Woodland Heritage

2017

Peter Goodwin
1942-2017

WOODLAND HERITAGE

for the future of British woods

Patron HRH The Prince of Wales

Contents

www.woodlandheritage.org.uk

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Peter Goodwin – A life well lived !

by Lewis Scott

I had the privilege and pleasure of working with Peter as his co-pilot at Woodland Heritage from its inception 24 years ago, but, as I said to Sally, there was only ever one Captain !

When such a huge and charismatic personality as Peter is lost, many people can be forgiven for wondering if the charity will lose its direction, its impetus and its driving force ? Will it sink without trace ?

I knew the answer to that question on April 3 when watching Peter's army start to gather on the fields of Sotterley (thanks to his old friend and compatriot, Miles Barne). On and on the vehicles came, and it seemed they would never end. In their hundreds they arrived, coming from every corner of the country. Watching Peter's host assemble by the lake I came to realise that WH would indeed survive and more; it would flourish, and his fellow Trustees and many supporters would all do it for Peter ! It was always difficult to say "no" to Peter, so infectious was his enthusiasm and so right and honourable was his quest. He would adopt a cause and fight for it tirelessly. Peter single handedly raised six figure sums for research into Acute Oak Decline (AOD) and then worked with Dr Sandra Denman, her young team at Forest Research and many Universities, to understand the disease and ultimately defeat it and other threats to his beloved Oak. This work, a unique public-private partnership, will continue. In the credits at the end of the film on AOD made just before Peter's death, Guy Corbett-Marshall commented: *"Without Peter there would have been no film to see and most importantly no story to tell."*

WH aims to connect the growers of timber with all those who used it from makers of fine furniture to sheep hurdles. We want to unite the wood chain and revive the wood culture. For nearly a quarter of a century, WH has done just that, as well as running courses in silviculture, harvesting, measuring logs, sawmilling and many forms of woodworking. His Royal Highness The Prince of Wales was persuaded to become Patron and described this work as a remarkable example of the virtuous circle. **Peter just made everything make sense, his forestry, his saw-milling, his cabinetmaking and his acorn nursery, it was his "virtuous circle".**

As Miles said in his appreciation of Peter for the RFS: *"He had the milk of human kindness by the quart in every vein. His energy and passion swept aside opposition and doubters. He was completely genuine, totally altruistic, always supportive of young people wanting to go into forestry and related trades. Andrew Falcon got it right when he described Peter as 'the beating heart of forestry'."*

His long time friend and doctor, Tim Cutler, said: *"The one phrase I keep in my mind about Peter especially when I am in or near any woodland is the Sir Christopher Wren memorial, 'If you seek his monument, look around you'. Many future generations will have a lot to thank Peter for. By his inspiration and enthusiasm for better woodland, our countryside will be his memorial."*

Amy Goodwin, Peter's youngest daughter, wrote after seeing the AOD film: *"Dad would have loved to have thought that following his death further great achievements could be made on AOD so that his dear, dear English Oak would be saved."* Amy, it will be.

Without Peter so many good things would simply not have happened and so much bad would have gone unchallenged. Peter was not just a force of nature, he was a real force for good in the world.

A privilege and a pleasure, Sir.
Lewis

Sally Goodwin standing with two giants of the forestry world

A tribute to Peter Goodwin

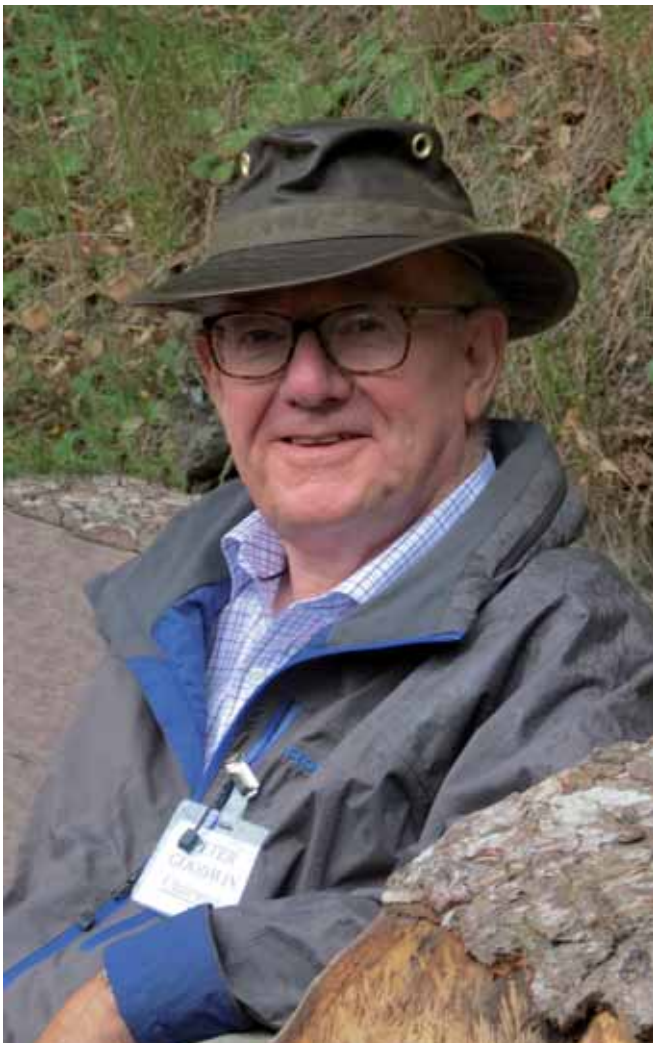
by Gary Battell

We were all greatly saddened to hear that Peter Goodwin had lost his fight for life. It is difficult to put into words Peter's many fine attributes and the lifetime contribution he made to the world of woodland improvement, cabinet making and education. Peter was respected for his knowledge, his passion and his desire to share his knowledge that linked growing high quality timber to its end users.

Peter will be remembered as a doer not a talker. He achieved so much in his life that brought long lasting benefits to the woodland industry, to young people and a greater understanding of Acute Oak Decline (AOD) thanks to his amazing fund raising and support of Forest Research. Everyone who supported him both admired and deeply respected him and his communication and organisational skills that underpinned everything that he achieved.

Peter was an absolute pleasure to work with, as he was honest and forthright and amazingly supportive. He will be remembered for his long involvement with the East Anglian Division of the Royal Forestry Society (RFS). His close friends, Miles Barne and Edward Brun, said Peter transformed the meetings when he burst onto the scene in the late 1970s with his enthusiasm which stimulated discussion and debate, which were greatly enhanced by the name badges and loud speaker that he instigated. He had a wonderful skill of getting more people involved by thrusting a microphone into their hands and asking for their comments. Peter was the leading figure at RFS meetings and any meeting without Peter was bereft. The fact that the East Anglian Division has so many members is entirely due to Peter.

Many woodland owners sold wood to Peter and they all say he was easy to do business with. He knew what an Oak butt would look like inside and he shared that knowledge with the seller. He was always scrupulously honest and paid the best prices for the high-quality Oak and other species he required.



Edward Brun says, "Peter and myself have been instrumental in organising many trips abroad over the years to Denmark, France, Germany and Holland to learn more about the silviculture of Oak and especially the provenance of high quality European Oak. More recently Peter travelled with me on a trip to Denmark to assist in the marketing of British Ash." Edward continued his memories by saying "It was a real pleasure witnessing Peter being presented with the Royal Forestry Society Gold Medal in 2011, a medal so deserved for his dedication to the RFS and the setting up of Woodland Heritage with his friend, Lewis Scott, his support for the European Squirrel Initiative and his immense fund raising work for research into Acute Oak Decline."

I worked closely with Peter, Dr Sandra Denman (Forest Research) and Tom Newman (SummerIsle Films) on the making of an AOD appeal film that will soon

become widely available. Sandra, Tom and I will miss his guidance and humour very much, but we are delighted that Peter's legacy will live on in the film funded by Woodland Heritage.

Peter was a wonderful member of the Woodland Heritage team along with Lewis and Belinda. Ted Wilson, a past lecturer at Newton Rigg, said "Peter, Belinda and Lewis at Woodland Heritage always gave wonderful praise to other people's work and they offered huge encouragement and support to staff, students and business owners to bring forward the next generation of foresters and craftspeople."

Andrew Falcon spoke about Peter's knowledge and contribution at the celebration of Peter's life held at the Sotterley Estate, his favourite place, where a dynamic approach is taken to woodland management. Andrew said "Peter had an ability at Woodland Heritage and RFS meetings of extracting every angle of discussion in his quest for greater knowledge and was always willing to share and disseminate his unrivalled silvicultural knowledge. From the 1970s onwards he increasingly connected cabinet furniture makers to foresters to improve the way trees could be managed to produce high quality timber and bring improved environmental benefits for nature."

WH Trustee Geraint Richards said: "I think Peter encapsulated in one man what is so wonderful about the trees

and timber sector: deep knowledge and huge experience but made alive by passion, friendliness, humour and charm."

Peter set a wonderful example to people with his self-effacement and humility. He championed and supported many hundreds of people who are now making significant contributions to the woodland industry, to wood processing and forest research into pests, pathogens and diseases.

Peter was a driving force for the enrichment and protection of British woodlands over the last three decades and he worked with tireless enthusiasm until the end.

Our 2017 Field Weekend

HAMPSHIRE & BERKSHIRE BORDERS

Thursday June 15 morning

Gaze Burvill, East Tisted, Hampshire

By kind permission of Simon Burvill

Our day will start with a tour of the workshops and showroom of Britain's leading manufacturer of award winning garden furniture and kitchens. With over 24 years' experience Gaze Burvill's workshop thrives on the talented work of craftsmen, many of whom have trained with the firm to create its unique designs. Combined with new technology, every piece is hand built and hand finished to the highest standard. Gaze Burvill exhibit regularly at Chelsea and throughout the world. We will also be shown two new films, both funded by WH, one on managing small woodlands and the other on Acute Oak Decline. The afternoon will commence with our AGM before we drive to the nearby gardens of Rotherfield Park Estate.

Thursday June 15 afternoon

Rotherfield Park Gardens, East Tisted, Hampshire

By kind permission of Sir James and Lady Scott

These extensive gardens around the house cover about twelve acres and are Grade II listed by English Heritage. They have been tended by six generations of Scotts (and their wives!) since 1808 and include an acre of walled garden within which the vegetables are planted according to the phases of the moon. There are glass houses, a dedicated peach and apricot house, and a vinery. Other features include a ha-ha, the remains of an ice house, a Lime avenue, clipped Yews, orchards and a new Willow cathedral. In 1928 Norah Lindsay produced a planting plan for one side of the house. Some of this remains, as do her notes in the Rotherfield archives.

Friday June 16

Herriard Park Estate, Herriard, near Basingstoke, Hampshire

By kind permission of the Jervoise family

Led by William Hamer, Agent for the Estate, and assisted by Graham Taylor, WH Trustee, we will visit the historic Herriard Estate which has been in the same family for many generations – its ownership can be traced back to a lieutenant of William the Conqueror called Hugh De Port. It is set in wonderful parkland with much to see, including some of the tallest and cleanest Douglas Firs you might ever come across. The Estate is a strong advocate of a vibrant rural economy to support and maintain the beautiful countryside created by farmers and landowners. They are members of many national organisations that promote this, such as the NFU, the CLA and the RFS and they accept their responsibility to assist local groups, organisations and charity events.

Saturday June 17

Kintbury Holt Woodlands, Kintbury, West Berkshire

By kind permission of the Stevens Family

Led again by William Hamer, Agent for the Estate, and Graham Taylor, we will visit this predominantly Oak woodland with some fine mature trees and some extraordinary plantings at wide spacing which actually work. Oaks raised from Kintbury's own seed provenance and Farm Woodland planting. It is at Kintbury that Peter Goodwin planned to talk about Oaks of different ages and grades; selecting the 'winners'; and to discuss the current demand and prices achieved for a parcel of winter felled Oak and what to do with the cankered Cherry. We will also see a demonstration of the traditional craft of Oak cleaving by a local man.

Members and their guests will be very welcome

To book, please contact Woodland Heritage:

enquiries@woodlandheritage.org.uk or **01428 652159**

WOODLAND HERITAGE
for the future of British woods

Gary Battell

Winner of the 2017 Peter Savill Award

At the Woodland Heritage Trustees' December meeting Peter Goodwin's nomination was read out: *"True passion can engage and inspire action. Gary Battell certainly is passionate about trees, the wildlife they support and the bluebells they shelter. I commend Gary's nomination for the 2017 Peter Savill Award".*

Gary's love of trees originated in his time as a Boy Scout whilst living in a children's home for the first fourteen years of his life. He has worked in woodland and park management since 1975 including posts with the Forestry Commission, the National Trust and, since 1998, as Woodland Advisor to Suffolk County Council. He was a founding member of the Ancient Tree Forum, sits on the Regional Committee of the Royal Geographical Society and the Committee of the Royal Forestry Society's East Anglian Division.

His enduring friendship with the late Dr Oliver Rackham brought him additional landscape history and ecology knowledge which he now passes on to a wide audience. He is a valued adviser to numerous organisations as well as helping individuals to get into forestry or set up their own businesses.

During such spare time as he has, Gary supports the management of Staverton Park, with its 4,000 magnificent Oaks in an ancient deer park. In the nearby small Woodland Heritage tree nursery he raises acorns to supplement the site with young Oaks.

Since his attendance at Forest Research's inaugural meeting to discuss what Dr Sandra Denman had just named "Acute Oak Decline" (AOD) he has been closely involved in the work at Alice Holt earning huge respect and appreciation. He continues to play a leading practical role in the filming of our AOD research film.

In recognition of Gary's contribution to forestry through the giving of his time selflessly in the cause of tree health, woodland management, woodworking and education Woodland Heritage Trustees were unanimous in awarding him their prestigious 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 acquires Whitney Sawmills

by Guy Corbett-Marshall

Thanks to almost a decade of working together via delivery of the 'Woodland to Workshop' course, it became a natural step for Woodland Heritage to become the owner of Whitney Sawmills last August.

This highly respected business had been established by local craftsman, Will Bullough, in the early 1990s at a time when Will, as a craftsman, had become increasingly frustrated with the quality of the timber available to him so he decided to try milling and drying his own materials little realising what this experiment would eventually lead to.

The sawmill grew steadily to become a UK-wide supplier of timber to businesses of all sizes from the grand Dumfries House project in Scotland to one-man boat builders in Cornwall. Over the years the mill has supplied many exciting prestige projects such as fine Oak for the King's Dining Room in Edinburgh Castle, or Sweet Chestnut for the royal row barge, Gloriana. More recent projects include milling Oak and Elm for the restoration of *HMS Victory* and, more locally, the rebuilding of Grade 1 listed Llwyn Celyn just over the border in Wales.

A sawmill is at the centre of the timber supply chain although it has become increasingly rare as a type of business with a huge reduction in the number of hardwood sawmills in the UK in recent years. Woodland Heritage believes that, with the right approach, a healthy future exists for those that remain; something that it wanted to demonstrate by taking over Whitney Sawmills.

As well as supplying the varied demands of its customers, Whitney Sawmills also helps to keep rural employment and skills alive. Whitney Sawmills isn't just a supplier; it's also a customer, buying timber from local landowners and helping to secure the jobs that they in turn offer. It has also always been a priority at Whitney to aim to benefit woodland wildlife wherever possible, as so often it is lack

Guy Corbett-Marshall and Will Bullough mark the change of ownership of Whitney Sawmills

of woodland management that is creating the greatest threats to many endangered species.

Whitney Sawmills supplies a range of different timbers specialising in Oak, although Douglas Fir has become increasingly popular in recent years. Other hardwoods supplied include Ash, Elm, Sycamore, Sweet Chestnut, Cherry and Poplar, with Walnut, Alder, Lime and Maple occasionally available as well.

The vast majority of planking stock is milled off-site and then air-dried in a large barn, although some stock is kiln-dried to reduce moisture content further for internal uses in particular. Kiln-drying takes over from the air drying process which, with the most commonly supplied Oak planking, can normally be assumed to take one year for each inch of thickness. Air drying goes down to 16-17% compared with10-12% moisture content with kiln drying.

Tongue-and-groove flooring as well as skirting, architrave and cladding have all been growing as sales products, although the other major product in demand besides planking is beaming, which is taken in as green logs and then milled on-site to order. Where possible 'falling-boards' coming off the saw will be retained for use as flooring or planking, but otherwise the main by-product created is firewood that is sold in bulk (slab-wood), as well as by the sack to the general public.

Customers include joiners, cabinet makers, timber framers, builders, architects and DIY woodworkers and whilst a good proportion live and work within a 50-mile radius of Whitney, many orders are shipped each year across the UK; one of the attractions that draws customers to Whitney Sawmills is its ability to fulfil customised orders.

Whitney Sawmills has always supplied both UK and European timbers with Woodland Heritage's aim being to increase the proportion of timber sourced from the UK and especially from the West Midlands and Wales. Woodlands in this area are often under-managed, reflective of the trend nationally, which led to the project to create a hardwood roundwood price index and video described elsewhere in this edition of the Journal.

For further information on Whitney Sawmills please go to **www.whitneysawmills.co.uk**

John Jackson

Winner of the 2016 Prince of Wales Award

Teaching on the Woodland to Workshop course is an enormous privilege, not just because of the calibre of the other tutors but, significantly, because of the diverse nature of the participants. The rich blend of ages, backgrounds and skills amongst those attending each course means every course is incredibly memorable. It does, however, also mean that it is incredibly difficult for the tutors to choose, each year, the outstanding course attendee to receive The Prince of Wales Award. Although the attendees in 2016 were of the usual high standard, the tutors unanimously agreed that John Jackson should be the 2016 recipient. John showed exceptional enthusiasm on the course, regularly asking questions and diligently taking notes. John, from all the tutors on 'W2W', our heartfelt congratulations. **Geraint Richards**

from woodland to workshop

I grew up in rural Northumberland and spent a great part of my childhood out of doors. My experiences on the fells of the North Pennines and in the forests of the Allen Valley gave me a passion for wild things and wild places. My father's business, a specialist joinery and furniture makers, gave me an early window into how materials harvested from these wild places are used to showcase the beauty and functionality of what was all around me.

After leaving school I spent four years working overseas – in South Africa, Spain and lastly Slovenia. These trips brought me into contact with wilderness in many varied forms and my fascination with the natural world took total control. It was the time I spent working in the eastern mountains of Slovenia that put forests and timber to the front of my mind. To experience first-hand the tradition and way of life that grew out of these wild and remote forests was what I had been looking for. It cemented in my mind a need to work with wood, so I returned to Northumberland and began an apprenticeship with my father.

Geoff Jackson started Langley Furniture Works 35 years ago on his own, but the business now employs 12

people. Our work ranges from free standing furniture to kitchens, staircases, external joinery, listed building and church work. I have been working with him for six years now and although I am continually reminded of how much I have to learn, I feel today that I have a skill set which allows me to tackle the more challenging side of our work. My greatest pleasure is in sourcing, seasoning and then working with locally grown timber. We have a good relationship with a sawmill in the west of the country and through this link we have access to some fantastic trees which yield spectacular timber.

In trying to broaden our business horizons and my own personal knowledge of the UK timber trade, I came across Woodland Heritage. I had been looking for a wider timber community for some years, as it feels at times that the Northeast is a slightly forgotten outpost of silviculture and woodworking. The W2W course sounded exactly what I had been looking for, and being offered a place on the spring course was great news.

The course delivered far beyond my expectations. To have access to their tutors, all experts with decades of experience, was an unexpected and fantastic opportunity. The knowledge I gained at Whitney Sawmills on the drying of sawn timber made a big impact and challenged some of the principles which I had taken for granted. This, combined with a group of fellow participants from the wood chain, made for an unforgettable and hugely valuable experience.

In the months after the course we brought a large parcel of Oak and Elm from the Borders, so the skills in selecting, sawing and seasoning hardwood I had learned were immediately put to the test. Since then, I have been searching the wilds of the North for more new and exciting timber to fill our sheds with and to pass on to others so they too can experience the wild and beautiful potential of locally grown timber.

Letters to the Editor...

Dear Lewis and all at Woodland Heritage – I hope this finds you all well.

I am so very saddened to have news of Peter's sudden passing and write now to tell you I am thinking of you all – his Woodland Heritage family, and his own family – with love and prayers.

It is as though a great Oak in our forest community has fallen, leaving a huge gap through which cold winds now blow. It is hard to see how the canopy could possibly recover when such catastrophe strikes. In time, perhaps, new seedlings will grow in this place too – maybe those fostered by Peter's leadership and encouragement.

Today I have been using my WH extendable pruning saw in anger – and thoughts of Peter and his teaching were never far away. (I may now acquire a Land Rover with which to practice his patented roof-top technique...) We shall grow Oaks, and prune them, forever in his name.

Yours aye,
Kate Tuer – Forester and Woodland Heritage supporter

Dear Kate,

What a lovely letter! Peter was certainly "a great Oak in our forest community" and indeed he does leave a "huge gap". I like the way you move on to a positive note of "new seedlings will grow... fostered by Peter's leadership and encouragement". You know, I think you might be one of them!

Yours aye,
Lewis

Dear Lewis,

I am very sorry to hear about Peter. I remember him well and particularly how he approached me at the final dinner of the 'from Woodland to Workshop' course and said, *"So what can we do to support your business?"* As simple as that question was, I found out over time how rare it is for anyone to take an interest, or to show willing to support some random small venture trying to achieve something impossible (and puny at the same time) somewhere in the North West.

It is sad that he is gone and although I didn't know him well, I am sure he will be missed very much by many. He infused the charity with his enthusiasm enough that it will carry on in that spirit well into the future

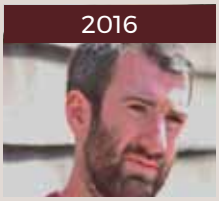
I have to say your course was one of the most helpful things I attended when I was preparing to set up our sawmilling business. If we failed to make it in the end then that simply is a testimony on how hard it is to make something like that work in present economic climate and work culture.

I hope you and your colleagues are well and please give my regards to all who continue with the great work of making forestry and the timber industry in UK a better and stronger and more sustainable one.

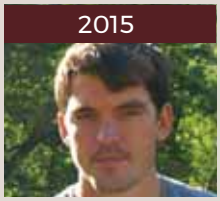
I am now working again as a joiner so although I don't log trees and sell planks anymore I am fortunate enough to still have the touch and taste of wood in my everyday life.
I hope to develop my craft around the theme of beautiful and local timbers as much as possible.
(www.norakasanicka.co.uk)

All the best
Nora Kasanicka

From our Woodland to Workshop courses – some past winners of The Prince of Wales Award and ... some seedlings for the future ?

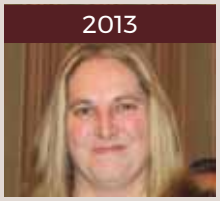


John Jackson

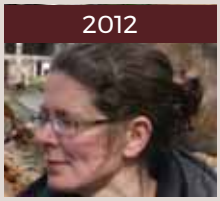


Nick Hill

Finbar Vesey



Nina Williams

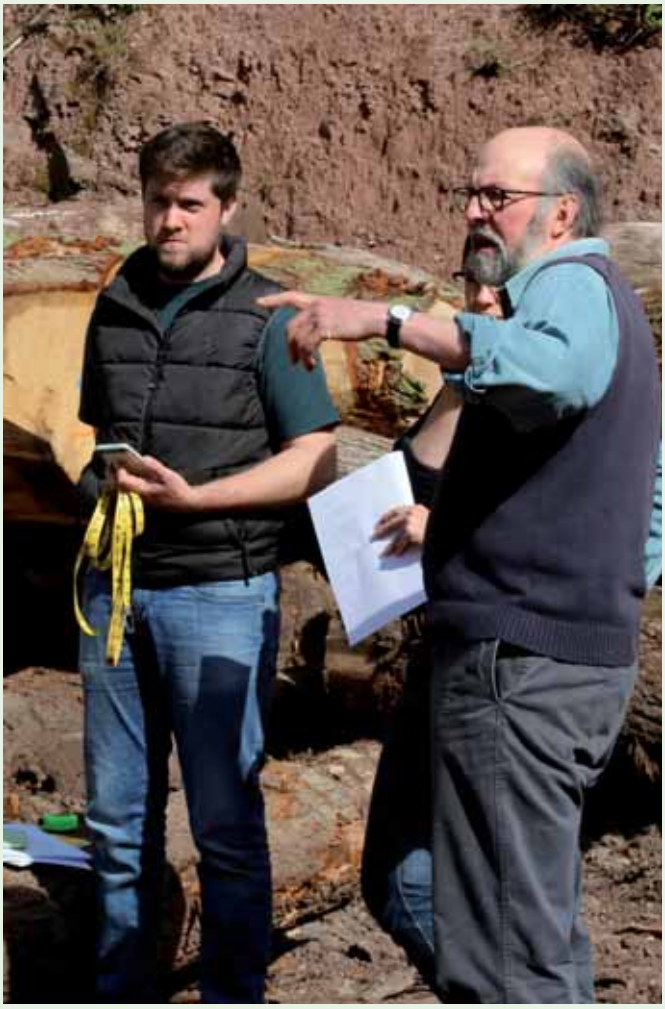


Tabitha Binding

Matthew Cope

Action from our 2016 courses

from woodland to workshop




Wood-Miser

For the future of British woods

Wood – Versatile. Beautiful. Sustainable.

