flights to the UK. Undeterred and with typical resourcefulness, Dermot flew to Paris and then got the Eurostar to London, a shuttle to Gatwick and eventually got home 36 hours later than planned, although did manage a sight of the Eiffel Tower along the way, which was an unplanned bonus!

whitneysawmills.com

The European Agricultural Fund for Rural Development:
Europe investing in rural areas

Student Design Award winners propose different ideas to benefit local woodlands

by Guy Corbett-Marshall

For the second year running, the RSA Student Design Awards brought forward novel ways to utilise local woodland resources to stimulate inclusive and sustainable economic activity.

In an Award category called 'A New Leaf', sponsored by internationally recognised designer and furniture maker as well as longstanding Woodland Heritage member, John Makepeace, with support from Woodland Heritage, two quite different ideas caught the judges' imagination, with the winners sharing the £2,000 John Makepeace Award at the awards ceremony last June.

Harry Peck, studying a BA in 3D Design at Northumbria University, proposed 'Raw Furniture', a sustainable timber furniture range grown and crafted in Cornwall. The range would utilise an array of tree species and their unwanted offcuts, with a manufacturing process committed to supporting and celebrating the diversity of local woodlands, as well as helping to regenerate the local economy which has seen significant job losses.

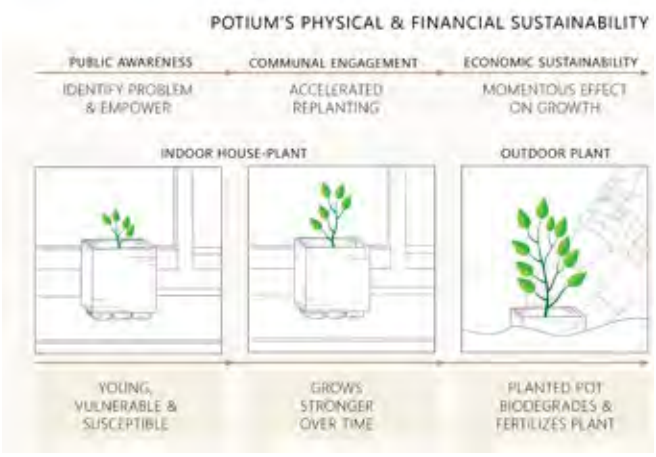
Raw Furniture would promote increased planting in a county with just 8% tree cover, in turn encouraging dedicated woodland management. The furniture is simply designed to reduce waste and incorporates offcuts into smaller accessories.

Responding to his award, Harry said: "I have learnt a lot about forestry during the research process for the project and have found that this is an area that really excites and interests me. I feel that it has influenced my career aspirations in that I would be interested in taking the idea further as well as taking much more consideration into where I source timber from in the future when making."

Marianna Lordou, a BSc Product Design student at the University of Dundee, proposed a solution to a quite different problem. 'Potium' is a biodegradable plant-pot made from converted infected waste from mandatory felling in response to Phytophthora Ramorum, thereby creating environmental and financial growth from suffering woodlands.

Larch in Scotland is particularly susceptible and there is a large management zone established to limit the spread. By developing a waste management facility in this affected zone, local jobs could be created, and high levels of infected tree waste material would be diverted from

'Raw Furniture' sustainable furniture range by Harry Peck, University of Northumbria



'Potium' biodegradable plant pot by Mariana Lordou, University of Dundee

incineration to a valuable resource. The Potium plant pots themselves could serve as a commercial alternative to single use plastic nursery pots, as they biodegrade easily adding nutrients back into the soil.

Reflecting on her experience taking part in the awards, Marianna said: "I couldn't decide what to study at University: I had a deep passion for biology, as well art and design. This brief allowed me to combine both of those passions together. By integrating live organisms such as mycelium into my design proposal, I have come to the realisation that design is everything and involves different fields and complex systems. I'm proud to have combined bio-tech and design to propose a solution to pressing societal and environmental issues, and I aim to embrace this multi-disciplinary approach to my designs in the future."

The brief for 'A New Leaf' challenged applicants to tap into different perspectives to bring innovative approaches to the design, marketing, and manufacture of products from woodlands, at the source, or very near to, the woodland itself. Consideration was required as to the specific product from woodlands and how this could be utilised.

Successful entries were expected not only to consider product range and market analysis, but also to demonstrate how the manufacturing process could benefit local communities through employment, skills, or community relationships.

The judges made clear that they sought surprising and innovative approaches to integrating manufacturing processes into a specific woodland context, a woodland that could be anywhere in the world.

Applicants were also asked that whilst creating their products they should bear in mind that wood products can help address climate change, if they displace higher energy materials and are designed to have a long life, so that they don't quickly release carbon into the atmosphere.

More information on 'A New Leaf' can be found at **thersa.org/student-design-awards/winners/2020-21/a-new-leaf**

The Chairman of Woodland Heritage is interviewed by a Director of WH Timber about Whitney Sawmills

by Susan Bell

As a former Woodland Heritage Trustee and now a Director of WH Timber Limited I am eager to hear from you, Simon, as the new Chairman of WH, your views on the future of Whitney Sawmills.

Simon Burvill, Chairman of Woodland Heritage

Susan Bell, Director of WH Timber Ltd

Back in 2016 the Trustees, including you and I, took the bold decision to acquire Whitney Sawmills on a leasehold basis. It seemed to us that the processing of home-grown timber from well-managed woodlands was a vital part of our mission to promote the joining up of the whole wood chain – from beautiful trees to valuable products. It has now been decided to acquire the sawmill outright and continue and develop the business of W H Timber Ltd.

So, first of all – what do you see as the benefits gained and the lessons learnt from the first six years of WHT?

Buying Whitney Sawmills was not just bold, it was also visionary. Forestry in Britain was in a state of huge uncertainty, timber prices were at best static and in some places falling and much of the industry was in crisis. Peter Goodwin, our Chairman, identified that sawmilling was vital to the future production of fine timber and, just when others were getting out of it, Peter steered the charity to support what at the time was seen as the weakest link.

The early days were difficult, Peter Goodwin passed away just six months after we took on the lease and initially it proved hard to find a profitable way forward for the mill which was also in desperate need of investment. It's a great credit to Guy Corbett-Marshall and the previous owner, Will Bullough, that we held it together through this period. The arrival of Dermot Doyne in January 2018 was a turning point. For me it is no coincidence that not only Peter, Lewis and Will Bullough were all former furniture makers but in Dermot we found another. The idea of 'User turning Producer' is a very powerful one, as you immediately get a kindred spirit who knows what the market wants.

A key lesson is that being bold and visionary is not easy and it requires grit, courage and eyes on the future to see it through.

The Charity has invested substantially in the sawmill already, do you see such investment as being key to its future?

Yes I do, although I am also hopeful that future investment will come out from reinvestment of profits. The new buildings are not just uplifting for everyone who works at Whitney, they also demonstrate to customers, staff and stakeholders that Whitney is committed to the future and keen to make a difference. The new saw, when it arrives, will likewise increase W H Timber's capability to deliver a highly value-added output. Looking forward, in particular I would like to see investment going into people. Whitney needs to become a Learning and Development organisation, and although we will want good staff retention to deliver results for the sawmill, we will also be wanting to send young people out into the industry equipped to make a difference to British Forestry.

In what ways do you think Woodland Heritage itself has gained from ownership of Whitney? Can you see scope for greater interplay between the Charity and its trading arm at Whitney to promote better WH's aims and objects?

Buying the sawmill has been hugely beneficial to Woodland Heritage. If nothing else it is a brilliant

statement of intent: we are a force for change in British Forestry, Wood Culture and Fine Timber production, for the long term and for the benefit of all, and we are prepared to take action to support our beliefs.

I am really excited about the prospects for the trading arm at Whitney as I see huge potential in the interplay which you mention. Users of timber, and let's face it we all are, are where we need to go to promote the message that from an environmental, economic and overall sustainability perspective, we need to use the timber on our doorstep instead of buying it in from abroad. What better way to do this than through our own trading activities.

Many small sawmills in the UK have closed down over recent decades; do you see a better future for mills such as Whitney in the future? How important do you feel it is for the health of British hardwood and native softwood woodlands that processing can be carried out locally and profitably?

I can see a really strong future for sawmills such as Whitney and also mobile mills, as both are at a scale where they can be flexible and offer a high quality service. At last some of the economic factors which have discouraged this activity are reducing. With increasing timber prices and the public's, in particular young peoples', appreciation of the importance of using sustainable materials (and you can't get more sustainable than wood from managed sources), the demand for British timber is set to grow significantly in the coming decade and beyond. It is generally accepted that 40% of British forests are not managed or are under-managed and this has to change. When it does, the timber produced will need to be milled and it will be a lack of know-how and capacity that will hold us back.

It is fundamental to sustainability that our native woodlands get processed locally. The French timber industry has suffered terribly since they opened the door to exporting round logs to China, rather like when our food industry became over-processed and disconnected. This leads to unsustainable, greedy and often bad practices which damages both the industry and the people that it is supposed to serve.

Do you see the importance of Whitney Sawmills being a demonstration of good practice and viability?

With the terrific team that we have running the sawmill and with profits from its activities steadily increasing,

Inside the new reception and office at Whitney Sawmills

Whitney Sawmills is beautifully placed to demonstrate good practice and viability. Not only that, I also believe Whitney gives us an opportunity to raise awareness to the general public of the 'wonder'-full aspect of saw-milling. There really is something magical about seeing a fine tree revealing a beautiful timber which it created over its lifetime and from which future generations can benefit.

Woodland Heritage has always promoted the necessity of maintaining and developing skills and training in all aspects of the wood supply chain – including through its own much-praised Woodland to Workshop courses. Do you see further opportunities for developing this work at Whitney?

This topic is very important to me. Having trained at Hooke Park and having been on the W2W course, I had the privilege of learning on both occasions the importance of the connections between all the different parts of the chain from seed selection all the way through to the users: furniture makers, architects, builders and the public. These links are still far too weak.

The purchase of the freehold at Whitney and the funds now being raised by our Founders' Appeal will give us a platform to develop Whitney into a centre of excellence for developing not only skills and training but also connections and finally a wider understanding of just how important Wood is to all our futures.

Platinum Jubilee leaves a living legacy in Herefordshire schools

by Karen Usher and Guy Corbett-Marshall

A dynamic group of organisations with their roots in Herefordshire came together over the winter to make a lasting difference to the grounds of fifty schools in the county.

The Herefordshire Lord Lieutenancy joined forces with NMITE (Hereford's new university), NMITE's Centre for Advanced Timber Technology (CATT), Woodland Heritage, Timber Development UK and local businesses in the timber, forestry, building and art communities to design and deliver a short programme about the importance of trees in our lives, and to celebrate the Queen's Platinum Jubilee by planting trees in her honour.

Participation in Herefordshire's Queen's Green Canopy Schools Programme was completely free. A tree had been acquired for each school taking part thanks to a very generous donation by The Mumford Memorial Trust, with each of the trees having been grown at Hereford Trees.

Because of the Trust's kind support, schools could either have a visit by a Deputy Lieutenant as part of a whole school assembly programme about trees and wood, and the Queen's Jubilee Green Canopy celebration, or schools could make their own arrangements for an event.

Whichever option was chosen, each school received a six-to-eight-foot native tree (Silver Birch, Bird Cherry, Oak, Lime, Black Poplar, or Mountain Ash) to be planted by their pupils, on school ground, in a short ceremony to honour The Queen. Schools were encouraged to end their day by going on-line with their pupils to record their tree planting onto the Queen's Green Canopy website.

Each of the trees planted came with a stake, tie, and rabbit guard, as well as a commemorative plaque, with further help in the form of a guide to caring for trees, as well as a UK Tree Planting Guide poster created especially for this initiative.

Participation by pupils was very much encouraged from helping to dig a hole in which to plant their tree, to helping

Various tree planting events throughout schools in Herefordshire

to decorate the area around the hole for the tree with red, white, and blue bunting and pictures of The Queen. Most schools asked a small group of pupils to give a short dedication speech after their tree was planted, whilst others involved school-affiliated Scout groups to form a guard of honour during the actual planting ceremony.

The ceremony encouraged learning too, asking questions such as: what do we use wood for, where does wood come from, and how long do trees take to grow from saplings to mature trees?

Linking trees to the monarchy, schools were encouraged to tell the story of the King who hid in a tree, right up to today with an introduction to The Queen's Jubilee and why The Queen loves trees.

There are plans to run a second phase of the Queen's Green Canopy in Herefordshire schools next autumn and winter.

Always a turn for the better

by Guy Corbett-Marshall

One of the hallmarks of any notable Woodland Heritage event has been the presentation of a gift to mark a special contribution, whether that be hosting a tour during a Field Weekend, recognising a major achievement in the worlds of forestry or using wood, or indeed thanking a volunteer for time and effort given to helping Woodland Heritage.

Invariably, the choice of item for the recipients that would have impact, longevity, and a status to make it treasured was a beautifully turned and always unique item crafted by the genius, Richard Chapman.

A member of Woodland Heritage since its inception, a regular at Field Weekends every year, it is very sad to report that Richard closed his workshop last year and that there will be no more presentations of his work as a way for Woodland Heritage to thank people for what they have done to help the charity.

Look back at any recent Journal and Richard's work will grace many a page; indeed, look no further than the cover of this issue, as that is Richard's creation being presented by Lewis Scott to our Patron. And, of course, how often, as with this particular presentation, was there a fascinating story behind how Richard planned every one of his artifacts.

For him, there seemed to be a way to turn something pretty much literally out of nothing; a gnarled old piece of timber fit only for most people's fires made into something stunning. Not that every piece was made this way, it was just that Richard had a wonderful eye for seeing the potential in almost any piece of wood.

With a firm plan in mind, the wood is cut down to size

Measure twice, cut (or turn) once!

Richard's second home: his workshop

The presentation bowl for Roger Richardson

In the seven years that I have worked for Woodland Heritage, there have been so many presentations made to so many different people for as many different reasons, and now all these recipients can rest assured that they own an item within a finite body of work, which, one day, may yet feature in an Antiques Roadshow of the 22nd century.

But as well as the wonderful bowl most recently presented to Roger Richardson initially to celebrate a 'special birthday', but now with a doubly good reason to thank him for his service to the charity, there was one other presentation that springs to my mind that like Roger's was, for me, closer to home.

I inherited the tradition of the Richard Chapman bowls being presented to worthy beneficiaries and was taught by my great colleague, Belinda Moore, how to match the right items to the right people. How often 'B' would see a wonderful Richard Chapman bowl be handed to someone, no doubt hiding very well a thought that the item would look well in her home.

In June 2019, one particularly lovely item had been made by Richard, which 'B' loved from the moment she saw it; she said so several times. So, with the thought of 'right-item; right-person', when it came to thanking 'B' for all that she had done for Woodland Heritage over 25 years, well, there had to be just one recipient; you taught me well, 'B', and I hope that you love it to this day.

Thank you, Richard, your work is loved today and will be treasured long into the future. Thank you also for donating your Union Graduate lathe to be used at Whitney Sawmills during our Woodland to Workshop courses, and may you enjoy looking back on all the beautiful items that you have created over the decades.

Belinda Moore ('B') with her special bowl in 2019

Coppice construction

by George Fereday, Associate Teaching Professor, London Metropolitan University

The case for timber in construction is increasingly compelling. Recent research has shown that building with timber can be 30% faster with up to 90% less waste[1] - this within a general construction sector that accounts for 40% of global carbon emissions and a third of all waste in Europe.

Prefabricated timber homes are cheap, fast to manufacture and install, good for energy efficiency, and low impact in terms of transportation - yet only a tiny proportion is made from timber sourced in the UK.

As well as promoting a sustainable green economy, timber and engineered timber building products offer long-term carbon capture and storage, and have the potential for adapted re-use in the future as part of a circular economy. Sweet Chestnut is a durable, straight growth, dimensionally stable timber well suited to use in buildings. However, very little UK grown Sweet Chestnut roundwood is used in construction. The majority is converted into fencing or simply burnt as firewood.

The Home Grown House featured in Timber Trades Journal

Home Grown House (HGH) is a research project challenging this status quo by exploring new, value-added uses for coppiced Sweet Chestnut in buildings in the south-east of England. Kent and Sussex have among the highest numbers of new start building projects in the UK alongside the largest regional abundance of coppiced Sweet Chestnut.

Yet the UK imports 82% of its wood (production and imports)[2] and rates of woodland management in Britain are low, with only 59% of UK woodlands under active management[3]. Many formerly coppiced woodlands have fallen out of regular harvest cycles making them more prone to pests and diseases, while containing a mixture of small, medium and large diameter trees with few markets.

Through the HGH project we are addressing these issues by designing building components specifically with a range of small, medium and large diameter roundwood in mind. We have designed a 'kit of parts' for disassembly and re-use and all cut components can be sawn efficiently to reduce waste during milling. This low-waste / high yield philosophy means the components are cheaper than traditional imported alternatives.

To achieve milling efficiency, we collaborated with industrial partner Wood-Mizer who are market leaders in mobile sawmilling. The company helped test new radial cutting techniques for repeatability, ensuring they could be reproduced on other sawmills elsewhere in the UK.

When coppiced (cut back to just above ground level every 15-30 years), the Sweet Chestnut tree re-grows multiple, straight lengths of roundwood from each stump or 'stool'. Coppicing is also naturally regenerative, meaning that there is no need for replanting of saplings, and harvesting

in this way encourages higher levels of biodiversity than in other monoculture woodlands, by opening up the woodland floor to sunlight. Coppice forestry also creates skilled rural jobs. By designing in a way that links forestry practices, ecology and construction from the outset, the HGH project has forged new connections that contribute to a holistic, sustainable and local timber supply chain.

Open-air exhibition and research impact

In June 2021 we exhibited five coppice-based buildings systems on the Birling Estate in north Kent as a demonstration of HGH applied research. During the exhibition, our 'kit of parts' was situated within the coppice woodland from which the material was harvested. Importantly, the timber structures were also exhibited alongside the forestry machinery used to harvest and extract the roundwood. The woodland setting, machinery and coppice prototypes combined to communicate the links between ecological woodland management practices, high quality locally grown timber, and sustainable building design. Stakeholders from across the timber supply chain, higher education and public sector were invited to view the prototypes and feedback their reflections on how they might be improved.

Home Grown House open air exhibition

The Home Grown House project featured on the front cover of the Timber Trades Journal (TTJ Sept/Oct 2021) and was presented at COP26, the UN Climate Change Conference in Glasgow in 2021, boosting links between sustainable forestry and green economic development through a process of regenerative design.

The next phase: Home Grown Cabin

The Forestry Commission is currently funding a follow-on project to develop a 'demonstrator' cabin. The cabin components are being made from novel coppiced Sweet Chestnut structural insulating panels. We are using sawn and cleft Sweet Chestnut for the structure and external cladding, and Ash, diseased with die-back, for interior linings. The cabin project will be completed in April 2022.

More information can be found here:

Acknowledgements:
The Home Grown House project was funded by London Metropolitan University through support from HEIF (Higher Education Innovation Fund). The Home Grown Cabin project has been awarded funding from the Forestry Commission through the Woods into Management Forestry Innovation Fund. This project has featured on the Forestry Commission blog as one of two national cases.

Project collaborators:
George Fereday, London Metropolitan University, Principal Investigator
Guy Nevill, Birling Estate
Dougal Driver, Grown in Britain
Nick Meech, Designer + Maker
Harri Lewis, Jack Munro, Mule Studio
David Leviatin, London Timber Frame
Dave Biggs, Wood-Mizer UK.

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Wild Service Tree trial – reaching new heights

by Christopher Guest and Guy Corbett-Marshall

The Wild Service Tree seed source trial was established at an inaugural meeting in summer 2018 under the auspices of Woodland Heritage.

The experiment was designed, and its establishment was supervised, by Christopher Guest of CJG Silviculture Ltd and Jens Peter Skovsgaard of the Swedish University of Agricultural Sciences, with the planting taking place between November 2019 and January 2020 at Fontmell Hill (Dorset), Sotterley (Suffolk) and Spernal (Warwickshire) Estates.

Last year's Journal reported on how the saplings battled through their first growing season in 2020, which included one of the driest Mays on record. This resulted in heavy losses of the admixed species but with the Wild Service helped by limited irrigation at all three sites.

So, what of 2021 and the second year of growth?

Despite the watering in 2020, a total of 98 Wild Service had to be beaten-up at the end of that year, all replaced by saplings kept in reserve to maintain the overall total of 576 saplings per site of nine different provenances (three from the UK, four French, one German and one Italian). By comparison, just 14 Wild Service succumbed in 2021, with these losses following the trend set in 2020 of mortality rates declining from Spernal to Sotterley to Fontmell, where just one tree was lost in 2021.

Inspired forecasting at the planning stage has meant that of the 112 Wild Service that died over two years, only two could not be replaced from stock of the various provenances held in reserve.

The mortality result has been attributed to the local growth conditions in the year of planting as well as the variation in stand establishment practices across sites.

In terms of growth, the average greatest height increment across all Wild Service seed sources was, as in 2020, again at Sotterley (29.4 cm) followed by Fontmell (22.6 cm) and Spernal (14.9 cm). On a relative scale, the growth rates at Sotterley were 21.9 % above those at Fontmell, and the growth rates at Spernal were 17.6 % below those at Fontmell. In line with its high growth rates, Sotterley again had the tallest Wild Service trees, which was the case across all nine of the seed sources.

A preliminary analysis of variance indicated that second-year height growth varied significantly among sites and seed sources. First-year height growth and rainfall during the second growing season (as a substitute for site) were also tested as explanatory variables and did not contribute significantly to the model; interestingly, the seed source most vigorous in the nursery was falling behind in 2021.

By the end of 2021, French seed sources came both top and bottom of the ranking, the mixed seed source Burgundy (Lugny-Plottes-Chardonnay) measuring 93.7 cm on average across all three sites being tallest, with Escatalens the shortest at 'only' 70.8 cm.

Ranking seed sources by tree height at planting and after two growing seasons revealed that all English seed sources and the German Sailershausen, all of which were sown early and were the tallest at the time of planting, had fallen behind other seed sources, all of which originate from Continental Europe and were sown late.

This could indicate that tall seedlings were more negatively influenced by transplanting than short seedlings, or that some Continental seed sources possess a more sustained growth potential. The former interpretation is in line with results from the first growing season, while the latter interpretation is consistent with the development of growth rates and most notably of Sailershausen. Time will show which of these interpretations will hold in the longer term.

Helped probably by their year in the ground, and despite a dry April at Fontmell and Sotterley, no watering was needed in 2021 unlike during the drought in May 2020 at

Fontmell. Vigorous straight-stemmed wild service. Seed source: Burgundy / Lugny-Plottes-Chardonnay (7). Block 1. Photo taken on 11 August 2021

Sotterley. Seed source: Cavaioni (9), permanently marked in block 3. Average tree height of Cavaioni in block 3 at time of photography = 121.2 cm. Mulch mats laid around each wild service in summer 2020 to aid water retention. Photo taken on 15 December 2021

all three sites. Unlike in 2020, Sotterley received the most rain and at levels almost double that of the year before, with the other two sites receiving in 2021 around 85% of the rainfall of 2020 in the growing months of April to August.

The conclusion therefore has been that rainfall could not account for tree growth other than through the combined effect of soil, rainfall, and other local factors, as expressed in the analysis by the factor "site".

In summary, the higher growth rates at Sotterley during 2021 are consistent with the somewhat more fertile, ameliorated soil and, possibly, the larger precipitation. The intermediate rates at Fontmell reflect the well-drained soil of intermediate texture, and the low rates at Spernal can be attributed to the high content of silt resulting in a very compact soil, prone to both waterlogging and drought.

The admixed species (especially Oak and Hornbeam) at Sotterley and Spernal suffered again in 2021 with >1,000 saplings beaten-up at Sotterley and >400 at Spernal, those two sites also seeing low growth rates for those that survived, with Field Maple at Sotterley faring slightly better than the other species.

Mowing took place at all three sites in 2021 with Fontmell's early mow supplemented by weed trampling in July, with the other two sites mowing once in July or August.

Woodland Heritage and the project managers would like sincerely to acknowledge the landowners of Fontmell Hill, Sotterley and Spernal Estates for their generous support in establishing the trial and for making land available, and The Scottish Forestry Trust and other charitable trusts which have supported this research project. Thanks are also due to all involved in seed sourcing, plant propagation, soil analysis, site preparation, planting, measuring, provision of meteorological data and other critical tasks during various phases in the establishment of the trial. Maintenance, re-measurements (at the end of both 2022 and 2023 at least) and future analyses will be supervised by Christopher Guest and Jens Peter Skovsgaard.