Do you care about wood as well as trees?

by Lewis Scott

Well, what do we mean by woods? We could mean woods as in Woodlands, or, we could mean woods as in planking Oak (ready for crafting into a fine dining table), or one of the many other beautiful species found on these shores, Ash, Sycamore, Cherry, Chestnut, Larch, Lime, Walnut to name but a few.

We could mean structural beams of solid Oak or Douglas Fir?

The "future of British woods" is intentionally ambivalent to mean both our trees growing in well managed woodland and also the timbers our craftsmen and women will hopefully still be using in a thousand years time.

WOOD IS GOOD

Trees, happily design out most waste naturally if we let them, by consuming only sunlight, soil nutrients and water. The production of steel is highly energy intensive, producing and disposing of UPVC is a toxic nightmare, concrete can give off 140kg CO_2 per cubic metre – whereas trees as they grow convert CO_2 into oxygen, purifying the very air that we breathe.

Wood is Good and to promote its use over other less environmentally friendly and sustainable materials, Woodland Heritage has invested in a sawmill near Hay on Wye. We are living up to our motto of "action not words" and are now helping to strengthen the wood chain. As far as is possible we will try to adopt the principle of locally grown, locally used.

We need to grow our trees straight and strong and we cannot just plant a tree, walk away and hope...you need to mind your "P"s! *(see opposite)*

"Trees can live for hundreds of years and then exist for another thousand as a beam in a Cathedral (Peter Garthwaite OBE)," or, as below, in a more modern demonstration of beam construction.

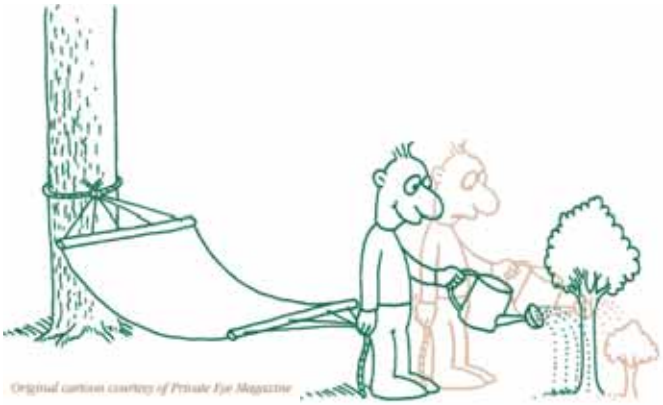
Gloucester Services by Glenn Howells Architects

And if wood is used in a less heavy-weight way we have the Pembroke Collection (opposite) in Elm and Ash.

The designer Sarah Kay said *"Inspired by the Welsh tradition of 'stick' chairs, sometimes also known as Welsh Windsor chairs, I was struck by how characterful they are. The proportions are typical of quite narrow seats in depth because of the size of the local Oak trees and then strikingly wide from side to side. This resonated with me as I like a chair that allows you to change position."*

The maker Sarah Kay is a graduate of the Woodland Heritage "Woodland to Workshop" course.

Or, if wood is used in a very light and delicate way, *"Trees are a truly beautiful vital resource and 'wood art' allows nature's design to live on in our homes"* – Joey Richardson.



"A society grows great when old men plant trees whose shade they know they shall never sit in."
Ancient Greek Proverb

WOODLAND HERITAGE
for the future of British woods

You should not just plant a tree, walk away and hope...

...you need to mind your "P"s!

PLANNING
Clarify your objectives.
Right tree, right place, right reason.

PREPARATION
Don't let young trees compete with grass and weeds for nutrients and light.

PROTECTION
How will you deal with damage from grey squirrels, deer, rabbits and ongoing competition from weeds?

PRUNING
Are you going to carry out "formative pruning" and how often? And high pruning?

PICKING
When are you going to undertake "thinning" and pick those trees with most potential for a final crop?

PRODUCE
Harvest the selected trees and process them into planks of the most beautiful, natural and renewable raw material available to mankind.

PLOUGH
Plough back some of the profits into re-planting for future generations. Try to ensure that what you do is sustainable over the longer term.

The new Woodland Heritage identity

by Roger Richardson, a Trustee and a member of the Communications Group

Field Weekend regulars will have known Sydney Draper, the consistent winner of the "Furthest Travelled" prize. His death was reported and there were some excellent photos of him in last year's Journal. What may be less well known is that he bequeathed a generous legacy to Woodland Heritage. As a result we can do much more towards fulfilling our purposes than has previously been the case.

The Trustees' first decision towards "upping our game" was to appoint our first full time person, Guy Corbett-Marshall, as Development Director and there is much about his work elsewhere in the Journal. The second decision was to form a Communications Group, four Trustees who were charged with creating a new identity for Woodland Heritage.

It was realised that if the charity was to develop and to change, then its outward appearance also needed to change. Change had to be visible. To cut (or does WH "fell"?) a long story short, the new logo and strapline were presented to and approved by the Trustees in December.

The Comms Group felt that the previous logo presented only our title and that in a rather old-fashioned shape surrounding a tree of uncertain parentage. It was not a memorable 'mark' and it in no way explained what we are and what we do. The new one has an easily remembered and explanatory symbol showing part of a tree's life-cycle with a pruned and nurtured sapling, admittedly also of less than certain parentage, and a half section of a beautifully sawn and sticked perfectly round log. Woodland Heritage's core purpose defined!

WOODLAND HERITAGE
for the future of British woods

Alongside the symbol is a very legible setting of our title and then the strapline "for the future of British woods". A lower case 'f' so that it runs on from the title above, and then the all-important word "future". A snag with our by now unchangeable name is the word "Heritage" which can be and is taken as referring to the past. Yes, of course, we are concerned with the heritage of our woodlands but we are much more taken up with the future of our trees and, as the strapline says, our woods. This last word is intended to be taken to refer both to woods as in enjoy them and to wood as the product and, by use of the plural, to its enormous variety. British to define that our remit covers the whole country.

Beyond the logo (of which there are various versions to suit a variety of uses), the Communications Group commissioned the design of new stationery, a new edition of our membership/recruiting leaflet and a new edition of the WH guide to the formative and high pruning of young trees. It is hoped that both of these will be available for members and guests at the Field Weekend.

Another major task was to oversee the design of a modern and striking cover for the Journal and a guide to the style to be used for its pages. The new style was seen and much liked by Peter Goodwin back in January and the design was approved by the Trustees at their March meeting. One hopes that you, dear reader, will like the new style of the Journal as much as they did and do.

John McHardy
A tribute

by Geraint Richards

The late, great John McHardy was Head Forester to the Marquis of Bath on his Longleat Estate, a position he took up in 1969.

John, at an early stage, recognised the advantages of managing the estate's woodlands according to continuous cover forestry principles and, under his care, the Longleat woods became renowned for the quality of their timber, a result of John's silvicultural prowess. During John's time at Longleat, the estate increasingly became a visitor destination and John embraced the opportunities that this brought, in a manner that set an example to others in the sector.

John, throughout his career, devoted considerable time to the good of the forestry sector, attending meetings and hosting visits, and many foresters would describe him as having had a huge influence on their careers. He was instrumental in the formation of the Continuous Cover Forestry Group.

I first met John shortly after I joined the Duchy of Cornwall, some twenty years ago. I visited Longleat to look at and learn from the uneven-aged silviculture that John had developed. Like so many others, I was immediately impressed by the man, not just his silvicultural knowledge and marketing shrewdness, but his charm, his wit... Those of us who had the privilege of knowing John will well remember the twinkle in his eye as he told one of his stories; he was a great story-teller. If I'm honest, I left that first visit thinking 'I want to be like John McHardy'; he was the complete forester.

'Inspiring, a legend, a hero'; I've heard all these terms used by people to describe John and I'm not inclined to disagree with any of them. He was one of the greatest influences in my forestry career, a man to whom I owe a huge amount. I have put a lovely photo of John near my office desk and each time I look at it I still think, 'yes, I want to be like John McHardy'.

The story of the Verdun Bench

by Simon Burvill

On 19 December 2016, 100 years plus one day after the end of the First World War Battle of Verdun, a select group of Kew Gardens staff, historians and the iconic Chelsea Pensioners gathered alongside the Mayor of Richmond, between the Palm House and the Temple of Aeolus at Kew Gardens to unveil a commemorative piece, the Verdun Bench.

The unveiling – "lest we forget"

The Battle of Verdun was one of the costliest battles in human history, with more than 700,000 casualties over its span of 303 days.

Many Kew Gardens staff were serving during this period and in January 1919 two Oak trees were planted in the Royal Botanical Gardens at Kew from acorns picked up in 1917 from the battlefields of Verdun. They grew into a 'living memorial' to those who lost their lives not only in the Battle of Verdun but also the Great War.

One of these 'Verdun Oaks' was planted in a prominent position beside the Chinese Lions and the lake, near to the war memorial plaques in the Temple of Arethusa and Victoria Gate.

Richard Deverell and Tony Kirkham of Kew, and Simon Burvill of Gaze Burvill

For 94 years it grew to great stature – and great girth, thanks to its sunny position in the Gardens, with no other trees to compete with for light – and became a magnificent Sessile Oak tree (*Quercus petraea*). But just six years short of its 100th birthday, it was severely damaged by 'St Jude's Storm' on 23 October 2013, and had to be felled.

In January 2014, Tony Kirkham, Head of the Arboretum at Kew, contacted me as he had a plan to commemorate not only this magnificent tree, but to make a mark of remembrance for all the staff from Kew who lost their lives in both devastating World Wars. Tony wanted to unveil a special seat, made from this tree, to mark the centenary of the end of the Great War on 11 November 2018.

I was honoured to be asked to have a look at the fallen tree to see if it was going to be possible for my team to design and make a special seat from it. Anything that Tony does not know about trees is probably not worth knowing, so he was aware that an Oak tree which had not been nurtured in a carefully managed forest does not usually yield good wood for furniture making – or at least for good quality furniture making.

At Gaze Burvill (www.gazeburvill.com) we have 24 years' experience in designing and making Oak outdoor seating with craftsman-made seats gracing the finest private and public gardens in the land, including The Royal Botanic

Gardens Kew. Oak is our favourite wood, and a good choice for an outdoor seat, being naturally impermeable and durable. However, this tree, damaged by a storm, has to be treated with special care.

Assessing the tree, and understanding the best way to cut a trunk into boards in order to get the most stable, warp-resistant, strong wood is specialised work, so in April 2015, we took the Verdun Oak to Helmdon Sawmill, placing it in the hands of Geoff Tyler of Tyler Hardwoods and sawmiller Steve and his experienced team.

Simon Burvill at Helmdon

Watching a tree trunk going through the sawmill is one of several knuckle-biting stages in the transformation of a trunk to usable wood board. It is all the more exciting when the Oak is to be quarter sawn – a highly skilled cutting technique which, as well as revealing the unique and beautiful medullary rays in the wood grain, also produces the strongest and most stable cut from the Oak – the fillet steak of the tree, so to speak (see page 24 for *more about quarter sawing*).

Trees do hold secrets, however, and there were six potentially lethal ones hiding in our Verdun tree trunk – six nails, probably used decades ago to pin a poster to the trunk, and, over time, enveloped into the growing tree, eventually becoming completely hidden from sight.

Secrets will out, as we all know, and this one came out with a terrible noise, which called a sudden halt to the sawing process in the very last cutting section.

The culprits

Eighteen strong, clean boards were successfully produced from the trunk but we were left with a broken sawblade and the last 'V' shaped portion in a state too dangerous to saw into.

This orphan piece, a sculptural 'V' shape, possibly for 'Verdun', had its own beauty about it – with dark streaking marks from the iron nails reacting with the Oak clearly visible, like a dark wound, and rather haunting.

It felt right to celebrate the 'injured' piece of Oak just as much as those that survived their sawmill ordeal intact – returning heroes all. And so, the Verdun Bench was born – a raw, evocative seat, which shows its scars proudly.

We designed a bench from this triangular piece of Verdun Oak while the two legs are made from Corten steel – with

The 'V' end

its raw, yet warm, dark orange 'rusted' metal colour, which will provide a beautiful, textured support for the Oak which cantilevers out on either side.

Two bronze plaques have been dovetailed into the surface, one to mark the history of this terrible battle and a second showing the annual rings of the Oak counting back to the date when the nails were driven into it.

Of the other two sides of the triangle, one is specially 'scorched' black, in reference to the horror of battle and loss, while the third side is left to weather naturally. The bench is mounted on an old brick surface which ties in with the red of the Corten and it's final resting place is close to the one remaining Verdun Oak still growing on the slope leading up to the Rotunda.

As the Verdun Bench was creating drama in the sawmill, the beautiful sawn boards successfully cut from the Verdun Oak trunk, were quietly taken away by Geoff Tyler and his team to be air-dried, a stage which will continue until the

One of the explanatory plaques on the bench

end of 2017, before being kiln dried at the very end and then delivered to our works in Hampshire.

From this wood, two further seats, 'Remembrance' and 'Hope', still in the design stages, will be unveiled in November 2018, 100 years after the end of the Great War.

As the world's leading seed bank and botanical science centre, we should show no surprise to learn that a cutting from the fallen Verdun Oak was carefully grafted by Tony Kirkham and his team, and the planting out of this new young 'Verdun Oak' will coincide with the installation of the Verdun Seats in 2018. **It will remind us that the future should be full of young growing things, and that with tragic loss, renewal must follow, just as with sad remembrance must come hope for the future.**

Working with trees, and wood – and acorns! – we experience this renewal very closely, and, at Gaze Burvill, we feel privileged to have contributed practical experience and design expertise to such a project as that of commemorating the endings of both the Battle of Verdun, and of the Great War itself, with a world-renowned garden such as Kew.

The future

Stimulating timber supplies from new sources in Britain

by Guy Corbett-Marshall

Not all woods in Britain are, or are ever likely to be, managed to provide timber to meet domestic demand for the resource, this being the case particularly for hardwoods. Some owners do not wish to see their trees harvested and many sites are simply too inaccessible or too small to make felling and extraction viable for anything other than personal use.

But with something like 50% of the deciduous woodlands in private ownership either not in management or severely under-managed, there is almost certainly an untapped resource that could be brought into production, helped by raising awareness amongst woodland owners of what they could be doing with their standing timber (and reduce the significant amount of 'same use' hardwood timber imported from around the world).

Forestry Commission England issued a tender at the end of last year that firstly sought to research and then publish the values of different species of hardwood trees (a hardwood roundwood price index), and then secondly to inspire woodland owners to think differently about their resource via an on-line film, ideally with a view to them starting to manage their woods for timber production. The tender was won by Grown in Britain which included Woodland Heritage and Pryor & Rickett Silviculture as key delivery partners, the latter represented by its MD and Trustee of Woodland Heritage, Graham Taylor. The film, the filming and editing costs of which were funded by Woodland Heritage, shows how timber trees are grown and managed, what positive and negative features they may develop over time, and how a tree can be valued in terms of the different products it can yield. If any audience could be considered the target it would probably be the owners of small to medium sized woodlands.

Graham Taylor, Dougal Driver and Kelly Morss prepare for the next stage of filming

Estates with a large area of woodland are likely to be managed in-house or via an agent, but landowners for whom woodlands are very much secondary elements of their holding, may not be familiar with the current state of the timber economy and what options are open to them; the same is likely to be true for other non-commercial, smaller woodland owners.

The notable increase in recent years in the demand for firewood has perhaps masked alternative ways to make money from trees sustainably. The film, however, makes it clear that by nurturing a hardwood tree to enable it to provide planking, beaming and fencing products, as well as some firewood, its value could be seven times what selling simply into the firewood market might achieve.

Filmed largely at Whitney Woods (owned by Will Bullough) and Whitney Sawmills, the film does concentrate on Oak, the most popular hardwood supplied in England, but does not neglect white woods such as Ash and Sycamore.

The film will be launched at Woodland Heritage's Field Weekend on Thursday June 15 at Gaze Burvill's workshops in Hampshire and will then be able to be seen on-line on both Grown in Britain's and Woodland Heritage's websites from that date; the hardwood roundwood price index to help owners estimate the value of their timber resource will appear alongside the film on the Grown in Britain website.

WOODLAND HERITAGE

Grown in Britain

For more information on the price index go to **www.growninbritain.org**

Quarter Sawn Oak

Timber cut from trees, first quartered then radially sawn. In the majority of the boards the growth rings are perpendicular to the surface.

by Will Bullough

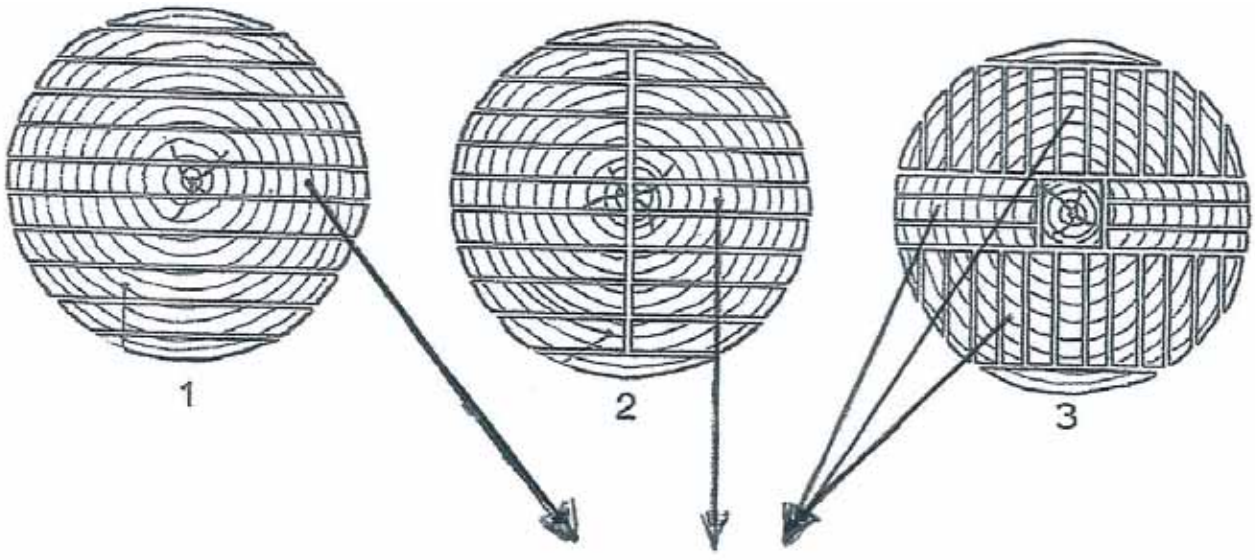
Over three thousand years ago men had discovered that, given wedges and something to hit them with, it was possible to split a clean Oak log all along its length into halves and quarters. Having done that, it wasn't surprising that they also found that by lining up their splitting tools exactly on the radius of the tree, they could cleave out planks.

This they managed to do even on trees up to ten metres long and by lashing the boards together with Yew wood "ropes" they are understood to have made the first known cross-Channel boats. Incredibly you can see the remains of one of these vessels in the Dover Museum.

These Bronze Age folk had not only made their first sea-going boats, they had also unwittingly discovered quartered Oak and were already exploiting some of its special properties.

Fast forward a couple of thousand years to a time when the wealthy of the Jacobean period wanted to insulate and decorate the interiors of their cold stone houses, they too resorted to the same principle. Employing the finest 'Wainscot Oak' (then as now mostly imported from the continent) the technique of cleaving clean thin planks radially from Oak butts was perfected. These only needed sawing to size and planing on one face to be ready to fit as Oak panels. Compared with laboriously hand sawing masses of thin boards this was a quick and simple system and one which incidentally had the added

Some methods of log conversion



Quarter Sawn Boards

1. **Through & Through** or **Plain Sawn**, only the central boards are quartered.
2. **Billet sawn**, used when there is a pronounced heart shake, only the central boards are quartered.
3. Most common method of quarter sawing where the majority of the boards are quartered and the heart may or may not be boxed out.

benefit of revealing the natural decorative beauty of the medullary rays *(pictured below)*.

Today, hundreds of years later, when all sorts of amazing saws have been invented that can easily cut all manner of products , those sawn boards that imitate the riven and cleft products of long ago in being sawn as near as possible to the line of the radius of the tree, are still the most highly prized.

Why is this and what is all the quarter sawn fuss about?

The wonder of quarter sawn Oak is that by a series of happy coincidences several beneficial properties are quite naturally combined. These are :

1. Quarter sawn Oak is effectively natural plywood. It comprises thin alternating sheets of cells each of which, as in plywood, have their grain running at right angles to the next. One sheet is made of xylem cells, strong structural tubes which carry water vertically up the tree, and the next sheet from medullary ray cells running laterally and carrying nutrients between the pith and the sap wood. Thus, like plywood, the alternating grain of each layer restricts its neighbour's ability to shrink or expand and as a consequence gives a very stable structure which tends to stay flat.
2. Oak when quarter cut is particularly waterproof. Hence wine barrel staves are quarter sawn to minimise leakage, as are the components of the finest quality exterior furniture like that made by Simon Burvill (and described in his article on page 20).
3. The junction between the medullary rays and the xylem cells is structurally weak and inclined to break given a bit of encouragement. This is what Bronze Age man had discovered with his wedges and it is why to this day Oak lends itself so well to numerous cleft products such as fencing materials and roofing shingles both of which also exploit the benefits of item 2 above.
4. Also, because of this structurally weak link, if ordinary plain sawn Oak boards are dried too quickly after milling, the surface of the boards will tend to break up with a mass of small cracks (called surface checks) along the lines of the medullary rays. However with quartered boards, where the rays run parallel to the surface, the threat of surface checking during drying is almost totally eliminated and with it the risk of ending up with defects which can seriously devalue the product.
5. Finally, to cap it all, quartered Oak is undeniably the most beautiful of the sawn Oak cuts. The silvery plates of the medullary rays that it reveals reflect the light in such a special way and the overall effect is truly beautiful.

Next time you are watching the TV news and are wearying of the banter of Prime Minister's Question Time, just let your gaze drift beyond the heckling MPs and let the sight of all those gorgeous QS Oak panels covering the walls of the House of Commons raise your spirits .

Take heart that there is such a thing as a naturally durable, stable, easy to work, waterproof and extremely beautiful product and that to date nothing has been invented to better it.

Orchard Barn keeps traditional building skills alive

The past can teach us how to build a greener and healthier future!

by Sarah Partridge

Orchard Barn was an overgrown and derelict barn with few prospects in life other than to succumb to gravity. Ten years on, and many trees and trainees later, the 17th century timber frame has been lovingly restored and been given a new lease of life as an Environmental Education Centre.

Orchard Barn pre-restoration

It is still a work-a-day barn, complete with Woolpit White threshing floor and a reinstated beaten earth floor. It also boasts a splendid hand-cut Oak roof frame topped off with 20,000 hand cleft shingles, and some resplendent Ash doors.

What is extraordinary about this barn is that the work has been undertaken as a series of practical training courses and volunteer sessions, and the natural materials have been sourced as close to site as possible. In many instances materials travelled only a few yards between source and building. By design the barn is 'off-grid' and most of the conversion from tree to timber, or clay to daub has made best use of human energy – people power (over 1,800 and counting) choosing to work collectively using traditional techniques and tools.

Orchard Barn provides a unique service in the heart of rural Suffolk, and what better way to develop a centre than to use deep green sustainably sound materials and labour? It is run by the OBee Community Interest Company, established in 2007 with both social and environmental objectives that draw heavily on traditional skills. The centre is next to the village of Battisford, itself the centre of an historic timber framing project in the 1560s when Sir Thomas Gresham owned houses and woods in the local area.

He brought 200 carpenters to the area to convert his trees into a timber frame that they later took to London by ox-cart and boat. It was to become the first Royal Stock Exchange, opened by Queen Elizabeth in 1571.

OBee is delighted to be following a long held timber framing tradition. In fact the trees for their new roof frame came from woods once owned by Sir Thomas. Timber framing using local trees is still very much alive at Orchard Barn. There is also a history of using hedgerow trees in roof structures and we have continued this too. Home grown Elm poles have been converted into rafters in the lean-to roofs.

Working in the woods debarking Elm

When we first began the restoration we were mystified by the mud and straw covering the battens. On closer inspection it was applied to cleft sticks in between battens – a rural approach to wind-proofing and waterproofing under the tiles. We have replicated this wattle and daub infill and gone on to work with architects and builders to guide them in the authentic restoration of vernacular buildings. Coppiced Hazel is excellent for the wattle.

There is scope to improve the depth of daub and increase the insulation properties in old roofs. Furthermore the hygroscopic nature of clay helps regulate moisture in old buildings. There is so much remembering needed as to the use of the landscape in building!

We started phase two of the restoration project last year. It is the reinstatement of two vernacular style cart lodges. The first one uses Elm poles – again in the round. After successful crowd funding in 2016, OBee was able to buy in the professional services of Traditional Oak Carpenter Rick Lewis to train up their growing band of regular volunteers. With the best use of naturally occurring shapes in mind, five Y-posts (forty year old Elm) were chosen.

These are dug into the clay and used as vertical posts. The crooks support the wall plate thereby replicating the archaeological evidence found on site. The back wall plate will sit on a cob and clay lump wall reinstated on flint

Hewing a log into a sole plate for use in the repair programme

Round wood timber framing trainees

foundations. Elm rafters are housed into the wall-plate and held in place with home-made Oak pegs. This extra space will enable rural crafts to be learned at Orchard Barn.

Phase three is altogether much bigger and more ambitious – the reinstatement of a Suffolk long house thought to have been built in the same period as the Royal Stock Exchange. Last lived in during the 1930s, the timber frame was substantially over-engineered by someone who wanted to show off his or her status. Maybe there were timbers left over from the framing on Battisford Common?

Orchard Barn Volunteers are working with a local woodsman to help restore some ancient woodland. In exchange for their time and energy they are being given green Oak. This is what will be used both to repair the 450 year old timbers and to replicate the frame of the long house. When it goes ahead, this will provide opportunities for training on a live restoration project.

Orchard Barn is delighted to have worked with the Eastern Branch of the Institute of Historic Buildings for the last five years. Continuing Professional Development certificates are available for attendees at our professional courses.

Our next five-day Restoration Skills course started on Monday 22 May and included: earth building, timber framing/repairs, greenwood roofing, the use of Lime, and how to remedy damp in old buildings. What makes this course unique is its emphasis on sourcing materials directly from the landscape which in turn helps develop a demand for the woodland products that will keep our ancient woods managed. Is this sustainability in action? We think so!

www.orchardbarn.org.uk

Crispin Chalker

A remarkable woodland owner from Suffolk

by Gary Battell

Peter Goodwin asked me to write an article about Crispin Chalker, as he had a deep respect both for what Crispin was achieving in his woodland and business and his support for Dr Sandra Denman's work on Acute Oak Decline.

Crispin Chalker

Crispin's childhood growing up in the countryside and at a school surrounded by woodland strongly influenced his future career. He first worked for a tree surgeon in Surrey where he got his chainsaw certificate and learned the importance of saving trees where possible and minimising the impact of tree surgery. After that he worked for ten years with a one-man conservation company in Suffolk where he learned a wider range of land management skills from the self-employed contractors working with the company. It was now that Crispin and Dani started looking for a small piece of woodland of their own. Big and Common Wood came up for sale, a year to the day that his mother died leaving an inheritance that gave them the opportunity to buy a larger area of woodland than they had ever thought possible.

Crispin Chalker's wood in East Suffolk is on a dividing line of Suffolk soils with part of the wood being on very light sandy soil with pockets of clay. The wood had undergone a phase of ruthless timber extraction in its life when all the marketable trees been removed. It then came into the hands of owners who concentrated on shooting rather than woodland management for a period of fifty or sixty years, resulting in a woodland that was largely Hornbeam, Ash and Oak but devoid of larger, better quality Oak trees. Damage had been caused not only in the interests of the shoot but also through lack of management of increasing deer and squirrel populations. Thus it was typical of many small isolated broadleaved woodlands and, like them, this wood's original state was no longer recognisable.

Crispin describes his first visit to the 50 acre block of broadleaved woodland, only two miles from his home, and the opportunities it presented as "mind blowing". He remembers "The wood had a cathedral style presence and you dared imagine certain things, but I tried to keep my feet firmly on the ground". At that time he had little idea about woodland management on that scale but he knew about its past management and that there was no particularly visible ride network or access. Nevertheless, to his delight their sealed bid was successful.

The first problem that became apparent was the deer issue as this wood was being ravaged primarily by red deer and muntjac. There were up to forty red deer breeding in the woods in springtime and up to eye-level there was virtually nothing growing and no saplings. Crispin consulted Trevor Wright, Forestry Commission Woodland Officer, David Hooton from the Deer Initiative and the local farmer's son to discuss the deer issues and access. At that time fencing woodlands was a new, and expensive option for managing deer and there were not many good examples where entire woodlands had been fenced. David Hooton said it would most probably be the answer as the population was transient and there was no deer management being

undertaken in the out-of-season period. Hinds were coming to the wood to fawn in the closed season so culling was not feasible. Fencing the wood, also supported by the Forestry Commission, was therefore the chosen option. A successful application for a Woodland Improvement Grant (WIG) enabled the stoning of the access tracks, clearing the fence-line and erecting the deer fencing. All the fencing posts and strainers were provided from 1987 windblown Sweet Chestnut from the wood.

Crispin has proved that fencing can work but warns that it is very dependent on the close maintenance of the fence. Like all the operations done in the wood, it was a steep learning curve. They developed a good technique for clearing the deer once the fence was finished. A number of lifting gates were erected to allow access to the outside of the fence for maintenance and as there were some red deer at the time they used a lot of rook bangers on ropes to give an eight-hour period of banging. These were set-up at dusk in early summer and they went off all over the wood all night and by the morning that had cleared out all the red deer. The lifting gates were then closed. However, that left the most difficult deer to manage, the muntjac. Where the deer fence ran over ditches and they had used slatted wood to infill the ditch, if the gaps were too wide, these small deer could get into the wood. It took five years of constant management finally to eradicate the muntjac from the wood. Even now, though, if the fence is damaged and it cannot be repaired quickly enough, there is another muntjac incursion. Crispin, has also found that electric fencing requires constant management. It is good when it is functioning but it takes very little for it not to do so – typically if a branch falls on the wires. Crispin checks the fence after high winds and, other than that, every ten days. He regularly maintains the fence tensions and during the summer strims a three feet strip from the turn-out of the rabbit netting and around the entire fence-line once every two to three weeks. The effort is considerable and on-going but not doing it is not an option.

Over the ten years the fence has been up, Crispin has built up knowledge of the surrounding countryside and the habits of its wildlife. If animals are used to accessing an area and a fence is erected, then some animals you can keep out and others not. Over all, though, he has found that animal pressure on the fence has declined over the ten years. This is partly due to animals adapting to the wood being fenced and partly to the deer management on a landscape scale orchestrated by the Deer Initiative. Despite the work it involves, Crispin is committed to the fence and its management whilst deer numbers in the locality remain at a level that would cause severe damage to the healthy regeneration of the wood.

After the deer fence was up Crispin started ride widening and coppicing and in the process found the old rides that he then opened up. The trees and coppice each side were coppiced to allow more light in to maximise habitat value. He first started felling conventional coppice coups of a half to one hectare for two to three years, then he moved into connecting some of the coups. Now he prefers rectangular coppice coups and ride widening to link the entire boundary of the wood so that the whole of the outside boundary is managed by coppicing or thinning to create a dense low-level thick cover on the woodland edge with high biodiversity value. He also pollarded some ancient Field Maples and that has paid off, as that area has thickened-up providing nesting sites in the regrowth. Trevor Wright has commented that you don't see much woodland edge management as it is expensive and more challenging work and it often involves partnership-working with neighbouring landowners. Therefore woodland edge management tends to be neglected and yet it is the reverse of what should be happening because the edge is the most important woodland habitat.

Crispin anticipates that within six to ten years he will have completed the period of catch-up management and achieve a higher commercial return. He plans to adopt a new management regime that reflects a lower yield and higher quality from the second rotation. With this in mind he has changed his approach from coppicing that has had mixed success, to a regeneration felling system that allows for greater natural regeneration and possible enrichment planting of different species including small-leaved Lime under the thinned original canopy cover. This method overlaps the coppice with standards and continuous cover forestry systems. However, while he likes the work involved

in felling, thinning and using the product to make firewood, fencing and planked wood, it can become all about the number crunching; one can easily become too swayed by figures and making it work financially. So he is looking forward to a period where he no longer has those pressures and he can manage the wood to improve its health and quality. The idea is that in six to eight years he will modify a business that is currently dependent on a large amount of relatively low value firewood that takes so much time to produce and currently accounts for 80% or more of his business to a future where he will add greater value to the harvested wood and be more creative by making new products. There will still be on-going ride-edge management, tree safety and tree disease management but with a greater concentration on quality genus loci trees and a subtle change in the direction of development with the minimum of intervention and improving natural regeneration. This vision can only be realised with the deer management now in place. He is monitoring the ever-changing situation that has been highlighted by Chalara and is considering enrichment planting of species such as small-leaved Lime and Field Maple as a replacement due to Chalara as these are not species of choice for deer to browse on.

In the pursuit of enhancing the commercial possibilities of the woodland, Crispin again turned to Trevor Wright from the Forestry Commission for advice on the creation of a woodland management plan and enrolling into the grants system. Additional business support was available through Sid Cooper at Woodfuel East for equipment. It was Sid who advised on how to set the timber processing up and the possibility of a grant for a firewood processor. Until then there was only a little saw bench and splitter enabling the supply of firewood to a few people locally but with the volumes of timber being harvested it was necessary to figure out a system to get the trees efficiently processed into firewood on a larger scale. This proved to be another steep learning curve but over time the system has been tweaked and improved. Due to the increasingly mild wet winters the biggest issue was processing substantial amounts of Hornbeam before it deteriorated. The aim was to produce the best quality firewood possible. A continental system was adopted whereby the trees were felled and cut into six metre lengths and, if the wood was accessible, a teleporter was used to move the timber. If that was not practicable, a timber trailer was used to forward the timber.

When thinning, a set of hydra-tongs is used to skid the logs to the ride edge from where the timber is taken back to the wood-yard, within the wood, where it is cut into 1.2m split billets. It is loaded into wooden frames or strapped bundles, stored undercover for twelve to eighteen months and then cut into logs in readiness for delivery. Crispin points out that it is necessary to split and process Hornbeam when green and as soon as possible. All the billets are then kept in an open barn. As a one-man business he has found that processing firewood is very time consuming.

During felling periods three extra people are taken on for three days a week. Once the yearly felling work is complete Crispin will do the splitting and storing billets with one person to helps and then he works alone on the firewood processor. Having good and reliable people to work at peak times has proved to be essential. Everyone knows the system and what is expected, so they just get on with the job. Crispin wishes he could give them more work as they are ideal employees, but the economics of employing an additional full-time member of staff render it impossible. He has been able to undertake contract work for other local woodland owners but for a variety of reasons that work is not always easy.

Currently approximately 15 to 20% is processed through his Wood-Mizer sawmill including all the better Oak and Sweet Chestnut. The latter would have to be extremely

poor not to be put through the mill. Logs are milled to order for small quantities of beams and posts, but mostly wood is cut for something that he will make and sell such as gates and fencing. However, he must utilise the small volume of timber produced from the woodland to make money as he does not have enough timber to make large quantities of fencing material that he could sell. He has to focus on the material he has – processing it and fitting it, thus doing the whole job so that as much value can be gleaned out of the wood as possible. As the harvested volume reduces, more material of increasing quality will be put through his sawmill. The woodland is now at the high volume out of the gate with relatively low value and this reflects the nature of the woodland that he is dealing with but as time goes on he intends to invest more time in making products from larger diameter and better quality wood. Crispin is passionate in his belief that wood is phenomenally undervalued so he always tries to utilise his wood in the best possible way and strives to produce the best firewood and to maximise the Oak and Sweet Chestnut on his sawmill. He accepts that demand for firewood can dumb-down the utilisation of wood, however, he accepts it is an important part of his business.

Crispin is keen to acknowledge the help and support of the people he has met along the way and who have pointed him in the right direction, most notably the continued support from Trevor Wright, the area Forestry Commission woodland officer and Gary Battell, Suffolk County Council's woodland advisor. His work is often undertaken in isolation, so it is encouraging to discuss various aspects of woodland management and the business as a whole. He strongly advises other woodland owners to be open to working in partnership with a range of people who can give other views, advice and support as it has given him so many benefits, contacts and confidence.

He also greatly valued attending Woodland Heritage's Woodland to Workshop course, saying that it is a fantastic course that goes from identifying and learning about trees and their management through to learning all aspects of how to get the best out of the trees when milling the timber along with stacking, storing and seasoning the sawn wood. This is a science in itself and is of increasing importance to businesses such as his: if it is not done correctly you just end up with nothing but firewood. As he points out, knowing in advance what is within the trunk before you cut it, and how it is going to react when cut, makes a tremendous difference and is a whole new skill set that is required if you mill wood.

Over time Crispin has noticed changes in his woodland and has always had more questions than answers. However, the close working relationships with advisors have helped give some answers as to why change is occurring and what to do about it. For example, it was seeing symptoms in his Oak trees that looked more like disease than simply the result of stress or shock, that stimulated him to call in advisors to investigate and Gary Battell suggested Peter Goodwin have a look at the Oak decline. Peter had not seen anything like that before and in turn asked Dr Sandra Denman of Forest Research to have a look. That led to the whole programme of research into what has become known as Acute Oak Decline for which Woodland Heritage has been so instrumental in raising funds and supporting. This tale exemplifies the huge value of those who actually work the woods, along with woodland owners, agents and contractors, as they are the best observers of the indicators of all forms of tree decline and are thus well placed to alert and support the scientific sector. It is Crispin's belief that if woodland owners are concerned and want answers as well as best advice with regards to pest and diseases, it is important that they welcome and support research in their woods even if it might be many years before we get the answers.

Crispin regards himself as remarkably fortunate to have his own wood and to be able to profit from it in so many ways. He is an avid supporter of pest control – notably the national campaign to manage the grey squirrel through new and innovative methods. He would like to see greater cooperation between all concerned throughout the wood chain and woodsmen given the chance to work woods to maximise the economic, environmental and social benefits that woods can provide.

Woodland Heritage working with Royal Botanic Garden Edinburgh

by Guy Corbett-Marshall

Opportunities for Woodland Heritage to work 'north of the Border' are always approached with great interest by a charity that has tended to act predominantly in England.

So, it was with much enthusiasm that Chairman, Peter Goodwin and fellow-trustee, Tom Christian, discovered last year two very suitable ways to work with the Royal Botanic Garden Edinburgh (RBGE), both capturing the essence of Woodland Heritage's great passion for beautifully crafted wooden furniture.

The first project involved a collaboration with the highly talented Steve McLean of Dovetail Scotland (www.dovetailscotland.com), who was commissioned to create two unique coffee tables for the reception at the RBGE using the most stunning Burry Elm.

Photo: David Purvis

Detail of coffee table in Elm by Steve McLean

Steve is Chairman of ASHS (Association of Scottish Hardwood Sawmillers) and has been a longstanding supporter of Woodland Heritage. His business, Dovetail Scotland, is a member of ASHS and is based in the Fintry Hills, Stirlingshire, with the Elm tables entirely reflective of Steve's philosophy: the highest degree of craftsmanship at all times and just as each tree is unique, so too is each piece he produces. All furniture, including the Elm coffee tables,

Photo: David Purvis

Steve McLean (L) with Simon Milne, Regius Keeper RBGE at the unveiling of the new tables

is made from locally sourced Scottish hardwoods, a resource that Steve is committed to renewing – for every tree he uses, he guarantees to replant at least two.

The second project involved joint sponsorship by Woodland Heritage of a hard-backed book, in an edition of just 500 copies, which was created to accompany the exhibition *After the Storm*. This is at the RBGE's John Hope Gateway from December 2016 to June this year.

This After the Storm project explores the legacy of big storms from various perspectives. The first part of the book deals with the ecology of storms and the relationships between disturbance, regeneration, diversity and resilience.

Photo: David Purvis

Still Water Sidetable by Daniel Lacey at the opening of "After the Storm"

Photo: David Purvis

Asymmetrical Writing Desk by Stephen Finch

The hypothesis is that periodic disturbance, on a traumatic scale, is inevitable and probably essential to prime the regenerative cycles that drive all terrestrial life on Earth.

In the second half of the book there is a celebration of another legacy of a major storm event, the cyclone that delivered 100 mph gales across Scotland on 3 January 2012. Fourteen Scottish designers and makers transformed wind-blown timber, salvaged from trees damaged in the RBGE, into beautiful and unique pieces of furniture. The designs reflect the makers' response to storms, real and metaphorical, and offer personal reflections on the theme of disturbance, regeneration and resilience.

The majority of the items created for the exhibition were made from Common Oak, Norway Maple, Sweet Chestnut or Atlas Cedar, mostly unique exhibits that used a mixture of more than one wood, sometimes combined with other materials such as copper, granite and suede.

Whilst stocks last, copies of the hard-backed book that accompanied *After the Storm* can be obtained for £10 from **www.rbge-publications.myshopify.com**

Irregular Silviculture
Transformation in Practice

edited by James Walmsley of Bangor University, Woodland Heritage Trustee

"Let me tell you something. You need a transformation. I need a transformation. The way the forest is managed needs a transformation." The reflective thoughts of David Lasala, one of the participants in this highly respected two day course run by Andy Poore and David Pengelly of SelectFor. Woodland Heritage generously supported six attendees of the most recent iteration (autumn 2016) and this article is an edited version of **individual write-ups** provided by each of the following attendees: Tom Haynes, Adrian Murray-Walker, David Lasala and the three Jonathans: Jonathan Burton, Jonathan Spazzi and Jonathan Tompson.

Background to the course and introduction

Delivered by Continuous Cover Forestry (CCF) experts Andy Poore and David Pengelly, this course comprises a series of lectures and field visits to educate participants on the practical steps required to transform even-aged stands to 'permanent irregular' stands. The beautiful and enchanting Stourhead (Western) Estate plays host to lectures and site visits, the combination of which makes a convincing case for the virtues of CCF. **Jonathan Tompson**

Participants select which trees to remove in a marking exercise. Factors such as quality, vigour, diameter and stability must all be weighed up in reaching a decision for each tree

Over its history the forest at Stourhead has been managed for its aesthetic value and particularly as a backdrop to the Estate's renowned gardens. So much so that in 1898 a policy against large-scale clearfelling was implemented. Through clearing only small areas at a time, the forest developed into a patchwork of small even-aged stands, each one varying from the next in age and species. When Andy and David got involved with the Estate in the mid-90s they began to break up this uniform stand structure by felling and thinning across boundaries, and managing not by area but on a tree-by-tree basis. Here the objective is to make the most of every good tree (in terms of timber production) and for every tree to reach its financial optimum. **Jonathan Tompson**

Mixed conifer natural regeneration beneath small canopy openings. Later this will be respaced to favour Douglas Fir and Western Red Cedar due to their high timber value

"I arrived on day one with 15 minutes to spare and the course commenced in the village hall after tea/coffee and introductions. I was pleased to meet quite a wide and varied number of people from all over the UK and some fellow students from Bangor University. We received a very informative series of presentations from David Pengelly and Andy Poore which also kick-started some interesting debates from other attendees regarding the methodology for tree selection on the estate and the rationale/driver for adopting the selection system instead of other silvicultural practices."
Adrian Murray-Walker

Day 1 – morning

The first morning provided a brief and highly informative grounding in the fundamentals of irregular silviculture. The distinction between selection and shelterwood systems was defined and the suitability of each system to particular situations was made clear.

As the course focused on lowland CCF, selection systems where given priority. Day one focused primarily on conifers and the transformation of even aged stands to more diverse structures. A key principle in driving this transformation is the need to 'forget about spacing' and focus instead on the quality and vigour of individual trees. In order to do this it is necessary to set a target diameter for trees based upon their optimum financial value. When this is done alongside having a target basal area based on fostering ideal light conditions for regeneration, a stand will progress through a number of structural stages until its optimum equilibrium structure is reached.

The morning session also provided a brief and informative introduction to the economics of irregular silviculture. The key is to see the forest as continually accruing interest each year through incremental growth: in order to profit from this, the growth should only be harvested at the optimum time.

Day 1 – visit to Dropping Gutter, Stourhead (Western) Estate

The course visited a host of varied and worthwhile locations to convey SelectFor's approach to transformation. The first visit was to Dropping Gutter at Stourhead Western, a site which is nearly halfway through its transition to an irregular selection forest (ISF). Participants' eyes were immediately drawn upwards to the

Marteloscope exercise in action

towering canopy trees of Douglas Fir (*Pseudotsuga menziesii*) intermingled with Sitka Spruce (*Picea sitchensis*) and the occasional Red Cedar (*Thuja plicata*). Once accustomed to the light levels, eyes were cast across the cones of regeneration. The instructors then drew us into their thinking, kindly imparting useful rules of thumb such as prioritising extraction layout and prioritising stems with a future rather than getting lost on developing regeneration: achieving the correct light levels can take care of that. Also discussed was the role of tending, thinning and harvesting operations to develop both quality and the desired mix of species within the compartment, whilst being guided by optimum felling diameter.
Jonathan Burton

Day 1: marking exercise using the Marteloscope method

A big draw of the course for many of the participants is the opportunity to pit their tree marking skills against the clock and against the experts – and to learn how best to mark stands for transformation. The use of this "Marteloscope" – a completely enumerated hectare plot – enables the recording of participants' choices of which trees to fell and which to retain. This can then be accurately modelled using a spreadsheet to provide a detailed breakdown of the consequences of their actions on the future development – and transformation – of the stand.

The SelectFor approach to selection

Firstly trees are graded from A to D. Grade A trees ('stems with a future') are favoured at each intervention and retained until they reach their target diameter. Many of the low quality C and D grade trees, and trees that have either reached their target diameter or are unlikely to increase in value, are removed. In a more conventional system you might have to keep poor quality trees that are well spaced and remove the higher quality ones that are not, but CCF is not constrained in this way. When marking a thinning, David and Andy don't fell a good tree purely because of where it is (unless it's on an extraction rack). In fact, 'clumpiness' is a desirable stand attribute, and those areas with a lower basal area will benefit the more light demanding species both in the understorey and the mid-storey.

The marking exercise

Participants were tasked with achieving the hypothetical goals of maintaining or enhancing future increment, improving the quality of the stand, and removing an ideal volume. In order to do this, they used a target diameter for each tree species, as well as class and grade of tree, and then proceeded to mark trees equivalent to approximately 25% of the basal area for future felling. Participants found the marking exercise to be extremely useful in reaffirming the principles that had been discussed in the morning session. Deciding which trees to mark for removal entailed selecting a balanced mix of high quality large dimension Douglas Fir that had reached its optimum financial value, alongside lower value poorly formed or oversized specimens. Advice and discussion between groups and the course leaders regarding trees for removal made for a fun and thoroughly enjoyable method of learning. Andy and David were available throughout the exercise to discuss approaches and reinforce rules of thumb – a favourite being *"Think twice about removing a below optimum sized tree, and then leave it"*.

Results from the marking exercise

There was by no means a consensus; certain trees were not selected by any group, whereas other trees were marked by everyone. Yet the results were found to be very useful in helping to understand the implications of each individual removal – or retention. Variation between groups was mainly due to a select few high value Douglas Fir either being retained or removed. The principal of focusing on removing the poorer quality trees had been applied successfully by every pair and meant everyone had understood the primary objective of the exercise. Some pairs found that they could have removed a greater quantity of material – there was a tendency to be over-cautious.

"Being able to interpret your practical decisions within a real plot was extremely worthwhile, especially in developing an understanding of your own personal attempt at marking a transformation thinning. The experience will form an important future reference point for many of us."
Jonathan Burton

Harvesting and marketing of timber from irregular stands

Day one finished with another classroom session, this time focusing on the harvesting and marketing of timber in irregular stands. In order to implement selective harvesting systems, a thorough and comprehensive network of extraction racks and tracks are absolutely essential. Detailed advice and guidance on implementing this infrastructure in various types of stands was provided and the numerous advantages and drawbacks were outlined. Successful marketing is crucial in making CCF systems sustainable. In the case of Stourhead large diameter Douglas Fir offered the most profitable return, unlike large diameter Spruce which accrues very little value above 45 cm dbh. The key point regarding marketing of timber was that every possible market should be explored, no matter how niche or unlikely.

Day 2 – irregular silviculture in broadleaf stands

The morning session explored the problems faced when trying to achieve sufficient, but not excessive, natural regeneration in broadleaf stands. This can be controlled through careful manipulation of light conditions and ground vegetation. The session concluded with an introduction to how irregular silviculture can be conducive to the restoration of plantations on ancient woodland sites (PAWS). Successful restoration often requires numerous thinning interventions and continued protection and expansion of natural remnants. Careful consideration should be given to ground flora, an equally important component of any ancient semi-natural woodland (ASNW). **Tom Haynes**

A diverse understorey at Stourhead

Despite that fact that hazel coppice was abundant, numerous attempts to market coppice material had not been successful. Yet, even without a market, the dense coppice cut prior to each intervention earned its keep by suppressing coarse vegetation and providing a conducive environment for canopy regeneration – clearly providing a valuable service.

Concluding remarks

One of the major benefits of a permanent irregular system is that regeneration niches stay open for longer due to the retention of the canopy as a control mechanism for ground vegetation. Equally, canopy retention can serve to control potentially excessive (and undesirable) levels of natural regeneration, which may be costly to respace. Ideally, regeneration is not desirable in high densities; its distribution and quality is much more important, as only those individual trees of the best form, and which are in the right place within the stand structure, will be recruited to the canopy.