Spernal. Site following mowing and strimming in early August 2021. Photo taken on 13 August 2021

The full report, 'Wild Service Tree Seed Source Trial Testing nine seed sources for survival, growth, health and stem quality at three locations in England' by Christopher Guest & Jens Peter Skovsgaard, can be found via **www.woodlandheritage.org/wild-service-tree**

The stick chair making movement

by Bill Ratcliffe

What is the enduring fascination with traditional chair making?

Over centuries there have been countless distinctive designs; but they are all intrinsically the same object. The ergonomics of a chair has obvious limitations, yet specialist requirements as well as the demands of fashion have provided endless inspiration for new designs.

Perhaps our obsession is down to the fact that the chair is a piece of furniture that we actually use so regularly, and, of course, the need to sit down is a basic human function.

Designs have been influenced by historical events. For example, the crown decorations added after the English Civil War to demonstrate the return of the monarchy, or military features on 'Trafalgar chairs' with sabre legs to reflect the weapons and emblems used. Given that we now have a new war in Europe, this is bound to have an impact on art and culture as well.

The regional chair styles and design features are akin to peoples' accents. The shape of an arm, the positioning of a stretcher or the design of a back – they all can pinpoint that a chair came from a certain maker or part of the country.

Take the Windsor chair and its regional variations or look west to the Welsh stick chair, which was traditionally made with native timbers, such as Ash, Oak, Beech, Elm and Yew. And they still can be - without the need for machining and with simple hand tools.

Making chairs offers the valuable opportunity to make something by hand that is beautiful, useful and essential. The maker can ensure the natural features and character of the timber are the stars of the show. They can also add their own design features and leave their individual tool marks - just like a fingerprint or signature.

Traditional chair making has never really stopped, despite mass production. Professional and amateur makers alike have kept the tradition going. But recent years have seen the biggest revival of the craft.

Bill's hand-made Welsh stick chair beside his traditional tool chest

I have worked with many different designs, but there was always something about the Welsh stick chair that struck a chord. Maybe it was my Welsh heritage or it just being a beautiful design. One of my stick chairs, made in Oak with Walnut wedges, sits next to my tool chest. It is the perfect perch for rest and contemplation, and a place for inspiration for future projects.

As a furniture conservator, furniture maker and tutor, based near Ely, Cambridgeshire, I was first inspired by one of US woodworker Chris Schwarz's books a few years ago, The Anarchist's Design Book. I then looked for a copy of John Brown's seminal 1990 work Welsh Stick Chairs and was lucky enough to get hold of a signed copy. Brown beautifully captures the history, the tools and the techniques in such a wonderful yet unassuming green volume. I was also delighted to see woodworking magazine Quercus devote a cover story to "JB" recently.

Bevel gauge for drilling the legs (left) and saddle inshave tool for saddling (right)

Brown explains in his book that the English Windsor started - like the Welsh chair - as a peasant's chair. However, at the beginning of the 19th century, tycoons of the Industrial Revolution seized on a commercial opportunity. High Wycombe, also where I completed my degree in furniture restoration, became the centre of mass production with the nearby Chiltern Hills supplying all the Beech wood they could want. Brown sums up with a quote from John Ruskin: "Life without Industry is guilt, and Industry without Art is brutality".

Thanks to those books, I became hooked and have made many stick chairs since and added a five-day chair making course to my offering as a tutor. Since then, I have guided scores of students, none of whom have ever left my workshop without finishing a lovely and very personal chair to take home. In my own small way, I feel I am handing on the baton of chairmakers past.

There is a unique connection with your materials when making a chair, particularly chairs like Windsor chairs or Welsh Stick chairs. This could be because they have solid seats, and so provide a canvas to display the beauty of the timber.

The seat is shaped for comfort as well as aesthetics. The "saddling" process is sculptural and brings out some lovely grain patterns. The arms and hand rests offer opportunities for shaping to tactile forms. The legs can be round, octagonal and even tapered. And the timber for wedges can be chosen to your taste, like so many personal touches that can be made.

Making chairs definitely makes you a better woodworker. For example, your ability to read the grain and feel for your materials will develop. Your work will become instinctive, and you will turn, travish, bore, scrape, spokeshave, saw, plane and wedge - just to mention a few techniques.
One of the first challenges the chairmaker faces, for example, is drilling seat sockets for the legs. These need drilling accurately at an angle and along a sight line. I use a digital bevel set to the correct angle, which is then clamped between two blocks and aligned on my marked sight lines. After drilling, the hole is then reamed to a tapered angle.

Two of Bill's woodworking students

After rough tapering the top of the leg on a lathe, the tenon is completed using a tenon cutter – like a large pencil sharpener - to match the socket.

Saddling the seat is an opportunity really to add your sculptural taste to the piece, the focal point of the finished chair, as the eye is drawn to the largest and most profiled area.

As I sink once more into my Welsh stick chair, I hope that this article may inspire some to read further on the subject and, more importantly, to make a chair.

It is such fun and so fulfilling. While the reward is in the making, the bonus is in the using.

Director of Craven Conservation, Bill Ratcliffe MA is an Advanced City & Guilds qualified cabinet maker, surface finisher and upholsterer. He has also achieved a First Class BA (Hons) Degree in Furniture Conservation, Restoration & Decorative Arts. He later gained a Masters Degree in the Conservation of Historic Objects. He has worked on a number of important projects at some historic locations but just loves working on a variety of objects. Bill also takes on commissions for making projects in addition to running a number of woodwork based craft courses.

Instagram: **@cravenconservation**
www.cravenconservation.co.uk

Barrels rolling towards a new home

by Guy Corbett-Marshall

Master Cooper Alastair Simms

Alastair Simms at work

Set between a paint store and a car body-shop on the edge of England's third-smallest city, Ripon, is a cooperage that is bucking the trends.

Established as recently as October 2020, in the midst of the pandemic, business has boomed so much that by the end of 2022, it is planning to move to bigger premises near Ripon.

The brainchild of London-based Danish businessman Christian Jensen, but built on the reputation of Master Cooper, Alastair Simms, who has been making barrels for over four decades, this is a company on a roll.

The current premises were taken on to help Alastair get the new cooperage going, but it's now bursting at the seams with a total of four coopers now on the books, plus a person covering admin, and another, sales.

For Alastair, it's the perfect way to complete a career (although he has no plans to retire!) that he started in 1979 as an apprentice cooper. A copy of his 'Form of Indenture of Apprenticeship in the Cooperage Industry' that he signed as a sixteen-year-old on 1 November 1979 is displayed on a wall at Jensen's Cooperage, that apprenticeship being for four years, and which started at the Theakston's Brewery at Masham, less than ten miles away from where he works now.

Not that this proud Yorkshireman has stayed in his home county for his whole life: his career took him to Wadworth's in Devizes, to working on cider vats for Weston's in Herefordshire, and to many other locations.

Alastair was admitted to the Livery of The Worshipful Company of Coopers in May 2010, and Jensen's Cooperage could become the route for others to follow suit. Amazingly, of the five coopers left in England, four work at Jensen's. Those wanting to become an apprentice first undergo a six-month assessment before embarking on their formal apprenticeship; in Scotland, the number of coopers runs into the hundreds.

The comparison with Scotland is important, as many of the cooperages north of the border are set up to deal with high volume business, whilst Jensen's have created a niche where they are very happy to deal with small orders, working to the principle of 'quality, not quantity'.

Fundamental to 'quality' is that only 1 ½" inch, quarter-sawn, English Oak is used, ideally at least 100 years old, durable, with a straight, tight grain and a moisture content

Range of highly specialised coopering tools, some dating back to the early 1900's

A new wine barrel (L) stands alongside a restored whisky barrel (R)

of 20 to 30% which allows it to be bent. The preferred supplier of late has been Shelmore Timber in Staffordshire that Woodland Heritage members visited in 2018.

As well as the grain, the Oak from Staffordshire has its own unique flavour, one that I tested, but I have to recognise that Alastair has a much more attuned palate than me!

That element of flavour is vital for the contents that are stored inside each barrel, whether that be whisky, wine, beer, or gin, the latter being where Christian Jensen developed his interest in cooperage, as he established and owns Bermondsey Distillery, where he distils Jensen's Gin, a gin based upon traditional methods and botanicals dating back 200 years.

Tradition, but commercially successful tradition, underpins both Jensen's gin making and the Cooperage; all the barrels are made or restored by hand. Visiting at a time when the news was all about energy crises, Jensen's Cooperage has far less to fear than many, and talk about 'circular economy'!

A well-made stave (they are assembled vertically to make the barrel, and are then held in place by mild steel hoops) can last eighty years and more; it is not impossible for a stave to achieve a hundred years in use, so matching the length of life of the tree from which it was taken. (Notably, the hoops might last only 25 years, mild steel being replaced by galvanised steel on wine barrels to avoid the wine affecting the hoops and ruining the taste of the wine as a result).

Knowing what is to be stored in each barrel is vital, the taste being influenced by treatments such as the charring of the inside of the whisky barrels, whilst wine barrels can be toasted from light to dark, across a range of up to thirty shades.

Alastair described wine barrels as 'furniture inside and out', and certainly the new, English Oak one that I saw was a work of art, although work that comes at a price; to make a new barrel will take the whole of a cooper's day, whilst replacing a few staves in an existing barrel, matched groove-to-groove with the old, could be done in a quarter of the time, with the cost to the customer reflecting whether they want new or refurbished, with current demand 2:1 in favour of refurbished.

Some customers want specific, used barrels, a large consignment of Jack Daniels barrels bearing witness to this arrived on the day I visited. Costs of the latter have quadrupled recently, but if customers want that taste, then they will have to bear the cost, and after all, the barrel could last for decades.

I was introduced to 23-stone blending puncheons, to 60kg casks, and learned about how whisky barrels contain 200 litres (180-210l), wine barrels 225l (sometimes 228l), but that beer barrels have the least tolerance: 36 $^{3}/_{8}$ to 36 $^{6}/_{8}$ gallons. There is no doubt that a Master Cooper must also master both metric and Imperial measurements!

In a world where few stick to the jobs they started with, it's clear that Alastair Simms chose well when he started out in employment nearly 43 years ago, and it's also clear that he has many years left in him, always wanting to learn more, with an ethos of pride in his work.

It might feel to Alastair as if Jensen's Cooperage is like a steam train out of control, but he is enjoying the ride and it does seem as if the destination is clear.

jensens-cooperage.business.site
instagram.com/jensenscooperage

Professor Mark Anderson (1895-1961) and the origins of continuous cover forestry

by Esmond Harris

Professor Anderson's legacy is relevant today in view of the importance of 'continuous cover forestry' although he would have referred to this form of silviculture as 'uneven aged forestry'. This though was only one of many innovative ideas that he contributed to British forestry, particularly in Scotland.

In 1912 Mark Anderson started studying for a degree at Edinburgh University but when war was declared in 1914, he enlisted in the Argyll and Sutherland Highlanders, later being commissioned into the Black Watch. Towards the end of the War, he was awarded the Military Cross.

After the War he completed the BSc course in forestry, soon to be followed by an MSc. He then joined the embryo Forestry Commission as a research officer with an interest in soils and nutrition at a time when new planting took precedence over research. He also saw the need for genetics with regard to the new tree species being planted, several decades before this was incorporated.

Able but difficult, Mark Anderson did not get on with the dynamic head of the Commission, Sir Roy Robinson, so that, frustrated by the lack of a scientific approach, he left the Forestry Commission in 1932 for the Irish Forest Service, first as Chief Forest Inspector and then in 1940 as Director.

In 1946 Anderson was appointed to the Forestry Department at Oxford University and then in 1951 to the Chair of Forestry at Edinburgh University where he remained until his death in 1961. Here he promoted the work that he is remembered for – 'irregular', i. e. uneven aged forestry, then referred to as the 'check method' – now termed 'continuous cover forestry'.

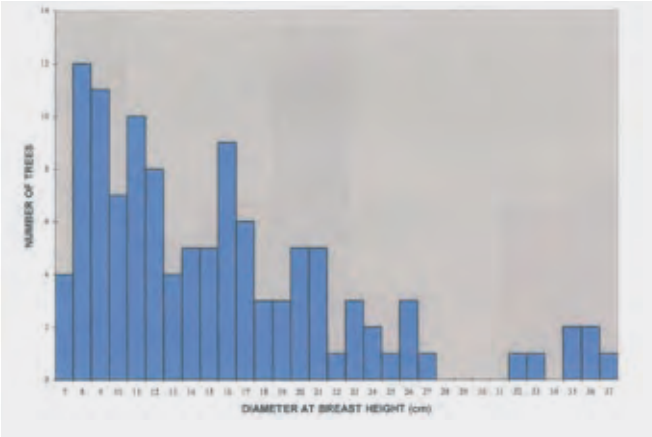
Amongst many contributions, his Selection of Tree Species: an Ecological Site Classification published in 1949, recommending species choice according to vegetation type, became widely accepted, the best example of which is at Craigvinean Forest in Perthshire with varied sites and correspondingly a wide range of tree species.

Mark Anderson disliked large, uniform areas of a single species but failed to appreciate that this was merely an initial phase in the development of British forestry. He was impressed by the use of natural regeneration in continental forests consisting of Norway Spruce,

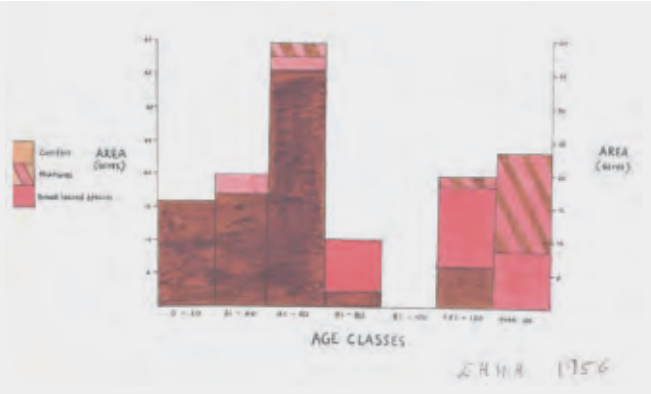
Professor Mark Anderson

European Silver Fir, Scots Pine and Beech, managed under a selection system known as the 'check method'. This was intended to reflect natural conditions, thus he favoured small, circular groups as being closest to them. Although preferring natural regeneration, he attempted to reproduce these conditions with small, circular planting groups within existing woodland when transforming even aged, planted woods to an irregular structure.

He persuaded the Forestry Commission to re-structure two forests in this way, first at Glentress near Peebles in 1952, and then in 1954 at Faskally in Perthshire, both Forester Training Schools with adequate labour to carry out the detailed annual measurements.



Faskally Forest – Diameter distribution from 1999 transects



Faskally Forest – Age class distribution histogram

The Faskally experiment, still running today, consisted of 185 acres of 'policy woodland, i. e. those around a mansion house, consisting of Scots Pine, European Larch, Norway Spruce, Douglas Fir, hybrid and Japanese Larch, a little Sessile Oak, Beech, Sycamore and Birch; thus, an interesting and varied semi-mature woodland.

Anderson wished to mimic European forests which included European Silver Fir, but this was banned due to the danger of introducing the insect pest Adelges nusslini to Britain so Western Hemlock (Tsuga heterophilla) was used instead, which has subsequently had a dramatic effect on the species mix. Initially there was little natural regeneration but now the woodland is dominated by Tsuga at all levels thereby diluting Anders's principal objective.

Anderson's plan had five objectives:

- An uneven aged irregular structure on a group basis; by the end of the conversion period to obtain a continuous series of age classes from 1 to 120 years.
- To improve the quality of the soil by the addition of broadleaves.
- To utilise natural regeneration where possible.
- To demonstrate a system of irregular forest management.
- To achieve maximum volume production; he also anticipated an enhanced yield compared with even aged forestry but this is doubtful.

Twenty-four compartments were delineated and allocated to six annual working blocks. Initially the smallest planted groups were of 1/8th to 1/16th acre but this proved impractical and 1/8th acre to half an acre were established.

A total enumeration of all trees over four inches quarter girth was measured and recorded on a six-year cycle. Callipers rather than girth tapes were used as more accurate and in the first cycle the position of the calliper was scribed so that exactly the same position was used next time. Twelve percent of the growing stock was felled each year on a six-year cycle.

There were initial problems with roe deer and rabbit damage but Anderson dismissed this as 'the forester's problem'! Capercailzie, then numerous in Perthshire forests, feed on the buds of Scots Pine thereby distorting the young trees. The annual enumeration work was time consuming and would have only been possible with students.

My wife and I were fortunate to visit the Faskally woods in 2009 during a student reunion forty-nine years after living in and knowing the area intimately. The changes in and development of the woodland was both dramatic and informative.

Western Hemlock, used by Anderson only as a substitute species, dominated the woodland at all canopy levels. The structure of the woodland though consisting of all age classes was 'uniform'. By this I mean it was the same throughout. My wife, having known the woods intimately, made an interesting observation: "Do you know where we are – it all looks the same?" I turned to a couple of ex-students and asked them the same. "No, but Faskally Loch is in that direction."

So, have Anderson's objectives been achieved? Certainly not so far as mimicking European forests is concerned, but 'yes' as an important forerunner of 'continuous cover' forestry, now a significant component of second rotation British forestry.

Woodland Heritage awards more grants to boost forestry careers

It's been another bumper year for Woodland Heritage helping to boost the careers of people wanting to advance their learning in the forestry sector. More reports appear elsewhere in this Journal from other successful recipients, with two further stories below.

Selectfor Bursary

by Roly Boughton

It was back in early 2021 when, tipping it down outside, I had what's known to most Woodland Managers as an "Admin Day".

I remember looking through a plan of operations for the estate where I was working and seeing yet again: 'Thin to Best Stem'. And I thought to myself: "You know what, Roly, you've been following the plans, using your intuition, taking advice from experienced foresters on transitioning these woodlands into a Continuous Cover Forestry (CCF) System. But maybe it's about time you attended a specific course!"

I'd been full of questions regarding applying irregular silvicultural methods for some time. I needed to see stands of trees not just transitioning but established and producing economic and environmental benefits; to see the data in black and white.

I knew the SelectFor course was the course I wanted to do. I had bookmarked it years ago, but although I knew it would be a sound investment, I hadn't been able to cover the cost or find the time.

I was aware I'd needed to get some support and heard Woodland Heritage had been providing a few bursaries which were competitive. So, without further ado, I put together an application and applied. Within a few months, I received an email confirming my application had been granted; the course was being run in mid-May and I was going!

The two-day course was a relaxed, but highly informative affair with both Andy Poore and David Pengelly delivering some well researched and detailed examples of CCF, with equally detailed data. This was the stuff I wanted and needed to know.

Roly Boughton

Each day was split between the venues at Stourhead. The morning session providing objectives and principles of CCF, followed by a practical site visit in the afternoon. What I found most useful was the fact that after discussion we could see real examples. Not pictures in a book or online, but to be in the forest and see it, feel it, and understand it a bit more than before; being very much a visual and practical learner, this was ideal for me.

The afternoon of Day One we visited a compartment called Dropping Gutter at Stourhead Western Estate to illustrate the morning session. Then we visited another compartment called Great Coombe where we were to undertake a Practical Marking exercise. This was great to do, with an opportunity to quiz others on marking trees. We worked in small teams which added to the experience by talking through decisions as a team.

Day Two was spent analysing the data and receiving feedback from the previous afternoon's exercise. To our

surprise our group achieved the highest score! A bottle of bubbly was our reward, and luckily for me having picked fantastic teammates, they gave this to me as it also happened to be my birthday!! Cheers, guys!

The afternoon followed a similar theme to Day One with site visits to both Cranborne Estate and Rushmore Estate. Due to Covid, however, we all travelled in separate vehicles which lead to convoy driving and sadly me getting hopelessly lost and missing the last site visit!! However, David was kind enough to forward me the notes the day after so at least I could read it up.

I returned to work with new vigour. Straight back into planning operations and applying the techniques with a clearer vision for the transitional woodlands I managed. Recently I accepted a new position as a Woodland Officer covering West Dorset and Purbeck for the Forestry Commission and I use the knowledge from the course daily.

A huge thank you to Woodland Heritage for supporting me, which has without doubt boosted my career. Many thanks also to Andy and David for delivering a superb course, and to my team mates for winning the Practical Marking exercise (and giving me the prize for my birthday!). THANK YOU!

Woodland Heritage, training grant

by Rory Pyper

In support of my training on the National Trust for Scotland's 'Heritage' Garden Apprenticeship Scheme, Woodland Heritage and the Borders Union Agricultural Society jointly facilitated my NPTC Chainsaw qualification at the Royal Agricultural University (RAU) in Cirencester in August 2021.

As a novice landscape conservator, interested in the state of our woodland heritage, I thought this qualification would be a minimum requirement for my professional development. Given the great number of serious plant diseases and extreme weather events threatening British forestry, it is self-evidently a useful programme to study.

Cutting up an old Hemlock at Harmony House Gardens in Melrose in the Scottish Borders

Over the course of the last two-decades, the National Trust for Scotland (NTS), for one, has seen many of the shelterbelts shielding their West Coast gardens dangerously compromised by the likes of Sudden Oak Death. To protect its now-vulnerable living collections, at gardens such as Arduaine or Inverewe, NTS has dedicated considerable resources to felling and replanting affected trees, reconstituting an essential buffer against ever more ferocious storms.

Given the cost associated with these projects, much of the work is being dealt with in-house by the garden teams themselves. It is my hope that, having completed my training, I will be able to contribute to this effort to maintain these woodlands.

Even in the first six months of having the chainsaw qualification and training, I have found myself assisting with the clear up following Storm Arwen in the Scottish Borders. Since then, whilst on the Elizabeth Hess Scholarship programme at Tresco Abbey Gardens in the Isles of Scilly, I have made further good use of my training.

Under the instruction of the Estate Forester and Head Gardener respectively, I have been involved in clearing Rhododendron from the Shelter Belts, removing diseased trees; I will also be undertaking a further placement at Harcourt Arboretum in Oxfordshire.

As I write, I am currently at the RAU, for two follow-up courses in professional tree climbing and chainsaw use that will further develop my forestry skillset. Suffice to say, I'm very grateful for the support from Woodland Heritage with my training to date; it has proved indispensable.

A Portrait of the Tree

Text and photographs by Adrian Houston

Adrian Houston, Loch Tulla, Scots Pine

What is your favourite tree? A simple question, but one that can spark a treasury of stories. From childhood memories of scraped knees and scaled branches to incredible histories of veteran species that have hidden kings and provided shelter for queens

It is a question that I have spent the past four years asking any number of people – conservationists, campaigners, adventurers, gardeners, landowners – all with their own personal tales of how these giants of the natural world have touched their lives in a profound and intimate way. Some of those giants and the names of those people who love them grace this article.

As a photographer, capturing these great specimens, I have had the luxury of spending time in their company. On frosty mornings with misty dew coating the grass and branches, late at night with a canopy of stars above, with the summer sun sparkling through latticed woodland ceilings. Each tree has a distinct personality – as a photographer you seek to capture something of the spirit of these remarkable trees in each portrait.

I have always had a strong affinity to trees having grown up in Scotland surrounded by woodlands and forests. My earliest memory, aged six or seven, was sheltering under a Scots Pine on a fishing trip with my father. It's where I caught my first brown trout, and I am happy to say that

the tree is still standing proud overlooking Loch Tulla in Glencoe – and it's my favourite.

My mother was a well-known Scottish painter and, as well as nature, I grew up surrounded by art. I have been a photographer for over twenty years. In my early years I assisted a famous advertising photographer in London and specialised in portraiture. As I grew in stature, I have been lucky enough to be able to photograph the thing that I love most of all which is the natural world.

Nature has an intensity so strong that it gives you a totally different view on the world. When you witness Earth's natural power, it is sometimes hard to see its underlying fragility. But scratch beneath the surface and it is there. The need to protect what we have before it is too late has influenced my work for as long as I can remember.

Experiencing first-hand the natural power of the Earth, makes you realise the sheer force of what surrounds us and gives us the ability to breathe. In 2004, I was photographing the vent of Kilauea (the goddess of fire) on the Big Island in Hawaii when the volcano started to erupt. This near-fatal experience made me realise how insignificant we are to the natural power of the Earth and why we must do our utmost to protect our planet.

My life's journey has made me realise how important trees are to us: they provide us with the very air we breathe, soaking up and capturing carbon from the atmosphere and converting it into oxygen. They stabilise our soil, preventing erosion, and help to limit flooding by absorbing storm-water. They provide shelter and food for wildlife – from multitudes of tiny insects to tawny owls, bats and deer – supporting teaming ecosystems. In our cities, it is estimated that trees can reduce temperatures by as much as 7°C and their canopies trap dust and pollutants from the air.

Many trees have healing properties and some of the world's pharmaceuticals are derived from trees: Aspirin comes from Willow bark, Yews are a source of Taxol used for skin cancers, as well as tree oils and bark quinine.