CCF is also beneficial operationally due to its ability to deal with stands that are inherently variable in terms of species, size and quality. This is of particular importance to UK forestry given the more recent trend in planting mixtures of species. Mixed species stands naturally develop greater stand structure variability due to variations in growth rates between species, so it is imperative that we develop the expertise and capacity to capitalise on this.
Jonathan Tompson

"The patience and expertise of the course leaders, coupled with a friendly learning environment, encouraged an open and honest exchange of ideas and knowledge." **Tom Haynes**

Individual write-ups are available on request. Each and every one of these participants expressed their gratitude to Woodland Heritage for supporting their attendance and extended notes of appreciation to David Pengelly, Andy Poore, and to the various estates which hosted such invaluable site visits.

EDITOR'S NOTE
Our sincere thanks and appreciation go to James Walmsley for editing these six reports.

Garthwaite Travel Bursaries

Since 1994, through the inspiration of our late Patron, Peter Garthwaite OBE, we have supported foresters of all ages to travel to many countries to study aspects of forestry, or wood processing outside the UK. Some twenty-one years on, many of these individuals remain in touch and are still putting their experiences to good use. Previous countries visited include the USA, Holland, Germany, Switzerland, Finland, Sweden, France, Croatia, Ireland, Latvia, Czech Republic, Greece, Denmark, Italy, Austria, Japan and Canada.

The Trustees of Woodland Heritage continue to invite applications for bursaries to study an aspect of forestry or wood processing outside the UK.

Eligibility

Applicants must either be forestry practitioners in the UK, or intending to become so after completing a forestry education. Preference will be given to those whose interests are in the production of high quality timber. Applications for support on compulsory tours (e.g. as part of a University group) will not be considered, nor will retrospective applications.

Applications

Should be sent to Lewis Scott and should contain details of the proposed travel including costs and a brief (one page maximum) CV. Applicants should also ask one independent referee to write separately and in confidence to Lewis Scott in support of their application.

Successful applicants will be expected to produce a short article/report with photographs on their travel for publication in the Woodland Heritage Journal and/or website.

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COURSES IN CONTINUOUS COVER FOREST MANAGEMENT

IRREGULAR SILVICULTURE IN THE LOWLANDS: TRANSFORMATION IN PRACTICE

Marking is a difficult skill to learn, particularly within an unfamiliar discipline such as Irregular Silviculture. These Courses provide an in-depth introduction to the theory and practical application of irregular silviculture in coniferous and broadleaved stands with the emphasis on lowland forests.

The Courses incorporate a marking exercise in which the trainees, in groups of two, undertake the marking decision process for themselves within a one hectare stand under transformation and interact with two experienced practitioners. On the completion of the marking exercise, the trees selected for removal by each group are inputted into a spreadsheet which provides a detailed summary of the silvicultural and economic consequences of the each marking. These data can be compared between the groups and with the marking of the local manager.

The two day course incorporates site visits in irregular coniferous and broadleaved stands and looks in detail at the silviculture of transformation and the monitoring of stand structure and performance.

The Courses are based on the Stourhead (Western) Estate, Stourton, near Mere, and the Rushmore Estate on the Wiltshire/Dorset border. The Courses are designed for 14 trainees and will be led by Andy Poore and David Pengelly, both leading exponents of Continuous Cover Forest Management.

Woodland Heritage will be offering some bursaries on a case-by-case basis.
Members of Confor could consider applying for assistance to their Education & Provident Fund (www.confor.org.uk/resources/education-provident-fund).

THE NEXT TWO DAY COURSE WILL BE HELD IN OCTOBER 2017.

WOODLAND HERITAGE

For further information see the Courses section on www.selectfor.com
or contact David Pengelly at david@selectfor.com

WOODLAND HERITAGE

Bangor University

by George Thomas Dennison

Bangor University, in North Wales, is home to the Bangor University Forestry Students Association (BFSA). The association participates in forestry activities on a local, national and international scale allowing students to develop their practical skills whilst networking with like-minded individuals and professionals. The photo beneath shows the 2016-17 committee, as well as the members of the incoming committee for the 2017-18 academic year.

Photo: Mathew Ince

Top: Alex Donaldson, Christy Dowling, Mathew Ince, George Dennison. Bottom: Chris Andrews, Sarah Ellis, Matthew Clark

2016-17 activities have been numerous and varied. These have included:

- Green-wood working, under the supervision of highly talented individuals at Ffarm Moelyci.
- Several tree planting volunteer days with the Llyn Parc Mawr Community Woodland Group on Anglesey.
- Exploring local woodlands, such as Elwy Working Woods.
- Four high profile guest lectures.
- Increased involvement with Llais y Goedwig in North Wales, allowing students to participate in regional activities relating to community woodland groups.

BFSA members have attended national conferences and field visits hosted by the Royal Forestry Society, the Institute of Chartered Foresters and two members worked closely with the Woodland Trust during the Tree Charter's development and launch. Furthermore, on an international level two BFSA members have been selected to go to South Africa on a 16-day field visit with the

Photo: Mathew Ince

Tilly Gamble planting conifer species within a coastal section of Llyn Parc Mawr Woodland

International Forestry Students Association (IFSA) for their 2017 international conference. They will be joined by a distance learning MSc Forestry student who lives in South Africa. BFSA is currently the only UK university student society to be member of IFSA (www.ifsa.net/), making Bangor University a front runner for students interested in Forestry.

Photo: Mathew Ince

Alex Donaldson and Mathew Ince using shaving horses at Moelyci Ffarm working on their individual projects

Having accomplished a huge amount during the 2016-17 academic year, BFSA have big plans for the forthcoming year and the new committee look forward to reporting on their achievements in the 2018 Woodland Heritage Journal!

Dr James Walmsley, Woodland Heritage trustee and Course Director for the undergraduate forestry programmes at Bangor University, acts as the 'BFSA staff liaison' and is delighted to see the society continue to go from strength to strength. BFSA was founded by Martin Price (Woodland Heritage member) and James in 2005.

forestry@undebbangor.com
www.facebook.com/groups/2223783770/

Book Review

Broadleaf Forestry in Ireland

by Peter Savill

Growing broadleaves for profit is a relatively recent venture in Ireland. The main emphasis and advances in forestry in the 20th century were in growing conifers, particularly Sitka Spruce, on vast areas of peatland. It is not therefore particularly surprising that there was relatively little Irish experience to draw upon for the preparation of this book.

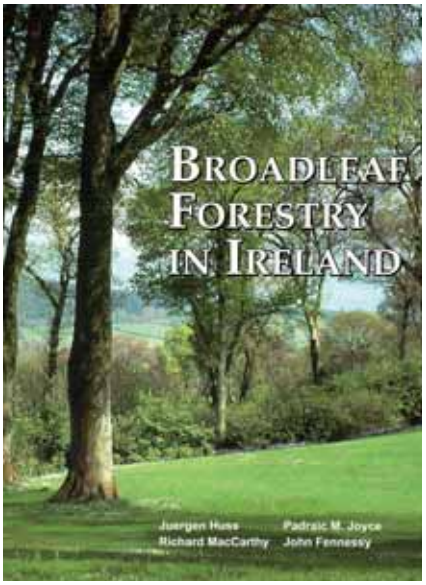
COFORD (the Irish Council for Forest Research and Development) is to be congratulated for sponsoring and publishing this work on a previously neglected area of Irish forestry. It consists of 496 pages and is in two parts. Part I deals with development, site demands, objectives and silviculture of broadleaves and Part II has descriptions of more than 60 species, mostly exotics, divided into 24 main timber-producing broadleaves, then with 37 minor ones, and finally the many rare ones.

Each species' section is divided into several parts covering the origin and distribution of the species, its botanical and timber characteristics, ecological characteristics including climatic and site preferences, regeneration capacity, provenance, silvicultural and other values and management, and a "conclusion" section. The book is amply illustrated with many excellent photographs and tables.

Many of the topics dealt with in Part I could themselves be the subject of separate textbooks, as indeed they often are. The first section deals broadly with the history of Ireland's forests up to the development of modern forestry. The second section deals with the Irish climate and soils. The third is about the economics and values of forests, including policy. The fourth subject area, by far the longest section in Part I, covers silvicultural strategies and procedures. The final short section of Part I is entitled "Conclusions and Outlook".

The authors are an impressive group and between them have the background knowledge and experience to cover most of the topics in the book with complete authority. All have forestry backgrounds as well as considerable additional experience and expertise. The inclusion of Professor Jürgen Huss (of Freiburg University) as an author has considerably strengthened the text because it is currently impossible to find anything written in English that explains German thinking and practice of silviculture so well.

The occasional use of unfamiliar terms might confuse some readers (e.g. "stadium" meaning a stage in an ecological succession, "short- and long-living" not lived, "middle" diameter, not mid, "vegetation period" for growing season, bushes for shrubs, just-in-time management (understood to be crisis management in responding to the unexpected), mono-and poly-corm for monopodial



and sympodial, solitaire for single isolated trees.

The broadleaved area of Irish forests in 2012, at 112,000 ha, represents around 17% of the total area of forest in Ireland. Much of it is in a derelict, neglected condition. Broadleaves account for about a third of the current level of afforestation. Most broadleaved woods are young and in need of thinning. Concentration on economic objectives and profit are said to be the priorities both of state forestry in Ireland and also of Coillte and these are concentrated upon in the book, as also is the rule when selecting trees for removal "vigour first", though other aspects are not ignored. They are, however, considered as "constraints". The authors do concede that social functions will gain greater relevance in the near future. The value of forests for carbon sequestration is hardly mentioned.

There is a great deal of information that is of real practical use in the book. One

example is Table 4.4-17 which gives root collar diameters that should be demanded in seedlings of various heights.

Much of the tone of the book appears to be a comparison between forestry as it is currently practiced in Ireland and forestry in Central Europe. There is a major emphasis on silvicultural systems, with a very sensible proviso that systems should be adapted to suit local conditions rather than followed slavishly. The authors' obvious dislike of clear felling is evident though they say that the continuous cover system is not suited to solve all problems "as a vast number of publications would have us believe". It also contains a lot of wishful thinking about what forestry in Ireland might become: idyllic, highly profitable forests where regeneration is almost solely by natural means and where there is an inexhaustible supply of funds for the expensive forestry operations. Most forests would be selection forests "the dream of many ecologists and foresters as to how forests should look everywhere". All foresters would keep detailed records of each operation they perform....

The book contains relatively few references and little mention is made of much of the excellent research previously carried out by the Forest and Wildlife Service into such things as tree nutrition; German examples are used instead.

The three-page general index is very scanty, though the species index is thorough.

A puzzle for the reviewer has been the intended readership of the book. Although it is very well and clearly written, and it is stated on p270 that "This book is primarily dedicated to the establishment of new forests on farmland and their subsequent management" it might be too advanced for those without backgrounds in forestry, and so is likely to appeal mostly to practitioners and graduate students both in Ireland and Britain.

J Huss, P Joyce, R MacCarthy and J Fennessy (2016) Broadleaf Forestry in Ireland. Price €55 from Department of Agriculture, Food and Marine, Dublin

www.agriculture.gov.ie

Goodwin backs Goodwin in fight against AOD!

by Guy Corbett-Marshall

NHG Timber Limited has been a member of Woodland Heritage for over 15 years and an active supporter and donor, most recently making gifts to help research into Acute Oak Decline (AOD).

Shortly after Peter Goodwin died and having just received a video made by Peter and the AOD research team about the threats to our Oak trees, managing director of NHG, Nick Goodwin, sent his company's most current gift to the charity, but with a further opportunity made available to Woodland Heritage.

NHG Timber Limited was established in 1981 by Nick Goodwin (no relation to Peter), but after almost 50 years in the timber trade, Nick had decided to hand the business on to his two sons, Guy and Ben, and to Stuart McBride, a fellow director, and to mark Nick's departure he had arranged a Corporate Day in May.

The guest list for the evening dinner featured many influential names in the timber trade industry both in the UK and abroad and Nick was keen that the issue of AOD was brought firmly to their attention. And so at Nick's request, I had the chance to both introduce the film and to give it very valuable exposure to a group of people who have the opportunity to pass on the message about AOD within the timber industry; judging by talk at the breakfast table the next day, a spark had certainly been ignited.

Nick Goodwin

Woodland Heritage wish Nick Goodwin a long and happy retirement and hope that the longstanding partnership with NHG Timber Limited will continue to flourish with the new team at the helm.

European foresters support "close-to-nature" forestry visit to Scotland

hosted by the Continuous Cover Forestry Group

by Bill Mason, Chairman CCFG, Scott McG Wilson and Victoria Stokes

In June 2016 40-50 ProSilva delegates from across Europe gathered in Scotland for their annual meeting and field visits, hosted by their British affiliate, the Continuous Cover Forestry Group (CCFG) and sponsored by Forestry Commission Scotland and Woodland Heritage. In September the CCFG also celebrated their 25th Anniversary supported by guest speakers, Philippe Morgan and Jurij Diaci of the University of Ljubljana who discussed the challenges of the next 25 years.
www.ccfg.org.uk

ProSilva Europe was established in 1989 to provide a forum for owners, managers and scientists interested in "close to nature" forest management.
www.prosilvaeurope.wordpress.com

It has affiliates in 24 European countries, including Great Britain and Ireland, and has recently recruited New England, USA. The current ProSilva Europe President is Philippe Morgan, a CCF consultant in Wales.

After the meeting, delegates received a briefing on Scottish forestry from Charlie Taylor, ex-Forest Enterprise Scotland District Manager for the Tay Forest District and practitioner of continuous-cover forestry (CCF) within Craigvinean Forest, Dunkeld. Charlie emphasised that while CCF is still a subsidiary approach in Scotland, its profile has increased over recent years and further expansion is supported by the Scottish Forestry Strategy. Earlier CCF trials established by Professor Mark Anderson at Glentress and Faskally, together with experience on traditional private estates, is being augmented by wider uptake by the FC. Challenges remain – wind exposure, shortage of silvicultural skills and limited availability of specialist equipment, together with sawmiller preference for Spruce sawlogs in the 30-50cm dbh size range.

Day 1: Cowal and Trossachs Forest District

The first afternoon visit was to Forest Enterprise Scotland forests in the Trossachs. The party were welcomed at the Lodge Visitor Centre outside Aberfoyle by Planning Manager John Hair, who explained the history of forestry in the area and the role of CCF in developing plantations for multiple objectives. Example stands were then visited in the field which provided delegates with a contrast between unthinned first rotation conifer stands being clearfelled as part of a native woodland restoration project with the extensive natural regeneration developing under 80 years-old Sitka Spruce in stands with a long history of thinning.

Influence of Forest Management on birds

The first day ended with a presentation by Dr. John Calladine, Senior Research Ecologist for the British Trust for Ornithology in Scotland, dealing with the effect of silvicultural systems on bird populations in forests. He had led the first study in Britain which compared bird populations in conifer stands managed through CCF with stands managed through patch clear felling. Published results showed that adopting CCF had favoured woodland specialist bird species, but at a landscape level it was desirable to have a mix of both systems to provide a range of habitats.

Day 2: Strathspey

The second field day saw the party travel north to the native Caledonian Pinewoods of Strathspey, with a brief overview on the native woodlands of Scotland from Dr Scott Wilson en route. The group was introduced to Glenmore Forest by Graeme Prest, Forest Enterprise Scotland District Manager for Inverness, Ross and Skye District and his colleagues. The morning session continued with visits to sites within Glenmore Forest where a range of silvicultural approaches are being applied

to Scots Pine stands for primarily amenity and biodiversity objectives. Enhanced deer control measures are allowing Pine natural regeneration to extend out onto surrounding heath while measures are being taken to restore native broadleaves to the ecosystem through enrichment planting.

The afternoon visit was to Victorian Scots Pine plantations on the private Seafield and Strathspey Estates at Loch Vaa, near Boat of Garten. The host was estate forest manager Will Anderson, with inputs from Forestry Commission Scotland Conservator (Highlands), John Risby. Here, as elsewhere in Strathspey, uniform shelterwood systems have been implemented for production of high quality Scots Pine logs while using successful natural regeneration to restock the stands over a 10-20 regeneration period. Delegates discussed the compatibility of this rather formal approach with close-to-nature principles, and felt that there could be benefits from moving towards a more irregular stand structure.

Day 3: Craigvinean Forest and Faskally Wood

The final day of the excursion visited Forest Enterprise Scotlandforests in Perthshire at Craigvinean, by Dunkeld and Faskally, by Pitlochry. These contain some of the most advanced examples of adoption of continuous-cover forestry on the National Forest Estate in Scotland. The visit to Craigvinean was hosted by Planning Manager Matt Young. Here the group saw the progressive transformation of Douglas Fir and Sitka Spruce stands overlooking the main A9 trunk road, culminating in a visit to the towering mature stands of Douglas Fir stands at the Hermitage with many trees reaching 50-60 metres in height.

The discussions highlighted the need to accommodate CCF management with the mechanised harvesting systems and limited premarking of thinning typical of much British forestry. These contrasted with a more traditional emphasis in the European countries represented amongst the delegates on motor manual felling and premarking of thinning by a professional forester.

After lunch the group examined Faskally Wood, Pitlochry hosted by Charlie Taylor of Forest Enterprise Scotland, long-term manager here. Faskally is one of the surviving Scottish trial sites where Professor Mark Anderson of Edinburgh University had introduced trials of CCF in the 1950s. After a period of neglect, the CCF regime was revived by Charlie Taylor in the 1990s and now it is probably one of the best examples of transformation to an irregular forest structure in Britain. It clearly shows the potential for using CCF in the management of Scottish forests on appropriate sites where regular thinning is possible.

For a full report of this event visit:
www.ccfg.org.uk/events/downloads/2016/Report_ProSilva_Annual_Meeting_Scotland_2016.pdf

Woodland Heritage is delighted to continue its association with ASHS

ASSOCIATION OF SCOTTISH HARDWOOD SAWMILLERS

ASHS

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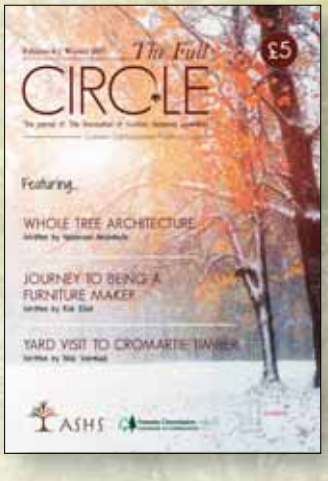
WWW.ASHS.CO.UK

EDITION 6 DUE FOR DISTRIBUTION - OCTOBER 2017



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The Dunkeld Memorial Bench

In memory of Sydney Draper, forester, supporter and sponsor of Woodland Heritage

The Oak tree was sourced from the grounds of the Dunkeld House Hotel and crafted by Nigel Ross into a fine bench, which now sits on the Big Tree Trail on the banks of the River Tay

"Without trees there would be no life on earth, as we know it."

Sydney Draper

"Come sit and rest a while in the company of trees"
with the compliments of Sydney Draper"

Made by Nigel Ross, a wood sculptor based in Dunkeld **www.nigelross-sculpture.com**

Future success?

The views of one Trustee

by Roger Richardson

As the title implies these are my views and not necessarily the opinions of the Trustees as a whole. Nevertheless I believe I am making some points which need thought and discussion by all of us, not just the Trustees.

The Trustees visited our recently acquired Whitney Sawmill before their March meeting. During the visit I was very much taken with a remark by the Manager, Tom Sutton, that he thought that about 49% of the timber he was processing was home-grown. Whitney Sawmill's remit is to source as much of their timber as they can from the UK and yearly figures can be produced.

Woodland Heritage, I have always understood, was founded by Peter Goodwin and Lewis Scott, both running furniture manufacturing businesses at the time, because they could not obtain enough high quality timber, particularly Oak, from the UK and were forced to buy abroad. They saw that by encouraging British woodland owners to adopt best practice in what they planted and how they looked after their trees, the problem, admittedly over a long time, would begin to be solved. Now, for the first time in my years as a Trustee, we have, by owning a sawmill, a means of measuring the progress of the founders' vision. There will be ups and downs but, at last, we have a 'metric' with which to see whether we are moving in the right direction and at what speed.

Are we going about achieving our goal in the right or the most cost effective way? Partly yes but largely no. We spread our message mainly through our Journal and our Field Weekends. The first is well received and well read. The second is enjoyed by and is of value to those who attend. But with the readership of the Journal and the audience at the Field Weekends, both largely our members, *we are preaching to the converted*. What proportion of UK woodlands that are managed commercially do we represent? More importantly, what is the proportion of managed woodlands, whether owned by our members or not, compared to the area of woodlands that could be

Roger Richardson

properly managed but which now are merely thickets? I would suggest that our members' area is much less than half of the total managed area and that the latter is a minute fraction of the area which could be.

How do we bring all owners of commercially managed woodlands (and by commercially managed I mean growing trees for timber and profit and not just for pheasants) into membership? However, answering that will not of itself increase the output of high quality home-grown timber. The real question, and it's where the potential solution lies, is how do we get our message across to the owners of woodlands who do nothing with their trees? I don't know the answer – who does? How can we, how should we, preach to the great unconverted? Only by doing so effectively will we make real, continuing, and now measurable, progress. *We must find a way*.

I am assuming of course that the research, so admirably and largely funded through the efforts of Peter Goodwin, into the causes and prevention of AOD will be successful. If not there will be no Oaks awaiting best practice, nor anything else. Heritage perhaps – but no Woodland.

The Association of Pole-lathe Turners and Greenwood Workers

by Harry Rogers, Secretary , APTGW

The 2016 Bodger's Ball was held at National Trust Tyntesfield near Bristol, over the weekend of May 6 to 8. It was a wonderful setting with the added advantage that we could look around, and be inspired by the splendid Tyntesfield Victorian Gothic mansion and the lovely gardens.

There was a superb range of high quality craft demonstrations, and some very interesting workshops and talks. This year for the first time we ran Pre-Ball workshops in a wide range of activities, including saw sharpening, bowl turning and leathercraft, and these were very popular as well.

Photo: Gary Bygrave

Tim Stevenson receiving the WH Best in Show Award

There was a huge turnout for the Craft Competitions, and the standard was very high. Members of the Association each have the opportunity to vote on the craft competition entries, so the winners really are being assessed by a very wide judging panel! The competitions are a great opportunity to showcase some of the best craft in the country, and the support of Woodland Heritage is a key part of this.

The Woodland Heritage award for 'Best in Show' went to Tim Stevenson for a wonderful automaton of a bodger at work on a pole lathe..... as you wind the handle the pole lathe turner works on a chair leg, and birds circle above etc... It gave great amusement, was expertly made and a very justified winner, despite there being lots of other very good entries.

The award for 'Best Newcomer' has been held over to 2017, as this year we did not find a candidate that met the award criteria.

We continue to have Local Groups springing up all over the country as people become inspired by using natural materials and simple tools to create beautiful things. The Association has nearly 900 members worldwide, and membership continues to grow year on year. A new Local Group even formed as a result of organising the Ball, and is to be called the Peak and Dukeries Greenwood Workers.

Photo: Andy Alder

A close up view of Tim Stevenson's automaton

The Woodland Heritage awards are very prestigious, and at the prize giving ceremony Jon Warwicker, our chairman, recorded his special thanks to Woodland Heritage for their continued support of the Association of Pole-Lathe Turners and Greenwood Workers.

The 2017 Bodgers Ball was held in Shropshire over May 11 to 14 , in a rural location between Shrewsbury and Telford. The aim was to hold a simple event with people sharing skills and knowledge, and making friends, somewhat akin to the earlier Balls.

For the latest information please see: **www.bodgers.org.uk**

Our Field Weekend 2016
Yorkshire

Friday June 24: Robert Thompson's Craftsmen Ltd at Kilburn, Yorkshire

by Bede Howell

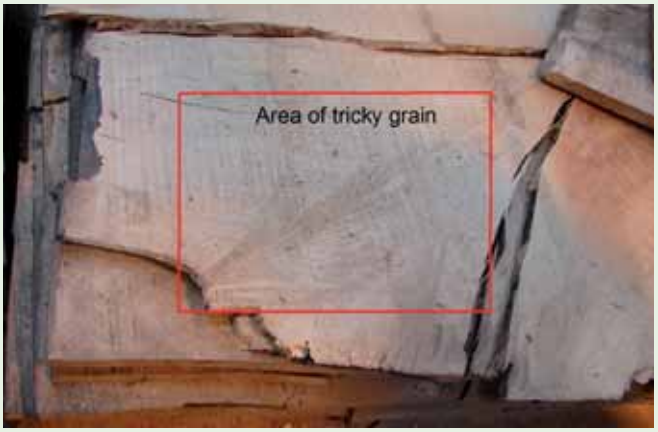
The combination of fine wood, fine design and first-class workmanship is what draws most people to the workshop and showroom at Kilburn in North Yorkshire, not too far from Ampleforth Abbey. Those who come have almost certainly heard of the famous "Mousey Thompson" and his trademark of what Robert Burns called a "wee, cowering, timorous beastie".

Look who's climbing up my leg!

Did the tradition start from early commissions for cheese boards? It has stuck – and to good effect, now with some 20 craftsmen and five ancillary staff employed amongst whom are some from foreign shores. Real artistic skill is international and we watched a young Polish man choose a board, stand on it, legs apart and then swiftly use his adze to transform a "bit of wood" into a scintillating piece of Oak, reflecting light from the curved faces of the gently undulating hollows of the finished surface. This very old method of surface dressing is an acquired skill, and one which sets Thompson's furniture apart from that of many others.

Adze work in detail – find the mice

Those members of Woodland Heritage privileged to attend wanted, of course, to see the whole system from the felled Oak butt through to the finished artifact, but as most of the primary breakdown sawing is now done off site we had to be content with a tour of the stock yard, gazing in wonder at the many, carefully-numbered and dated, boules gently seasoning until each in turn comes to be transformed into a thing of man-made beauty. The writer's expectation was for fine, cylindrical, straight, knot free, planks showing only a narrow band of sapwood outside the regular growth rings of generations of skilled foresters – and these were not absent – but the skilled eye of Ian Cartwright, Robert Thompson's successor in choosing and buying the wood, can see virtue in oddments of difficult grain.



Difficult grain in plank

Difficult grain skillfully used

Fine work in Oak is dependent on reliable supplies of raw material, carefully (the "Media" would always say "lovingly") graded and stickered for outdoor drying, followed by careful kilning to ensure stability.

Part of our national heritage

Oak is naturally lively, expanding and contracting readily as its moisture contents varies, a most tricky wood to work with. The meticulous management of the yard is under the watchful eye of Frank. Those who live by trees and wood can only be impressed at the stock, and any "bean counting" businessman would be horrified to find that the supplies of wood are not "JIT" (delivered just in time, so minimising the period when finance is outlaid).

Not JIT – nine years seasoning in plank

The dates on the boule say it all, but at least some more instant cash is generated in the tourist facility set in the friendly shelter of massive boules.

Would you like to choose a table, Sir?

Thompson's pieces find themselves in honoured places and in humble; from Cathedrals through Livery Companies, University lecterns and down to domestic cheese boards. The style and quality are unique and long-lasting. Wooden pieces make splendid presents, to be admired, used, cleaned and polished for years, often outliving their original donors and recipients. And they don't get broken! Superb wedding presents!

Friday June 24 (morning): Castle Howard Estate Woodlands

by Jonathan Burton

There couldn't have been a better place to start a Howardian Hills field weekend than on the Castle Howard Estate. We were greeted by a landscape that was adorned by Vanburgh and Hawksmoor in the 18th century. We went along the great Lime avenue through the Carrmire gate and breached the mock fortifications to begin the tour at the foot of an enormous decorative stone pyramid.

Nicholas Howard kindly welcomed us to the estate and introduced us to the forest and nursery manager, Nick Cooke, who was to guide us for the morning. Nick has recently passed his 40 year milestone on the estate and was primarily involved with the tree nursery until 2003 when he also became head forester. Forestry forms an important component of the estate's income and constitutes more than a fifth of the estate's land. Previously 19 woodsmen managed the forest here, there were ten when Nick began but this has now been reduced to just one woodsman alongside the forester.

Castle Howard's forestry has been certified since 2005 and it was heartening to hear that this created a particular demand for the sustainable timber produced. Income is also generated through a firewood business and the nursery. To a lesser extent diversification was evident with the sale of venison via the estate's butcher and the sale of river piles for flow attenuation in local river courses, exemplified regionally with Pickering's "Slowing the Flow" project.

Managing the forest within an AONB with a substantial proportion of PAWS focused the management options available. A familiar bane is the squirrels who, according to Nick, are preferentially working through the Sycamore to the Oak followed by the Beech. Management of these blighters on the Castle Howard Estate in particularly

difficult given the quarter million tourists visiting annually, along with walkers and charity running and cycling events passing directly through the forests. Within these limited options, control is managed through tactically placed box tree traps though even these are subject to vandalism.

In terms of disease, Ash forms a small component of Castle Howard's woodland and so the primary focus was instead on *Phytphthora ramorum*'s approach that had been recorded eight miles away. The removal of susceptible mature European Larch on ancient woodland sites was the focus with the aim to restore to "natives"; although Graham Taylor noted that EL was potentially one of the least susceptible Larches to *P Ramorum*.

The group paused to reflect on one of the areas restocked in 2011 with clustered Pedunculate Oak interspersed with Ash and Wild Cherry. Seedlings were mainly sourced locally and grown in the estate's nursery unless supplies were drying up when material was sourced from continental Europe. Restocking was expensive given the need to tube against the butcher's resident supply of roe deer and the "strong ground" encouraging the Briars (*Rubus sp.*) to romp along. Nick had taken to mulching the newly planted specimens to keep deer at bay and decided that it would be necessary to "beat up" to tighten the spacing between the trees.

Continued management of the Silver Birch regeneration was again ensured through the estate's integration with local business. This time Nick had developed a symbiosis with local hurdle makers who cleared the Birch and put it to good use. Bede Howell suggested that the Birch could be utilised to fill in the racks and thus create a useful firewood supply when the time came to open them for thinning.

The tour continued along the old 18th century coach roads on which, as intended, we happened on Hawksmoor's statuary the "Four Faces" and another pyramid reportedly known to some locals as "Flames of Fire" and which has recently been restored. Visiting the Four Faces during spring is a delight when the wood is awash with bluebells. The old coach roads were lined with spectacular specimens of Turkey Oak, but, as John Evelyn remarked, they are "goodly to look on, but for little else". The male catkins of these gun barrel straight behemoths are troublingly the host to the sexual life-stage of the wasp that induces the knopper gall and once combined with the tree's brittle timber their looks are their only redeeming feature.

On the other hand, the estate's Pendunculate Oak was fetching a serious price which provoked a double-take from many in the group. Nick Cooke put this down to the quality of the timber, his prized contractor's choice, and workmanship, along with his approach to sales. As recommended by the Woodland to Workshop alumni and instructors: the estate sold the logs in length for the buyer to decide the product and sold "at roadside" so that the buyer could gauge the product purchased more confidently, thus increasing the producer's selling price.

Our visit concluded with special thanks to Nick for giving us such a varied and interesting tour and, accordingly, he was presented with a beautiful turned Ripple Ash vessel made by our master woodturner, Richard Chapman. It certainly "hit the spot"!

Friday June 24 (afternoon): The Hovingham Estate

by Peter Goodwin

As we left Castle Howard for our ten minute drive to their nearby "enemy!", Hovingham Estate, some of us recalled the fascinating 1999 Field Day when Woodland Heritage members were led by the late Sir Marcus Worsley. It was good to come back.

Now it was the turn of Sir William Worsley *(above)* to welcome our party and to tell us about his family's commitment to sustaining their beautiful landscape and, particularly, their passion for forestry. It came from the heart. The Worsleys have owned their woodlands for 450 years and in 1897 the present management policy was put into place. The woods were mostly under-managed and contained stool-grown Oak which was felled during the Second World War.

The primary conifers subsequently planted were European Larch and more latterly, Douglas Fir, Sitka Spruce and Corsican Pine. Hardwood species were only planted on suitable sites, where Oak, Sycamore, Ash, or Sweet Chestnut are the primary species. A policy of heavy thinning has been continuous since 1897 – the principal aim being to produce prime quality saw logs. The objective is to reach an even age structure and a true "rotation" forest.

Shooting is of great importance to the estate. The hills and valleys in the park are ideal for high pheasants and every effort is made to reconcile the needs of shooting with commercial forestry.

The history of the park is well-recorded and it has been restored under plans begun some 30 years ago. The Park Woods, some of which are Ancient Semi-Natural, are particularly important for conservation, shooting and landscape. They are managed on continuous cover forestry principles, with group planting creating an uneven diverse broadleaved woodland. The grassland areas of the park are being regenerated with groups and individual trees. Sir William has great affection for the park and was proud of the way the family had taken immense care and deliberation in order to "get it right".

Sir William was accompanied by David Brown *(below)*, the estate's consultant from Tilhill Forestry, who had been brought up at Hovingham under his father, the late Alec Brown, and who had taken over as head forester at a young age. We were in good hands. David could recall planting and tending many of the plantations which we discussed and he explained how times have changed since the days when the estate employed four forestry staff, whereas nowadays all the work is carried out by contractors.

Discussions at our first stop centred around the recent demise of Corsican Pine due to suppression and the outbreak of Dothistroma – countered by the success of Douglas Fir and Sitka Spruce which has just been recorded as having a yield class of 24 for both species after just 26

years. A proposed clear felling operation in Carolyn Plantation was discussed over many weeks by the main interested parties – the gamekeeper, landowner and head forester – until the decision was reached. Proof of the sensitive touch needed to maintain the right balance of landscape within The Howardian Hills Area of Outstanding Natural Beauty (AONB) as well as the interests of the Estate.

Arriving at Bank Wood, we were amazed at the high quality of this Oak stand which was planted in 1972 with a nurse crop of Norway Spruce and which had been high pruned in 1980 and 1985 and particularly in 1996, when David Brown was presented with a hydraulic high pruner and in his own words "went mad and pruned every tree!". But his enthusiasm had clearly paid dividends because we were now looking at some potentially high value Oak butts.

Bede Howell could see management parallels with the French system, as set out in Jean Lemaire's book (which he has translated so admirably), and we debated whether it was too late to open up the Oak crowns to enable the trees to increase girth – Lemaire insisting that the work must be carried out no later than year 20/25 for maximum gain. Here, being so much further North, it was thought that it was not too late but that David should quickly give his selected "winners" the necessary room for their crowns to expand. Some of us were concerned that the next thinning could well open up more side light and that epicormics could develop and spoil the prime butts. The final consensus was that a Hazel understory should be planted to give the necessary shade. We left Bank Wood mightily encouraged and with high hopes for its future.

We then moved off in convoy to Horse Coppice where we stood under massive 175 year old Oaks in an Ancient Semi-Natural Woodland. Here we discussed how the angle of the sun in North Yorkshire is such that their coupe felling size has to be larger than "down South" in order for the newly planted trees to have sufficient light. David had marked a small group of Oaks for their second thinning and we were invited to challenge his selection – a risky gamble for anyone who knows the WH pundits – but David survived! So we turned to the hoary question of late pruning which the writer warned would be discovered by the timber trade in 120 years' time upon felling. Word would spread then! A careless or devious estate owner would never be able to get away with concealed knots under the bark. Always high prune to reduce knot size with no pruned branch more than an inch in diameter.

Keep at it for the next 20 years by pruning the "winners" only. Those are the rules.

We were treated to the sight of a fine "boat skin" quality Larch standing over our parked cars and were told that this superb tree contained 7.89 metres of prime timber with a volume of 139 Hoppus feet – and 218 Hoppus feet overall. Graham Taylor gave us an insight into the price per tonne for conifers against hardwoods and advised extending the rotational age to accommodate boat skin Larch to achieve premium prices.

It was now late in the afternoon and time to accept Sir William's kind invitation to take tea at Hovingham Hall. Set in the Oak-cobbled coaching yard and with stunning views over the cricket square and gardens, we knew just how privileged we had been to have been given such a personal tour by our host. It was therefore only fitting to present Sir William and Lady Worsley with an exquisite turned Ash vessel by our "ace" woodturner, Richard Chapman. Also with our warm thanks, David Brown was given a copy of "The British Oak" book by Archie Miles.

It had been a wonderful afternoon and Hovingham Estate is clearly in very good hands.

Saturday June 25: The Settrington Estate

by Susan Bell

There is always something special about a landscape that has the strong personality of the landowner stamped upon it. It is individual and purposeful. If ever there was an estate with an owner's stamp on it – Settrington is it. And it is the 600 acres of woodland that provide the essential framework for the overall scene.

Our day there, kindly hosted by the Storey family – owners since 1936 – started with a vivid introduction from Sir Richard Storey in The Orangery; a remarkable, art-filled, renovation of the former 18th century riding school. His son, Kenelm, who took over the running of the Estate in 2008, was also there to welcome us before handing over to Woodland Heritage Trustee Graham Taylor. Over the past 70 years the Estate has always employed a forestry consultant and Graham, as Director of Pryor & Rickett Silviculture, is only the fourth during that time. Graham later attributed the noteworthy consistency in approach to the woodlands over time to this fact together with the close involvement of the owners. As became apparent during the rest of the day, the priorities of the owners were the growing of fine hardwoods, the glorification of the landscape and providing an excellent shoot.

In his introduction in Big Wood, where our morning was spent, Graham described the Estate's commitment to hardwoods as "second to none". Thus pest control, the grey squirrel in particular, was a top priority. With the exception of severe damage to no fewer than 300 Sycamores when a "delinquent gamekeeper" (Sir Richard's definition!) took his eye off the ball for a few days, they were keeping on top of the squirrel problem by trapping. These endeavours were described by Graham as being "a delight" and "an example to all" enabling the growth of Sycamore and Oak comparable to that on the Continent.

However, our first stop was to gaze upward at some awe-inspiring 66 year-old Redwoods which still had a long way to go before challenging their USA counterparts. They grow up to 100 m. high. It was easy to see why Sir Richard had "fallen in love" with these giants and allowed them to stay, unlike most conifers, on the Estate. The main question in the UK is just how marketable these trees are because of their sheer size and the lack of sawmill capacity that can handle them. According to Will Bullough, who had processed a few "speculatively" at his sawmill, Redwoods are still for the enthusiasts rather than a commercial enterprise despite their good durable timber. However, Tom Christian said they were becoming more popular in Scotland, as a replacement for disease-prone Larch. Graham added that it was a species of potential in the face of climate change and that nothing seemed to bother it.

A recurring theme at our Field Weekends is that forestry is a long-term business and as such is subject to the changing vagaries of Man and nature. These were much in evidence here with the depletion of a quarter of the woodlands for timber for the Second World War effort; a favourable tax regime spurring substantial re-planting and new afforestation post-War subsequently curbed by the tax changes of the 1988 budget; and the devastating loss of Elm to disease. Now Ash dieback – a fungal disease known as Chalara – already in the UK and the Emerald Ash Borer Beetle, on its way westward across Europe, pose a huge threat to Settrington woodlands which comprise some 40% of the species. This reliance on a single species is causing a major dilemma for the Estate and Graham was asked to outline his proposed plan before others were prepared to express their views.

Having reiterated that economics were not the driving force behind the plan but that landscape and shooting were, Graham said that major sudden change was not required but that there should be a continuing shift in the balance of species over the next 10 to 20 years. In some cases where the stand was pure Ash and the disease was already evident, there would be no choice but to fell.

However, a steady change to more mixed varieties was necessary as, because of the volume of Ash, the Estate could not wait for a 'big hit'.

Jo Clark *(below)* leads on the Living Ash Project seeking out trees tolerant to Chalara. As a famous Ash estate, and one that has provided excellent stock throughout the country, she pleaded for time to be taken and only those trees showing symptoms to be taken out. Will Bullough supported this view and advised designating an area of Ash and hoping to come up with resistant stock to replenish it. Graham stressed that due to the sheer volume of Ash on the estate and the relative slowness of the proposed changes there would be plenty of opportunity to check continually for resistance in the residual trees. He later reported that Sir Richard was critical of the current Forestry Commission approach and believed the way ahead was through breeding programmes. He added that Settrington was already contributing to the FTT's progeny trials. Later, the question of possible overhead chemical spraying was debated but at present its questionable efficacy, the cost of multiple applications each year and the unknown effects on surrounding vegetation were all to be resolved.

Peter Savill receiving a turned Walnut bowl on his retirement as a Trustee, from Peter Goodwin

Bede Howell was concerned that as Chalara was only discernible in high summer the felling of stricken trees would be required about the same time as the shoot was underway. Graham explained that as the shoot had been changed to a 'wild shoot', the nesting season (mid-April to late June) actually coincided with times of year when forestry operations stopped unlike most shoots when the birds are released just about the time that forestry operations are restarting.

Tom Christian posed the all-important question – what are the alternative species that might replace Ash? He pointed out that there was less appetite for funding hardwood alternatives than for the traditionally more commercially- important conifers. No definitive answer emerged during the day but it was clear that we would need to look beyond UK native species and that the major problem of the Grey Squirrel would have to be addressed in whatever was considered.

Our next stop revealed another interesting dilemma. A high stand of Poplar on a slope was now past its prime at 58 years old. It had no commercial value but was priceless for the shoot. In order to maintain the height, to ensure the birds flew high towards the guns, the intention was to take out 50% of the Poplar and to extend the life of the healthiest. For replacement trees Cricket Bat Willow had been planted, being fast-growing and in time it should provide a better return. Normally these trees are found in damp conditions often by watercourses. However, they seemed to be growing well in this spring-fed flush on this otherwise relatively dry hillside. In order to meet the requirements of the batsmen of Yorkshire and England, 12 growth rings to the bat face are required so a 25-27 year

cycle would be necessary but the value would then be high. Provided the trees are managed, with all knots rubbed off, a sum of £300 for clean stems could be gained. Again to meet the cricketers' requirements, stem lengths should be in multiples of 2'6" (76cm) .

Our final stop of the morning took us to the top of the wolds to an exposed, cold, dry spot with high PH soil that, again, was important for the shoot. Here a belt of some 50 metres. of pure Ash had been felled as it was past its prime. Pre-Chalara it would have been left to regenerate but now it will be restocked with Lime, Beech, Sycamore and some Oak although the latter may not thrive in the conditions. Despite Sir Richard's dislike of conifers, it was necessary to warm up the site so Lawson Cyprus, the preferred species of nesting pheasants, and Pines had been planted around the edges together with some shrubs. Here was woodland planted primarily for the shoot, but with timber very much in mind. Wild, as opposed to reared, pheasants require long grass to hide from predators and many acres of such grassland have been left on the Wolds. This has proved invaluable, not only for the Countryside Stewardship High Level Scheme grants it attracts, but also for the biodiversity of the estate. Rabbits had kept the grass down in the past but after a 'determined killing' effort the population diminished, the grasses grew and attracted shrews and voles and hence buzzards and ten pairs of barn owls. Hares, too, have moved in.

With that happy thought we returned to the Orangery for lunch, a fascinating talk about its art and architecture by Sir Richard *(above)* and to hold our AGM.

Sunday June 26: Thorp Perrow Arboretum

by Jim Buckland

Sarah and I have been attending Woodland Heritage Field Weekends for around a decade now and the format is well established.

Two days of visiting well managed and fascinating woodlands on some of the best run estates in some of the most glorious parts of the kingdom. Two days of hard core forestry with heated but gentlemanly debate about all aspects of the growing, harvesting, marketing and utilisation of timber – a dialogue that is entertaining, educational, enlightening and exhausting in equal measure. And then on the Sunday morning an opportunity to relax a little and take a more tangential and aesthetic approach to trees in the landscape by visiting a garden or arboretum, a post prandial *bon bouche* after the challenging banquet laid out before us over the previous two days.

The 2016 trip to the Howardian Hills of North Yorkshire followed this time honoured pattern with two days of visits to the woodlands of Castle Howard, Hovingham and Settrington. All magnificent estates whose forestry operations are still very much guided by the concerns and personal passions of the families that own them and where social and aesthetic factors are as much part of the equation as hard-nosed commercialism. Interestingly our Sunday *bon bouche*, a visit to the Thorp Perrow arboretum, accurately mirrored the balancing of these drivers of arboreal endeavour that are personal passion, aesthetics and the need to support these by commercial acuity.

Thorp Perrow is one of the finest private collections of trees and shrubs in the country and its 100 acres, including the earlier nineteenth century Millbank Pinetum, are of national significance. They are home to five National Plant collections; *Tilia* (Lime), *Fraxinus* (Ash), *Cotinus* (Smoke Bush), *Laburnum* and *Juglans* (Walnut). They boast 66 Champion Trees and have extensive collections of naturalised bulbs,

especially daffodils and bluebells, plus extensive wildflower meadows.

They are probably unique in Europe in being primarily the creation of one man, who in a burst of sustained arboreal enthusiasm lasting from 1931 to his death in 1977 planted up the 60 acres of open parkland given him by his father with over two thousand species. However, as is often the case, an enthusiast's obsession can sometimes outstretch his capacity to sustain the object of his passion and towards the end of his life the arboretum fell into disrepair. Equally the collector's instinct to make the collection comprehensive all too often results in a grossly overplanted arboretum where you literally can't see the wood for the trees.

This was the situation when Sir Leonard's son, Sir John Ropner, inherited the estate. He was determined to rationalise the collections and return them to their former glory, a challenge that remained an abiding passion until his recent death and one that his widow Nicola Ropner, son Henry Ropner, and the current curator, Faith Douglas, are equally determined to sustain.

It was Lady Ropner who welcomed us to Thorp Perrow and then hurried off to attend to some catering issues in the tea room and thereafter to carry on with the mowing, a job which she has inherited from Sir John, activities which graphically illustrate the family's active and total commitment to their charge! Before leaving us she introduced Faith Douglas who has been curator since 2010 and who combines this role with running her own landscape/gardening business; two ladies of formidable energy and commitment! They are aided and assisted by two full time gardeners and a small team of volunteers. The arboretum is open all year round and attracts 70,000 visitors annually, no doubt aided by the inclusion of a small Birds of Prey Centre within the site.

Faith was kind enough to spend two and a half hours of her precious Sunday morning guiding us around what was revealed to be an amazingly diverse cornucopia of trees and answering our questions. I have to confess that after a while I simply gave up trying to note down all of the marvels which were laid out before us and decided simply to absorb the spirit of the place and enjoy the experience. However despite this dereliction of duty a few highlights do stand out. First and foremost the magnificent Lime Avenue, home of the National Plant Collection of *Tilias*, and containing 33 different species and cultivars including *Tilia chinensis*, *Mongolica* and the charming *Tilia henryana*. An experience that confirmed two things for me, firstly the celebratory nature of a well planted avenue and secondly just how stunning Limes are as an ornamental tree – fantastic!

Other individual trees of note (amongst hundreds!): a huge *Fagus sylvatica* var *Heterophylla*, the Fern Leaved Beech; a gloriously spreading Caucasian Wing Nut, *Pterocarya fraxinifolia*; an impressive Algerian Oak, *Quercus canariensis* that despite its provenance is perfectly hardy in Yorkshire; an unusual and UK Champion tree, the Californian Walnut, *Juglans californica*; a fine Swamp Cypress, *Taxodium distichum*, one of my favourite trees for its feathery magnificence and capacity to grow in wet places, and finally another giant favourite the awesome Wellingtonia, *Seqoiadendron giganteum*. Also memorable, but perhaps for the wrong reasons, was the bizarre and tortured *Sequoiadendron giganteum* "Pendulum" planted by the Royal Forestry Society in 1999 and whose only quality Bede Howell summed up as "having the advantage of making everything else look good!" And all of these set in a landscape of shady glades, grassy rides, discreet ornamental plantings and well managed lakes and watercourses.

This was a wonderful conclusion to our Yorkshire Weekend and was an amenity exemplar of those qualities of personal passion and commitment, aesthetic sensitivity, commercial acumen and inter-generational sustainability that had been writ large in our earlier forestry forays. Another marvellous weekend and thanks as always to Belinda and Peter and to all those who work so tirelessly on our behalf to make them happen.

Field Day Snapshots

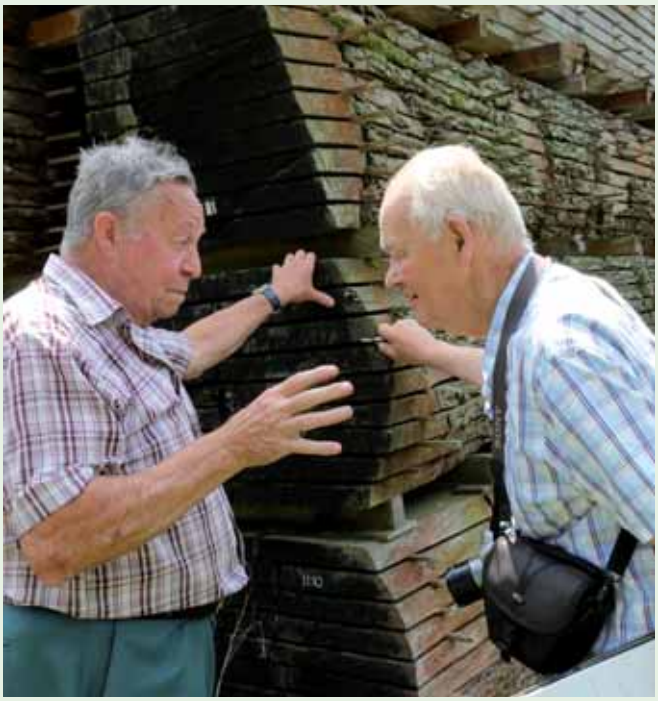
Guy Corbett-Marshall

Sally Hamer

Nick Cooke at Castle Howard

Lewis Scott

David Brown



Gavin Munro and Bede Howell

We really don't know! - Editor

Susan Bell, a WH Trustee

Jenny Bullough

Tom Christian, a WH Trustee

Sharon Rodhouse

David Duxbury

Faith Douglas

Trying to answer the carbon question

by Guy Corbett-Marshall

Peter Goodwin had an insatiable appetite for learning about how forestry could be improved and what issues it faces in the short and long term, the latter exemplified by his drive to understand more about and then to tackle Acute Oak Decline head-on.