Tony Kirkham, Kew Gardens, Mexican Bald Cypress

Julian Freeman-Attwood, Chirk Castle, Sweet Chestnut

Aljos Farjon, Kings Walden, Great Oak

Joanna Lumley, Hyde Park, London Planes

Elephant Oak, Hatfield House

Doctors are realising that the importance of the environment in which patients recover is just as important as the medicines they take. As well as the physiological benefits of trees, attention is turning to eco-psychology based on the notion of our disconnection with nature. Modern medicine often sets the physical and the emotional apart, yet their roots are firmly intertwined, and research has shown how powerful exposure to the natural environment is for both our mental and physical wellbeing. Trees have the calming properties to bring back our connection to nature, reducing stress levels and providing joy and inspiration. Spending time walking through a forest or sitting under a tree has been proven to be incredibly beneficial to our well-being.

We in Britain have a strong affinity with the Oak, our national symbol of strength. The ruling majesty of our woods, the English Oak (*Quercus robur*) supports more life than any other native tree species in the UK.

Oaks have been common to these islands since the end of the Ice Age and are steeped in our history, from ancient Druid rituals practiced in their groves, to stories of royalty finding protection among their canopies, to couples being married under their branches in the time of Oliver Cromwell.

The durability and usefulness of the tree's timber is one of the reasons we ruled the waves. HMS Victory was constructed from over 6,000 trees 2,000 of which were Oaks. Luckily for us, these trees have been preserved in our deer parks and Royal Forests, status symbols of the aristocracy in the medieval ages, many of which have remained in protected areas of land to this day.

Our pagan ancestors worshipped trees but for many of us nature has been pushed out of our lives. In the United Kingdom today, only 13 per cent of land is covered in trees, compared to an average of 35 per cent elsewhere in Europe. From a land rich in forests and woodlands, we have become a nation literally stripped bare of this most valuable of natural resources.

'The tree which moves some to tears of joy is in the eyes of others only a green thing that stands in the way. Some see nature all ridicule and deformity and some scarce see nature at all. But to the eyes of a man of imagination, nature is imagination itself' (William Blake)

This quote has always stuck in my mind. I feel sometimes that people have grown to take trees for granted and have

Dominic Prince, Broadly Wood, Beech

Danny Clarke, London, Acacia

forgotten how important they are in every way. For as long as we have been on the planet, they have been an integral part of us. Trees are under threat, endangered with disease, global warming deforestation and pollution. Yet they represent one of our greatest hopes for the future of the planet.

Over the past four years I have immersed myself in the world of trees. Trees have lived decades longer than any human being. They are old and wise, and I have acknowledged this with my artistic vision – A Portrait of the Tree.

This was conceived as a way of illustrating how trees connect us all on a universal level. The great beauty about asking people to think about their favourite tree is that most people have one, thinking back to climbing them as a child, sitting in their shade, or as a defining and constant part of the landscape. The fact that some people have forgotten about their connection to that special place with a special tree is understandable in the frenetic world in which we live but returning to that happy place from time to time would be the best form of therapy we could have.

The way trees communicate with one another and other species underneath the forest floor, sharing nutrients and water through their root systems, is something known as the wood wide web, and the way in which more seasoned mother trees are able to detect the ill-health of their neighbours through this mycorrhizal network and provide them with much-needed nutrients is a lesson to us all.

My hope is that together the stories and pictures in this book offer a powerful tool to help educate people, from children to adults, about the vital role that trees play in all our lives and in turn give these amazing trees a voice.

When you are photographing a portrait of someone, generally the more famous they are the less time you have with them, so you need to make that connection in a short space of time in order to get the best out of them.

Making that connection is the same with a tree: I would need to visit it and spend some time working out the best time of day or night to capture it and connect with it to understand it. The great advantage is that the more famous the tree, you can still spend as much time getting to know it as any other. Once you understand your subject you will be able to capture its best moment, the more patience you have waiting for that perfect light, the better the result. Throughout the day and twilight hours trees will take on many forms as the light moves across them, often the chosen tree may be surrounded by many others, so you need to wait until the light form picks out the best moment to photograph it. Photographing a tree with atmosphere through the early morning mist of dawn or the last rays of sunset, or on a dull rainy day to bring out its mystical charm inspiring people to look at trees in a different way and understand their beauty is the most important thing to me.

Lord Salisbury, Hatfield House, Oak

Sutton Hoo ship sails again

by David Cracknell

For those who have seen the film *The Dig*, you will be familiar with the story of the amazing Sutton Hoo treasure trove: the famous golden face mask and clasps of an Anglo-Saxon dignitary, likely Raedwald, one of the first kings of what was yet to be known as England.

Less attention has focused on the ship which housed his burial chamber within the mound. Probably because by the time of the find it had completely rotted away, leaving just a decayed imprint in the Suffolk soil.

More than 80 years after the find of a lifetime by archaeologist Basil Brown in 1939, a group of volunteers and shipwrights are reconstructing the ship at the Longshed at Woodbridge, a small axe throw from the royal burial site. "He was king of the East Angles, just on the cusp of Christianisation of England. He's one of the first kings of what would become England," Master Shipwright Tim Kirk explains.

He ruled from 599 to around 624, one of the few Bretwalda or country-wide rulers referred to in the Anglo-Saxon Chronicle and the first king of his region to become a Christian.

Raedwald's warship had been dragged uphill from the River Deben below. As soon as the discovery of the burial chamber was made, it was clear from the great effort and preparations made, that this was the funeral rites of a very important person.

Digital models of the ship were developed from period plans of the boat's impression in the soil.

Kirk, a boatbuilder who has recently completed an archaeology degree, has had to piece together the bare bones of the ship with an army of volunteers who are all being trained in traditional boat building and Oak log cleaving.

As well as the lack of certainty over the identity of the ship's owner, we also cannot be sure of the origins of its design. Was it a home-grown layout or one influenced by overseas invaders perhaps?

Tim Kirk has ambitious plans

"It is possible this was built on the continent, and it came over here," Kirk explains. "But it is my personal belief that it was British-built to a continental pattern because of the way the frames are built and attached to the ship, but that is a conversation that has gone on for 50 years."

The spacings in the frame are very nearly three feet apart, suggesting the Anglo-Saxon shipwrights were working to the Roman foot (11.5in) as opposed to its longer Germanic equivalent (13.5in).

When I visited in February 2022, there had been a big milestone, with the installation of the "stem", the final element of backbone of the 27m-long ship, which had just been hoisted into place.

The proposed launch date of the ship is just two years from now. At present it is a skeleton hull with softwood formers known as "molds" [correct spelling], which will eventually be removed when the side planks have been riveted in place.

The project has been privately sponsored and crowd funded, as Lottery funds do not apply to "new builds" as opposed to restorations. Some of the 40 oars (£1,000 each) are still available, as are 3,600 traditional nails (£20).

A quartered oak log cleaved by hand for planks (left); willow tree nail with Oak wedge (right)

Volunteers trained in splitting specially selected local 200-year-old Oak trees and forming them into the correctly-sized and smooth planks for the ship's hull. Some of the Oaks even came with an old "logbook", recording the original date of planting in the 19th Century – with the specific intention of being eventually used for ship building. And it is nice to see a focus on sustainability as well, as each tree cut down will be replaced with new planting.

Cleaved planks are riveted to the ship's skeleton. The shape is key for a ship that it is estimated could hold up to six tonnes of cargo and remain stable.

The Oak boards, hewn from 200-year-old Oaks, quartered then hewn into planks by volunteers using axes and adzes. As Oak can twist as it grows, milling it via traditional methods is a skilled job. If the log is not cleaved correctly, it can follow the grain in the wrong direction and could ruin the plank.

As well as metal rivets, some of the joinery is held together with "tree nails" rammed home tight with wedges.

Originally the design was done with CAD software, but once you get down to the actual build it is all up to the good old human eye.

"It is actually the bevel angle and the width of the planks that sets the shape of the ship," Kirk explains.

"Because we wanted an accurate ship to that which was in the ground and that we would trial properly, we decided to use a modern method of using molds, because we wanted an accurate shape. We are using volunteer labour, and this is hard enough, as is using traditional axes and so on."

The frame of the reconstructed ship takes shape, awaiting its 'skin' of oak planks cleaved by hand from 200-year-old trees

When the ship is finished and launched in 2024, the first season will be to learn how to row the ship and see how it handles; the second season will see them row up the Thames as far as possible.

"We know that Raedwald went to Canterbury in 620 to be baptised, so there is a potential voyage there. It is about half a day – we think – to go from here to Canterbury by sea, while it would be a day and a half to go by horse and cart. So apart from the bling factor and the prestige, it would have been the fastest way to get to places," Kirk adds.

Further plans include going up the east coast to the Humber and up the Trent, where there were three Anglo-Saxon battles around the Raedwald period. It certainly will be amazing to see the launch of this ambitious and really fascinating project in a couple of years' time.

All the wood's a stage!

by David Cracknell

According to the dictionary, the definition of a "folly" is "an often-extravagant picturesque building erected to suit a fanciful taste".

And that is exactly what Mark and Lindy O'Hare thought they were constructing when they decided to build an open-air amphitheatre in a woodland bomb crater on their Suffolk farm.

But soon they found themselves deluged with inquiries.

"We thought it would be a folly and we'd put on a few shows and school plays a year," says Lindy O'Hare, the co-founder of the Thorington Theatre, near Halesworth. "But word spread fast and soon we were being contacted by the BBC and theatre groups."

The open-air theatre was built during Covid, in a Doodlebug bomb crater in woodland on the edge of the farm near the roadside. It was originally the brainchild of Silas Rayner, who lives with his young family in a cottage on the estate.

"We didn't have a grand plan, but when we saw this great hole in the woodland, we thought it already looked like a natural amphitheatre," Lindy says.

"Silas thought the bomb crater would make a great venue for an open-air theatre and so we started exploring the idea. One thing led to another and before we knew it, we had started construction on a 350-seater theatre."

The first season last summer saw a mixed programme, with a comedy festival, folk and rock concerts and opera nights. Of course, the place was just made for Shakespeare, with the wooden boards capturing every footfall of dramatic intent, just like at the original Globe in London. Perfect for A Midsummer Night's Dream.

Even early on they have already attracted upcoming stars such as TV comedians Lou Sanders, Sara Pascoe and Nish Kumar. "I've never laughed so much when Lou came on,"

Mark and Lindy O'Hare fulfilled their midsummer night's dream

says Lindy. "She kept going on about the "pandy", the pandemic, making light of a dark situation."

Lindy and husband Mark bought the 300-acre farm four years ago, after a career in finance in London. Mark wanted to start a nut tree farm, and the family has planted thousands of whips already, including many stands of Cob Nut (Hazel) and Walnut stock, as well as utilising cuttings from their ample Sweet Chestnut stems all around the woodland.

The entire theatre is built from timber from Chestnut coppice in the surrounding woodland. Coppicing of mature stands began in 2019, but Covid did not stand in the way of the plan.

The Chestnut was milled and planked on the hill above the theatre and then carried down. The plan for the stage and seating areas was sketched out roughly at first on a piece of paper. Some Larch and Pine have been used in the construction also.

Stakes were laid first to support the seating, all made from Chestnut, which is especially durable to weathering, hence it is the favoured choice for use in fencing.

"We've built the structure to fit the land," Silas says. "One of the joys of this site was that it already had that special magic. The light inside these woods is incredible when the sun shines.

The sketch that started it all

Theatre in the snow: a perfect setting for A Winter's Tale?

Mark inspects the Chestnut stakes supporting the seating

Milling coppiced Sweet Chestnut boards

"And there's something about a woodland environment, it's a comfortable place to be in and a lot of people don't get to spend much time in such places."

Some of the Scots Pine lining the bomb crater were left to protrude through the stalls. There is a great attention to detail, there are lights along the stairs, changing rooms, disabled seating and a bar area at the top of the hill at the back.

"We wanted to make the theatre as inclusive as possible and have reached out to local schools and charities, as well as theatre groups and touring production companies," Lindy explains.

"We are very keen that the actors are properly paid as well."

The structure was deemed "permanent" by East Suffolk Council, and planning permission had to be sought. However, there was great support from the local community, with only one letter out of 20 not in support of the scheme.

Many of the guests are locals, of course, but the theatre also largely benefits from tourists and holidaymakers. While not designed as a big business, the theatre will "wash its face" now that it is established, helping to cover the costs of such an ambitious project.

Opening just as lockdown restrictions were being eased, made Thorington an ideal open-air entertainment space where as many as 200 socially-distanced people could still attend despite some regulations on contact remaining. The theatre is a great space, and you can imagine the streaks of golden light beaming through the canopy in the late afternoon sun. Or Hermia, Lysander, and Helena whispering lines and disappearing into the shadows behind a tree trunk on a starry midsummer night.

Already this coming summer season is getting booked up. Proms in the Wood starts in June, followed shortly by Shakespeare's Much Ado About Nothing and Comedy of Errors, Cosi Fan Tutte and a really varied programme. There are children's shows, such as Peter Pan, The Jungle Book and Alice in Wonderland.

Of course, there are wood related events as well, with "The Music of Trees" performed by Geoff Robb, an award-winning classical acoustic guitarist, as well as performances of "Into the Woods" by Stephen Sondheim.

You can't help feeling that this folly of a project has now become much more; in fact, it is a real community-minded scheme, borne of the "new normal" the world is facing following Covid.

Businesses raise money and profile for Woodland Heritage

by Kelly Morss and Guy Corbett-Marshall

Support from businesses need not always be about the organisations themselves making donations of money, or in-kind, as two companies illustrated last year. Both firms used their networks to raise large sums to benefit Woodland Heritage's work, which at the same time brought what the charity does to the attention of completely new people.

HOLLOWAYS OF LUDLOW

Holloways of Ludlow and their customers raised an extraordinary £3,879.90 for Woodland Heritage, by donating 5% of all their online sales over their Black Friday weekend which ran from Friday 26 November to Monday 29 November 2021.

Mark Holloway, CEO of Holloways of Ludlow, recognised that Holloways' values are shared by Woodland Heritage. Both believe in the importance of growing the best timber to create the finest items, especially furniture, while also being able to help UK growers and makers along the way.

Mark said: "By doing what we love, we have grown to become one of the UK's leading suppliers of quality lighting and furniture. We continue to source the very best products from around the world, with a focus on the UK and Scandinavia. Everything that we sell is judged against our founding principles: that good design is timeless and that items should be made to last. For us, we couldn't think of a better cause than Woodland Heritage to benefit from our 'shop, save and donate' Green Friday event."

Holloways' generous donation will fund work which will enable Woodland Heritage to achieve its ongoing vision for a UK more self-sufficient in timber grown in healthy, well-managed woodlands that benefit both people and wildlife.

Meanwhile, longstanding Woodland Heritage member, **Gaze Burvill**, took part in the Virtual 2021 Vitality London 10,000 at Lodge Farm on Friday 4 June 2021 to support the charity's work.

Lodge Farm is Gaze Burvill's Hampshire HQ and is beautifully sited in the charming South Downs countryside. A route was devised for team members to either run or walk, starting on the old railway line and circling around the beautiful local area, finishing 10 kilometres later at Lodge

Holloways of Ludlow – Arkipelago chair

Gaze Burvill's outdoor dining furniture

Farm.
Supported by a video on the Gaze Burvill website, where Simon Burvill talked more about the challenge and Woodland Heritage, it was no surprise when the initial goal of £2,000 was surpassed.

Buoyed with last year's success, a second Gaze Burvill 10k Run and Walk in aid of Woodland Heritage is scheduled to take place on Friday 17 June 2022;
If you'd like to get involved, please send a message to

Charlie Dedman and Simon Burvill of Gaze Burvill celebrate competing their 10k run

Woodland Heritage was delighted to be nominated as Holloways of Ludlow's Green Friday charity and thank all their customers who share their vision to "Buy Better, Buy Once, Cherish Forever". It was a privilege to be chosen to receive the proceeds of Holloways' hard work, as it was to be able to benefit from the Gaze Burvill 10k Walk and Run.

Both companies provide such inspirational models that we'd encourage other like-minded businesses to adopt. These sorts of fundraising are vital for the ongoing success of the charity, so if you would like to discuss ways of helping Woodland Heritage, please contact **office@woodlandheritage.org**.

office@woodlandheritage.org.

Irregular Silviculture in the Lowlands: transformation in practice

A review by a pupil at one of the SelectFor courses

by Jamie Brookes, a 2021 participant supported by Woodland Heritage

If the development of machines, synthetic materials and computer code over the last century can be thought of as major advancements in grey technology, Andy and David's model of applied irregular silviculture is a watershed moment in green technology. The approach combines peer reviewed research, data science and statistical modelling, with in-person assessment of a forest environment's behaviour and traits.

My name is Jamie Brookes. I use drones to build maps and 3D models of natural environments for forest data collection and aesthetic purposes. My history and education are in the grey technology world, yet you are far more likely to meet me in wellingtons than your traditional office-appropriate shoe.

Coming into the September 2021 course I had been nursing several questions. They were:

- What does a good quality irregular silviculture environment look like in practice?
- How do you extract timber in this irregular environment?
- What are the economic impacts, and can irregular forests retain their commercial viability?

I did not leave disappointed. Each of these topics were explained in detail using data from the sites we would visit later in the day. I found this format helped to provide the context and to anchor the learning in tangible, real scenarios.

Part of finding the context involved a marking exercise. We split into pairs and were tasked with selecting trees for a planned thinning of the stand. We were given a map, explanatory notes and grading criteria from which to base our decisions. My thanks go to Dr Lucie Jerabkova, a fine partner from whom I learned heavily.

Jamie Brookes

This marking exercise was recorded and graded, with a good-natured prize for the winners. The comparative analysis of our decisions – coupled with some innovative metrics – ensures that you understand exactly how you did, and how you might adjust going forward.

What have I learned? I've come away from the course with a holistic, packaged understanding of the intentions of irregular silviculture. I've come away with many new avenues of exploration into this new world of forest science. I've come away with a revolution in the way I understand the forest around me, and the roles of each scattered element it contains.

Gaining this knowledge has helped me better target my digital forest mensuration work with Landscan UK, and how I can help further. During a discussion on a research plot, Andy proposed a theory regarding why irregular silviculture plots demonstrate higher biodiversity in the upper canopy. Whether perhaps it could be involved with the complexity in the upper topography of the canopy surface. This just so happens to be a perfect application for the use of drone 3D modelling – a capture of the upper surface to accuracies less than one inch – with the data retained forever, helping to achieve an exact comparison over time as the forest evolves.

Overall, the ideas presented during the course are a successful blend of natural principles coupled with a recognisably engineering mindset. I'm grateful to have been exposed to them.

Deep thanks go to Woodland Heritage for supporting attendance at this course, to Andy and David for the information, and to my fellow attendees for a collaborative, productive environment.

www.landscan.co.uk

Natural regeneration in action

Computer generated 3D model of a complex canopy struture – derived from drone scan

In the woods

Rycotewood Furniture Centre – 85 years of keeping skills alive

by Joshua Hudson

It was the late artist and philanthropist Cecil Michaelis who in 1938 founded Rycotewood to provide craft training for young people, in the small town of Thame in Oxfordshire. A keen supporter of the Arts and Crafts movement, he was concerned that valuable skills were in danger of being lost.

In 2004, Rycotewood had outgrown its home in Thame and moved into its new specialist furniture design and making centre in the historic city of Oxford as part of Activate Learning, the pioneering education group. It now boasts four dedicated workshops, a design suite, machine shop, spray booth and a CNC (Computerised Numerical Control) room.

Today, Rycotewood continues Cecil's original aim, giving students the opportunity to develop a wide range of skills that respect the ideals of the Arts and Crafts movement, whilst understanding the changing face of the furniture industry to keep its curriculum relevant.

Students have always been the lifeblood of Rycotewood, developing core skills working with traditional hand tools as well as with industry specific machinery. The centre aims to mirror the conditions seen in the furniture industry and is particularly excited at the prospect of integrating newly installed CNC technology into the curriculum.

Design is an essential part of what the centre does; students can express their ideas through freehand drawing before refining their ideas using CAD (Computer-aided Design) software in the dedicated design studio. The teaching of theory addresses a wide range of subjects including health and safety, timber technology, furniture history (and its future). Rycotewood strives to produce students who develop into passionate designers and craftspeople.

Rycotewood offers a wide variety of courses. Students can join straight from school, undertaking level 2 City and Guilds qualifications in Furniture Making with progression onto level 3. The focus of these courses is on traditional furniture making using hand tools. Constructing boxes and drawers using dovetails joints, and door frames with mortise and tenon joints. Veneering is a key skill, and this allows the students to work creatively developing marquetry designs. This course also equips older students to develop and build on existing craft skills.

The Furniture Design and Make degree course enables students to develop high-level skills in design and craft. Years one and two are used to equip students with core

Students at Rycotewood are able to develop skills using traditional tools and processes

Level 3 City and Guilds Furniture Making - Side table in Walnut with a laminated stretcher

Pete Burns, BA Hons Furniture Design and Make – Rocking Chair in English Ash

Level 3 City and Guilds Furniture Making - Side table in Walnut and Sycamore with hand cut dovetail joints

Level 2 City and Guilds Furniture Making – Small table with hand cut dovetail joints and veneer/inlay detail

Level 3 City and Guilds Furniture Making – Tool box in Walnut and sycamore with hand cut dovetail joints

Jan Waterston Foundation Degree in Furniture Design and Make – Velo Seat in Ash

Simon Bulley completing his BA in Furniture Design and Make

Daisy Lula Brunsdon, www.lulajames.co.uk

Freya Whammond, www.freyawhamond.co.uk

skills in the design process including sketching and CAD as well as furniture craft and production. The students use hand tools and woodwork machinery in a wide variety of processes including traditional hand-cut joints, laminating, and steam bending components and veneering. Year-3 allows students to forge their own creative path, designing and making furniture inspired by their own personal research using the skills developed in the earlier part of the course to produce innovative work.

Rycotewood's National Apprenticeship scheme sees top-level industry partners sending their new talent to Oxford to develop and nurture their teams. Furniture making skills are honed in the centre's well-equipped workshops enabling the next generation to succeed in industry.

The hugely successful evening and weekend classes cater for those wanting to experience woodworking and develop skills in a relaxed and friendly environment.

In the last two years the workshops have seen the inaugural National Saturday club in furniture giving 13–16-year olds the opportunity to experience and develop furniture making skills in a free 16-week experience.

Rycotewood's tutor and technician team love what they do, their passion can be seen in all aspects of the thriving faculty in Oxford. They boast vast amounts of industry experience, Furniture Makers' Company Master's awards and Guild Marks in both furniture design and making. Their knowledge and passion for furniture design and making continues to inspire students.

Alumni stretch worldwide with many now owning workshops and sending their own apprentices back to Rycotewood to continue the cycle.

The furniture industry is vast and multi-faceted: from independent workshops catering for bespoke customers, to large factories producing pieces for both the domestic and contract market. Rycotewood's teachers, technicians and students work closely with the furniture industry making regular workshop visits around the UK an important part of the students' experience.

Hattie Speed, this-girl-makes.com

The centre's Apprenticeship scheme with companies such as Halstock, Benchmark, Joe Mellow and Bill Cleyndert provides a direct link with industry, but it also engages within the Furniture Design and Make degree. Rycotewood also runs live projects with employers and industry partners including Ercol and William Hands.

Rycotewood strives to give its students varied experiences and it partners with several material suppliers which generously sponsor projects including the American Hardwood Export Council and Lathams Timber.

Major figures from furniture craft and design are returning guest lecturers giving inspiring talks to the students. These include Sebastian Cox, Gareth Neal, Fred Baier, Natalie DeLeval and Jay Blades amongst many others.

Craft and design education faces many challenges, with the perception in schools that it is too costly and takes up too much space. Furniture courses have been disappearing from the curriculum at both further and higher education levels in the last decade. Yet even with recent world challenges, Rycotewood has seen a huge demand for skilled designers and makers from the thriving furniture industry. The centre's students are guided into a career that offers fantastic opportunities to put skills and creativity to the test.

Rycotewood is the perfect place to equip the furniture industry with people who are highly skilled and passionate about furniture.

rycotewoodfurniture.co.uk

RYCOTEWOOD FURNITURE OXFORD

From 'Woodland to Workshop' to woodland management and agroforestry

by George Foster

In 2018, I was fortunate enough to attend Woodland Heritage's Woodland to Workshop course, courtesy of the charity's generous grant scheme.

I started my career managing woodlands for conservation organisations and charities. The remit of my work was always tagged as being for the benefit of people and wildlife, but I would often find myself questioning the role we had assigned to people within this dynamic.