It was therefore of little surprise that Peter was so keen in January to visit the University of Birmingham's Birmingham Institute of Forest Research (BIFoR) Free-air CO_2 enrichment (FACE) experiment at Mill Haft, Staffordshire, nor indeed that he came back so enthused about what is happening there and how it had the potential to be a superb venue for a Field Weekend visit in the future.

One of the six arrays; the black pipes take the CO_2 up to the point of release

Some years in the planning and establishment but now fully operational since the spring of this year, the BIFoR FACE experiment has been designed to provide a new level of understanding of how mature Oak woodlands will respond to a future climate with higher levels of carbon dioxide (CO_2) than exist at present. The experiment will expose large areas of the Mill Haft woodland to elevated levels of atmospheric CO_2 at around 550 parts per million (ppm), which is expected to be reached by 2050. Today, the level is around 400ppm and increasing at 3ppm per year.

The experiment consists of six circular arrays within the woodland, each 30m across, which extend from the ground to the top of the trees. CO_2 is being released within three of these rings, while the other three are acting as control plots and receive ambient air only. A further three patches of similar sized woodland will measure the background forest activity without the complex infrastructure.

The experiment works by storing liquid CO_2 in tanks under high pressure at Mill Haft. In the daytime, the liquid CO_2 is converted to a gas using vaporisers and transported in pipes through the woodland to the experimental rings. Here, it is mixed with air to a high concentration inside the circulating plenum before release, this high CO_2/air mix then dilutes in the surrounding air to 550ppm. Sensors within the ring are used by a computer to adjust automatically the amount and

Liquid CO_2 is stored in large tanks by the main buildings

The liquid CO_2 is transported in pipes supported by minimal impact frames

direction of released CO_2 according to the speed and direction of the wind. This means that the CO_2 is always dispersed towards the centre of each ring.

Although this enrichment is above today's levels of open-air CO_2, it is lower than that typically found in offices or classrooms and is fully dissipated within 100m of each ring, so it poses no threat to people or wildlife.

One often considered question is whether more CO_2 will provide trees with more 'food' to grow faster; to add biomass more quickly. This simple proposal should be better understood as the experiment proceeds and a huge volume of data is generated. The sheer amount of testing and sampling (from the effects on soils to the effects of leaf growth) that is undertaken every minute/hour/day or other frequency, depending on what is being collected, and how, is mind-boggling with so many avenues being explored. Yet, the FACE experiment is open to additional tests being brought forward by third parties, just so that as much can be learned as possible from this time-limited experiment.

As awesome as the data collection and analysis is at Mill Haft, so is the lightness of touch of the operation; a

Inside one of the remote monitoring stations

woodland of 13,477 trees losing just 51 in the creation of the experiment. All of the towers that release the CO_2, indeed all the infrastructure that feeds these towers, are drilled into the ground as needed, meaning that when the facility is dismantled the effect on the wood will be negligible. And when in very rare circumstances trees do need felling, the trunks will be supported above the ground so that they do not rot and risk distorting the effects of the CO_2 enrichment unnaturally.

The site in Staffordshire was selected as it met a variety of criteria, such as being large enough to host the whole experiment, that each plot had a similar make-up of tree species, size and density, and that the topography and soil conditions were suitably similar throughout not to affect the end results.

Mill Haft is one of two current FACE experiments across the globe, its role being to represent temperate, deciduous, coppice-with-standards woodland within the research network. The other facility is in Sydney, Australia (subtropical, dry Eucalyptus forest) while a third is being constructed in Brazil (tropical, broadleaf, evergreen rainforest), and one planned for Northern Sweden (semi-boreal, boreal conifer forest).

CO_2 enrichment experiments were tried first of all on crops during the late 20th century, with the first FACE system installed in forests in the late-90s in a maturing Loblolly Pine stand in North Carolina. These pioneer experiments have shaped the design and operation of the BIFoR FACE experiment in Staffordshire and when all data is amalgamated across the globe, from all the past and present experiments, world-wide knowledge and appreciation of the effect on trees of increasing levels of CO_2 in the atmosphere will be advanced immensely.

Best use of British Timber Awards

Celebration of Craftsmanship & Design 2016

"Every year Woodland Heritage is proud to support the Celebration of Craftsmanship & Design. There are always stunning exhibits which in our view demonstrate the economic and environmental value of trees and promote wood as a beautiful and renewable natural resource", said Peter Goodwin, in the brochure for this prestigious exhibition. "Using British timber encourages the sustainable and economic value of our woodlands, as well as supporting the wood chain."

Celebration of Craftsmanship & Design director, Jason Heap was delighted with this year's winners and once again the Woodland Heritage judges Peter Goodwin and Will Bullough were spoilt for choice and quality.

In determining who should be the recipients of this year's awards, marks were given for design, species selection, use of timber, craftsmanship and provenance of the wood used; points were also given to entrants who provided proof that they had gone out of their way to source timber locally and/or find out where their timber came from.

Winner

Chris Wiseman

'Oak Within'

www.wisemanwoodworks.com

A hand-made sideboard in beautiful British Sycamore and Oak with six traditionally made piston-fitted drawers. This piece was also the winner of the 2016 Alan Peters Student Award for Excellence.

Judges' Comment

"The remarkable quality of this piece displays an exceptional range of skills. An aesthetically imaginative design with immaculate craftsmanship. A fantastic achievement for Chris, a student who has just completed his training. A great craftsman for the future. This was his second ever piece of furniture that he had designed and made."

Highly Commended

Robert Scott

'Aeolian' Console Table'

www.robertscott.eu

Sculpted in Ash by hand and inspired by rock formations created by wind erosion.

Judges' Comment

"A clever sculptural piece with real impact. Its organic shapes have an enduring quality with strong fluid lines. Another young maker who has demonstrated the potential beauty hidden within a native timber."

Special Mention

Paul Jaques

'Walnut Poem Coffee Table'

www.jaquesdesign.co.uk

The imaginative use of 153 carved Walnut off-cuts finished, on the exterior, with sealed Nitram charcoal with bronze elements.

Judges' Comment

'If ever useless timber has been rescued to great effect, this is it. Huge effort has been made to maximise the beautiful English Walnut grain, with numerous small carved off-cuts which combine to produce a truly inspirational piece."

Jason Heap is to be congratulated on his exhibition, now in its 23rd year and which is recognised as the UK's largest annual exhibition of contemporary designer-maker furniture.

Woodland Heritage will return and encourage more craftspeople to use timber grown in britain at the 2017 event which runs from 19 to 28 August at Thirlestaine Long Gallery, Cheltenham.

Celebration of Craftsmanship & Design

info@celebrationofcraftsmanship.com
www.celebrationofcraftsmanship.com

A History of British Oak: Part Two

by Esmond Harris

In the 2016 Journal Esmond Harris described the early history and uses of Oak, its natural regeneration and thus guidance for growing Oak today. Here, he follows up with a summary of its history and an account of role of Oak today.

Past and Present uses of Oak: A Summary

For several hundred years Oak occupied a unique position supplying Britain with timber and other secondary products. Fortunately Oak occurred widely, the timber is strong, hard and heavy, the heartwood is durable and the tree grows to a considerable size. The bark was used for tanning, Oak charcoal was used for smelting (mainly from coppice) and the timber was used as domestic and industrial fuel. Oak timber was also important for smoking foods to preserve them, for lime burning, salt production and glass making. The acorns were the source of 'pannage' (forage) for pigs living in Oak woods and were also utilised as a coffee-like drink for human consumption. The timber was the best structural material available for many hundreds of years, not only for houses, ships and agricultural buildings but also for furniture, docks, bridges, weirs, mills and their wheels. Because it is easily cleaved (split) along the medullary rays, it forms good roof shingles and can be used for cooperage (barrel making). There were special uses for cleft Oak as it is particularly durable when cleaved because the vessels are not broken but riven apart.

For many centuries the craft of 'cooperage' provided the 'containers' of the day in the form of barrels and casks made of cleft Oak staves. By the 19th century suitable Oak for cooperage was becoming scarce, so at first good Oak from the Continent and then white Oak *(Quercus alba)* from North America, was imported.

The great strength of Oak was utilised to its full in windmills, vital for grinding corn, whilst one of the most unusual uses of Oak was by John Harrison for his famous marine chronometer, designed to keep time at sea. In order to avoid metal parts rusting he used quarter sawn material as it is more stable than other cuts. His famous clock on the stables block at Brocklesby in Lincolnshire, is still running after three centuries.

The durability of Oak is demonstrated in many old buildings, the oldest surviving being the wooden church at Greensted-juxta-Ongar in Essex dating from AD 835.

Perhaps the finest example of mediaeval carpentry is the Oak of the hammer beam roof of Westminster Hall built in 1394; whilst the National Trust continues the tradition of using Oak in many restorations of their older buildings today.

By the Tudor period large houses were being built for the wealthy, and Oak panelling, as well as Oak furniture, became popular; much of it still in existence today. Oak timber remains popular for furniture making although much is now made from imported American Red Oak *(Quercus rubra)*, however English Oak is still used by many craftsmen, such as 'The Mouseman' of Kilburn in Yorkshire.

Shipbuilding in Oak

Undoubtedly the most important use of Oak for many centuries, was in shipbuilding. Due to its strength, durability, workability, cleavability and abundance in historical times; this was the ship timber *par excellence*. Both 'carvel' and 'clinker' construction were used; the first with planks side-by-side, in the second the plank edges overlap and were fastened to frames with Oak 'treenails' – small pegs that swell when wet to fit tightly. The remains of many early examples have been found, some being over 4,000 years old. These very early boats were usually constructed of cleft Oak shaped with an adze and bound together with Yew withies.

As England developed after the Norman Conquest, ships for trading in wool and cloth, some being ocean going vessels, were needed. Oak from forests such as The Forest of Dean and New Forest became hugely important. Henry VIII was a great ship builder and there was an ample supply of wood at this time. Albion tells us: "...the last twelve years of Henry's reign saw more Oak cut than in an ordinary half century before". Consequently, four years before Henry died, it was necessary to pass an act – the Statute of Woods of 1543 – reserving woods for essential timber supplies. Much coppice Oak woodland had also been cleared to provide charcoal for blast furnaces.

To build a ship required a vast amount of Oak and much of it had to be obtained from mature trees to get the required shapes in heartwood. This is known as 'compass timber' or 'grown timber' – wood that is naturally curved – and comes from large limbs providing the desired curves and bends. Holland reports that in 1593 "just repairing four Royal Navy ships required 1,740 mature Oaks or about 2,000 tons of Oak wood. To build a large warship took about 2,000 Oaks of at least a century old."

When Charles II was restored to the throne the shortage of Oak led to Evelyn's famous *Silva*, first published in 1664, encouraging the planting of trees. In his next edition in 1670 he was writing: "There is not a cheaper, easier, or more prompt expedient to advance ship timber, than to solicit that in all his Majesties Forests, woods and Parks, the spreading of Oak be cherish'd".

In the latter part of the 17th century The East India Company also required large quantities of the best Oak to build and maintain their ships, which were trading around Africa to India. At the same time, trade from the West Country was opening up the cod fisheries of Newfoundland.

Large valuable Oak trees were cut up very skilfully. The Golynos Oak in Gwent, purchased for the Plymouth Dockyard in 1810, provided the following timber: "The main trunk was cut into quarter boards and cooper's stuff; the Limbs, one upper piece stem for a one hundred gun ship, one ditto fifty guns, one other piece seventy-four guns, three lower futtocks each one hundred guns, one fourth futtock one hundred guns, one ditto forty-four guns, one floor timber seventy-four guns, one second futtock one hundred guns, and about twenty knees, all of which were large enough for the Navy."

Experiments were carried out in the New Forest and elsewhere in the late 18th century to ascertain whether pedunculate or sessile Oak was most suitable for naval ships. Resistance to splintering from cannon balls was tested but no conclusive results were obtained, suggesting that neither was better in this respect. By then shortage of Oak timbers meant that ship builders were looking abroad for supplies and some ships were built abroad. Timbers other than Oak were also used, such as pitch Pine from America and teak from the Far East, whilst iron was gradually replacing Oak for ship construction, use of the latter increasingly being confined to coastal and river craft, so that the demand for Oak declined.

'Oak for the Royal Navy': from Wheeler's The Modern Druid 1747. The Oak bears a heavy crop of acorns, whilst Britannia holds an Oak seedling. In the background the fleet is assembled. Translated the inscription reads: "The glory and protection of Britain"

The last British ship built of Oak was Captain Scott's *Discovery*. Scott explaining that: "steel is in constant need of repair; nothing but a wooden structure has the elasticity and strength to grapple with thick Polar ice without injury." The last type of boat to be built from Oak timber was the sturdy Bristol Channel Pilot Cutter which was being constructed up to the beginning of the 20th century.

Interest in the restoration of classic craft for pleasure purposes, commencing around the 1970s, has resulted in a demand for small parcels of Oak again. The west country trading barges *Garlandstone*, *Lynher* and *Shamrock*, all on display on the river Tamar, were restored using Oak; the first with Oak from the Forest of Dean.

In the days of sail, Oak also had a use other than as timber. This was to tan sails. Oak bark was a vital ingredient in the

process due to its high tannin content, preserving the sails from damp, mould and rot. The tanned sails of restored Thames barges can still be seen on east coast rivers today.

Seasoning

The shortage of timber meant that sometimes proper seasoning was not carried out and 'green' timber was used for ships, resulting in early rot and the need for extensive repairs. When properly seasoned, the heartwood of Oak is extremely durable but the sapwood cannot be seasoned sufficiently to make it durable and when felled, is quickly invaded by fungi and beetles. Air seasoning was traditional in the past and even today is thought by some to do a better job. At the Yorkshire workshop of Robert Thompson, Oak planks are still air seasoned in the open for four to six years, with 'stickers' between them, to allow air currents to circulate before use. Timber was sometimes seasoned in salt water as a means of removing the sap.

Oak is particularly subject to shake – fractures running between the wood fibres – which open up during seasoning and if extensive, the timber falls apart.

Special decorative features of Oak

The medullary rays, along which the cleavage takes place, are horizontal vessels running in from the phloem under the bark to the sapwood, carrying food for the tree's growth and for storage. They show up on quarter-sawn timber as silvery areas, known as 'silvery grain' or 'figure'. Because these vessels have not been cut across, exposing their open ends, this surface is uniquely waterproof, thereby explaining why cleft poles of Oak (and Chestnut) withstand damp conditions without rotting. This is a process of great antiquity as there is evidence of cleaved Oak in the ancient causeway known as the 'Sweet Track' in

Selling Oak timber from Moses Cook's "The Manner of Raising Forest Trees" 1717. The owner and his agent discuss the price with the timber merchant. The crooks at the tops of the two trees lying in the foreground are probably for 'ship timbers'

PRIME MAIDEN

Timber, and Pollards,

IN FARWAY, DEVON.

FOR SALE

AT AUCTION,

BY MR. HUSSEY,

AT THE GOLDEN LION INN, IN HONITON,

On MONDAY, the 26th Day of JANUARY, Instant,

AT 3 O'CLOCK IN THE AFTERNOON,

117 Maiden Oak, Elm and Ash, TIMBER

TREES,

And 200 Oak & Ash POLLARDS;

As they stand numerically marked with White Paint, on Colehayes, Edhill, Widcombe and Lambrooke Estates, and Bull and Arrish Coppices, situate in the Parish of Farway; in the following Lots:

MAIDEN TREES.

Lot.	On Colehayes.	No.	
1.	Ten Maiden Oak	1	to 10
2.	Five Ditto	11	to 15
3.	Ten Maiden Ash	1	to 10
4.	Ten Ditto	11	to 20
	On Edhill.		
5.	Ten Maiden Oak	1	to 10
6.	Ten Maiden Ash	1	to 10
7.	Ten Ditto	11	to 20
8.	Seven Ditto	21	to 27
9.	Five Maiden Elm	1	to 5
10.	Five Ditto	6	to 10
11.	Five Ditto	11	to 15
12.	Five Ditto	16	to 20
	On Widcombe.		
13.	Twelve Maiden Oak	1	to 12
14.	Ten Maiden Ash	1	to 10
	On Lambrooke.		
15.	One Maiden Ash	1	
16.	Two Maiden Elm	1	to 2

POLLARDS.

Lot.	On Bull and Arrish Coppice, in Widcombe aforesaid	No.	
17.	Ten Oak Pollards	1	to 10
18.	Ten Ditto	11	to 20
19.	Ten Ditto	21	to 30
20.	Ten Ditto	31	to 40
21.	Ten Ditto	41	to 50
22.	Ten Ditto	51	to 60
23.	Ten Ditto	61	to 70
24.	Ten Ditto	71	to 80
25.	Ten Ditto	81	to 90
26.	Ten Ditto	91	to 100
	On Widcombe, and Bull Coppice.		
27.	Ten Ash Pollards	1	to 10
28.	Ten Ditto	11	to 20
29.	Ten Ditto	21	to 30
30.	Ten Ditto	31	to 40
31.	Ten Ditto	41	to 50
32.	Ten Ditto	51	to 60
33.	Ten Ditto	61	to 70
34.	Ten Ditto	71	to 80
35.	Ten Ditto	81	to 90
36.	Ten Ditto	91	to 100

The above Timber is of great Lengths, large Dimensions, very superior in Quality, well situated for Carriage, and is well worth the attention of Ship and House Builders, Coopers, &c. &c.

☞ For Viewing the same, apply to Mr. Edward Thomas, Carpenter, in Farway aforesaid.

Dated Gittisham, January 13th, 1832.

A 19th century notice of an auction for the sale of Oak for ship timbers and other trees

Somerset which has been dated at 6,000 years old. Cleft Oak was also used in early ships before sawing had been developed, thereby providing thin, strong, durable planks.

There are two unusual and valuable forms of Oak; 'Brown' Oak and 'Bog Oak'. These occur as a result of discolouration of the wood, which enhances its decorative quality for interior work and furniture. The first is caused by the beef steak fungus, whilst the second occurs when Oak has lain for a long time in waterlogged conditions. Very occasionally 'Green' Oak, discoloured by a fungus *Chlorociboria aeruginascens*, is also used for decorative work.

Star shake in the cross section of an Oak log

'Pippy' Oak is another feature of Oak exploited for its decorative effect. This occurs as a result of very small knots arising from numerous, small adventitious buds in the bark but which have not developed and get enveloped in the wood as the tree trunk expands, these show up in cross section when Oak wood is utilised and can be displayed by skilled craftsmanship. These small, undeveloped buds, sometimes also occur as a result of nibbling by animals, particularly in hedgerow Oak trees.

Ageing Oak trees

Great age is often attributed to Oak trees and Oak certainly lives longer than many other species, though some large trees are particularly vigorous and their size can therefore be misleading. Loudon, in his *Arboretum Fruticetum Britannicum*, was the first to recognise the relationship between the circumference of the trunk of a tree and its age, recording the measurements of nine Oaks between 60 and 120 years in the New Forest. Taking girth measurements at six feet from the ground, he found that the circumference increased on average by a half to two

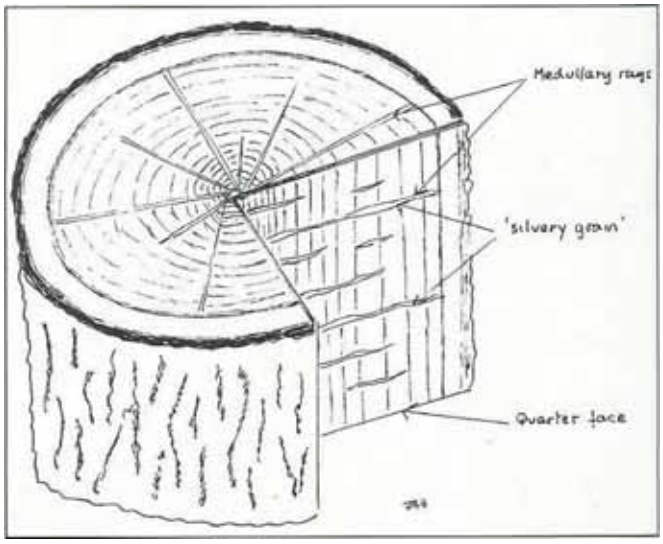
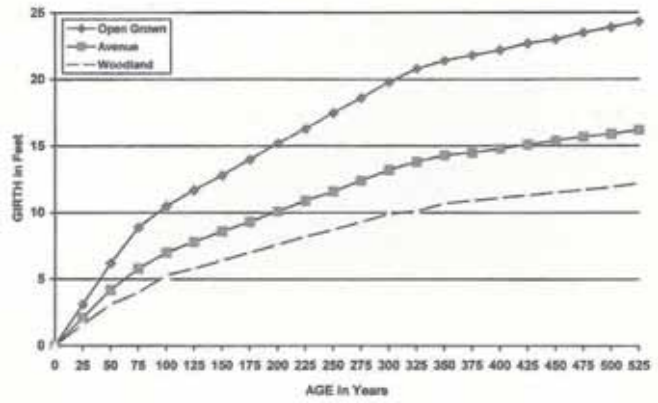


Diagram showing the position of medullary rays, in which the products of photosynthesis are stored, which run radially through the stem, well displayed in 'quarter-sawn' Oak and known as 'silvery grain'. (Drawing by Jeanette Harris)

thirds of an inch per year, after which girth growth slowly is reduced due to the increasing circumference though it does not cease until the tree dies.

Alan Mitchell, who made a detailed study and meticulously recorded data about many trees throughout Britain followed up Loudon's formula by considering ten Oak trees aged from 26 to 238 years in locations ranging from the south of England to Wales and central Scotland. He also re-measured five trees that had been recorded by Elwes and Henry in 1906 and from this data he concluded that: "Vigorous, large crowned trees are likely to be seven to nine feet in girth at 70 years and 10 to 13 feet at 100 years; further growth is usually not far from one inch a year until over 20 feet in girth, and thereafter, as long as the crown is largely maintained, the annual increase averages nearly three quarters of an inch, but under half an inch on less good sites." Mitchell also pointed out that neither the height nor spread of the crown of a tree is a reliable guide to age "but the circumference of the bole of any tree must increase in some measure during every year of its life. The age of a tree is thus some function of the circumference alone." He therefore refined his rule of thumb thus: "Young Oaks on a good site often grow 1.5-2 inches a year for their first 60-80 years. From then on until they are 20-22 feet (6-6.6 metres) in girth they maintain the standard rate of one inch a year." Thereafter they "slow further, depending on the loss of leafy crown and seldom survive with a slower rate of less than one inch in 5-6 years." These rules apply to open grown trees, those in avenues will be about two thirds the size and in

woods the circumference will be about half. The graph below illustrates Mitchell's formulae.



Graphical illustration of Mitchell's formula for ageing Oak trees

Mitchell's table for aging Oak trees

AGE	*Open Grown*		*Avenue*		*Woodland*	
	Inches	*Feet*	*Inches*	*Feet*	*Inches*	*Feet*
25	37.5	3.1	25.0	2.1	18.7	1.6
50	75.0	6.2	50.0	4.2	37.5	3.1
75	112.5	9.4	75.0	6.2	56.2	4.7
100	126.4	10.5	84.3	7.0	63.2	5.3
125	140.3	11.7	93.5	7.8	50.1	5.8
150	154.2	12.8	102.8	8.6	77.1	6.4
175	168.1	14.0	112.0	9.3	84.0	7.0
200	182.0	15.2	121.3	10.1	91.0	7.6
225	195.9	16.3	130.6	10.9	97.9	8.2
250	209.8	17.5	139.9	11.6	104.9	8.7
275	223.7	18.6	149.1	12.4	111.8	9.3
300	237.6	19.8	158.4	13.2	118.8	9.9
325	252.0	21.0	168.0	14.0	126.0	10.5
350	257.0	21.4	171.3	14.3	128.5	10.7
375	262.0	21.8	174.7	14.5	131.0	10.9
400	267.0	22.2	178.0	14.8	133.5	11.1
425	272 .0	22.7	181.3	15.1	136.0	11.3
450	277.0	23.0	184.7	15.4	138.5	11.5
475	282.0	23.5	188.0	15.7	141.0	11.7
500	287.0	23.9	191.3	15.9	143.5	11.9
525	292.0	24.3	194.7	16.2	146.0	12.2

Note: These are merely average measurements giving an estimate of a large Oak tree's likely age.

Mitchell also emphasised the need to look critically at the past growth of a tree when estimating its age. He drew attention to the misleading effect of pollarding and the need to take account of this common practice of the past, pointing out that "most of the biggest famous Oaks are either pollards in that by the height of ten feet their boles divide into numerous limbs."

Symbols and sayings

Oak appears as a symbol, usually depicted as Oak leaves, on many things which are traditionally connected with royalty or our nation. In heraldry Oak acorns, leaves and trees, are incorporated in the arms of many individuals or corporate bodies. In 1936 the National Trust adopted an easily recognised logo of Oak leaves and acorns to designate its properties.

Alongside the numerous traditional sayings about Oak there are many literary references to these magnificent trees.

Many Oak trees are named through their association with local or historical events, most of them connected with royalty. For example; William the Conqueror's Oak in the White Deer Enclosure of Windsor Great Park. Elsewhere I have recorded 736 named Oak trees, not all of them still alive but all with interesting stories attached to them. (*Oak; A British History* by James, Harris & Harris, Oxbow Books 2003).

The role of Oak in nature conservation

Today Oak has a paramount place in nature conservation and this is likely to become increasingly significant. The many 'pests' of Oak as they were regarded by the Victorians, now have a conservation value, though there are also worrying occurrences of 'sudden Oak death' and other problems. The light foliage of Oak woodlands and the wide spacing of Oak trees at maturity maintain a good grown flora, as well as sustaining much bird life. Old Oak trees with decay sustain a wide spectrum of insects and lichens, whilst coppicing is being practised again by many Wildlife Trusts and other woodland owners with conservation as an objective.

What will be the role of Oak in the future?

One of the attractions of growing Oak comes from the timber it produces – its strength and durability as well as its particular beauty. It, therefore, still has a special place in today's Britain. Perhaps it also has an important role in carbon storage as the carbon sequestrated from the atmosphere during the process of photosynthesis is stored in the wood and as most things made of durable Oak last a long time, so it is an efficient means of carbon sequestration.

In 1980 The National Hardwood Project was proposed by Dr Neil Paterson with the object of increasing the interest in growing more hardwoods, particularly Oak, using improved clonal material. This initiative has developed well under the Hardwood Improvement Programme (now FTT) which includes Oak amongst the six species it is researching and promoting. The Oak project section of this initiative has two principle objectives; to increase the proportion of recoverable timber per hectare and to improve the quality of the timber produced.

Future success in Oak woodlands will depend upon their maintenance in the early years because Oak, more than

Prime Oak logs extracted to ride side and ready to be sold

most other species, requires more attention at the beginning of its life if trees of timber value are to be produced.

Despite extensive wartime fellings, the area of Oak woodland in Britain has increased in the post war period, mainly in the south, now standing at 219,000 hectares; more than any other broadleaf tree. From its lowest ebb in the 1970s when Oak timber was worth only £7.82 per cubic metre, it has shown a steady rise in value until today when it is worth in the region of £150 per cubic metre, although of course, this is over a period of inflation.

Conclusion

Today, if Oak is to be grown economically, and there is a tenfold difference between the value of low grade Oak and first quality veneer butts, attention to site and soil conditions are of paramount importance. Thus local soil and site conditions are critical for the production of good quality Oak trees and timber, pedunculate Oak requiring more fertile and deeper soils than Sessile Oak. Kerr and Evans writing in 1993 stress that "Oak should be established on deep, fertile acidic clays and loams because these sites are optimal for the species and are believed to reduce the incidence of shake." To which must be added the importance of 'nursing' young Oak in the early years after planting.

Amongst hardwood timbers, Oak remains the one that is in greatest demand and commands the highest price. Thus Oak will surely continue to be a tree which is prized and will continue to have a special place in Britain.

Oak Processionary Moth

who sprays and who pays?

by Dr Terry Mabbett

Oak processionary moth (*Thaumetopoea processionea*) has now spread outside of its London base which this alien insect pest has occupied since 2005. New and separate outbreaks originating from later introductions on Oak tree planting material imported from other European Union countries are also established in some of the Home Counties.

Dr Terry Mabbett

As a consequence increasing numbers of woodland owners outside of the capital are now confronted with OPM and the all component parts of Forestry Commission's (FC) management programme as directed by a SPHN (Statutory Plant Health Order). This will invariably include spray application of an insecticide, most likely during the April/May 'window' when OPM larvae are very young, relatively small (L1 and L2 stages) and therefore most susceptible to insecticide.

Picture Dr Terry Mabbett

Application of insecticide to control OPM. Who sprays and who pays.

Affected stakeholders in the Core Zone (mostly in London but including parts of Surrey) are not issued with SPHN's and as such are not forced to carry out OPM control measures including spray application of insecticide. Stakeholders with breeding populations of OPM on land inside the Control Zone or Protected Zone (as designated by FC) are issued with SPHN's which require action. The SPHN should make it clear whether any mandatory control activity, including the application of insecticide, will be Defra funded or funded by the landowner.

Three insecticides are approved for ground-based spraying against OPM. Deltamethrin, diflubenzuron and *Bacillus thuringiensis* subsp. *kurstaki* display significant differences in potency, persistence and damage to non-target organisms. In their Operational Programme for 2017/18 FC says: "We will normally use BTk and sometimes

Picture courtesy Forestry Commission

New separate outbreaks have established outside of London since 2005 from plaques of eggs on Oak tree planting material imported from other EU countries

diflubenzuron. There are no plans to use deltamethrin but it may be considered [for use] in the Protected Zone as part of a robust response package."

Deltamethrin is a potent and persistent synthetic pyrethroid insecticide acting by contact and ingestion. Mode of action is via the insect's nervous system. A single treatment will usually eradicate an OPM infestation because deltamethrin is capable of killing the later developing and therefore much larger and heavier L3 to L6 stage larvae. Downside to deltamethrin is the insecticide's broad spectrum of action which affects a wide range of non-target arthropods including most insect groups, arachnids [spiders and mites] and terrestrial crustaceans (woodlice). Deltamethrin is toxic to pollinating insects and wide range of aquatic organisms.

Diflubenzuron is an insect growth regulator acting via contact and ingestion, interrupting chitin synthesis at

Picture Dr Terry Mabbett

OPM larvae seen here were literally dripping from Oak trees in the London Borough of Richmond (Core Zone) in May 2015

Picture courtesy Barlett Tree Experts

The biological insecticide BTk is increasingly ineffective against larvae from the L3 stage onwards because the larval gut becomes too resilient for the bacterial toxin to punch through. L2 stage larvae shown here

moulting and thus killing immature (larval) stages of the target insect pest. Diflubenzuron has specificity towards Lepidoptera (butterflies and moths) but is also used in agriculture and public health to control other groups of insect pests including cotton boll weevils (Coleoptera), houseflies (Diptera), grasshoppers (Orthoptera), as well as mites (arachnids). This means insects belonging to groups other than Lepidoptera, and some other arthropods, in the Oak tree environment may be affected. Diflubenzuron shows activity against some aquatic wildlife with freshwater crustaceans among the most susceptible. Diflubenzuron is not persistent in the environment and requires a follow up second spray for control of OPM.

Bacillus thuringiensis subsp. *kurstaki* (BTk) is an entomopathogenic biological insecticide based on a commonly occurring soil bacterium which acts against OPM larvae by ingestion only. It is highly specific against the Lepidoptera but lacks persistence because it is easily washed off of the Oak foliage by rainfall and also lacks photo-stability. A follow up application within 2 weeks is therefore required. OPM larvae much beyond the L2 stage are increasingly unaffected by BTk because the stomach wall of these older and more developed larvae

Picture courtesy RBG Kew

OPM nests have recently been found for the first time in Hertfordshire and Essex

Picture Bartlett Tree Experts

OPM is an invasive insect pest of Oak trees but with a 'sting in the tail'. A post L3 stage OPM larva complete with urticating (stinging) hairs

becomes too resilient for the bacterial toxin to 'punch' through. Spray timing is therefore critical and both spray applications are essentially required during the relatively short window of opportunity when OPM larvae are still at the L1 to L2 stages.

BTk is the most selective of these three insecticides and should therefore offer the least amount of ecological damage and environmental destruction. However, lepidopterous insects (butterflies or moths) with Oak foliage as the larval food plant, and a larval window closely matching that of OPM, are at risk from sprays of BTk, as are any predators dependent on these larvae as a food source.

There is strong evidence to suggest that aerial application of BTk to Oak woodlands at Pangbourne in West Berkshire to control OPM in May 2013 impacted heavily on the blue tit population therein by killing larvae of the green Oak tortrix moth (*Tortrix viridana*), one of the most important food sources for blue tit nestlings at this time. Landowners will not be the only ones forced 'to pay' for insecticide application to control Oak processionary moth.

Important Note: Legislation surrounding use of chemical and biological pesticides is under constant change. Potential users should carefully consult all product labels and suppliers and manufacturers on all aspects of pesticide use, including the active ingredient, dosage and frequency of application, application technique and protective and safety equipment for operators to ensure they stay within the law.

Dr Terry Mabbett's research background and experience comprises of pest, disease and weed management in tropical tree crops in the West Indies, West Africa and Asia. He has a BSc (Hons) in Agricultural Botany (University of Wales), a MSc covering applied entomology, plant pathology, weed science and pesticide application technique (University of Reading) and a PhD in tropical plant pathology and agriculture from The University of The West Indies. He has also been the winner of the RFS James Cup in both 2009 and 2016 for articles of note published in their Quarterly Journal of Forestry (QJF).

His interest in UK forestry was re-kindled by commercial clients marketing fertilizers, nutrients, chemical pesticides, biocontrol agents and application equipment into both tropical agroforestry and UK forestry.

He regards urban and peri-urban woodlands as perhaps the most important woodland resource we have. These woodlands are the most accessible to the vast majority of the country's population and as a result are under the most pressure and threat from pest and diseases. For him, the excitement of these woodlands lies with finding something that rural dwellers may take for granted within their woodland resources, but which in urban and peri-urban woodlands is now a rarity.

Life as a graduate trainee forester

by Ben Butler

I am often asked what attracted me to forestry management as a new career at the age of 34. I can quite honestly say that there was probably no one defining point in my life that directed me. It was quite simply that I was in a period of transition. My life reflected my outlook: that I loved living in and near nature and, at the time, my mind was open to try new career paths that incorporated more of an ecological philosophy

So whilst sitting on the deck of my houseboat, reading an article on forestry, underneath a huge weeping Ash on the banks of the River Trent, my career focus was clearer than it had been for a while, and my imagination kicked in as to what it would be like to be working in forestry management. Six years later and my imagined reality is now here.

To get to this point (Assistant Forest Manager with Pryor & Rickett Silviculture), Banger University advised that I update my school qualifications with a year's foundation course in environmental studies, which I did with the Open University. That course allowed me to develop my essay writing and analysis skills and helped me to get used to a general academic outlook, whilst still working. I was accepted in 2012 and moved to life as a mature student at Bangor University studying BSc Forestry. I am not going to say it was easy because it was not, but I did fairly well.

My time at university included a year's placement and I was fortunate enough to undertake a sandwich placement in Northern Ireland with the Forest Service based in Enniskillen. This was enjoyable, and showed me many aspects of upland forestry; it was an opportunity to embed what I had learnt so far, as well as to experience being part of a knowledgeable and supportive team.

Reflecting on my working life before the start of a career in forestry, it is noticeable that there were aspects that helped me to develop a number of relevant skills. As a painter, questions were asked about the world around me. This involved observation and evaluation of why something mattered, if it was true and how I could learn from it. These correspond to aspects of science, and in particular forestry, which I love. With the ease of my transition, it seems that a change to forestry could have been made earlier, as it has proven to be an obvious step for me. Add to this, my love of nature and landscape coupled with several years in business, and I have found myself in a career that almost resembles those ideals I had imagined years earlier.

Whilst studying, I never made my mind up as to what aspect of forestry, upland or lowland, I would like to end up working in, so it is perhaps fitting that I have been working in both. My eight months with Pryor & Rickett Silviculture have involved assisting highly knowledgeable senior managers with their portfolios in Mid and North Wales and the Marches. Working as a part of a team, I have been spending the planting season planning and supervising various forest maintenance and re-stocking operations, and gaining valuable silvicultural knowledge along the way.

It is fair to say that the multifaceted nature of forestry management is highly enjoyable and certainly keeping me busy. I look forward to continuing on my journey to becoming a forest manager within a highly successful company.

www.silviculture.co.uk

Trying to make a difference

How a Monkey Puzzle became a village quiz

by John Pitcairn

While I was whiling away the time one evening down the pub with some men all of whom had lived in the village longer than the 28 years that I had, one them mentioned a large Monkey Puzzle tree in the village.

I commented that it was a coincidence that it was a female while the one on the Great North Road was a male. I was greeted with blank looks – not because trees had sex, but because none of them knew of this male tree. Set only ten yards back from the main road, and standing at least ten feet above the bungalow behind it, they must have passed it several times a week for over 40 years. It made me realise just how much trees are taken for granted and unappreciated.

I also thought of how long it had taken me to realise there was a lot of clipped Elm in the hedge I walked past every time I went to the pub. The idea came to have a *'Favourite Tree in the Village'* vote, just to get people to know and think about the trees in the area.

The only woodland related displays I have seen have been at fairs or shows, that have "WOOD" or "TREE" in their name and are therefore rather preaching to the converted; though this may say more about the sort of events I go to. I thought I would try to reach a more general audience, albeit a mainly fairly rural one.

I committed to have a "Woodland Info Stand" and to collect votes at the village festival, which was eight months away. The two-day festival has its origins in a 1980's church fund-raiser centred on vintage and steam vehicles. It still has a vintage vehicle feel.

In April posters and an article in the parish magazine started asking for nominations of trees for a short list. Meanwhile an email to various woodland organisations asking for posters and educational material produced a response from Woodland Heritage, and a couple of offers of application forms. I had naively thought I would be able to pick up leaflets and plagiarise the internet to create a display. The Forestry Commission appears to have just about given up printing leaflets, and those on the internet are specifically targeted, not really of general interest.

The Favourite Tree vote did cause some extra thought about the village trees. The most common reaction was that it was very difficult to select one. Some people did walk round the village looking at trees to nominate but failed to make up their mind! In the end the short list of six trees was almost self-selecting. The only nominated trees not to be short-listed were the male Monkey Puzzle, with fewer nominations than the female, and trees on little-used routes. Posters were put up next to the shortlisted trees about a month before the festival. Just before the nominations closed I went on the WH Field Weekend and heard Peter talking of Sydney Draper extolling his achievements as having made a significant difference. Inspiration indeed, if it was needed.

So, armed with an A4 printer and an A3 laminator I prepared displays on woodland history, woodland management, tree identification and known pests and diseases. There was also a woodland mammal identification quiz with a supplementary question on which animals damaged trees. The Favourite Tree vote was accompanied by a historic map of the village with photographs of the trees and a few notes about the species. I had thought to do something about imports of timber and charcoal, but reliable figures on this inefficient use of our timber resource are not easy to come by.

It was always my intention to build a roundwood timber-framed wood store in my wood and replacing pegs with screws and bolts meant it could serve as my gazebo for the event. Though it did take rather longer to erect than a standard gazebo, it did prove to be one of the driest pitches on the site.

Everything was going fine, until the weather forecast took a turn for the worse the Thursday before the festival weekend. Unfortunately, the forecast proved correct and heavy rain from 11am to 4pm meant there were not many visitors on the

Saturday. I did manage to convince someone that a leylandii may be a conifer but was not a Fir tree. The adults did mostly know that grey squirrels were bad for trees, but few knew voles were. The Sunday proved grey but dry and a steady number of people came to cast their votes. Most children had a go at the mammal quiz. Some had a go at the tree identification. I had put out the WH tree identification key. This is not easy to use but did get the comment from a retired teacher that it was not perfect but was the best he had seen. I don't think anybody used it systematically but the pictures enabled the native twigs I had put out to be identified. The trays of conifers and less common trees remained under the table.

The Woodland Info stand.

Those people who stayed and read any of the displays were mainly people who already had a connection with or at least an interest in woodland. There was a group of unaccompanied children who spent half an hour at the stand looking at the child-orientated pieces and studying the slice of Horse Chestnut trunk outside the stand. One girl managed to count the rings and identified 1887 as the age of the oldest ring. As the slice came from the bottom of the second length and the tree was planted to commemorate Victoria's golden jubilee she was probably correct; quite an achievement.

My aim had been to raise the profile of trees in the village and to get across the messages that woods need managing if they are to thrive, and that grey squirrels are a Bad Thing. Did I succeed? Possibly. I am not a sales man and dragging people off the street is not my forte, so the effort I put in to the displays was not really appreciated. The Favourite Tree vote did work for some, though I used every public facility to publicise it, there were a number of villagers who remained unaware of it. A younger person with social media skills might have done better. Photo-shopped pictures of Usain Bolt and President Obama voting for one of the trees on someone's facebook page were a highlight. Personally it was worth doing as I made several contacts I would not have done otherwise and I learnt a lot doing the research. At the end of the day I enjoyed doing it. I now also have sufficient material to do a talk at the local village History Society and to go into the school.

The number of adults who could not confidently identify an Ash leaf, even amongst a rural population, suggests that getting woodland, never mind forestry, onto a mainly urban political priority list is going to be a struggle. The tide of public opinion may, however, slowly be turning against grey squirrels. The day a sign asking people not to feed the squirrels goes up outside an RSPB café will be a significant step.

I think I was right in thinking that trying to persuade the public that we need more conifers was a step too far. That woodland needs managing and that productive woods are better than non-productive ones are messages we can get across. Having the ear of Ministers is not enough on its own, particularly if the Minister hears different messages from the large NGOs. It is their members who appear to drive policy around the environment. The executives may be more supportive of productive timber woodland than the rank and file of their membership. It is those who care enough about the environment to belong to an organisation, but may not see the bigger picture, whose opinion needs to be changed. It can be done a few at a time, that is where we can try to make a difference.

The Irregular Silviculture Network

by Philippe Morgan and Andy Poore

The recently established Irregular Silviculture Network (ISN) is affiliated to the Association Futaie Irrégulière (AFI) to provide an English-speaking interface to the AFI. The ISN will administer UK and Irish stands within the main AFI Network and will promote and facilitate the use of the Management Protocol and Irregular Forest Inventory. ISN will also be used as a vehicle to undertake other research projects in irregular forest management, maintain a list of contractors who can set up research stands and undertake data input and retrieval.

Being a member of the ISN

ISN is managed by a board of six forest managers and scientists from the UK and Ireland. The Chairman/ Secretary is Phillipe Morgan who is also Vice-President of the AFI and operates as the link with the central organisation. The Vice-Chairman is Andy Poore, the Treasurer is David Pengelly and the Scientific Adviser, Ted Wilson. Also on the board are two of the leading irregular silviculture practitioners in Ireland, Padraig O'Tuama and Paddy Purser.

Membership is open to forest managers, owners and scientists engaged in irregular high forest management. Members will have access to specialist software, data resources, training in the monitoring of irregular stands and opportunities to meet other members from UK, Ireland and Europe, as well as being members of the AFI.

What are the questions we are trying to answer?

- What is the performance of the overall stand and its components (different species, size classes etc.) in terms of volume/ basal area increment, diameter increment and timber quality?
- Which trajectory should the stand be on and how should the structure be developing in terms of the overall growing stock size and its distribution across the size classes?

Stourhead (Western) Estate, Wiltshire (AFI Research Stand No 67)

- How does the stand compare with other similar stands with regard to, for example, the relationship between growing stock and increment or between growing stock size and regeneration?
- How do we ensure that marking decisions are leading to economically satisfactory results?
- What are the suitable economic parameters to use and how do we integrate these into marking practice?
- How does biodiversity output vary with structure and density?

ISN is involved with 2 levels of monitoring:

AFI Research Stand Network: this includes stands formally within the Network and subject to the full AFI Monitoring protocol which covers a wider range of dendrological, economic and biodiversity parameters.

ISN Management Protocol: a protocol with a more limited scope designed to be applied more widely for forest management purposes at the forest estate level and for benchmarking between forests.

The AFI Network

The Association Futaie Irrégulière (AFI) was founded in 1991 to monitor the development and the economic performance of irregular high forest stands. The AFI is a group of French private forest managers in partnership with one of the leading irregular forestry academics in France. Their aim is to chronicle management and record evidence of *Close to Nature and Continuous Cover Forestry* practices with an emphasis on permanently irregular stands. Their network of research stands are selected for their special characteristics and extend across France and into Belgium, Luxemburg, Switzerland, England, Wales and Ireland.

The AFI Network provides a framework within which to showcase examples of best practice and allows comparisons to be made between stands. For the Network to operate, consistency between measurements is essential, as well as standardising variables such as timber grading and price size curves. All data from Network stands is stored centrally for consolidation and distributed as reports for individual research stands. Work to improve access to this data is well advanced and the ISN are also working with the AFI to produce information in English.

One of the most powerful uses of the AFI Network data is to bring together stands on similar site types and/or species composition to show the relationship between

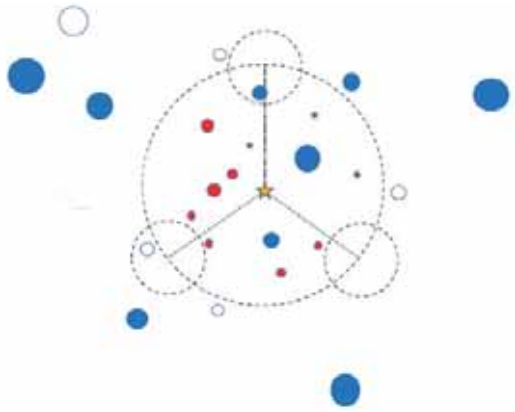
Forêt de Gergy, Burgundy (AFI Research Stand No 5)

key variables. *This use of empirical data is of direct relevance to forest managers.*

Irregular Silviculture Network ISN

In Britain and Ireland, the direct measurement of increment in permanently irregular stands for either management or research purposes is very rare. The ISN aims to reverse this trend and to amass data from actively managed irregular stands and stands in transition.

To this end the ISN has developed, in parallel with the main AFI Network, a Management Protocol suitable for more general irregular forest management purposes as well as a whole forest inventory package.



Layout of an ISN Abbreviated Sample Plot

Stands measured under this protocol are not part of the AFI Network so the data is the property of the forest owner or manager allowing for a choice of timber parameters or reference tables. This Management Protocol can be used in two distinct ways on Local Research Stands and for Whole Forest Inventory. Specialist software first records baseline data and then, timber and value increments on a regular cycle.

For further information please contact Phil Morgan: **phil@selectfor.com**

Future Trees Trust

What we did in 2016

by Tim Rowland – Development Officer

Another busy year at Future Trees Trust saw us working across the forestry sector in the UK and Ireland on a range of projects with an increasing number of partners.

Our work as a founder member of The Living Ash Project consortium continues to raise our profile across the forestry and ecology sectors, as did our Annual Supporters' Day at the Torry Hill estate in May, attended by many of the sector's principal forestry stakeholders, influencers and policy-makers.

Work on the Ash genome, carried out at Queen Mary University, London, has just been published in the top scientific journal Nature (vol 541, No.763 12 January 2017). This work would not have been possible without access to the genetic resource that Future Trees Trust and Forest Research have compiled over the last twenty years.

We will also be revisiting all 400 of our Future Trees Trust selected Ash plus trees this summer, to identify any tolerant individuals for inclusion in a new breeding programme. Please get in touch with our research coordinator, Jo Clark, if you think you have any tolerant Ash.

We will be undertaking a massive grafting programme in January 2018, but need to identify trees throughout the whole of 2017.

At the invitation of the Forestry Commission, we are working with stakeholders from the forestry sector to create a National Tree Improvement Strategy for both broadleaves and conifers. We believe that by working in partnership, we should be able to access major funding from the Research Councils, Defra and others, to ensure that our future woodlands and trees can be as resilient, as productive and climate-change adapted as possible.

This is an ambitious and long-term initiative that will need the engagement of dozens of organisations from all the relevant

sectors. We therefore hope to bring representatives from all appropriate stakeholders together at a national tree improvement conference to help create and develop the partnerships needed to start identifying the research areas and projects required.

Last year, we were commissioned by the Woodland Trust to undertake a project into identifying sustainable seed sources for 14 potentially important timber tree species. This long-term project aims to ensure a sustainable supply of seed for generations to come and has already resulted in the identification of six selected Small Leaved Lime seed stands and ten source-identified seed stands considered suitable for Forest Reproductive Materials (FRM) registration. These 16 stands cover five seed zones, and ten counties and total over 60 hectares – substantially increasing the potential seed stand area of Small Leaved Lime which currently stands at 15 hectares. Similar investigations into 13 other species are planned.

Our increased fundraised income enabled us to commit far more funds to tree-breeding projects. Last year we spent £146,072 on our tree-breeding projects and charitable objectives, up from £129,179 in 2014/15. We currently have financial commitments totalling £244,272 for research projects across our seven core species.

One of our founding principles is to commit all but one year's operating costs (about £50k) to tree-breeding projects, in order to optimise the amount spent on our charitable objectives. A large proportion of this research funding has been to establish clonal seed orchards for Sweet Chestnut and to start propagation for Oak seed orchards which we will start to plant over the next two to five years.

With financial support from the Department of Agriculture Food and the Marine in Dublin, we were able to create a new role – an Irish Development Officer – to help raise our profile, coordinate our work and raise funds in Ireland. Long-time Future Trees Trust member and retired Teagasc employee, John McNamara, joined us in January. John brings with him a host of tree-breeding experience and contacts across Irish forestry. He will work with Tim Rowland, our UK Development Officer, to help achieve the kind of growth we have been fortunate to achieve in the UK.