Certainly, if you are a walker, a cyclist, or a twitcher, you are typically well represented in the management planning of protected landscapes. However, rural industry is often seen as incompatible with the objectives of wildlife conservation. I would often find myself in conversation with foresters and farmers at our hosted events who would witness and appreciate the diversity of the landscapes we were managing, only to see all weight in the discussion lost because we weren't striving to make a profit, or sometimes even to cover costs.

So, when I was offered the opportunity to manage part of the Wyre Forest, for an organisation that weighted conservation and enterprise in equal measure, I grasped it with both hands. Alongside colleagues, I managed a small team through each stage of production: thinning and planting, felling and extraction, processing and milling on site, and adding value, producing gates, fencing materials and small construction projects, all under a management plan designed to transform the woodland using irregular silviculture.

The learning curve was steep, enjoyable, and highlighted a number of areas where I needed to develop my skills and knowledge, particularly around grading, measurement and valuation of timber.

Woodland Heritage in many ways reflects the move I had just made, being a charity involved in woodland conservation that runs a commercial sawmill and its

Assessing a stand of Oak behind Whitney Sawmills

Woodland to Workshop course was exactly what I was looking for: a group of seasoned experts collaborating on issues ranging from sustainable woodland management to timber processing and production.

For the first day of the course, I came prepared with waterproof boots and a list of questions that had been building up in my head since I started my new job. The day began at a running pace, packed full with talks and discussion around the timber industry with Will Bullough, followed by selecting and grading of hardwoods with Gavin Munro. In the afternoon, we were shown around the woodland behind the yard to assess a stand of Oak, preceded by a fascinating tour of Whitney Sawmills, led by the manager, Dermot Doyne.

Day 2 focussed on forestry, with a tour of the Duchy Estate in Hereford with Geraint Richards and Graham Taylor. We had some very interesting discussions about managing landscapes with strong amenity and conservation value whilst meeting financial objectives. We toured the estate's tree trials and stands in various stages of transformation to CCF (continuous cover forestry).

Day 3 we got down to the business of timber measurement. We all occupied the yard with tape and notepad, testing

various techniques of measuring volume and valuation. I realised during this session that I could no longer pretend the hoppus foot doesn't exist; either that, or it simply strengthened my resolve that metric is progress.

We also got the chance to see a mobile Wood-Mizer in action. At the time I was running a Trak-met, the cheaper competitor of Wood-Mizer, so it was interesting to compare and discuss the pros and cons of running a mobile over static business.

The course was designed to be a sociable experience, with dinner at a local restaurant arranged for the evening. I made lasting contacts and the experience far exceeded my initial information gathering mission. It reaffirmed my hypothesis, that taking part in each stage of the process, from growing, to processing and adding value, is both enjoyable, but also has a practical logic, particularly when considering local supply chains and sustainable management.

Since my time in the Wyre Forest, I have added further complexity to my workload by incorporating agroforestry; firstly, working on a number of projects on the continent, and then by setting up with a partner as a woodland management and agroforestry consultancy in West Wales. I have found that agriculture and forestry in the UK share many of the same issues, particularly around subsidy dependence, cheap imports and systemic under-appreciation, whilst having arguably the greatest potential of any industry of positively impacting people and wildlife.

Although agroforestry sounds new-fangled, much like continuous cover forestry it is really just a return to traditional management techniques, but with modern developments incorporated, such as mapping and data analysis.

The lines between pre-industrial farming and forestry were likely much more blurred, as trees would have provided an important source of shelter, timber, food, fuel, and fibre.

In Portugal, particularly in the south, agroforestry (or Montado) is the traditional practice; animals are grazed, and crops sown under Oak and fruit trees grown for their bark, timber, fruit and pannage (pigs feeding in a forest). We still see some of the remnants of these practises in the UK, such as pannage rights in the New Forest, parkland and wood-pasture, but also in post-colonial countries like New Zealand, where settlers planted meadows with Willow trees pollarded on rotation for timber and fodder for the dryer months.

Typical Montado landscape of Portugal: Holm and Cork Oak over wildflower rich grassland. Here, mixed herds are common; varied grazing habits help produce mosaic habitat, as well as the famed Presunto ham.

Oliver Rackham viewed the countryside as a woodland landscape, ranging from closed-canopy woodland to fields and hedgerows, as part of an open woodland system. Forestry and farming are therefore intrinsically linked, as part of a wooded landscape and are ultimately heading in the same direction, towards a mindset where profitability is more important than crop yields, diversity of income is the resilient option, and production doesn't have to be to the detriment of people and wildlife.

It's an exciting time to be in the game!

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George is a partner in Sylvan Woodland and Agroforestry, West Wales, which specialises in assisting farms and small to medium sized woodlands to become more sustainable and profitable.

The Alan Peters Furniture Award 2022

Championing UK furniture design and making talent

This annual award celebrates the legacy of one of Britain's most prominent furniture designer-makers of the late 20th century while aiming to encourage all talent in the craft of furniture design and making. In 2022, Woodland Heritage was delighted to become a Patron of the Alan Peters Furniture Award.

Any woodworker who is a resident citizen of the British Isles, over the age of 18, with a passion and talent for designing and making contemporary furniture, is invited to submit up to two pieces made primarily of wood. These can also include, if applicants so wish, other complementary materials that echo Alan Peters' design philosophy. Judging is based on the appropriate use of material, quality of workmanship and functionality, as well as originality of design.

Both one-off designs and potential batch-production designs are encouraged and the piece(s) doesn't have to be large. Applicants should be familiar with the work of Alan Peters prior to applying and are encouraged to read organiser Jeremy Broun's 64-page online video-integrated e-book, which is offered free-of-charge here: **www.woodomain.com/alanpetersaward2022**

The man behind the award

Alan Peters OBE (1933–2009) was one of Britain's most prominent furniture designer-makers of the latter part of the 20th century. He was apprenticed to Edward Barnsley and had a direct link to the English Arts and Crafts Movement. He was hugely influential internationally in his practice, teaching and publications. Above all, his respect and understanding of how wood behaves and the value of hand skills, while moving tradition forward, resulted in the creation of many timeless pieces. He created affordable,

Alan Peters OBE

functional furniture, which was built to last, making an art of his craft in some of his subtle innovations.

History of the award

The original award was called 'The Alan Peters Award For Excellence' and was initiated by Jason Heap in 2010. The prize was offered to three winners, each of whom were given free exhibition space alongside the professionals at his annual furniture event in Cheltenham. The award ran for eight years and the judging panel was Jason Heap, Keith Newton and Jeremy Broun.

Following the success of the 2021 online award, it is hoped that this year there will be a physical exhibition along with a judging ceremony.

Judging panel

Jeremy Broun (Organiser) – designer-maker and co-exhibitor with Alan Peters from 1978–2002
Andrew Lawton – designer-maker who worked with Alan Peters as well as on his last commission
Freya Whamond (Guest) – Yorkshire-based woodworker and furniture designer-maker

PRIZES OFFERED

1st PRIZE
£1,000 Axminster Tools voucher

2ND PRIZE
£500 English Woodlands Timber voucher

3RD PRIZE
£300 Judges' prize

This competition is open to any resident citizen of the British Isles, aged over 18, who has an enthusiasm and flair for woodworking. A piece of furniture – indoor or outdoor – is to be made, and six high resolution JPEG images submitted, together with a Word description. Shortlisted applicants will be asked to engage in a Zoom video call or to submit a one-minute mobile phone video introducing themselves and describing the piece(s).

Judging of entries will take place in August followed by an exhibition(s) in September – exact dates TBA.

The deadline for submission is 31 July 2022

To download an application form and view the free 64-page e-book, visit **www.woodomain.com/alanpetersaward2022**. The entry form can be found at the right of the page. Payment for entry can also be made securely via the website.

For further information, contact either Group Editor, The Woodworker & Good Woodworking, Tegan Foley (**tegan.foley@mytimemedia.com**), or organiser Jeremy Broun (**jb@woodomain.com**).

2021 WINNERS

1st prize
Overall winner of The Alan Peters Online Furniture Award 2021: Andrew Lapthorn's 'Remnant' table.

2nd prize
Aidan Donovan's 'WAGA' table in English Elm.

3rd prize
Nick Newlands' 'Art Chest' in Cherry and Sycamore.

An exhibition programme for the winning pieces is being planned for September 2022.

1st prize – 'Remnant' table by Andrew Lapthorn

2nd prize – 'WAGA' table by Aidan Donovan

3rd prize – 'Art Chest' by Nick Newlands

Five Trees and Five Days

These are just a five of my favourite trees and days

by Tony Kirkham MBE, VMH

One of the many questions that I am often asked, especially when taking people for a tour of the trees in the Arboretum at Kew is "What is your favourite tree?". It's never an easy answer, as my choice changes with the seasons and with my frame of mind at the time. However, here are five that I would always have on my list, and they are trees that I have met in the flesh in their native habitat – I will always be fond of them.

Chinese Tulip Tree

The Chinese Tulip Tree *Liriodendron chinense*, a member of the Magnoliaceae family, is one of the aristocrats of the tree world, deserving a special space in any arboretum or garden. There are only two species of the genus, which are separated by thousands of miles, with *L. chinense* occurring in central and southern China and the other species, *L. tulipifera,* growing in the eastern US from southern Ontario to central Florida, making a magnificent tree to 50m and more. Although they have been separated as disjunct taxa for several million years, they still closely resemble each other, although in my view the Chinese species is the more elegant with larger, deeper lobed leaves, and both species have greenish-yellow tulip-shaped flowers which are well worth waiting for. I first made acquaintance with this tree on **24 September 1996** in the forests of Daba Shan, Sichuan, when I was seed collecting to replenish the collections in the Arboretum following the destruction caused by the Great Storm on 16 October 1987. This tree was given a reprieve by the forestry department as it was being used as a skyline cable anchor tree for extracting timber. We were able to collect viable seed from it which was germinated in the Arboretum Nursery and then hree years later several young specimens were planted out to reinstate the heritage landscape vista, "Tulip Tree Avenue".

The Chinese Tulip Tree (Liriodendron chinense)

Sapphire Dragon Tree

On **10 October 1992** I was seed collecting in Taiwan, to continue the replanting of the Arboretum following the 1987 storm. One of the many arboreal highlights of the expedition was the Sapphire Dragon Tree, *Paulownia kawakamii*, endemic to Taiwan and one of seven to ten species of the genus mostly occurring in China. When we collected the seed from a single, heavily lopped, isolated

Above and right The Sapphire Dragon Tree (Paulownia kawakamii) at Kew

tree, we were told by our field guide, Dr Fuh Jin Pan, that it was a vulnerable species with less than 100 trees occurring in the wild. This was apparently due to the clearance of mixed evergreen forest for the commercial cultivation of apple and peach orchards and the over exploitation for its valuable timber in the past. Following an assessment in 1998 it was listed as critically endangered in the IUCN "Red List of Threatened Species" with only 13 mature trees found remaining in the wild. This beautiful tree deserves to be protected and grown more in our gardens for the sweetly scented, upright, pale lilac-blue flower panicles which can be up to 1m tall. The champion tree at Kew which was planted behind the Water Lily House in 1995 shouldn't be hardy, because the seed was collected from a tree at 1,800 metres elevation, which in Taiwan is classed as subtropical, but it proves to be perfectly hardy where it flowers every May without fail.

Hanging Garden Tree

It was **12 February 2010** and my wife, Sally, and I were on the quay at Tofino on the west coast of Vancouver Island in Southern British Columbia waiting for a water taxi, a small motorboat called "Salty Dog" to take us to one of the many small islands in the sound called Meares Island. The weather was certainly against us with heavy, driving rain and very low visibility, but this was our last day in

1,500-year-old Western Red Cedar, Thuja plicata, at Meares Island, Southern British Columbia

Tofino and the last opportunity to visit this incredible Island in Clayoquot Sound. It was named in 1862 by George Henry Richards, captain of HMS Hecate in honour of John Meares (1756-1809), an English navigator, explorer, and fur trader. In 1984, the First Nations of Clayoquot Sound declared the island as Canada's first tribal park, preventing any harvesting activities of its old growth temperate rain forest. As we passed sea otters and bald eagles on our ten-minute boat ride we were able to take in the magnificent view of the forest giants, some of the tallest trees in Canada that reside on this island. Once we were dropped off at low tide, we joined a 620-metre-long board walk and followed a trail through old growth forest to see the iconic "Hanging Garden Tree", a 1,500-year-old Western Red Cedar, *Thuja plicata*. With a circumference of 18.3 metres and a height of 42.7 metres, most of the tree is decaying and dying, but the trunk is still full of life, playing host to a wealth of epiphytic biodiversity including fungi, lichens, ferns, and young seedlings of Western Hemlock and Red Alders rooting into the decayed timber. It is a truly magnificent and beautiful specimen, and with only an hour and a half to absorb the atmospheric conditions and to attempt to photograph it in the heavy rain, thoughts were of returning to meet "Salty Dog" and get back to a dry warm space in Tofino.

Jomon Sugi

It's four o'clock in the morning on **28 November 2012**; it was very still, dark, and cold with a hard frost on the ground and we were setting off along the Kusugawa hiking trail heading up the north face of Miyanoura-dake, at 1,935 metres the highest peak on the volcanic island of Yakushima. Yakushima is a small windswept island located off the southern tip of Kyushu with most of the island in the Kirishima-Yaku National Park. We were following in Ernest Henry Wilson's footsteps who visited this tree 98 years ago on 20 January 1914. Yakushima is noted for the beautiful *Rhododendron yakushimanum* first discovered on this island in the early 1900s and the old growth forests of Japanese Cedar, *Cryptomeria japonica* known as "yakusugi". As it began to get light, we were treated to seeing some incredibly large, mature specimens of *Stewartia monadelpha* with bright orange flaky bark, but we were in a hurry, heading for a very special ancient tree

The ancient tree "Jomon Sugi" (Cryptomeria japonica), Yakushima, Japan

"Big Lonely Doug", Douglas Fir (Pseudotsuga menziesii), Vancouver

"Jomon Sugi" named in reference to the Jomon period of Japanese prehistory. Wilson most probably saw this tree without realising its significance, but in 1968 its discovery raised the importance of the island's forests and promoted the awareness of this tree as a tourist destination. This tree is estimated to be between 2,000 and 7,000 years old and an observation boardwalk about 15 metres from the tree has been built to prevent compaction damage from the many visitors' feet. After several photographs and some time to absorb the atmosphere, we had a five-hour hike back in the dark to our base at Miyanoura. What an amazing day and what a remarkable tree!

Big Lonely Doug

My last day is **6 March 2020**, and the tree is a Douglas Fir, *Pseudotsuga menziesii*. Not just **any** Douglas Fir, but a very special tree called "Big Lonely Doug" that I had read about, and wrote about in one of my recent books, and I wanted to meet him in person. I had been lecturing in Vancouver and I added a week onto the trip to spend some time with Sally on Vancouver Island in a small town called Port Renfrew situated in the southwest corner of the island. Conditions were wild, but we were lucky to get a day's break in the weather and with a guide we set off into the Gordon River Valley to meet the second largest Douglas Fir after the "Red Creek Fir" in Canada. In 2011, a forester called Dennis Cronin was surveying a block of old growth forest in preparation for felling and amongst the Western Red Cedars (*Thuja plicata*) and Western Hemlocks (*Tsuga heterophylla*) came across an enormous Douglas Fir. This was to be his last job before retirement, and he decided to save the tree. He wrapped a ribbon around the tree and wrote "leave tree" on the ribbon, saving it from being felled. It now stands alone in the clear cut and measures a magnificent 70.2 metres tall with a diameter of 3.91 metres at 1.3 metres above ground. I was not disappointed meeting this tree celebrity and after spending the rest of the day finding other named champions in the river valley we embarked on our journey home, arriving in the UK in the week of Covid lockdown.

It's never easy to select five of your favourite trees from a very long list, but these five are what I believe to be potential tree species to integrate with our native trees for future planting schemes in the UK, helping us build a treescape resilient to climate change and increasing pest and disease introductions, and at the same time providing us with a usable resource from our landscape.

No decline in Oak research in 2021

by Sandra Denman (Forest Research)

It feels terrible to begin an article on a sad note, but the losses experienced in 2021 lie heavily on my heart.

To us all as Woodland Heritage supporters, the sudden loss of Lewis Scott in November 2021 has left us bereft of his elegant leadership and gentle humour. Opposite in nature to Woodland Heritage's Co-founder, Peter Goodwin, Lewis operated in a quiet manner, whereas Peter radiated dynamism, action, and charisma. They led a wonderful, inspired organisation in a balanced way. How we now miss both giants of our industry.

We are so grateful to them both for their vision and their drive to fund tree health research and draw together public-private funding partnerships especially through the Action Oak initiative. Without this endeavour and the generous support of Woodland Heritage members and its related charities, we would not be where we are in our understanding, leadership, and management of Acute Oak Decline (AOD). We sincerely thank them for all they did to help secure the good health and resilience of our Oak trees for future generations.

2021 was not all bad; challenging without doubt, but exciting in many ways as well.

The Bac-Stop project

Last year, I wrote about the UKRI (UK Research and Innovation) funded Bac-Stop project and described all the things we were '*going to do*'.

This year, I can tell you about some of what we have done and how we did it. I share with you information on cutting-edge tree technology that we are using to monitor how Oak trees physical and metabolic (chemical) functions are affected by environmental stresses and disease. I am finding this part of my research journey exceptionally exciting. I am learning so much from working side-by-side with my colleague, Dr Elena Vanguelova (Figure 1), who heads soil

Figure 1: *Dr Elena Vanguelova, Senior Soil Biogeochemist at Forest Research, taking soil samples at the Bac-Stop field trial*

and biogeochemical research at Forest Research (FR), Alice Holt, and is the lead on the soil, environment, and tree physiological aspects of our field trial.

We set out a field trial based on the premise that *predisposition* has a fundamental role in Oak Decline. *Predisposition* is a condition brought about by both biological and environmental stresses that weaken trees. It leads to ripple effects that cause deterioration of tree health, which often ends in tree death.

Drought is a key *predisposition* driver and is one of the main environmental effects we are testing in our field trial. But pest and disease attack are also debilitating and may even be fatal. AOD is a good example of this. Both environmental and biological *predisposition* often act in concert and have amplified damaging effects than if they operate alone because the tree's energy sources are diminished, and defences are low.

Drought causes water deficiency and reduced growth in trees but nutrient imbalance also affects tree vigour and health. In the Bac-Stop project (Work Package 2) we ask the specific question: how do drought and nutrient stress affect AOD establishment and severity?

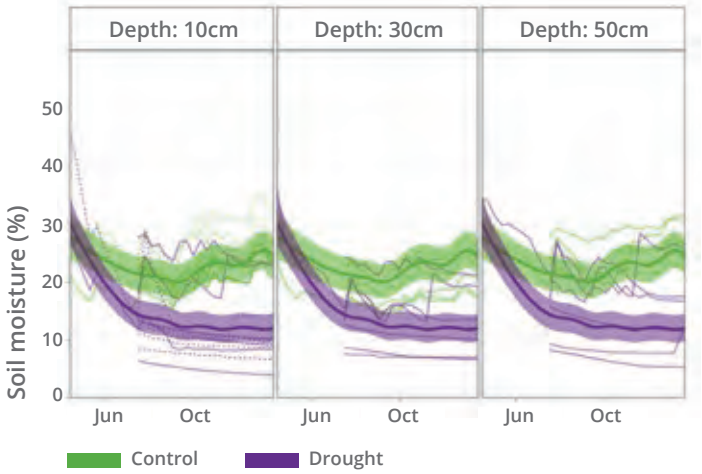


Figure 2: *Daily median soil moisture values recorded at three different depths (10cm, 30cm, and 50cm) in the control (green) and drought (purple) treated plots, between June and end of October 2021*

To answer the question, we have established a field trial on ~40-year-old Sessile Oak in which one third of the trees are subjected to drought stress which we are achieving by constructing rain exclusion shelters around the tree stems (See background Figure 1). Another third of the trees are almost fully ringbarked to induce nutrient and water deficiency stress, and the remaining third of the trees have been left as they are and serve as controls. Several months after the environmental treatments were applied, we inoculated the trees with the various components of AOD (more about this later).

The environmental conditions in the different treatments are monitored using soil moisture and temperature probes that are installed at different depths in the soils and linked to dataloggers. The dataloggers are battery powered, collecting hourly data that are downloaded at six weekly intervals.

So far, we can see that the drought shelters are working well. Using daily median values, we can see a significant difference between the drought and control treatments, with drought treatments having consistently lower soil moisture readings than controls (Figure 2). The difference in soil moisture levels between treatments has grown steadily over time but is starting to level off. This shows how the soils under the drought shelters are drying out, rapidly at first but slowing down with the passage of time, and may soon reach a very droughted state.

As the drought shelters extend only 2.5m on all sides of the trees, the roots of the affected trees have almost certainly sent out feeder roots beyond this distance in the search for water. This will have an energy cost and stress to the tree.

In terms of soil temperature, it was interesting that the drought treatment had consistently lower soil temperature during the summer months than the controls, and the drought shelters may contribute to this. Soil temperature decreases with depth and our data shows this clearly.

We expect the trees to respond to environmental stresses in measurable ways. For example, it is well known that drought stress causes changes to canopy temperature and leaf reflectance. When trees are placed under drought stress the leaf pores (stomata) close to reduce water loss, and leaf temperature goes up. When trees are stressed, the foliage may change colour for example, leaves may become lighter or turn yellow, and together with this there is a change in the reflectance of the leaves. Healthy leaves that are photosynthesising effectively are usually dark green in colour and have a low reflectance. So, leaves under nutrient and drought stress often have a higher temperature, are lighter in colour and have a higher reflectance.

To monitor and measure the effects of the environmental treatments on the trees, we have installed machines that are able to measure foliage reflectance, sap flow, tree girth, stem humidity, tree oscillation, air humidity and temperature in real time. The machines are called TreeTalkers (TT) and are strapped to the stems of trees (Figure 3). They have a number of probes, which are inserted into the stem, and multispectral sensors that measure all the above mentioned parameters. The data are transmitted every hour to battery powered wireless receivers (called TreeTalker Clouds), which are placed in the woodland and the data are stored in this '*Cloud*' and then downloaded remotely for analysis. These multimodal data tell us how trees are responding physiologically to the environmental treatments.

Figure 3: *A TreeTalker mounted on the stem of an Oak tree at the field trial*

Figure 4: *Aberystwyth University team: Dr Jasen Finch (seated) and Prof John Draper in the laboratory, Dr Manfred Beckman (taking tree stem cores)*

So far, we can see a delayed response in tree growth in the drought treatments. It will be so exciting to see how this changes over the coming season, and whether we can detect changes in leaf reflectance.

At the beginning of the experiment, we measured the nutrient status of the soil, leaves and feeder roots by chemical analysis. This was repeated three to four months after the environmental treatments had been applied.

So far, the data suggest that droughted trees have smaller leaves, which will probably lead to a reduced photosynthetic capacity of these trees. In future analyses we hope to establish whether drought and ringbarking have also impacted the nutrient uptake of the trees. The inspiration and lead behind the TreeTalkers is Dr Elena Vanguelova.

We are also monitoring the impacts of the environmental effects on the tree's metabolism. In essence, the fundamental mechanisms of life are chemical interactions that take place within organisms. These interactions can change under different circumstances, for example in trees, when they become stressed or need to defend themselves.

Using chemical analyses, we are able to detect and pinpoint the changes that are taking place, which give us insights to the energy cost to the tree. Understanding this helps us work out how to assist trees to mitigate damaging effects. Dr Jasen Finch, Dr Manfred Beckman, and Prof. John Draper from Aberystwyth University (Figure 4) are carrying out this research and hopefully we will have some results on this in next year's edition of the Woodland Heritage Journal.

Once the environmental treatments had been applied to the trees and they had a few months to take effect, we applied the biological components that cause stem weeping in AOD. These treatments comprised a mixture of bacterial species and the larvae of *Agrilus biguttatus*, the Oak jewel beetle (also known as the two-spotted Oak buprestid - TSOB). We keep stocks of the bacteria in the laboratory at Alice Holt and so had only to grow these up to produce inoculum but getting the larvae of *Agrilus* was a much harder job.

To obtain larvae for experimental use we need to rear the beetles in captivity and so this is an annual event in our laboratory at Alice Holt, but it is reliant on a supply of beetle infested wood which we ask from woodland owners and managers. Because *Agrilus* has a two-year lifecycle that takes place underneath the bark and hence out of sight, we can never be sure if the bark slabs we get from our supporters have a lot, or a few, or even any (!) pupating beetles that will emerge in the insect emergence cages we have constructed at Alice Holt. Obtaining sufficient beetles is definitely the most nerve-racking part of the work, and every year we have this worry!

From December to April, we visit sites and ask people to donate slabs of wood from trees we believe to be infested with *Agrilus* larvae. We place these wood slabs inside large beetle emergence cages and in the late spring or early summer the beetles emerge from the bark into the cages, where we catch them and take them to the laboratory for analysis and beetle rearing.

To rear beetles, firstly we examine and determine the gender of the beetles and then place small numbers of males and

Figure 5: *Dr Michael Crampton preparing bacterial inoculum in our new mobile laboratory*

Figure 6: *A plastic PCR tube fixed to the stem of the tree ready to receive bacterial inoculum*

females together in small breeding cages that contain fresh Oak leaves, water and a sugar solution. There, beetles feed until mature and then mate. The females lay their eggs either on the blue paper towel at the bottom of the cage or in folded blotting paper, which is intended to mimic bark cracks. The egg clusters are cut out from the paper and placed in Petri dishes in incubators. To try and co-ordinate a hatching period we incubate eggs at various temperatures, the cooler it is the longer it takes for the larvae to hatch from the eggs.

The past year we had a rather low number of beetles relative to the number we required for all our work, but we did manage to get a sufficient number of eggs and hatching larvae to inoculate the trees. Michael Crampton carried out the beetle rearing for us over the year gone by but has now left our team for promotion in another team; we will really miss the excellent work Michael did for us.

Having beetle eggs and bacterial cultures in hand we headed to the field in our new mobile laboratory (Figure 5). This is a Sprinter van that has been specially fitted with stainless steel benching, electricity, incubators, and cupboards. Now we can take microscopes, centrifuges, and other laboratory equipment safely into the field, and this enables us to prepare accurate amounts of inoculum and to work aseptically. What a huge improvement and boost for us! I remember the 'old days' when we did this type of work in a much more 'Heath Robinson' style.

One of the challenges we faced was how to apply liquid inoculum to standing trees in a safe way and so that it would not just run down the side of the tree trunk and be lost. Dr Anparasy Kajamuhan (Anbu) and I used tiny plastic tubes with the tips cut away at an angle that we secured to tree trunks with silicon ear plugs (Figure 6). *The joke in the team was that it had not escaped me that we were using ear plugs for our work at Little Snoring!*

Moving on ...! Michael and Sunny (Sundeep Kaur) prepared the bacterial inoculum in the mobile laboratory while Anbu and I applied the tubes to the tree stems. In instances where we applied inoculum by wounding the tree first, we made a small wound with a cork borer and then inserted the bottomless tubes in the wound. We then used a pipette to add inoculum to the tubes and left them overnight so that the inoculum could soak into the tree. The following day we removed the tubes where necessary and gently applied the beetle eggs and larvae. A video demonstrating this work is available on our BPD (Bacterial Plant Diseases) website. **bacterialplantdiseases.uk/bac-stop-research-in-action**

We hope to obtain sufficient beetles this year to repeat the inoculations and mimic nature, where the beetles would be expected to repeat their egg laying on trees until the tree was no longer suitable as a safe-haven and nutrient source for the developing larvae. Final measurements of the effects of all these treatments will be made in the autumn of 2023 and results should be ready the following summer.

The final aspect of our work examines the effect of the environment and biological stresses on the tree *microbiome*. A *microbiome* is the total community of microbes living in and on an organism. We all have unique *microbiomes,* for example human microbiomes are quite different from plant *microbiomes* and each *microbiome* reflects how organisms function. Thus *microbiomes* are important because they are part of the way in which organisms live. For example they aid nutrient acquisition and digestion, offer protection,

and defend organisms against attack and ingress. Their composition is linked to their function and environmental conditions, and under environmental stresses the natural healthy balance of the *microbiome* may be tipped with deleterious consequences for the tree.

Professor James McDonald's group at Bangor University is investigating this aspect of the trial, where Usman Hussain is doing his PhD on the microbiomes of the trees in the trial. Lucy Corbett at Reading University is doing her PhD on the enzymes in the soils around the feed-roots under the guidance of Prof Liz Shaw.

The key questions we hope this research will answer are:

- How do trees respond to environmental stresses?
- What effects do these stresses have on tree physiology, nutrient status, and resilience?
- Is *Agrilus* essential to the development of AOD and if so, what mechanisms are responsible for this?
- Is wounding necessary for AOD to develop?
- How are the biology of trees and their microbial communities impacted by drought and nutrient stress?
- What consequences do drought and nutrient stress have on tree health and resilience?

All the research we are carrying out aims to improve management. However, the road to evidence-based guidance is long. In the interests of space, I will have to report next year on the work we are doing to find out if *Agrilus* carries and transfers the bacteria causing stem lesions. These are essential questions that require answering if we are to consider beetle management.

However, I want to change tack a little now and share some concerns I have about management of Oak trees with Chronic Oak Decline (COD), particularly those Oak in parkland settings and heritage gardens, which include ancient and veteran Oak trees.

Managing Chronic Oak Decline (COD)

Chronic Oak Decline is also a *Decline syndrome* of Oak. It is different to AOD in that there is no bacterial stem bleeding component, although stem weeping caused by other damaging agents may occur. It is not as well defined as AOD, and the symptoms are not very well characterised or linked specifically with causal agents. This is partly because typical symptoms may be caused by many agents acting alone or together. There is an urgent need for research to provide clarity on the symptoms, causes and management of this Decline syndrome. In old currency, COD aligns with Oak dieback.

Our current thinking is that COD is driven primarily by environmental predisposition and root problems. Damage to the buttress roots and tree collar, the area of the tree at the soil surface interface, are thought to be a key feature of the disease syndrome and may be brought about by fungal pathogens or mechanical damage. Diminished feeder roots and impaired function are also thought to be important in the syndrome.

Soil health, in terms of soil structure, physical properties, balanced soil chemistry, and microbial function, is the cradle of tree health and vitality. The connection between Decline diseases, tree root health and mycorrhizal fungi is considered fundamental to tree health, and so there is real concern that damage to, and impoverishment of the root systems will translate to a significant predisposition driver for Decline diseases.

Identification of trees with COD relies on the condition of the tree crown but may also involve destructive sampling of buttress roots and the tree collar. Additionally, observations on fungal fruiting bodies (mushrooms, stem brackets or rhizomorphs, which are commonly known as boot laces) are extremely valuable in providing clues to primary biotic drivers. The symptoms of the disease also take quite a long time to develop, and so monitoring records of changes in the tree's physical appearance are also very helpful in diagnosis.

Typically, Oak trees suffering from COD initially show thinning of the crown and foliage may turn a lighter colour, perhaps even become yellowish (called chlorotic). This may occur over the whole crown or just over different segments of the crown. The tree sheds fine twigs and as this happens the branch ends appear to be stubby. Epicormic shoots may develop along the branches or stems. Major branches begin to dieback, there is no secondary crown below the branches that are dying back. (Note: if there is a secondary crown in good condition below the branch dieback, then the trees have a different condition called "stag-headedness". Stag-headedness usually occurs when tree buds are swelling or just flushed and a very hard frost kills the branches, leading to a temporary dieback and crown retrenchment. If tree health remains good the frost-killed branches will fall off and tree growth will resume. This may take years!). Destructive sampling of the buttress roots and collar may reveal attack by damaging root pathogens.

I was dismayed to see the very poor condition of mature Oak in such settings when I visited several sites this year.

Figure 7: *Aerial photograph reveals the extent of dieback and death of Oak trees due to Chronic Oak Decline*

Figure 8: *Turkey Oak, more than 400 years old, now suffering from an* Armillaria *incursion. Will it survive?*

At one site, Oak reaching their prime were showing alarming symptoms of dieback as shown in the aerial photo taken in 2020 (Figure 7). By trawling back through scattered monitoring records we were able to suggest that the death rate of Oak in their prime at this site had doubled in the past 10-15 years and that of Sweet Chestnut had increased ten-fold.

At another site, a beautiful turkey Oak (Figure 8) more than 400 years old was being attacked by *Armillaria*. A key concern and question arising from this alarming situation is how are we managing today's trees for tomorrow's ancient and champion trees? There is an urgent need for a conversation about a national tree management strategy to ensure trees reach full maturity and ancient status.

It is fair to say that because our research focus has been centred on AOD perhaps I have not given the attention needed to trees' suffering from COD, but I have tried to progress relevant research on the topic. We have a student at Bangor University, Bethany Pettifor, who is carrying out some foundational work on the Oak buttress root pathogen *Gymnopus* (previously known as *Collybia*) and next year we should report on some of this work. I also have small projects on *Armillaria* and hopes to develop this area in the future. So, I am making an effort now to give this serious condition, and management of it, some attention.

I am really grateful for the support from landowners and managers, and for their incredibly generous attention and help. The National Trust and Natural England are extremely keen to get us involved and they have been very helpful in both AOD and COD research projects; I thank them very much.

We hope to involve as many people as possible in considering the best management of these national arborical icons, and offer some evidence-based guidelines to ensure the good health and resilience of our trees for future generations in the face of changing climates and disturbed environments.

Monitoring the health of our Oak trees

Nathan Brown

The health of trees is reflected in their crowns. The number of leaves they have on their branches influences the amount of energy they can make through photosynthesis. By monitoring crown condition, we gain an insight into the underlying heath status of Oak, which in turn can help reveal long-term trends and the potential impact of environmental factors that may act to predispose trees to decline.

Oak crown condition is monitored by Forest Research at eighty-five plots across Great Britain. These plots provide vital historical context. They were established in 1989 when concerns about pollutant deposition and acid rain were prominent but it is unclear how representative they are of the nation's Oaks more generally. All plots are in Oak dominated woodland and this means that trees outside woodland are not well represented at all.

Trees in the wider treescape are likely to be subject to several additional factors which may impact their health, for example: soil compaction from humans and animals; the impacts of agriculture through ploughing and the application of fertiliser as well as exposure to higher temperatures and wind speeds. The Bac-Stop project is currently exploring the potential for volunteer groups to monitor their local trees and provide vital information to address existing gaps in Oak condition monitoring.

The first year of the project has focused on method development. The initial workshops were online and relied on images of trees from Google Street View to underpin the training. However, in September 2021 we could finally emerge into the field, hold in-person training events, and see the trees themselves! A big thank you to all the volunteers who gave their time to help our project!

We are currently in a strong position for 2022: we have a reliable method, training materials and recording systems, and now we are ready to expand the scope of the project. We hope to work with groups at five sites in the coming year and we plan to use a mixture of all the methods trailed so far.

We will ask volunteers to attend a one-hour webinar, which will be followed by a half-day training workshop in the field. This should provide all the information and tools for further monitoring, enable individuals to observe the trees that are most significant to them, and provide data that can be integrated with an established monitoring programme. One of our key aims is to instil an interest in observing change in the natural environment, as well as generating some useful data for research.

Investigating land-managers' and the public's attitudes to Oak and Acute Oak Decline and its management

Liz O'Brien

Our work in Bac-Stop focuses on people – including landowners and managers, and the public. We have conducted seventeen interviews with landowners and managers of Oak so far to explore the ways in which they value Oak, and the different types of management actions they already or would undertake to conserve and protect their Oak trees and woodlands. We cover issues such as their current management actions and awareness of tree pests and diseases, and any surveillance and monitoring they undertake, as well as their perceptions of risk from pests and diseases. Our interviews include different types of land managers from those who manage Oak or mixed woodlands to those who manage parkland estates, and include managers focused on conservation, timber production, and multiple objectives.

We have also conducted a survey of 6,000 UK residents to explore people's connection to nature, how people feel about Oak, and to what extent they value Oaks in different settings from woodlands to hedgerows, for example. We also explored people's knowledge of tree pests and diseases including Acute Oak Decline, and their views on the acceptability of different management methods to protect Oak.

We have also asked about people's willingness to get involved in volunteering activities to monitor or help to manage AOD. We asked the public when thinking of Oaks what adjectives and emotions come to mind. The word cloud below illustrates the range of words people used; the larger words mean more people used those words to describe how they feel about Oaks.

Figure 9: *A word cloud capturing the range of words people frequently used when asked how they feel about Oak trees*

We are also capturing data through our 'Odes2Oak' campaign where we are asking people to pay a tribute, celebrate or to outline how they feel about Oaks. One making a tribute provided this photograph and the following caption:

Figure 10: *Favourite Oak from an entry to the Odes2Oak website where people are invited to let us know how they feel about Oak trees*

"Working in a special needs school the children walk past many beautiful Oak trees in our beautiful grounds..... this is a favourite and you can see our other favourite far in the background."

Please would you help? We are asking for photographs or poems, artwork and written experiences concerning the importance of Oaks to people whether it is an individual tree, Oak products, or Oak woodlands. There is still a chance to submit a contribution. We would love to hear from you. Please go to: **bacterialplantdiseases.uk/odes2oaks**

We are currently analysing our survey, interview, and Odes2Oak data which will highlight whether different sections of society value Oaks for different reasons and identify any variations in perceptions between land managers and the public concerning the acceptability of the various methods that can be employed to protect against Acute Oak Decline. We will be reporting our results in 2022.

An update on AOD research activities at UWE (University of the West of England, Bristol)

Carrie Brady

In my update for the last Journal, I wrote about our *Tilia* (Lime) tree sampling project where the bacterial community of healthy trees is compared to those showing bleeding symptoms. A research Master's student, Helene Kile, joined our group at UWE in March this year and started by screening the material (swabs, leaves, twigs) I had collected from *Tilia* hybrids at Westonbirt Arboretum in September 2020.

A single *Tilia* × *moltkei* tree was displaying bleeding symptoms during that visit, which was swabbed. The molecular identification of the bacteria cultured from the swabs revealed the presence of a new *Brenneria* species found only in the diseased material. This was an exciting discovery as *Brenneria* is a genus of bacteria known to cause cankers, necroses and wilts on a range of woody hosts. The other plant material sampled from both symptomatic and healthy *Tilia* yielded typical endophytic bacteria such as *Erwinia billingiae*, *Pseudomonas* sp. and *Pantoea* sp.

We returned to Westonbirt in June 2021 to re-sample the same *Tilia* hybrids. In the week preceding our visit, the symptomatic *Tilia* tree was uprooted and completely blown over during a storm. Although the loss of a majestic tree was unfortunate, it did allow Helene and I to sample extensively and invasively.

Figure 11: *Necrotic lesion underlying the bleeding outer bark of a Tilia × moltkei, at Westonbirt*

Figure 12: *Helene Kile sampling an actively bleeding Tilia × europaea, at Minchinhamptom*

We found several more bleeds higher up the trunk of the tree which were swabbed. The outer bark panels containing these bleeds were then removed, revealing shallow, water-soaked, black necrotic lesions extending longitudinally down the trunk. The largest of these was 110 cm in length (Figure 11). The new *Brenneria* species was again isolated only from the diseased material, suggesting this bacterium plays a role in the necrosis.

Over the course of the summer, additional symptomatic *Tilia* hybrids were sampled from sites in Gloucestershire and Wiltshire with bacteria cultured from the diseased material identified as belonging to the new *Brenneria* species (Figure 12). Additionally, isolates of *Brenneria goodwinii* and *Gibbsiella quercinecans*, the two bacteria responsible for the necroses observed in AOD symptomatic Oak, were also cultured from necrotic lesions at some sites.

Helene has worked diligently in the lab performing all the analyses necessary to describe a novel bacterial species and is in the process of writing the publication after successfully defending her dissertation.

With further cases of bleeding cankers observed on *Tilia* in North Somerset last month, interesting questions have been raised regarding the possibility of another polymicrobial disease on a broadleaf host, similar to the complex responsible for AOD.

From humble beginnings

by Mandi Cleyndert

From humble beginnings working alone in a small North Norfolk Barn, Bill Cleyndert has been working in the world of bespoke interiors and furniture for almost 40 years. In 1999, in a derelict former chapel on a decaying ex United States Air Force military base, together with six skilled, risk averse colleagues, Bill Cleyndert & Company was formed. With a vision of excellence, we set about producing furniture and joinery for a select and discerning London based clientele.

Today at Bill Cleyndert & Company, we remain a family business employing over 100 talented people with two large purpose-built workshops. We are very proud to be considered part of a long-held tradition of furniture making in the East of England, and take pride in supporting British businesses and artisans.

We consider it our duty to preserve traditional craftsmanship whilst embracing modern methods of manufacture. Without new blood, as well as government, school and parental support of technical skills, companies like ours will struggle to exist. Our own in-house apprenticeship programme is built very much on a foundation of traditional hand-skills and understanding of solid timbers. At the same time, we appreciate the need to move with the times to remain relevant as well as competitive. We work closely with other leading UK furniture makers and Rycotewood College to ensure that the formal training which our apprentices undertake at college bridges the two. We currently have seven apprentices in the business and others who have successfully come through the programme.

We actively encourage work experience opportunities at our workshops, sharing skills with the upcoming generation of keen cabinet makers and supporting local schools with equipment for their Resistant Materials classes (formerly Design Technology) to maintain and encourage interest in our industry.

Recently we are seeing increasing demand for sustainable design and materials and expect this to grow.

Traditional skills such as hand carving are very much admired in our industry and often inspired by natural elements such as forest scenes and the coast.

Left to right: Finn, Apprentice Mentor, Matt, Alex, Kelly and Chris Hyde, Director of Curriculum at Rycotewood College

Our fourth year apprentice, Kelly

Images © Stephen Taber Photography

North Norfolk workshop, formerly the RAF Sculthorpe Chapel

Norwich workshop, located on the outskirts of the city centre

By-products of other industries such as raw banana bark, eggshell, or tobacco leaf are increasingly specified as prized finishes on decorative furniture and cabinetry and have inspired us to continue R&D into working with local, sustainable materials.

As a manufacturer we are acutely aware of the environmental impact of our own operations. Whilst we have much more to do to reduce waste and consider greener approaches, we are able to utilise waste materials to heat our buildings and to spray shops through our installed biomass burner, saving waste destined for landfill and fuel which we would otherwise buy in.

Instagram **@billcleyndertandcompany**

Bill Cleyndert & Company have supported the work of Woodland Heritage for 20 years as one of their longest standing corporate members.

Annual Wood Awards winners 2021

by Francesca Gregson, Distrikt Communications

Six structures and two product designs were announced as the Wood Awards 2021 winners at a ceremony held at The Building Centre in London on November 25. Established in 1971, the Wood Awards is the UK's premier competition for excellence in architecture and product design in wood. The competition is free to enter and aims to encourage and promote outstanding timber design, craftsmanship and installation.

The independent judging panel visits all the shortlisted projects in person, making it a uniquely rigorous competition. The Awards are split into two main categories: Buildings and Furniture & Product; the Gold Award is given to the project which the judges deem to be the winner of winners.

The judges chose **Magdalene College Library** by Niall McLaughlin Architects as both the Gold Award and the Education & Public Sector category winner. It is an arrangement of simple brick volumes with timber windows and pitched roofs which echo the gabled architecture of the college. The interior spaces are created by a glulam and CLT (cross-laminated timber) structure, supported on load-bearing brickwork, and populated with Oak shelves and tables.

Judge, Jim Greaves, commented: "Magdalene College Library is a *tour de force* of architectural design and achievement. The different forms of the reading rooms are beautiful and are experienced sequentially as they lead one through the building. The brick, timber and stone has been designed exquisitely with a thorough understanding of their intrinsic qualities."

The Commercial & Leisure winner was **The Alice Hawthorn** by De Matos Ryan. In medieval times, the village of Nun Monkton in North Yorkshire was an important river hub with many travellers staying overnight. In recent years, the village's last remaining pub,

Images © Nick Kane

Magdalene College Library by Niall McLaughlin Architects

The Alice Hawthorn by De Matos Ryan

The Alice Hawthorn by De Matos Ryan

St John Street by Emil Eve Architects

St John Street by Emil Eve Architects

a critical community meeting point, had come under threat. This community-led project transforms the pub's sustainability with the addition of twelve guest bedrooms, eight of which use an entirely timber frame construction centred around a new courtyard.

The Interiors winner was **St John Street** by Emil Eve Architects. This large Victorian apartment was acquired as an empty shell with an industrial palette of exposed brickwork and concrete. It has been reimagined as a warm, inviting home that retains the building's industrial character. A series of contemporary interventions are distinct from the existing fabric, with carefully crafted joinery running throughout.

Images © Jim Stephenson

The Boathouse by Adams Collingwood Architects

The judges selected **The Boathouse** by Adams Collingwood Architects as the Private winner. This practical family residence respects the outstanding natural beauty of its surroundings and looks out over the Salcombe Estuary. Natural materials are at the heart of the project. Yellow Cedar tiles and cladding adorn the roof and exterior, while the upstairs floor is made from Douglas Fir.

Built: East Pavilion by OGU Architects + Donald McCrory Architects was the Small Project winner. With cultural identity being a divisive issue in Belfast, it was important to find cultural common ground shared across the neighbouring communities. The site has a rich industrial history, and the Belfast truss used represents the area's history of manufacturing ingenuity.

The Structural Award winner was **The Welcome Building RHS Garden Bridgewater** by Hodder +

Images © Joe Lavery

Built: East Pavilion by OGU Architects + Donald McCrory Architects

Partners. Sitting within the new RHS garden on the site of 154-acre Worsley New Hall, The Welcome Building is predominantly one open space that acts as a gateway to the gardens but also contains a visitor meeting and interaction point, restaurant, gift shop, offices, and educational spaces.

Gayles Farm 5 by Wycliffe Stutchbury was the Bespoke winner. The sculptural piece has a flowing appearance, made up of thousands of small Oak tiles glued to an open weave cotton twill. The wooden curtain is hung on a hinged, three panelled Oak frame with hemp rope and cleats and can be height adjusted.

Iso-Lounge Chair designed by Jasper Morrison for Isokon was selected as the Production winner. The chair's cutting-edge design started life as a single sketch, where the hand flowed from the back of the seat to the floor. Plywood was the only choice of material to follow the curve of the cantilevered design.

Further information about the Wood Awards can be found at **woodawards.com**.

Images © Peter Cook

The Welcome Building RHS Garden Bridgewater by Hodder + Partners

Image © Simon Webb

Gayles Farm 5 detail

Images © Nicola Tree

Iso-Lounge Chair designed by Jasper Morrison

JUDGES

The buildings judging panel is led by Jim Greaves of Hopkins Architects. The panel includes Andrew Lawrence, Arup; Kirsten Haggart, Waugh Thistleton Architects; Nathan Wheatley, engenuiti; David Morley, David Morley Architects; architectural journalist Ruth Slavid; and Andy Trotman, Timberwright.

The furniture and product panel is led by design critic, curator and journalist Corinne Julius. The panel includes Oliver Stratford, editor of Disegno magazine; Rod Wales of Wales & Wales; and previous winners Yael Mer of Raw-Edges, Eleanor Lakelin, and Sebastian Cox.

SPONSORS

As a not-for-profit competition, the Wood Awards can only happen with collaborative industry sponsorship. Major Sponsors are American Hardwood Export Council, Binderholz, The Carpenters' Company and Timber Development UK. Other Sponsors include American Softwoods.

Studio Bark – No Building As Usual

by Studio Bark

Through No Building As Usual our mission is to celebrate and support diversity in the design profession and to play a part in halting global heating.

#NoBuildingAsUsual

What is 'No Building As Usual'?

No Building As Usual (NBAU) is a not-for-profit live-build educational programme that offers the opportunity for hands-on construction experience, teaching participants how to design and build in response to the climate emergency. Summer 2021 saw the launch of this ambitious, collaborative ten-week programme, where a dozen students would take the site from a groundworks state to a (very nearly) completed house.

Current educational structures have delivered very little shift in terms of ethnicity and gender balance, we therefore require innovation in educational practice. Whilst Studio Bark had run several live-build projects in the past, this was the first time that the focus was on cross-sector collaboration, looking to celebrate and support diversity in the design and construction professions.

NBAU offers hands-on experience on a project that was selected to showcase climate emergency ready design at affordable prices.

Each week looked at a different theme and stage in the construction process – during the inaugural 2021 programme, students took part in building from the zero concrete foundations up to the green roof. The process involved constructing the modular U-Build structure and shell, fitting insulation, electrics, plumbing, window installation, waterproofing and cladding. This happened alongside workshops from industry experts at TRADA, Woodland Heritage, Collective Works, Re-Fabricate, Atamate, the RIBA and many others.

Nest House

No Building As Usual 2021 covered a construction project called Nest House - a two bedroom, fully accessible, rigorously environmental home in Herefordshire.

Francine and Stephen Burns approached Studio Bark in 2015, and gained planning permission in March 2018. During these years, Stephen's health declined as construction prices started to soar, meaning the much-needed accessible home for the couple looked unreachable. Faced with this prospect, the client agreed to trial the NBAU educational building approach. In the weeks that followed the design was adapted to suit Studio Bark's modular U-Build system, site enabling works were carried out by a local groundworks contractor, and a search for students and sponsors began.

The client's leap of faith meant their project could be financially viable because the programme was run as a not-for-profit educational venture by Studio Bark's contracting arm. The twelve students who were selected had little to no prior construction experience, but a huge amount of goodwill, energy and enthusiasm. In return for their work, the students received a unique learning experience, going far beyond what would be possible to experience in a university setting.

"It has been such an amazing experience. Since completing my part 1 in the peak of the pandemic, an opportunity like this to get out there and be hands on with architecture and to see how everything translates from paper to real life, especially with such a supportive group of people, has been a lovely experience which has affected what I think architecture is and what role I want to play"
Gracious, a third year architecture student.

Students and building stages of Nest House – a not-for-profit educational venture by Studio Bark

The students and Studio Bark members lived on the site during construction. The first week was earmarked for site set-up, which included building a kitchen, off-grid showers and toilet facilities and a shelter for socialising. The students noted their experiences in a weekly blog, which included day-by-day reporting of the build but also personal reflections on the overall experience.

"I have gone beyond my comfort zone in the best way possible"

Ada, a first year architecture student

Getting NBAU off the ground in 2021 was a team effort between Studio Bark (project lead), Structure Workshop (supporting engineer) and other expert collaborators from across the building sector. We are extremely grateful to the NBAU 2021 sponsors: the Timber Trade Federation, Darling Associates, Forbo, Make Architects, Grimshaw Architects, Thermafleece, Kinrise Studios, Child Graddon Lewis, and for the huge support from NMITE, TRADA and the RIBA.

Diversity and Inclusion

The selection criteria for NBAU was approached differently to a usual application processes. Whilst the interview process focussed on enthusiasm for the build and work ethic, we were also looking for a perceived lack of experience, effectively selecting students who had the most to learn from the programme.

There is a lack of diversity within the architectural profession.[1] From an educational perspective, this is reflected in the low intake of students from ethnic minority backgrounds to undergraduate courses and even lower qualification rate at Part III. Whilst there are many reasons that students may not go onto qualify, it can be hard to see yourself in the wider architectural profession when those in it currently are only 28% female, and only 1% black.[2]

NBAU was a small scale look at how these figures could be challenged. Of the students in the programme, 83% were female and 30% were white. Discussions were had with the students about equality, diversity, inclusion, imposter syndrome, and how to navigate situations and feel more confident in an industry where you're likely to be the only woman or person of colour within a room. Students commented on how they felt emboldened to apply to the programme due to its commitment to addressing diversity and inclusion.

"I didn't feel out of place and felt the most comfortable knowing I'm for once not the minority"

NBAU student (anonymous)

A key moment was the Equality, Diversity and Inclusion in architecture workshop run by Dian Small, Regional Director of the RIBA London, where an open discussion into personal and industry experiences was shared. Dian created an honest and safe space for the students to explore architecture on their own terms. This exposed the daunting and often very difficult task of sharing feelings towards racism, sexism, religion, historical identity and self worth. To become inclusive professionals, a social awareness of others and their identities must be embraced – a message that Dian explained through experience, statistics and by solution.

In addition to the main build programme, a parallel series of workshops, mentoring and teaching days aimed to provide students with a well-rounded educational experience. Through mentoring, the students were able to speak one to one with a cross section of inspiring professionals.

"I now feel more confident about entering the architectural profession as a minority."

NBAU student (anonymous)

Education

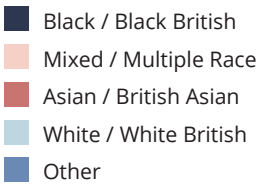
One of the aims of the NBAU programme is for students to learn by doing. This happened with all aspects of the build, one particular activity being the 'drill test' in the first week. Some of the students had not used power tools before, and so during 'Week 0' the students were put to the test, simply driving and then removing a screw until they were experts. Learning how to complete small details happened daily on the build site, and although at points progress felt slow, the students commented on the huge sense of accomplishment they felt at the end of a particularly difficult task.

1 ARB Equality and Diversity Data, 2020, www.arb.org.uk/about-arb/equality-diversity/data/
2 www.arb.org.uk/wp-content/uploads/8-Reporting-to-the-Board-Annex-A.pdf

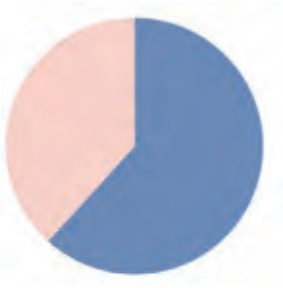
ETHNICITY
Across all 116 students who applied

ETHNICITY
Across the final 12 students

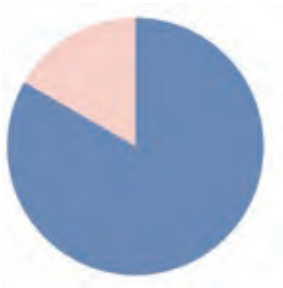
ETHNICITY
Entering architecture undergraduate studies



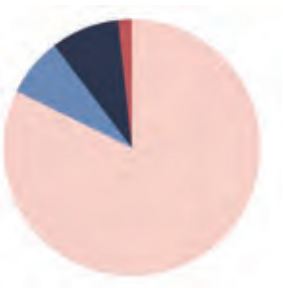
GENDER
Across all 116 students who applied



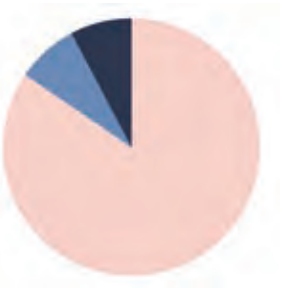
GENDER
Across the final 12 students

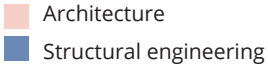


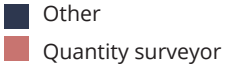
SECTOR
Across all 116 students who applied



SECTOR
Across the final 12 students







"My favourite aspect was seeing how the building progressed daily [...] All the elements of building were so rewarding especially when everyone who participated was so lovely and created a safe environment."
NBAU student (anonymous)

This immersive approach to learning was reflected in all aspects of the programme, with a campsite and shared cooking facilities set up in an adjoining field. The students cooked their meals on an open fire, and responsibilities were shared on and off the construction site.

One critique of architectural education is that technical knowledge is often separate from core design modules, which can contribute to a lack of applicable knowledge about buildability. With regards to zero carbon design, this can be entirely missing from some curriculums. According to the Architect's Climate Action Network (ACAN) Student Survey[3], only 31% of students felt their tutors were appropriately responding to the climate emergency, and only 23% of students felt that their course was properly preparing them for their future work.

One of the main aims for NBAU is to equip students with better technical skills, both in regards to structural and fabric principles in the context of the climate emergency. Given the long route to qualification, if we are to achieve the RIBA 2030 Net Zero challenge, students need to be learning these skills now.

'I've already heard some terminologies being used that I learnt while being on the programme, and I know how to do certain drawings and understand building structures a lot better.'
NBAU student (anonymous)

3 www.architectscan.org/stucan
4 committees.parliament.uk/committee/62/environmental-audit-committee

Nest House nearing completion

There were a number of workshops over the programme from experts in the industry, such as TRADA, Woodland Heritage and RIBA. The aim for these workshops was to ensure that the programme provided a rounded educational offering. These were extremely popular with the students, and are an element that will be enhanced in any future NBAU programmes.

Climate

There is a direct link between our fossil-fuel economy, consumerism, and rising temperatures. Participants of No Building as Usual commit to an immersive learning experience where they will consider the opportunities they have as both citizens and designers to tackle the climate emergency and challenge 'Business as Usual'.

Within the building sector we specify and consume vast amounts of materials, and the move away from energy hungry materials, such as bricks, concrete and steel, towards natural materials is happening, but very slowly. For example, at the recent Environmental Audit Committee panel session it was estimated that natural insulation materials accounted for only 0.2 to 0.3%[4] of the UK insulation market. We clearly have a long way to go, but the awareness of the impact of building is growing, and the conversation is moving away from the sometimes blinkered perspective of operational (in-use) energy, towards embodied carbon, referring to the amount of CO2e used by materials, transport and all the items needed to make a building ready for use. Broadly speaking, calculating the operational energy alongside the embodied carbon through a Life Cycle Assessment (governed by a British Standard) begins to show the 'Whole Life' impact of a building.

At Nest House, we collaborated with an innovative start-up called Looper who were looking into potential solutions for counting carbon beyond the design phase of a project, with a particular focus on real-time carbon accounting. This is very much a work in progress.

Here are a few of the steps taken to reduce both embodied and operational energy demands:

Embodied Carbon

- This is a no-concrete project (not even below ground)
- Jackpad adjustable foundations system sitting on a compacted hardcore base
- No structural steel anywhere in the building
- Plywood internal finish with a natural fire retardant finish (in place of toxic plasters)
- Wherever possible we used locally sourced Douglas

Fir for all non-structural timber elements (with better access to visual grading, we hope to use this structurally on future projects)
- 'Circular Economy' design principles – demonstrating a building which is designed for disassembly
- Natural and local building materials wherever possible

To lessen operational energy, Nest House used:
- 'Fabric First' principles - designing out the need for excessive bolt on technologies
- User responsive, smart heating system - lessening operational energy
- Paper-thin graphene heaters running off 12v technology
- Second hand solar PV panels connected to battery storage
- Direct Control Ventilation (through wall only to reduce ducting)
- Heat exchanger on hot water cylinder to reduce heat losses

Other environmental principles adopted:
- Integrated planting, and landscape enhancement supporting biodiversity
- Green roof and solar shading to terrace - to avoid overheating in the summer and the need for mechanical cooling
- Super efficient structural design to minimise material use marrying low and high tech timber techniques to create a building with very little 'stuff'

Getting involved

NBAU 2021 was the first of what is hoped to be many more summer live-builds, and naturally there was so much that we learnt as architects, builders and educators. We will be feeding back the many thoughts about the project to make the next programme even better. Please email **info@studiobark.co.uk** with the subject line 'NBAU Tell me more' if you:
- are a student interested in being part of a select student build team in the future, or simply finding out more
- work in private practice and are interested in running your own NBAU programme (we would love to hear from you and will share our resources from the 2021 programme)
- work for an organisation which would like to sponsor a student
- work in public practice and would like to see a NBAU programme run in your area

About us

Studio Bark is a young architecture studio founded by Wilf Meynell in 2014. We have a successful track record securing planning permission for ambitious designs on challenging sites across the UK. Our portfolio of built work encompasses residential and community projects with a specialism in bespoke homes. Through our work we challenge outdated ideas about architecture, construction, education, and modern business management.

Through continuous dialogue with academia, we periodically run educational construction projects to explore the rich territory between speculative design work and on-site pragmatism.

To find out more, please visit **StudioBark.co.uk**

A detail of Nest House

Action Oak report 2021/22

by Sarah Jeffery, Action Oak Project Manager

After another uncertain and unpredictable year that has seen a need to be both flexible with plans, as well as working with a shift towards the virtual, Action Oak has continued to build a solid base for itself.

Action Oak's family of researchers continues to grow, with the recruitment of Kate Halstead at Newcastle University to undertake a PhD looking at the effect of climate change on Oaks; Kate is funded via HSBC and One Earth.

We also welcomed two new PhD students at BIFoR (Birmingham Institute of Forest Research): Emily Grace and Vanja Milenkovic have joined the team there, working on Oak.

The other PhD projects supported by Action Oak continue to go from strength to strength with our first 'Annual Report' on their progress published in autumn 2021. This document is available in the Resources section of the Action Oak website (**www.actionoak.org**).

The report provides an overview of the work and the progress made on the research projects and programmes including:

- Genetic and metabolomic markers of resistance to the Acute Oak Decline (AOD) bacterial complex and the Oak powdery mildew fungus - BIFoR
- Oak tree genomes and metagenomes from five AOD sites – Royal Botanic Gardens Kew
- Genomic investigation of soil microorganisms – University of the West of England, Bristol
- Oak powdery mildew and tree health in the Celtic rainforest – Aberystwyth University
- Interventions to reduce the impact of climate change and other environmental stresses on Oak health – Newcastle University
- Decay of Standing Oak Trunks – Cardiff University
- Securing good quality acorn supply in the United Kingdom – Reading University
- Vulnerability of Welsh Sessile Oak woodland to outbreaks of native and invasion by non-native insect herbivores, under projected climate change through the 21st century. – Aberystwyth University
- Identifying disease suppressive microbiota to future-proof native Oak health and their associated economic, social and ecosystem services – Bangor University
- What lurks beneath: unravelling the chemically guided ecological interactions of Armillaria fungi, a devastating group of subterranean forest pathogens – Bangor University
- Infection biology and multi-omic analysis of a key Chronic Oak Decline buttress root pathogen *Gymnopus fusipes* – Bangor University
- Mortality of Young Plantation Oak in England: A multi-omic analysis of a serious bark disease on young Oak in England – Causes and risks to other tree species – Bangor University
- Bac-Stop – Forest Research (four different work streams all linked to different facets of AOD)
- Future Oak – Bangor University (an investigation into the role of beneficial microbes in fighting diseases that affect our native Oak trees.)

Action Oak Report 2021

Action Oak has also completed an evidence review for the project which is due to be published in spring 2022. The review highlights threats to Oaks and links to the research, providing a valuable tool for the partners and others to refer to in the future.

Sue Biggs CBE, Director General of the RHS and Rt Hon George Eustice MP, Secretary of State for Environment, Food and Rural Affairs of the United Kingdom beside the Action Oak display boards at RHS Chelsea Flower Show

Action Oak at RHS Chelsea Flower Show with Geraint Richards

Monitoring of the UK's Oaks has continued throughout the pandemic with most study sites having been visited, providing valuable new data on their condition; a new app is also being rolled out to help to deliver this work.

Work has continued with the Heart of England Forest and the National Trust to develop a Living Lab proposal designed to understand better the Forest's Oaks, bringing together the current research being undertaken, whilst also developing new projects. In addition, the Living Lab will provide opportunities for knowledge exchange. Action Oak has also been chosen by new outdoor brand, FeraGB, to be a recipient of their pledge to support environmental charities.

Action Oak also secured an exhibition slot at the September RHS Chelsea Flower Show which attracted many visitors and comments. The exhibition highlighted the importance of our iconic Oak trees.

The exhibition then moved to COP26 – thanks to support from Defra, APHA (Animal and Plant Health Agency) and the Scottish Government. The display outside the main arena again highlighted the importance of our trees, as well as the unique partnership approach Action Oak has developed.

Plans for the future

2022 is going to be a busy and exciting year for Action Oak and its partners with a fundraising dinner planned for May with The City of London which will take place at the Guildhall and fittingly in Plant Health Week. The event will bring tree heath matters to a new audience, as well as a welcome focus on the work of Action Oak, including ways its work can be supported.

The Action Oak partners' event will be back, after a two-year break at the Royal Botanic Gardens Kew, in June. This will be an opportunity for the wider Action Oak family to get together, share updates, and see management in practice within the Gardens.

Working with Welsh Government and the Royal Forestry Society respectively, Action Oak will be attending both the Royal Welsh Show in July and the APF Show in September, promoting all the valuable research being carried out on our Oaks.

Work to install information boards about Action Oak is continuing with Yorkshire Arboretum and will tie in with their newly opened plant health centre.

At the time of writing, agreement of a new funding programme for Action Oak is nearing conclusion, coming fittingly at the end of a three-year grant by The Prince of Wales's Charitable Fund. The latter support enabled the initiative to take great steps to further the fortunes of the UK's Oaks, funding that Action Oak acknowledges with much gratitude.

ActionOak
PROTECTING OUR OAK TREES

A welcome return for Woodland to Workshop September 2021

by Kelly Morss, James Cryer, Paul Thompson, Luke Myatt and Harry Boyt

COVID-19 regulations prevented any Woodland to Workshop courses from being held in 2020 and in the first half of 2021, but thanks to the easing of restrictions in England and Wales, September 2021 saw a welcome return to running this popular course based at Woodland Heritage's Whitney Sawmills.

The second of the two editions that were both held in September was the 25th running of 'W2W' and which, as ever, brought together people from a variety of backgrounds, all keen to learn about growing trees and milling and storing timber.

Now more than ever we will seek to support people in their pursuit of a career in forestry and timber related industries and this includes the bursary places for each course which enabled Daniel Hofgartner, Luke Myatt and Harry Boyt to attend 'W2W'. Both course 24 and 25 also benefited from the support of a charitable trust whose grant aid for Woodland Heritage to help advance the careers of young foresters enabled Paul Thompson and James Cryer to attend 'W2W'. Their experiences are reported below.

Students braving the wet conditions on the Woodland to Workshop course 25

James Cryer trying his hand at turning

James Cryer

Woodland to Workshop 24, 20-22 September 2021

Having just finished my first year as an Assistant Forest Manager in Southern England, I was thrilled at the prospect of learning more about what happens to timber, following the carefully considered (and long) silvicultural process.

This course provided a highly-informed overview of the supply, demand and utilisation of hardwood timber in the UK. It nicely encapsulated what I had learned during my first year in forestry, as well as an in-depth look at

what happens to the timber once it enters the sawmill. For example, the potential measurements, processes, treatments, grading and wood products made following harvesting. This latter aspect of the industry was still very new to me, so it was fantastic to share the course with others who already had expertise in this field.

The diverse range of professions present on the course significantly benefited the learning process, prompting everyone to share relevant experience and to ask different questions.

As a budding young forester, I will undoubtedly draw on this knowledge as my career progresses. The course has given me a much clearer insight into the types of desirable characteristics I should aim to promote during the development of the hardwood crop, alongside their respective target markets.

I am grateful to the many tutors on the course for sharing their skills and experience, as well as to the charitable trust, that through Woodland Heritage, provided me with the grant I needed to attend the Woodland to Workshop course.

Paul Thompson

Woodland to Workshop 25, 27-29 September 2021

My name is Paul Thompson and I manage Raincliffe Wood Community Enterprise CIC, a social enterprise that took on responsibility for a 222 hectare ancient woodland in 2015 as part of a community asset transfer from Scarborough Borough Council.

Raincliffe and Forge Valley Woods are now the largest community managed woodland in England.

The woodland is one of North Yorkshire's key living landscapes linking the river Derwent catchment area with the North Riding forests and the coast, and is part of a wider nature recovery network for the region.

This wooded site on the edge of Scarborough borders some of the most socio-economically deprived communities in the UK, yet it includes a National Nature Reserve, has extensive designation as a Site of Special Scientific Interest, and is home to nationally rare flora and fauna.

It also contains a plethora of historic environment features and its scheduled ancient monuments including medieval charcoal pits, holloways, bronze-age settlements and Neolithic round barrows which together make it a

Paul Thompson

fascinating but highly constrained site in which to plan forestry operations.

The woodland also provides a sanctuary for people seeking to escape the stresses and pressures of modern life, while contributing to the improved health and wellbeing of our community.

As a not-for-profit Community Interest Company (CIC) I have been tasked with making the organisation financially sustainable within two years, to enable us to continue to protect and enhance the woodland and its biodiversity for the benefit of everyone.

We currently generate a small amount of income through timber harvesting each year as we gradually restore our plantations on ancient woodland sites and we have a Countryside Stewardship Higher Tier agreement. However these income streams fall short of what is required effectively to manage the site and as such we remain reliant upon grant funding and donations.

In addition to the practical management of the site and delivering our land management obligations, over the past year I have been developing relationships with health and social care networks to explore potential opportunities to

provide green social prescribing to service users with mild mental health conditions.

My background working for the local Wildlife Trust, National Park and local authority while delivering conservation and community outreach projects helped me to hit the ground running improving habitats and delivering engagement activities, though I did have a limited knowledge of woodland crafts, routes to market for wood users, hardwood sawmills and grading timber quality.

The Woodland to Workshop course has been invaluable to me as I develop ideas and new opportunities for the community woodland. It has helped me to identify new more valuable markets for my timber, to gain an understanding of the needs of crafts-people, and to learn from the Duchy of Cornwall how it generates income from a variety of simple wood products that I can hopefully replicate up in North Yorkshire.

Thanks to the financial support received via Woodland Heritage from the generosity of the charitable trust, I was able to attend the course without adversely impacting on our under-resourced community woodland. I made some great friends and industry contacts on the course and would strongly recommend it to anyone with a passion for wood while growing quality timber.

Luke Myatt

Woodland to Workshop 24, 20-22 September 2021

I was very fortunate to be given the opportunity to attend the Woodland to Workshop course. I was particularly interested in sawmilling and furniture making and to broaden my perspective and experience regarding forestry management.

The course was thoroughly enjoyable and it exceeded my expectations; not only for the opportunity to meet and listen to industry experts, while also broadening my understanding of trees and timber on a holistic level with technical and specific knowledge that I can apply to my current career. The course has filled knowledge gaps and provided a great insight into sawmilling and timber conversion. It has given me confidence in grading and measuring timber, looking for defects in a standing crop, understanding species, processing, and the products which can be made.

The Woodland to Workshop course also provided a great networking opportunity to learn from the diverse range of

Luke Myatt (R) measuring planks with Ben Cairnwhite

participants, discussing their roles and perspectives on the subject of the course.

I am very grateful and feel very privileged to have received the grant to allow me to do this.

Harry Boyt

Woodland to Workshop 25, 27-29 September 2021

As a 'wood user', I have always understood the importance of the connection between those who manage woodlands and those who 'use wood'. However, I wanted a deeper understanding of this connection. I chose the 'Woodland to Workshop' course to aid my transition from the Army into a civilian career.

It also felt right, as I was starting up my own bespoke kitchen business, to fly the flag for British grown timber. I was keen to build a company that was not only sympathetic, but active in its support. The Woodland to Workshop course helped enormously in this endeavour. It not only gave me the knowledge, but also the confidence, to incorporate British grown timber into my business model.

As a result, Birtle & Co will be able to offer something extra: proof of an environmental conscience and a 'story'

Harry Boyt (centre) inspecting a log with course tutor, Dermot Doyne (left), and Geoff Negus of Whitney Sawmills (right)

Richard Adams contemplating the Hoppus system

William Livesey and Maria Sebastian with their turnings

behind the materials. Shortly after the course I was offered some brown Ash. Not only was the wood beautiful, but it had a lineage and identity that made it unique. It came from a local estate, was air dried in the yard up the road, taken to my workshop, and turned into drawers. It will eventually end up in a house in the same county, having travelled a total of 27 miles!

Harry's company, Birtle & Co, make fine handmade kitchens and is based in Suffolk.

www.birtleandco.co.uk
Instagram **@birtleandco**

Woodland to Workshop course 24 – students with their measured timber

Woodland Heritage is seeking corporate sponsorship for Woodland to Workshop student placements

The waiting list for grant funded places to attend the Woodland to Workshop course is at an all time high due to the postponement of three courses. We are most grateful to the institutions and employers who support their staff to attend but we would also like to continue funding the deserving people who do not have access to this support.

If your organisation would like to sponsor such a place on the Woodland to Workshop course, please get in touch with **Kelly Morss** at **office@woodlandheritage.org**

NEXT COURSES: 9 - 11 May and 26 - 28 September 2022
at Whitney Sawmill & Joinery Workshop, Whitney-on-Wye, Herefordshire. More information at
www.woodlandheritage.org/woodland-to-workshop

from woodland to workshop

My time at Prickly Nut Wood

by Robert John Lester, a Ben Law apprentice 2021

At the time of writing this article, it's a little over a year since I arrived at Prickly Nut Wood and it's great to reflect on my time there. Moving to the woods was a steep learning curve and there was always something to be doing connected with wood or fire! If we weren't lighting a fire, we were chopping firewood, collecting kindling or making shavings to use for starting a fire. It was a real lesson in using the environment around us to survive – we are so disconnected from that in regular modern life.

Image © James Smith

Robert Lester and Thomas Allen

Our lives were completely tied to the changes of weather. There was one week in February when our tap was frozen solid and we were without running water. We were chopping firewood and Tom put a cup of tea down. When he returned an hour later, it had frozen to the log. It was that day that I realised how important it is to keep working and moving when you've got no other means to keep warm.

One of our first jobs was to create a small shower block, using timber that Ben had milled. Olly, the previous apprentice, had put in the posts and roof and it was our job to do the rest. It was incredibly motivating to know that the sooner we finished, the sooner we could have our first shower! I remember the feeling of pride when I stood under the hot water for the first time, knowing that we had created it from timber from the woods.

On our first visit to the supermarket after a week of living in the woods, I was struck by the brightness of the lights – my eyes had got used to seeing things in daylight, by the glow of the flames or by head-torch. Looking around the supermarket, I noticed how much food is designed to be quickly heated up in a microwave or oven – not suitable for two blokes cooking on a fire!

We ate well, cooking all our meals from scratch. Our allowance at the Lodsworth Larder didn't stretch far so we had to be strategic in our purchases. I was grateful for having Tom as a teammate as we managed to agree on what to get and, more importantly, what not to get. Although sometimes we couldn't resist a couple of the famed Lodsworth Larder brownies!

I'd like to thank Woodland Heritage for its generous contribution in part-funding our chainsaw certificates. The training came at just the right time – a month into our work at the wood.

We learnt the process of short rotation coppicing using pruning saws and billhooks and by the time we were let loose with chainsaws, we appreciated the benefit of this piece of kit having already done it the slower way. Not only did it allow us to complete the coppicing work, the training has also equipped me with the skills and confidence to acquire more cutting work.

I currently work part-time with a forestry team looking after woodlands and nature reserves in North Norfolk. I see this as an extension of my on-the-job training which allows me to broaden my skills and knowledge while earning an income.

As I develop my craft business, I value the importance of being involved in that primary stage – conserving the natural spaces and sustainably sourcing my materials. It has brought me great pleasure to explain to people buying my products exactly where the wood has come from, why that tree needed felling, and why the wood was used for this particular purpose. It pulls the whole story together.

One of the things I loved about my time in the woods was the sheer amount of time spent outside. I felt so much more connected to the environment and the seasons.

We noticed the two or three minutes of extra light at the end of each day after the winter solstice and the intricate willow buds opening as I was brushing my teeth under the stars. I loved looking at the winter sunrises while eating my porridge, feeling the morning air on my face. I loved the sounds at night, the owls getting louder on clearer nights, deer barking not far from the cabin and the smell in the air as we went to check on the charcoal kiln in the middle of the night. I loved the sound of buzzards overhead while we were cleaving pales in early spring and the sweet songs of Otis, our Robin friend. There were very few days when there wasn't something new for the senses. While this sounds idyllic, it is also a tough and isolating way to live.

In the first few weeks of the new year, I was dealt some tough news from home and this soon led to a crisis point for me, right at the toughest point of the year. I tried so hard to get through it, to keep on putting one foot in front of the other, taking in the healing powers of nature and meditating. But I learnt that it was the wrong setting for me to process such deep emotional pain. There was too much time and space to ruminate and, with a heavy heart, I left at the end of April.

However, despite leaving earlier than anticipated and missing out on a big chunk of learning, I eventually began to see it as an opportunity.

The craft business I had been aiming towards before I'd gone to Prickly Nut Wood was still alive. I spent a lot of time making things when I got home, did some work helping with woven willow fencing and started going to shows to demonstrate my spoon carving skills. I teamed up with Olly Moses to help out with some of his spoon carving workshops in Cambridge. I quickly got involved in a few festivals towards the second half of the summer, offering short workshops for children and adults.

That was great for my confidence and led to my approaching a refugee charity in my home city of Norwich. I have since delivered half a dozen green woodworking workshops to the participants of this charity, showing them how to make chopsticks, bookmarks and even spoons! I'm excited at the prospect of what's to come as we head into the new year.

Many thanks to Woodland Heritage for its generosity, to Ben for the opportunity and for sharing his knowledge, and to Tom for his tales, wit and great support. Oh, and Otis the Robin, how could I forget him!

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Return to the roots

by Thomas Allen, a Ben Law apprentice 2021

This apprenticeship has been, for me, a return to the source: the land – from which we spring and in which we are rooted. Living simply, being in the soil and elements, among the trees and wildlife, it gives space for reflection and learning, and for the imagination to flow. And in the process I've returned to my own roots, as an artist.

Prior to the apprenticeship I had been creatively dormant for a few years while in an office job I was unhappy with. Two months into my time at Ben Law's Prickly Nut Wood my artistic spirit was reawakened and I found my mind's eye alight with imagery, fuelled by the patterns and forms in the surrounding woods.

It was a year-long lesson in living well. Beginning in November, as daylight was ebbing and the last leaves were stripped by autumn, it felt a natural time for introspection, free of distraction.

Life at that time revolved around fire: upon waking I'd often get my stove going; then down in the outdoor kitchen I'd light a fire for breakfast; at lunch, another fire; and once again for dinner. It was always nice to retreat to the warmth of my cabin in the evening (when yet another fire was lit).

Initial tasks included the building of a shower room, which meant Bob (the other apprentice) and I could count ourselves lucky as the first ones to have the luxury of hot showers on demand. With that said, showering

My cabin was a warm haven in the winter months

Otis and the cereal bowl

remained an infrequent event in winter given the icy drafts that swept in as soon as the water was turned off!

Our first taste of coppicing was the felling of an acre of short-rotation Sweet Chestnut mixed with Birch using pruning saws and billhooks. This gave us an appreciation of the ease and speed of felling with chainsaws once we got our licenses.

Speaking of which, James Smith, our chainsaw instructor, was a great teacher and we were fortunate enough to have him come to Prickly Nut Wood to give us almost one-on-one training in the area we were going to be coppicing that season.

I'd like to take this opportunity to thank Woodland Heritage for helping to fund our chainsaw course – we couldn't have done much without our tickets! (And Woodland Heritage would like to thank Suez recycling and recovery UK for its donation from its 'Giving Something Back at Christmas' fund that allowed the charity to support Thomas and Robert's chainsaw course - Ed)

Come January, we started to work on this year's cant (an area of wood felled in one season, also known as a coupe), cutting approximately two acres of Sweet Chestnut. It was great to be able to put our new chainsaw skills to practice immediately; like learning to drive a car, we had learned how to pass the test but then applying those skills in the real world was another learning curve.

It was hard, repetitive work, but rewarding and I certainly came away feeling confident with a chainsaw – as well as very fit! I'll always remember the feeling of achievement as I looked out across the cant just after the last tree was felled.

Throughout the coppicing period, and beyond, my evenings were usually filled with creating artwork in my cabin. Despite the day's tiring physical work, I was spurred on by yet another fire: the one in my belly.

In fact, I'd even find myself awoken early in the morning by images in my mind that needed sketching before starting the next day of coppicing. It certainly helps to have another focus like that to carry you through the long, isolated winter evenings. (It was all the more isolating as a result of the pandemic. Though, with that said, it was one of the best places to be during a lockdown, with access to 100 acres of beautiful woodland!)

I also did some green woodwork in my free time and Ben was very happy to offer advice. In fact, any woodland, or crafting-related questions we had, he always had a book to lend us from his extensive library to encourage our interest.

Entering spring, I was glad to say goodbye to the days of frozen water taps and watch the leaves unfold as daylight lengthened. Winter has its beauty – red moons and stars caught up in a canopy of twigs – but I was ready for spring's lively displays, including the fantastic dawn chorus.

One particular bird, a robin we named Otis Musél, developed an especially close relationship with us. Our outdoor kitchen was his territory and we regularly supplied him with food. In fact, I whittled him his own cereal bowl to match our own. He had us well trained (!) and I reckon we must have fed two of his broods.

The change in season brought with it other changes: Bob moved on to pastures new and the woodland tasks shifted towards the crafting of products. Ben would present me with a 'shopping list' of poles to extract from the cant, which were soon cleaved, peeled or pointed for various projects. I got plenty of practice with froes and wedges, axes and drawknives.

Thomas Allen – 'Caught up' in pencil and charcoal

One of my favourite crafting activities was roundwood timber framing: meditative moments spent with scribing tools and the satisfaction of seeing butter-pat joints kiss together. The timber framing courses were a highlight, where I had the pleasure of meeting several groups of lovely people, chatting around the framing bed and laughing around the evening fire. I even got to teach on a couple of the later courses.

On the first two courses, we made the frames for a studio cabin I plan to build and which I'm very excited about. It certainly feels empowering to come away from this apprenticeship with the ability to build such a structure.

I did so many things and learned such a lot during the year that it is easy to forget just how much was covered, and it was only when taking people on tours around the woods that I'd be reminded: "Oh yes, and I thinned the broadleaf plantation... Oh and I extracted timber using a log chute... Oh and the charcoal burns of course!"

The alchemy of charcoal burning is quite magical, especially as you approach the crackling kiln in the middle of the night and listen to the gentle hissing of soft rain on the piping-hot lid. The kiln takes a surprising amount of wood, which all needs splitting, and then the job of emptying it at the end is a dirty one. The new shower was most appreciated then!

Walking through the cant we felled, I felt you could almost see the new shoots growing, they sprung at such a rate, and it was so pleasing to see the space fill with foliage. I couldn't believe the stems were taller than me by the end of summer, and it was a relief to see a good amount grow out of the deer's reach – though there was plenty of evidence of nibbling.

The battle with the deer is unceasing, and I think the final straw for Ben was when he found them on the deck of his house peering in at him through the window! So we ended up installing deer fencing around his immediate living and working area – the house, pool, veg patch, workshop and yard. As a result, I'm now well practiced at making gates and post-and-rail fencing.

Shortly before leaving, I sat in on the Sustainable Woodland Management course. It was an excellent recap of what I'd learned, and a reminder of just how much Ben has taught me. It was a pleasure working with Ben and although, before I came to Prickly Nut Wood, I already admired what he'd achieved, I leave with all the more respect having experienced the cold, wet winters and back-breaking work knowing he did all that for years without the infrastructure I enjoyed such as tracks and gas-powered showers.

I certainly miss Prickly Nut Wood – and I struggle to drink mains tap water after a year enjoying fresh spring water! But I go forth richer in knowledge and confidence. I also have a big art exhibition to prepare for at Mall Galleries in London this year – artwork I created while in the woods won me first prize in a national competition. So I must crack on! And then there's a roundwood studio cabin to build at some point...

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‘Woodlander: A Guide to Sustainable Woodland Management’ by Ben Law

Review by Kelly Morss

“One of the real pleasures of working a wood is leaving what you started with in better condition for future generations”.

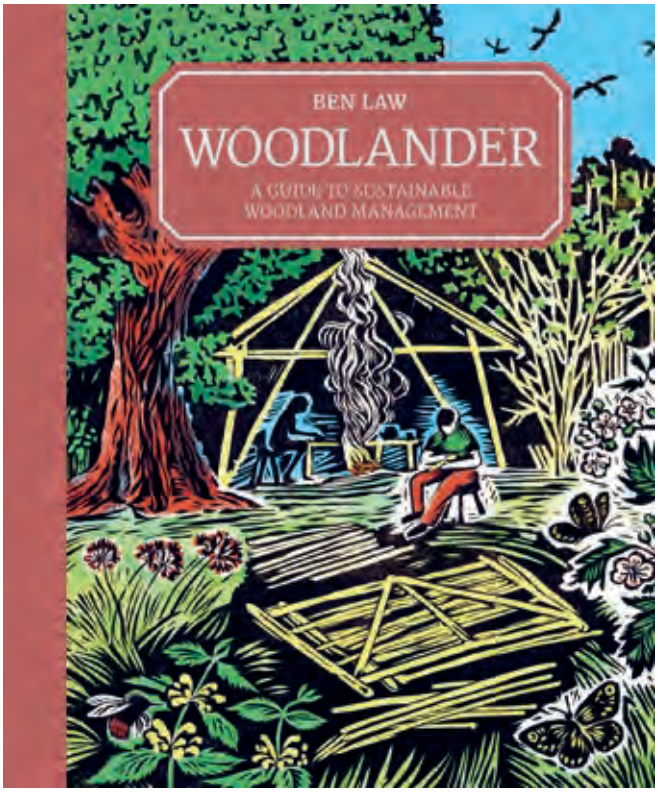
Perhaps Ben Law needs no introduction to the Woodland Heritage readership but just in case you are not aware of his work, Ben is a woodsman, author, and eco-builder based at Prickly Nut Wood in West Sussex. There he has spent 30 years honing his crafts, building his own home, running courses, and sharing his experiences of sustainable woodland management, roundwood timber framing, and permaculture design.

His latest book brings together this wealth of experience to guide you towards a holistic approach to small woodland management. As with Ben’s other books, ‘Woodlander’ is beautifully illustrated with both full colour photos and hand drawings, laid out in clear and concise chapters covering types of woodland, establishment, management systems, woodland ownership and the resulting products.

To condense this wide-ranging knowledge about the process into one book means that this is a broad view rather than a deep dive into any individual topic, but for someone wanting to understand the bigger picture with enough detail to be useful, this will be your invaluable guide.

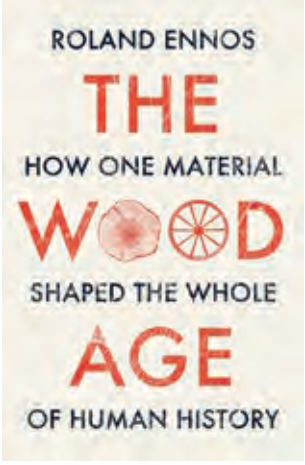
Part of Ben’s willingness to share his knowledge and experience is the apprenticeship scheme he runs at Prickly Nut Wood, where two people spend a year living and working in the woods learning and developing as woodlanders. You can read more about the experiences of Ben’s 2020-2021 apprentices on pages 90-93. They received Woodland Heritage support to gain their chainsaw certificates helping them take the next steps towards their careers.

To find out more about Ben and his work at Prickly Nut Wood, head to **ben-law.co.uk**



Other recommendations from Trustees and members:

The Wood Age: How one material shaped the whole of human history
by Roland Ennos



This book shows that the key to humanity’s success has been our relationship with wood. The author takes us on a sweeping, ten-million-year journey from great apes who built their nests among the trees, to early humans who depended on wood for fire, shelter, tools and weapons; from the structural design of wheels and woodwinds, to the invention of paper and the printing press.

A Chef's Table – from Uniqueworks workshop to Annwn restaurant

by Stephanie Smith

In 2021, Uniqueworks was approached to make all the dining tables for a new restaurant in Pembrokeshire. The restaurant was Annwn, the dream project turned into a reality of Welsh wild food and gourmet chef, Matt Powell. Sourcing beautiful native Oak from Whitney Sawmills, we created a suite of new furniture and in particular, the feature piece Chef's Table. Uniqueworks' furniture-maker, Jake Humphries rose to the challenge.

This article was the idea of Woodland Heritage co-founder, Lewis Scott, who was passionate about the provenance and story behind the pieces made from Whitney timber and who wished the story of the Annwn table to be told. After his recent unexpected death, this piece was written in memory of all that he achieved and hoped for in creating good practice in the wood chain, from tree to finished furniture.

Uniqueworks is a small family business, co-founded in 2009 in West Wales by Jake and long-term partner, Stephanie Smith. With a passion to work with wood and a bloody-mindedness to succeed with his own designs, Jake has to-date, made over 400 items of furniture, every piece different. What links them all together is a determination to use British timbers of all kinds and to let the wood inspire the form.

Whilst Jake didn't flourish at school and he rarely writes anything down or makes sketches for the furniture, he does, like others with dyslexia, excel at practical, hands-on craftsmanship and process, thinking naturally in 3D and working out design and method in his head. For Jake and many others like him, the wood professions provide a perfect place to utilise their skill-sets and make a significant contribution to the industry.

Matt Powell named his new restaurant Annwn, after the Otherworld, which in Welsh mythology is a world of delights and eternal youth and where food is ever-abundant. For Matt, a Welshman to his soul, the restaurant is a realisation of a long-cherished dream, and his chance, as he puts it, to 'put Wales on a plate'. Every dish he creates has a genuine sense of place, being sourced or foraged locally, seasonally and sustainably, exploring Welsh produce, and reflecting the natural wild ecosystems around him.

Jake Humphries with his dining table for Annwn restaurant

Matt came to see us at the workshop with the idea of creating dining tables which would, in every way, complement his ethos of using the natural products of the land, to produce something of exceptional quality and create something which actively contributed to the experience of the meal. Provenance was vital too; the tables were to be made within ten miles of his restaurant. He also wanted something beautiful.

With a fairly high bar to achieve, we settled on solid native Oak for the tables, in keeping with the traditional stone

The Chef's Table in service at Annwn restaurant

Top left: Coffee table with Sycamore panels cut into a dark native Elm frame. Top right: Oak Burr cabinet and chest of drawers. Bottom: Oak Burr natural edge chest by Uniqueworks Handmade Furniture

building of the restaurant, set inside an old estate's walled garden. Right from the start, we knew that we needed to choose timber full of character, and one of the tables in particular – the Chef's Table – of especial interest to Matt, required something a bit more out of the ordinary. The Chef's Table, he told us, is *the* place for guests to eat, within talking distance of the open view kitchen and the best seat in the house for soaking up the atmosphere.

Our relationship of years with the staff at Whitney Sawmills, run by Woodland Heritage, means that the staff there have a very good idea of the sort of timber that we like for the furniture we make – very often, the gnarliest, knot-filled boards, which many other cabinet makers would leave behind! As Jake puts it, 'Whitneys' timber is second to none. It's stable, properly kiln-dried, expertly selected and rarely warps, cracks, twists or shrinks'. We came away with some superb Oak burr.

It was a pleasure to make the four bespoke tables for Annwn, but the Chef's Table was the one which really captured the eye and the imagination. It is now in place in the heart of the restaurant. The table has an interesting cleat design on the top, and dark stained, tapering legs, but it is the beautiful pippy burr wood that is the actual star of the show, glowing in the soft light.

Our thanks are due to Matt for trusting us with his dream. It has been a memorable experience, for many reasons. Thanks also to our many customers and suppliers who have supported us along the way over the years and helped us become the furniture-makers we are today. Whitney has supplied much of the wood which has made our favourite pieces.

Here's to the next project!

uniqueworks.co.uk
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Wild Service Tree – a nurseryman's perspective

by Geoff Locke

I read with great interest the report on the Wild Service Tree (*Sorbus torminalis*) trial in the 2021 Journal.

Here at Mount Pleasant Trees, our tree nursery in Gloucestershire, I have been planting Wild Service for over 35 years, albeit in a much less scientific way than that described in the WH trials. Nevertheless my observations may be of interest.

In fact, I started growing and selling Wild Service over 40 years ago. At that time, very few tree nurseries offered the species and we sold only a few each year in the early years. Now, Mount Pleasant Trees which we started, and which is now run by our son, sells a few hundred every year.

Many of the trees I have grown have been from local seed which I have collected myself. Wild Service grows in abundance in this part of South Gloucestershire, particularly along old parish boundary hedgerows but also in woods. I have also grown on seedlings bought from other nurserymen grown from seed of mainly mainland European origin.

As well as selling a few thousand over the last 40 years I have planted a hundred or so for myself in our own woodlands. I have planted in very diverse soils and climates, from rocky, parched soils in South-East France where few other deciduous species will survive, to boggy, peaty soils in Snowdonia where again few other broadleaves will thrive. I have also planted on good forestry soils in mid-West Wales, as well as here at home near the Severn Estuary on shallow, heavy loam over unbroken marl. The trees have grown well and healthily in all these locations, and they will tolerate drought and wet heavy soils better than almost any tree species.

The first trees I planted here in Rockhampton 35 years ago are now about ten metres high and 30 cm diameter at 1.5 metres above ground level, a little above breast height.

30 year-old Wild Service at Mount Pleasant. The tree has many suckers, some from the base and others up to six metres from the tree, some marked with red tape for the photo. Numerous fallow and muntjac deer browse off most of the suckers.

They suffer here regularly from summer droughts and winter waterlogging. Most fruit regularly and prolifically and have done so for the last 15 years.

A fair proportion of them produce suckers up to about eight metres from the parent; it is a waste of time trying to transplant suckers, even digging them out with an excavator, as almost invariably they have very poor asymmetric roots. Conversely and surprisingly, in view of their sparse, deep roots, I have had almost 100% success in transplanting up to 25-year-old, seed-grown trees using a three foot digging bucket mounted backwards on an eight-ton excavator; the roots are side-cut first and then the tops are pruned at the same time as transplanting.

Most of my trees are planted at wide spacing and when evenly grown in this way they generally have a narrow growth habit with lots of narrow forks and competing leaders. To get the chance of a good timber log needs lots of pruning.

Some years, some of my trees give reddish autumn colours; good colours are most noticeable on very young trees.

A very important factor is that there has been very little squirrel damage to the trees, even in places where many other species have been terribly damaged.

One thing that would worry me about pinning too much hope on the potential for very high value timber from Wild Service is that I think its very limited market currently in the UK could be easily saturated. Perhaps most of its value is related to the scarcity of large logs. One should note that Wild Service timber, both heart and sap wood, is very attractive to woodworm.

I wonder whether the timber is really very much more attractive or different to *Sorbus aria*, *Sorbus aucuparia*, *Sorbus domestica* and even *Pyrus communis*. All those species can be grown more easily and quickly in soils which suit them; they too are all moderately or highly squirrel resistant.

Planting Wild Service is undoubtedly good for diversity and interest in woodlands but I think one should be very careful about planting if financial returns are the main aim.

There is of course lots of information on the internet and I think the very best is an excellent detailed account about all aspects of the tree: British Ecological Society, Journal of Ecology, Biological Flora of the British Isles. *Sorbus Torminalis* by Peter A Thomas, August. 2017. **www.besjournals.onlinelibrary.wiley.com**.

www.mountpleasanttrees.com

Future Trees Trust in 2021

by Joe Beesley & Jo Clark

Future Trees Trust (FTT) is a charity committed to researching and utilising UK forest genetic resources to support high-quality home-grown timber through the identification of superior trees **(known as 'plus trees')** and the establishment of field trials. We design seed orchards that are genetically diverse and adapted to UK growing conditions to improve the quality and yield of broadleaved timber, and make our resources available to all. Seedlings of improved Sycamore, Silver Birch and Wild Cherry are available from many nurseries, with Sweet Chestnut and Oak available in the next five to ten years.

Planting our first demonstration plots

This year we broke ground on a new project several years in the making. At four sites across the country, we are planting demonstration plots to show how seed from our orchards compares to material collected from seed stands. Each site will have lines of Sycamore, Silver Birch and Wild Cherry from these different seed sources to show visibly the positive effects of tree improvement.

In December we planted one site with Forestry England in Kent, and another in Herefordshire with the Duchy of Cornwall. In the new year we will plant the remaining two sites with Forestry England in Nottinghamshire and with a private estate in Perthshire. We hope that in several years' time forestry groups will be able to visit the plots to see the differences for themselves!

Seed collection for progeny trials

Our demonstration plots are going to show how improved seed performs alongside seed stand material, but at FTT we are committed to going even further. By experimentally testing the form and growth of the plus trees in our seed orchards, we can further improve the quality of the seed produced.

Marking out the first demonstration site on the public forest estate

Planting the first demonstration plot on the Duchy Estate

One of the best ways to do this is to establish experimental plots known as progeny trials and to assess them over many years. Seed is collected from each plus tree and raised into progeny that are planted out in large trials replicated across the UK. By studying how the progeny perform at different sites, we can tease apart the genetic and environmental contributions to the fine form and growth of the parent plus tree.

During autumn 2021 we collected seed for two series of these trials testing Sycamore and Silver Birch which will be planted in winter 2022/23. The trials will start to give important data after five years and be complete after fifteen, at which point they can be thinned genetically to produce additional seed orchards.

Collecting and weighing Sycamore seed for progeny trialling

James Cryer

Peter Borrowman

Expanding our Oak grafted seed orchards

Over the last few years, we have been establishing four seed orchards of Oak to improve the supply of high-quality British acorns for productive planting. These orchards are made up of grafted trees and the scions are taken from individuals across the UK with outstanding timber traits. Three are of Sessile Oak (*Quercus petraea*) in Herefordshire, Shropshire and Co. Down, and one of Pedunculate Oak (*Q. robur*) in Derbyshire.

This autumn, we were awarded a grant from the Tree Production Innovation Fund, operated by the Forestry Commission, to continue this important work. The funding will allow us to graft 1,200 more trees in January 2022 with scions collected from mature Oaks in the Forest of Dean and Herefordshire, and from two archive sites. The successful grafts will be planted out the following winter and will almost complete all these orchards! We are expecting the first acorns to be produced in five to ten years' time.

Patsy Wood Scholarship

The Patsy Wood Scholarship is an initiative coordinated by FTT and the Royal Forestry Society (RFS) and funded by the Patsy Wood Trust to support young graduates in their first job and to introduce them to the work of FTT.

James Cryer – our second scholar – completed a very successful year with forestry consultant William Hamer in Hampshire and Berkshire and is now working as an Assistant Forest Manager with Tilhill. James has written a review of his year that can be found on our website.

We are now delighted to welcome the third Patsy Wood Scholar, Peter Borrowman, who started in November 2021, also with William Hamer. The role has been expanded to two years to give Peter the opportunity to apply the skills he learns in the first year to the tasks of forestry management in the second. We are looking forward to working with Peter on the critical role of forest genetic resources in tree improvement, seed sourcing and resilient woodlands.

Change of CEO at Future Trees Trust

A message from John Leigh Pemberton, Chair of Trustees:

After more than ten years as our fundraiser and then Chief Executive, Tim Rowland has left Future Trees Trust. I would like to take this opportunity to thank Tim on behalf of the Board for all he has done for the Trust and to wish him well for the future.

We have exciting plans to increase significantly the scope and depth of our work as the only UK charity dedicated to improving broadleaved trees by conventional selective breeding to deliver vital environmental, economic and wellbeing benefits for current and future generations. We will be able to share more details about this with you in 2022 and very much look forward to implementing these when our new Chief Executive is in place.

Please visit our website for more information: **futuretrees.org**

Exclusive research preview

Mingling with the trees in Lady Park Wood

by David Cracknell

It's done. I can't believe it. Finally. The last paragraph. The last sentence. The last full stop.

After two and a half years' work, in February 2022 I had finished my MSc dissertation on the epidemiology of Ash dieback in Lady Park Wood (LPW).

Groan, not another study on Ash dieback?! I hear you say. Or to give it its Latin name *Hymenoscyphus fraxineus* (*H. fraxineus*). And I don't blame you – there have been approximately 20,000 studies on the disease, and yet we are still not quite sure why it affects some trees so badly while its near neighbours remain disease free.

But with the unique historical tree records in LPW, which was set up as a nature reserve in the 1940s, I was able to do a truly remarkable study with the help of the legendary George Peterken ("GFP").

Because we could trace the decades of growth of hundreds of Ash trees before Ash dieback struck the woodland around 2016, we could see how that prior vigour of the specimen was correlated to the severity of later disease.

In other words, if a tree was faster growing than a neighbour in the years before the pathogen arrived, would it stand it in better stead?

I will answer that question shortly, but first let me review the other key questions we were asking in the study.

Just to reintroduce myself. I am a former Sunday Times writer who became involved in woodlands just six years ago when I purchased an eight-acre patch of ancient woodland near Appledore in Kent.

I wanted to know everything about it: the wildlife (we have wild boars), the birds, the fungi and of course the tree species. Soon I was burrowing through the books and historical records at the Kent archive in Maidstone, until finally I took the plunge and signed up for the MSc in Forestry at Bangor University in 2018.

George Peterken and David Cracknell

The first person I met was James Walmsley, the head of the Forestry department and a trustee of Woodland Heritage. It would be James who recently invited me to join him as a trustee of this fine charity.

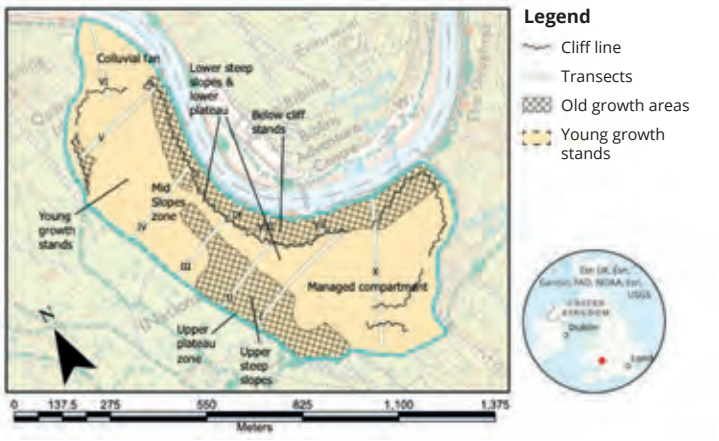
I immersed myself into the books and papers on silviculture, forestry ecology and agroforestry, becoming a real disciple of light management and creating woodland clearing ("gapology", as I called it). Not long into the course I drove down to the Wye Valley to interview GFP.

At the end of our three-hour long chat, I asked him if he had any suggestions for a dissertation. "Well, you could help me assess the extent of Ash dieback in Lady Park," he replied.

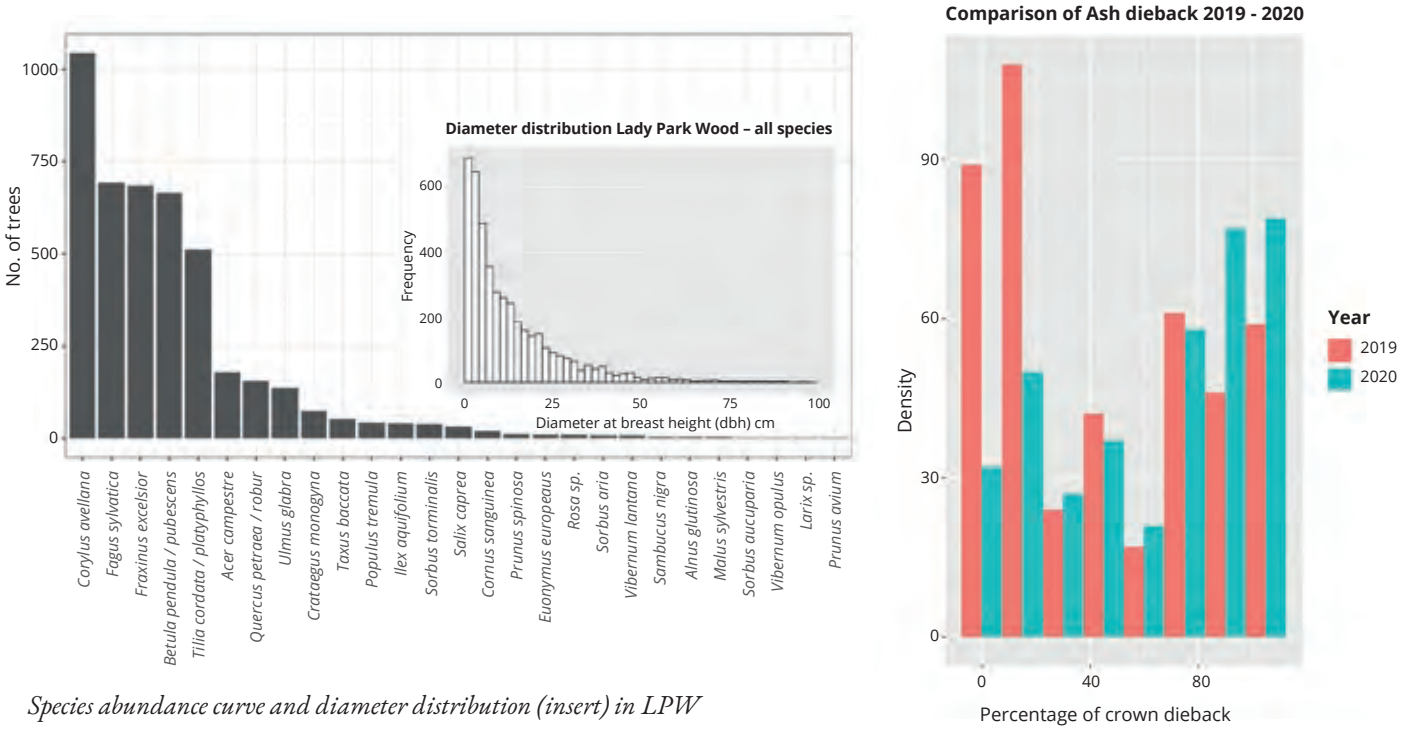
A few weeks later I was back. In the summer of 2019, we managed to measure the extent of crown dieback and epicormic growth (trunk sprouts are a sign of stress) in 464 Ash trees in the ten permanent sample plots in LPW known as "transects".

'GFP' assesses an Ash crown

Transect marker



Map of Lady Park Wood, Monmouthshire



Species abundance curve and diameter distribution (insert) in LPW

The plots were originally marked out with wooden stakes in the 1940s by Oxford University's Dr Eustace Jones and his students. These were replaced by galvanised steel bars in 1977 by Alan Orange, an enthusiastic school leaver who needed a holiday job.

Alan is one of the heroes of LPW because he was only supposed to measure the diameter at breast height of the trees ("dbh"), the classic mensuration dimension used by academics; but he went much further and drew highly accurate maps of the plots on graph paper.

It was thanks to those maps, which have been updated by GFP over the years, that I was able to conduct some really high-tech modern analysis of the spatial relationships between the trees, using the R software and the Spatstat package.

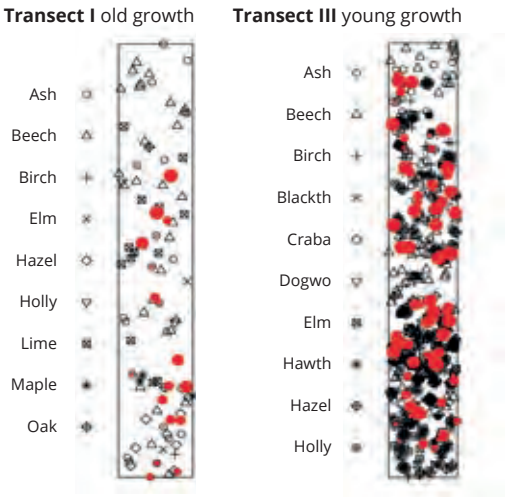
Once I had scanned in all the hand-drawn maps into the computer with GIS software, listing the species and dbh of more than 6,000 trees of all species including Ash, I was then able to test the spatial relationships between the infected Ash trees and their near neighbours, whatever the species. What is called "near neighbourhood summary statistics".

So, for example, I could list the four, five or more nearest species to an infected Ash tree, and see if the amount of non-Ash trees surrounding the tree made a difference. This measurement is known in the trade as "species mingling" – the extent to which a focal tree being analysed is mixing with heterospecific neighbours.

This has never been done before either.

Another similar trick we were able to apply once we had created this unique spatial database, was to assess

Graphic abstract of statistically significant correlations among diseased Ash



Spatstat plots (R) showing outbreaks of Ash dieback (red circles)

how dominant an infected Ash tree was within its "near neighbourhood unit".

In the same way we measure the number of non-Ash trees in the vicinity, we could measure how many of the four, five or more neighbours were bigger or smaller than the focal tree, thus giving us an individual tree variable known as "size dominance" for use in statistical modelling.

So, what's the scoop? What did we find?

Hopefully we will be publishing the study (as I write this, I am still awaiting my MSc assessment), but I can here reveal some of the juiciest findings in an easy-to-digest way.

Firstly, for the first time, we showed that prior growth rates of Ash trees were significantly negatively correlated with the severity of the disease. In other words, the more tree vigour, the healthier tree if you like, the more likely it is to resist the disease. This was true when we measured the growth rates – absolute and relative – over periods of nearly 40 years and also in a shorter period of the decade just before the disease struck the wood.

Secondly, I can reveal that we found for the first time that species mingling was significantly correlated with Ash dieback. When five or six neighbours were included in analysis, we saw that increased mingling of Ash actually increased the likelihood of disease. This is an interesting counterintuitive finding, as much of ecological research suggests that increased species diversity dilutes the effect of pests and pathogens on a focal tree.

Thirdly, we found that when an Ash was dominant – the biggest tree in the immediate neighbourhood of a half a dozen or so trees – the severity of the disease was less. Again, one might have expected the opposite: that the more volume of Ash, the greater number of spores and therefore disease spread.

Other findings confirmed previous research, including greater stand density, higher soil pH and slope gradient increases the likelihood of disease and higher canopy position aids resistance to the pathogen.

It has been an exciting journey, frustrating at times, but these extraordinary findings have made all the slog worthwhile. I am also aware that, of course, these site and spatial factors play a limited role in the epidemiology of *H. Fraxineus*, and that genetics are likely to cover the rest.

Yet the work has also raised so many new questions that could prompt future research, such as what combinations of different species in the near neighbourhood are most likely to contribute to Ash dieback. Previous research suggests proximity to Beech may agitate the disease to an extent. LPW certainly has Beech in abundance in many of the old growth stands.

As for LPW, it is now rife with herbivory after the failure of the deer fencing. It is very sad that there is now no natural regeneration of any species. There is an urgent need for repairing the fence; otherwise, the very essence of the experiment in woodland development is compromised.

I very much hope that LPW will continue for another 80 years as a nature reserve, allowing future students to continue vital ecological research as originally intended.

Continuous Cover Forestry Group (CCFG) Programme 2022

CCFG England

Thursday May 26
Field Visit to East Dorset. Growth responses to interventions during the transition of Douglas Fir and Oak plantations to irregular structures. A major gap in our knowledge relating to the transition of even-aged stands to permanently irregular structures is the lack of stand /yield models. This meeting will consider this issue in the light of increment and growing stock information in a number of Douglas Fir stands in various stages of transformation and will also consider the growth response of Oak plantations subject to innovative thinning regimes.

Friday September 16
Field Visit to Kyloe, Northumberland - a joint visit with the RFS and the RSFS. Kyloe is a private estate in Northumberland with the forest managed by Scottish Woodlands. We will be hosted by Arran Smith the local manager. The estate was last visited by the CCFG in 2006. The woods are managed under CCF (Continuous Cover Forestry) with regular interventions, natural regeneration and under-planting. One particular interest will be to see the effect of Storm Arwen (and others) on the structure of the woodland.

CCFG Scotland and CCFG Wales

Field Visits - Dates in September and October tbc. We have not yet confirmed the locations or dates for these field visits. We will provide more details in due course via our membership emails and within our Summer Newsletter.

Field Visits will be opened up to non-members after a short period. To be sure of your place please book early.

ProSilva Europe Annual Meeting, Luxemburg

June 14 - 17
The focus of this meeting will be on: 'Forest visions 2020+ - ecosystem services and future challenges'. As well as formal presentations there will be excursions around the city of Luxemburg on the themes of:

- Urban forestry – Luxembourg City forest "Baambësch"
- Forestry and water protection – North of Luxembourg "Burfelt"
- Forestry and tourism – east of Luxembourg "Mellerdall"
- Forestry and nature conservation – south of Luxembourg, the natural reserve "Prënzebierg Giele Botter"
- Climate change and risk management – west of Luxembourg "Härebësch" SES Koerich

Foreign study trip

We are planning a three-day study trip to Ireland in autumn 2022, focusing on the use of CCF in forests in the Wicklow area, including sites where research into the transformation of Sitka Spruce forests is being carried out. More details to be available via our website.

Courses on Continuous Cover Forestry delivered by Dr Jens Haufe and by Selectfor

April 27 - 28
Lowland England given by Selectfor – April 27-28 2022.
See **www.selectfor.com/courses/courses.html**

Scottish Borders given by Dr Jens Haufe. To be in the week beginning September 5th – further details to be available via the CCFG website.

Webinars on CCF

Dates
We are now hosting regular webinars where practitioners and academics explain aspects of CCF management, and these are available free of charge to all interested people – past webinars can be located on our website, which should include details of one scheduled for late March (CCF in Slovenia); another event is due to be staged in late April (CCF in Highland Perthshire).

For further details of all our 2022 events please visit our website: www.ccfg.org.uk or contact Michelle Raisborough, our administrator at administrator@ccfg.org.uk

A gift of trust

by Guy Corbett-Marshall

Over the last decade, the single most important source of donations that Woodland Heritage has received has been legacies.

Reported elsewhere in this Journal is the amazing difference that one legacy has made and will make to the charity's mission, and which has allowed James Wood to be established, at which Woodland Heritage aims to demonstrate the very best in uneven aged silviculture.

This wonderful gift will help us achieve one of our core objectives for the charity's permanent benefit and will give us the chance to develop and showcase its progress for decades into the future.

James Stratton trusted Woodland Heritage with all the balance of his Estate, what is known as a residuary gift, an act of faith displayed also by the late-Sydney Draper. Sydney was a longstanding supporter of Woodland Heritage; indeed, it was his lifetime donations that allowed the charity to start its current phase of development work.

Sydney's final gift, his residuary legacy, enabled Woodland Heritage to buy Whitney Sawmills, a possibility of which he would have been unaware, but which can, not just boost the charity's finances in an ongoing way, but also allow us to fulfil another charitable objective.

The two legacies above have transformed the scale at which Woodland Heritage can operate and the charity will always be hugely indebted to Sydney Draper and James Stratton for wanting to support us so generously.

Substantial residuary gifts are rare, and few individuals can make them, but in recent years, the annual work of the charity has been boosted by Woodland Heritage receiving a share of the residuary of other Estates. Like James Stratton, these gifts have come from people with no obvious link to the charity in their lifetimes; to Jill Coates, Arnold Atkinson and Robert Burton and their respective families, Woodland Heritage sends its sincere thanks.

Pecuniary gifts, a specified donation, are probably the most common form of legacies that charities receive and can be for any size. A gift by the late-Alfred Davies for tree planting will help us advance our work at James Wood; Woodland Heritage is most grateful to him and his family for wanting to support our work that way.

Over the nearly thirty years that Woodland Heritage has been active, the charity's work has been helped immensely by many legacies. The ones mentioned above are just some of the more recent ones, but all have enabled the charity to promote the growing of trees and the use of wood.

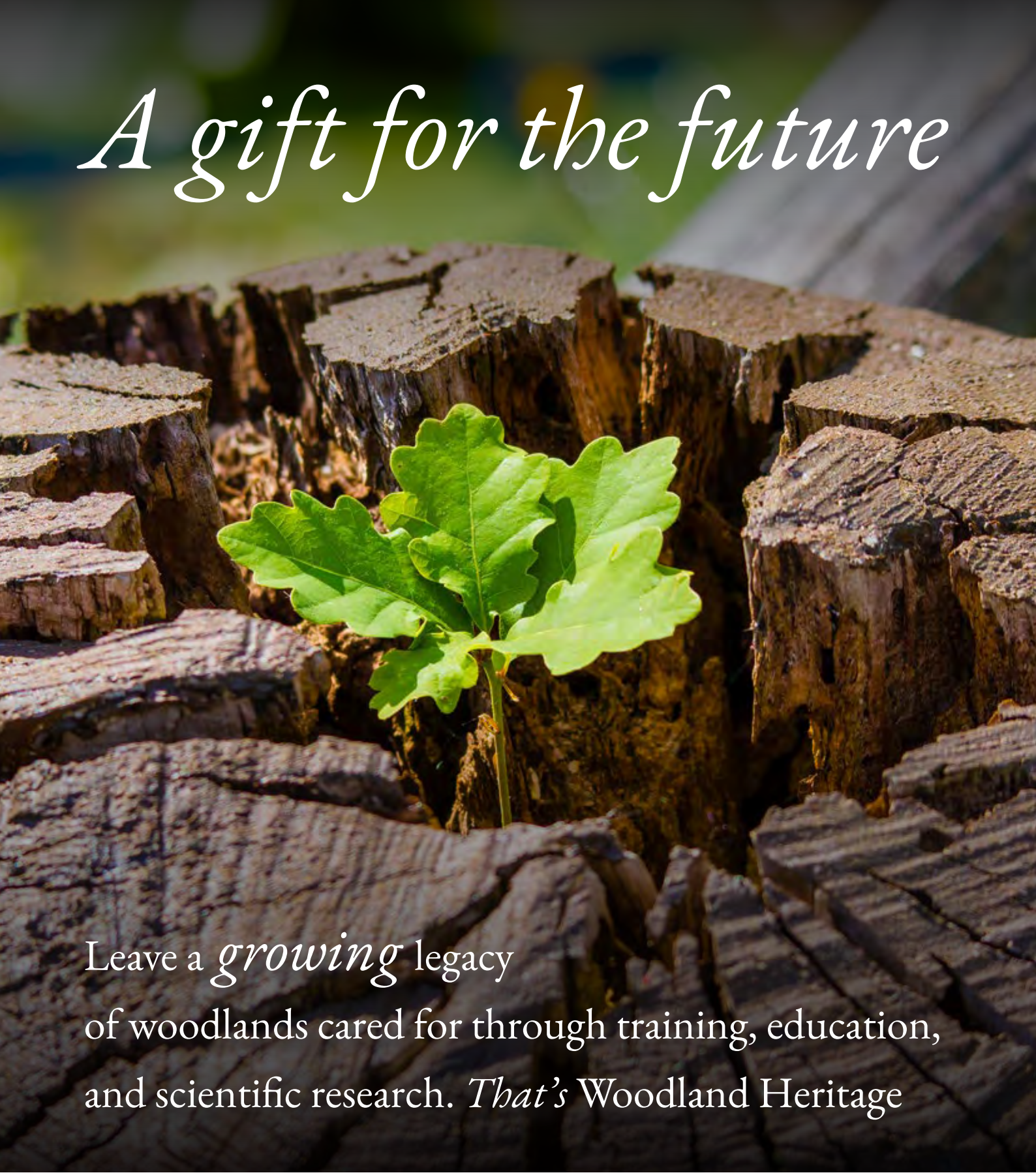
Every bequest made in support of Woodland Heritage's work is an act of absolute faith, a gift based entirely upon trust and the passing on of money or other assets that took the donor a lifetime to acquire. The duty of care to use this final donation made by that supporter is a profound one and Woodland Heritage takes that duty very seriously.

Anyone can remember Woodland Heritage in their Will and make a difference for the future of British woods. For more details, please go to: **woodlandheritage.org/leave-a-legacy**

Photo © Forestry Commission / John McFarlane

Woodland Heritage will be planting James Wood soon

Passing on skills anywhere along the timber supply chain is fundamental to Woodland Heritage's beliefs



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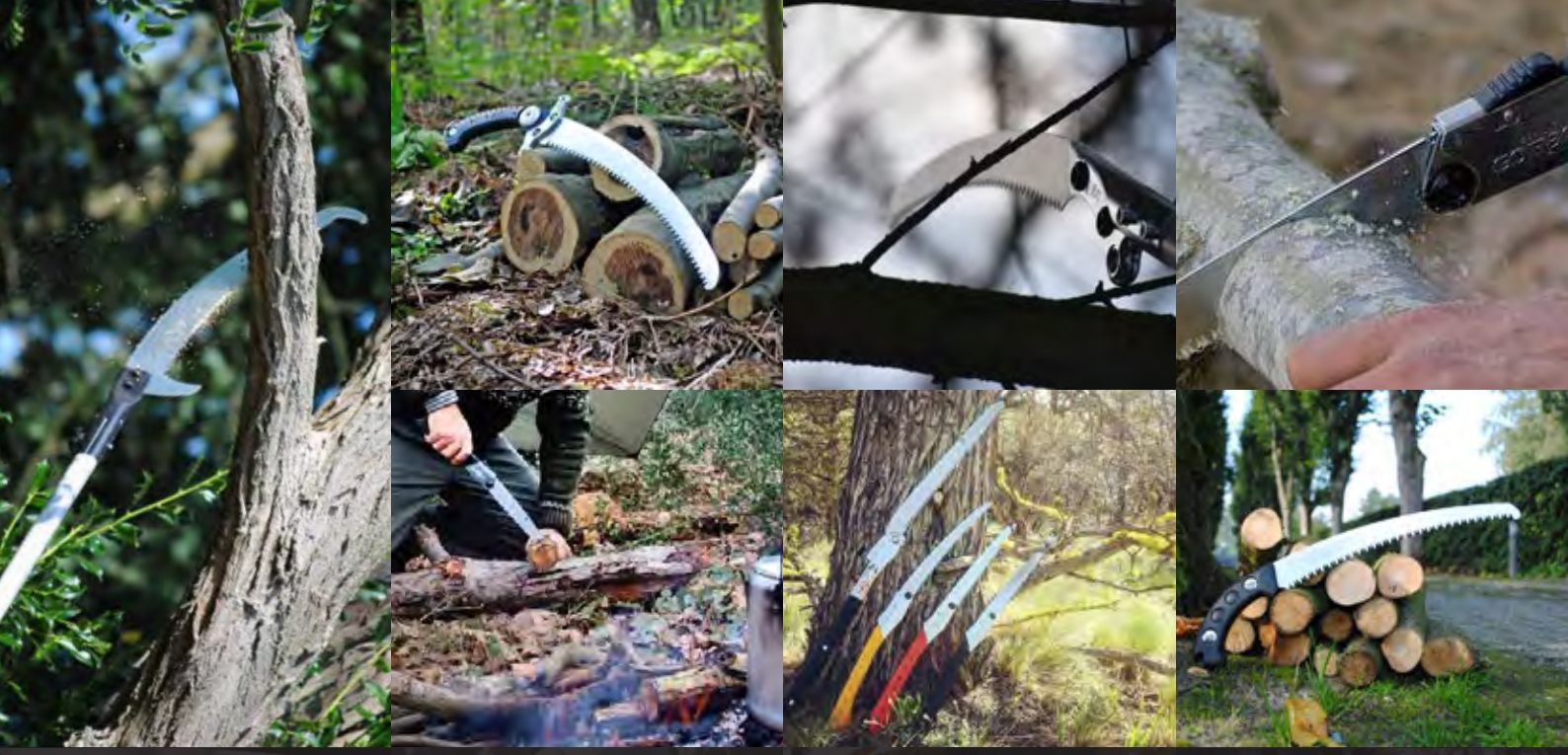

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