We are delighted to welcome three new companies to the ranks of our corporate supporters. Forest management company Tilhill Forestry (formerly UPM Tilhill), Torry Hill, the UK's largest producer of Chestnut products and Trees Please nursery have all recognised the benefits of an association with Future Trees Trust and have made generous donations to support our work.

We are in negotiations with several other forestry companies and hope to significantly increase our corporate supporter base next year.

A special word here for previous corporate supporter Tubex. Although unable to support us financially (they donated over £30,000 a few years ago to fund our Research Coordinator role), Tubex supplied, free of charge, tree protection tubes for a number of our projects last year. Already this year, Tubex and their official supplier, Cheviot Trees, have supplied 1,200 free tubes and stakes for our Oak clonal seed orchard project. We can't thank them enough for their ongoing and invaluable support.

With the continued support of Forest Research, who once again have provided £25,000 to support selected work, we will be progressing many tree-breeding projects, specifically with our Birch, Oak and Sweet Chestnut groups, as well as our Defra-funded work with the Living Ash Project.

The scale and range of the tree-breeding projects we are now undertaking grew significantly last year – we spent more than we've ever spent on tree-breeding projects this year and we have committed significant additional funds to ongoing tree-breeding projects.

www.futuretrees.org

My apprenticeship with Ben Law

by Will Hannam

My apprenticeship with Ben Law came about in a whirlwind. It started with me booking on to one of his famous roundwood timber framing courses. I was on the website and saw the apprenticeship opportunity and thought "Why not?". At 34 it never crossed my mind that I was too old to start again and work as an apprentice. As a furniture maker my interest in sustainably managed and sourced UK timber had increased over the years and I was determined to learn about how we can improve and celebrate what we have in the UK.

The apprenticeship offers an opportunity to "access all areas" when it comes to Ben's approach to woodland management. I could read all the books in the world (including Ben's) but nothing prepares you for the learning curve of living in Prickly Nut Wood every day, working alongside one of the leading lights in Permaculture/ Sustainable Woodland Management/Roundwood Timber Framing. Ben's knowledge is his greatest tool and to have that available and on tap ensures that you are always thinking about what you are doing, why you are doing it, what are the repercussions and what's the bigger picture.

From getting my chainsaw tickets and surviving a whole felling season, to helping to teach on roundwood framing courses and building alongside Ben for customers, the experience is as diverse as it is structured. I challenge anyone not to be inspired by the work itself. For me, however, the most important part of the whole apprenticeship was the opportunity to live totally off-grid within a beautiful woodland. My appreciation of flora, fauna, wildlife and the subtleties of the seasons will stay with me forever. Understanding the fragile symbiotic relationships of the woodlands gives you a respect and love for the environment that you can get only from totally immersing yourself in its beauty.

Will Hannam

Treehouse project using local Larch

The apprenticeship overall has changed my life totally. Ben's teaching, the diversity of the work and the magnificent surroundings of Prickly Nut Wood are so unique. Don't get me wrong, it is hard work! Very hard work! You have to have a strong work ethic to survive there. The winter felling season is tough (but great fun) and if you're expecting to come and work just a few hours a day then it might not be for you. Living "off grid" means exactly that. The cabins are basic with a bed and a woodburner, the kitchen is outdoors, you rely on open fires for cooking and your water comes from a spring. This all sounds lovely, but when it's the middle of winter, you've worked all day, it's too damp to light the fire and the spring is frozen then it can really test you. The important thing to take onboard is that this is a live working woodland that needs constant attention so it's all hands on deck. This is a lifestyle choice NOT a job and therefore you need to commit 24/7 for the whole time you are there otherwise you'll never really GET it.

www.ben-law.co.uk

Small steps of progress

by James Doonan, Bangor University

James Doonan acquired an honours degree in microbiology at the University of Glasgow, and an MSc in Molecular Ecology at Queens University, Belfast. He was the recipient of a Woodland Heritage sponsored Molecular Biology PhD project that began in 2012.

James Doonan

The Title of the PhD project was *Genomic analysis of bacterial species associated with Acute Oak Decline (AOD)*. The purpose of the PhD study was to understand how key bacterial species isolated consistently from AOD lesions were causing damage to Oak trees. James successfully completed his PhD in 2016, and will be awarded his degree in July this year. His research interests centre on DNA – the unit of information in all living organisms that codes their life activities. He has made an exceptional contribution to helping us make significant inroads into understanding the causes of the weeping lesions that are so characteristic of AOD.

James takes up the story...

Upon commencement of my Ph.D project in September 2012, AOD had been identified by Dr Sandra Denman and the Forest Research team at Alice Holt. In 2012, the complex pathology of AOD may have been imagined but not fully realised. To unravel biotic and abiotic factors within this Decline, Dr Denman defined several collaborative and parallel projects to tackle various components of the Decline. The foundation for my project had been built, as novel bacteria i.e. *Gibbsiella quercinecans* and *Brenneria goodwinii* had been identified from necrotic Oak lesions by Dr Denman and Dr Carrie Brady. Therefore, my role was to sequence the genomes of these bacteria, under the supervision of Dr James McDonald. This was an exciting undertaking as not only did genome sequencing allow me to work at the forefront of scientific endeavour but these bacteria had never been sequenced and we hoped that if we examined their DNA, we would unlock the causal mechanisms of AOD. Today, I can see that genome sequencing was a vital step in understanding the role of bacteria within the Decline, but unfortunately it did not unlock **all** the secrets of a Decline-disease as we once hoped. However, knowledge gained from sequencing facilitated the next steps which examined how bacteria behave within healthy and Decline affected trees. This led to an understanding of idiosyncratic bacterial behaviour, and the knowledge that when confronted with robust healthy trees, Oak defences were sufficient to repel opportunistic bacteria but, within a distressed Oak, bacteria release degradative proteins which break down the inner bark and vascular tissues, allowing ingestion of resultant sugars. This hugely fulfilling project characterised bacteria originally identified by Dr Denman and provides a stepping stone to managing the Decline through understanding its biology.

Early in my doctoral studies a recent graduate and colleague remarked that the key to progress in science is patience. Gaining scientific insights is not a sprint but built from incremental gains and, of course, some setbacks over several years of endeavour.
I would pass this advice to anyone embarking on a doctoral program, to corrupt a famous saying; it's not one giant leap but small steps and patient building of research foundations.

After completing my PhD, the opportunity to continue in AOD research was too exciting to miss. We have overcome substantial hurdles in our understanding of the Decline but have not yet fully answered critical questions to contain its threat. Thanks to Woodland Heritage, I'm continuing research on bacterial interactions within AOD with an aim to assuaging their impact on our native Oaks.
Today, AOD research has significantly expanded, with a substantial knowledge base and a burgeoning team of researchers taking a ground-breaking holistic approach to enable the complete characterisation and management of AOD.

Remember, remember, the sixth of November!

by Guy Corbett-Marshall

On 6 November 2017, the 800th anniversary of the influential 1217 Charter of the Forest, the Charter for Trees, Woods and People will be launched. This new charter will recognise, celebrate and protect the right that the people of the UK have to the many benefits brought by trees and woods. The Tree Charter will draw its strength from the hundreds of thousands of people across the UK that sign.

Led by the Woodland Trust, the Tree Charter has had the support of Woodland Heritage for the last eighteen months and we are now one of more than 70 organisations from across multiple sectors, which are working together to build a future in which trees and people stand stronger together.

More than 60,000 tree stories have been submitted in the last year and the themes from these stories have informed the ten Principles which underpin the charter. The Principles reflect important themes such as biodiversity, landscape, health and cultural benefits, with one Principle devoted to forestry:

A thriving forestry sector that delivers for the UK

We want forestry in the UK to be more visible, understood and supported so that it can achieve its huge potential and provide jobs, forest products, environmental benefits and economic opportunities for all.

Careers in woodland management, arboriculture and the timber supply chain should be attractive choices and provide development opportunities for individuals, communities and businesses. (Consistent with the emphasis on careers mentioned above, Woodland Heritage is supporting a Sector Skills Survey this year, the results of which will appear in next year's Journal.)

The build-up to the launch of the Tree Charter has involved many gatherings of the organisations that are supporting this initiative. At one of the meetings the results of a survey undertaken by the National Union of Students on 'Student perceptions on trees, woods and people' were presented, which in many respects suggested that a large groundswell of support for trees is likely to be carried forward by today's younger generation.

The survey was completed by some 4,500 students, two-thirds in the age-group 16-25, a majority being women and with quite a broad range of courses being studied. Around 60% of respondents visit woodlands at least monthly in the summer dropping to nearer 40% in winter with the main reasons for visiting being to walk or run, relax and de-stress, or to experience wildlife in a variety of ways.

Not surprisingly wildlife, the ability of woods to help relaxation and trees' overall ability to make places nicer to live in were seen as the main reasons why woods are so important. But maybe of most significance to the future of our trees, woods and forests were the overwhelmingly positive replies to questions posed about how these environmental assets contribute to the overall quality of life in the UK. Students showed great concern about losses of trees; they felt that everyone has a responsibility to help care for trees, woods and forests, but most of all they appreciated that there are many woods or forests in the UK that they will never visit, but they were still glad that these woods exist.

6 November 2017 will mark the renewal of principles that date back 800 years, but the NUS survey suggests that there are encouraging signs that they will ring true for today's younger generation and be passed down to their successors, thus offering long term hope for our trees and woods.

From the end of March 2017- November 2017, we are asking people to sign to show support for the 20 Principles of the Tree Charter. You can do this on the Tree Charter website *(https://sign.treecharter.uk/page/6023/petition/1)* and can get more information at **TreeCharter@woodlandtrust.org.uk**

Charter for Trees, Woods and People

Woodland Heritage takes action for biosecurity

by Guy Corbett-Marshall

The causes of Acute Oak Decline (AOD) are becoming better understood thanks to Woodland Heritage's support for research into the disease, with the likelihood that most of the threats emanate from the UK. But whether 'native' or 'man-made' (such as via importing infected trees, or wood-based products into the UK), the spread of pests and diseases such as AOD can be reduced greatly via implementation of biosecurity measures, which is why Woodland Heritage has been active in this field over the last year.

Health and Biosecurity interests, Woodland Heritage's positive impact on research into AOD brought an invitation last year to join Defra's Tree Health Policy Group, which meets on a quarterly basis.

Being a member of this group allows Woodland Heritage to feed into debates about how to tackle threats such as AOD, whilst at the same time having the chance to appreciate how much focus there is on addressing issues quickly and effectively; whilst Ash die-back has been and will continue to have major impacts on the UK's treescape and forestry interests, it brought forward the hugely positive step of the creation of the role of UK Chief Plant Health Officer as a way of addressing current and future risks.

In March, Woodland Heritage's trustees adopted the Arboricultural Association's Position Statement on Biosecurity in Arboriculture and Urban Forestry. Whilst 'arb' and urban forestry might not be central to this charity's interests, it was felt important to be seen to back an initiative that is aimed primarily at workers, who have great potential to reduce the risk of spreading tree pests and diseases if they adopt the right working methods.

A month later, I joined a long cast of people from the nursery, forestry and arboricultural sectors all contributing statements of support for a new Arboricultural Association (AA) film shot at Kew Gardens called 'Raising Biosecurity Awareness', supported by Barcham Trees PLC. The film was due for first showing at AA's 'Arb Show' in May, as well as at what has been termed 'the first international conference on arboricultural biosecurity' at Exeter University between 9-13 September.

Of course in providing words in support of these various initiatives, Woodland Heritage needs to act too and so is reviewing how to implement simple biosecurity improvements in its work, such as at the Field Weekend, on the Woodland to Workshop courses and with all of its operations at Whitney Sawmills.

Arboricultural ASSOCIATION

KEEP IT CLEAN

Don't give pests, and diseases an easy ride

Biosecurity in Arboriculture and Urban Forestry Position Statement

The Arboricultural Association is committed to promoting the implementation and understanding of good biosecurity practices to assist in safeguarding the future of our trees from the introduction and spread of harmful organisms.

This statement outlines some basic biosecurity principles that should be adopted to reduce the unwanted introduction and spread of tree pests, diseases and invasive tree species:

1. Operatives and organisations undertaking work on or around trees should consider the reasonably foreseeable consequences of their activities. Adopting **biosecurity risk assessment** processes and **policy** commitments are prudent first steps.
2. Those undertaking work on or around trees have a responsibility to implement routine **biosecurity control measures** for all sites and specific measures for higher risk sites highlighted by the biosecurity risk assessment process. This should include the cleaning and disinfection of clothing, PPE, tools, equipment and vehicles.
3. Arboricultural operations such as pruning, felling and planting should be planned, managed and supervised to minimise the movement of arisings and soil. All arisings must be **appropriately disposed of.**
4. Organisations working on sites with trees should ensure that their operatives understand biosecurity issues and comply to adopted biosecurity measures. **Training, guidance and supervision** should be provided when necessary.
5. Anyone planning, designing, or implementing planting projects should aspire to source **home grown** and nursed specimens avoiding, where possible, directly imported stock to reduce the risk of introduction of pests and diseases.
6. Anyone responsible for tree supply should ensure that trees and associated soil are supplied to customers **free of pest and disease** at all points in the supply chain. Consideration must be given to the latency period* and life cycles of all pests and diseases in order to achieve this. Special attention must be given to imported stock.
7. Good urban forestry practice involves managing tree populations to **increase species** and **genetic diversity** by focusing on the establishment and maintenance of trees with qualities suited to the site and the prevailing climatic conditions. Additionally, good species composition, age structure, stock quality and condition will help reduce the future loss of trees due to the introduction, hybridisation or spread of tree pests and diseases.
8. Anyone involved with trees must encourage and promote adherence to these guiding principles and above all **act as role models** in this regard.

** A period of time where a plant may be infected or infested by a particular pest or disease but where there are no physical symptoms that indicate ill health.*

If you are unsure about any of these guiding principles **do not ignore them**.
More information and guidance can be found from the following sources:

Arboricultural Association
www.trees.org.uk

Forestry Commission England
www.forestry.gov.uk/england-keepitclean

The Oxfordshire Woodland Group reborn

by Ken Hume, Executive Trustee, The Oxfordshire Woodland Group

Dr Robin Buxton – Deputy Lord Lieutenant of Oxfordshire – founded the Oxfordshire Woodland Group (OWG) charity over 30 years ago. This body was initially needed to act as a vehicle for channelling donations and funding received from various benefactors and charities keen to support the active management of Oxfordshire's 2,500 small woodlands.

OWG in conjunction with the five Oxfordshire local authorities funded the employment of a woodland project manager based in Oxfordshire County Council's offices and also worked alongside The County Forester. Over the next 25 years the woodland project manager visited over 500 small woodlands owned by private individuals, parish councils, farmers and community organisations with this service being provided free of charge.

Unfortunately economic constraints imposed on local authorities gradually reduced the level of funding received from them with the Woodland Group charity then endeavouring to make up the difference to maintain the project woodland manager in place by drawing down from reserves. However, in early 2014 the decision was taken to close the Woodland Project and to dispense with the services of the woodland project manager. The OWG Trustees were and are determined to continue pursuing the charitable aims of the Woodland Group and are now focused on investigating and implementing how to employ low cost, efficient and effective ways to promote the active management of small woodlands both in Oxfordshire and beyond.

The Group has now changed its operational emphasis away from providing woodland owners with advice (which might or might not be taken). Instead it now directs available funds to "hands on" woodland practitioners who actually do the very things needed actively to manage small woodlands. For example, this could involve funding an aspiring woodland worker to undertake chainsaw and tree felling training together with the purchase of personal protective equipment and clothing or to attend a course on timber-framing. The Group encourages those persons sponsored to provide some small service either to the Group or to various small woodland owners. Those practitioners who perform this work in an enthusiastic manner are awarded the status of OWG Fellow.

Oxfordshire Woodland Group – Jun 2015

A Jarvis OWG Fellow with a new hewing axe

During 2015 the owners of woodlands in South East England saw the withdrawal of Forestry Commission (England) woodland grant funding and its replacement with the Countryside Stewardship scheme that awards funding to owners based on a complicated points based assessment system developed by Natural England and administered by the Forestry Commission. This system favours deciduous over coniferous woodlands and large woodlands over small woodlands and, to this end and so as

Oxfordshire Woodland Group – Feb 2015

to effect administration economies, the Forestry Commission has decided that it will no longer contribute funding towards the active management or preparation of management plans for small woodlands of less than three hectares with woodland footprints also now needing to be a minimum of 20 metres wide to qualify. Thus, a small ribbon woodland in the Chilterns Area of Outstanding Natural Beauty *(above)* will no longer be worthy of attracting financial support even though this provides a vital windbreak, slows down upland rainwater runoff, and joins up with other small woodlands to form a contiguous wildlife migration corridor.

Kenneth Rankin, founder of The Economic Forestry Group, planted this woodland in 1959 so he must have recognised the visual amenity and the economic and environmental value that this type of woodland would provide for future generations. OWG examined Rankin's woodland in some detail and published its findings in Woodland Heritage 2014 (Hume, 2014. pp 86-87) quantifying the contribution that such woods are capable of making to the local economy, and the natural and built environment. The Oxfordshire Woodland Group has raised questions about this retrograde step at Parliamentary level via the local member of Parliament and with the chairman of the All Party Parliamentary committee on forestry.

The new policies being introduced are at odds with changing patterns of land ownership in the south of England where large blocks of commercial woodland are now being split and sold as smaller woodlands. Typically this might first result in a 650 acre commercial woodland being split down and sold in 100 acre lots and then in turn each of these being further split by the new owners into five to ten acre recreational amenity woodlands. At first sight this might not appear to matter much since the woodland area remains the same. However fairly soon the new owners of these small woodlands will realise that they are ill equipped to manage their woodland in a safe and efficient manner. The challenge then becomes one of engaging with and educating the new owners and possibly pulling these owners together to form collective or co-operatively managed groups that can access forestry resources. Thus, what was once a relatively straightforward process for The Forestry Commission to interface with one professional woodland manager, will now become a much more intensive management and coordination process.

In the south east region of England there are only nine Forestry Commission woodland officers and they are now likely to spend most of their time administering the complicated Countryside Stewardship funding scheme instead of being able to make field advisory visits to engage with this new wave of small woodland owners.

The need to address the reduction in government funding available to help support and encourage small woodland owners actively to manage their woodlands will now need to be sought from other sources. This will result in the OWG Trustees' efforts being directed away from their main role of promoting active woodland management to becoming that of charitable fund raisers.

The Oxfordshire Woodland Group would very much welcome approaches from individuals, organisations, charities and companies who would like to support its work but, most importantly, we want to hear from woodland owners and those persons aspiring to be woodland workers.

Contact details:
trustees@oxfordshirewoodlandgroup.co.uk
www.oxfordshirewoodlandgroup.co.uk/contact

Ref: HUME, K F, 2014. *Continuous Cover ForestryCourse. Woodland Heritage,* 2014, 86-87

Oak growers visit Crumblands, Crichel and Cranborne

by David Taylor

It's hard now to imagine what it was like in 1930. There was certainly austerity, and although the Forestry Commission had survived, just, the double dose of austerity and cuts which became known as the Geddes Axe, things can't have been too easy.

So quite why and how the State became the owner of Crumblands Plantation, near Tintern on the edge of Wales, seems lost in the mists of time. But astonishingly enough, the YC6 site was planted in 1931, and was, in the 1950s, the site of an experiment in the free growth of Oak. The experiment had as its objective "to discover how far girth increment of selected predominants can be increased over that obtained from customary practice by providing conditions of free growth so far as crown development is concerned." It went on to include observations as to whether green pruning could provide suitable lengths of clean butt.

The layout of the experiment suffered at first from being a bit fiddly, and over the decades it was amended, plots and treatments were amalgamated, there was a fire in a part of the plantation and the whole adventure suffered peaks and troughs of enthusiasm from the FC. Somehow it survived, in a period of FC research history which didn't see Oak as a priority. Today, as FC silviculturist Gary Kerr reported, its advanced thinking is being recognised, and it is due not just recognition but funding, for here are some interesting lessons for Oak enthusiasts. Gary's very comprehensive account of the experiment was published in the ICF's magazine Forestry early last year.

So the Woodland Heritage party, substantially the same as that which visited the French Oakwoods of the Loire in November, took Crumblands as the starting point for a short tour of Oakwoods in the UK. The aim was to learn more about how to obtain Oak of desirable and valuable girth and quality in less than 100 years. French managers have accumulated a mass of data and 30 years of history are encapsulated in Jean Lemaire's book, *Oak: fine timber in 100 years*. This took the concept of free growth as its subject and proposes that this time scale is quite within reach. And in spite of its history, Crumblands seems to begin to fit the pattern.

It's worth remembering that there weren't many squirrels about eighty years ago, but the resulting wood is a bit like the little girl with the little curl; where it is good, it is very, very good, but where it is bad it is horrid. Apart from the obvious, there are clearly two ingredients for free grown Oak to succeed. Firstly, an owner who is solvent and enthusiastic, and secondly, continuity of management. Crumblands showed the sad effect of a treatment where neither could be taken for granted. Time has slipped away as a result. Fine Oak in 150 years – well, I suppose that's a result. But the 1950s research concept must be a rare example of us being ahead of the French. We had some interesting comments from the timber trade on the effects of fast growth on timber quality, and especially the extent of sapwood. And on the unseen stresses within the tree caused by its exposed and spreading crown.

Gary's conclusion was that maintaining timber quality, especially by pruning to the desired level, probably makes the silviculture better suited to other hardwood species, say, Cherry, Sycamore or, dare we say it, Ash. Then it was lunch. Older readers will know what I am about to say. It was back to the sandwiches, the bananas and the tepid mineral water, taken al fresco in chilly April. Not ahead of the French in this department, are we?

From Wales we progressed south and east to our next stop, Crichel Down Estate in Dorset. Fresh from defeating the Government of the day over the restoration of the estate to its rightful owners after requisition during the War, Commander Marten set about some 1,500 acres of Ancient Semi-Natural woodlands, mostly Hazel coppice from which any useful over-wood had been removed, with customary vigour. A part was "reclaimed" to arable agriculture, but some was planted with Oak, in a mixture with both Larches, with Norway Spruce and with Corsican Pine, as was the custom in those days. As a method of

Andy Shirley-Priest and Andy Poore

Men of Oak

establishing Oak, either in State or private woods, this was almost completely unsuccessful. Forest Manager Andy Poore led the party, on a sunny April morning, through the bluebells to the exception which perhaps proves the rule, some very fine looking p54 Oak, both Sessile and Pedunculate, first thinned in the mid-sixties, with the conifers removed between 25 and 30 years later. Ironically the Corsican Pine proved by far the most financially rewarding. Other methods were adopted, such as groups of Oak planted among underwood which was mechanically swiped between the groups. This now has its problems, but we saw some stunning Oaks, and could have thought ourselves back in the Loire had not lunch intervened. Previous remarks apply.

But the conclusion began to emerge that Lemaire's silviculture can be applied in Southern England, if you can confront the risks from squirrels, and perhaps here is a basic stumbling block to growing hardwoods in free growth conditions in that the reduced number of stems increases the risk of calamity to an unacceptable level. And the sapwood problem remains with us, a feature our more optimistic members, including your reporter, chose to discount.

Finally we had a demonstration of new mensuration technology, from Richard Deffee, which was impressive. This enabled sampling to become standardised not just in the UK but everywhere. And it's cheap and, once mastered, it's quick.

Commander Marten sadly didn't quite survive the century, but his legacy lives on not just in legal case history, but in the woods, which now have a new owner, Lord Philimore. My original prescription for success is worth restating. Good owner plus good manager equals success. Take away either and the efforts of decades can quickly become lost.

We then moved on through countryside reminiscent of Thomas Hardy to Cranborne Estate. Passing some magnificent Douglas, we visited thirty year old Oak planted with Ash, grown up with Birch and not really prospering until a shake-up in management undertaken in 2006. Thinning, cleaning and pruning regimes have been adopted, and the results are beginning to show. We discussed ride layout; we contemplated basal area and we applied French Yield classes and Lemaire's graphs to those stands before us. Like so much that we have seen, in France and in the UK, all this is very much work in progress. Would that we could somehow see how it all pans out in another fifty years.

As usual on WH excursions, this was a friendly and informal trip, masterminded by Miles Barne and attended by a formidably informed audience. And it needed to be, as our guides, Garry Kerr and Andy Poore, set a challenging level of debate and showed us some fine examples. And yes, it can be done here, if you get rid of deer and squirrels, and if you have the knowledge and the faith and the stamina.

Our thanks to NR Wales, to Lord Philimore and to the Marquess of Salisbury, to Gary and to Andy and to Richard. We await the next thrilling instalment when our French hosts come to the UK, hopefully next year.

Crumblands and Crichel snapshots


1918 GGM 1997

Stiles & Bates' two decades celebration puts plenty back

by Guy Corbett-Marshall

A couple of miles west of the main road from Dover to Deal and just on the edge of the picturesque village of Sutton, lies the small, family-run business of Stiles & Bates. Members of Woodland Heritage since 1998, Stiles & Bates reached a milestone in its history on September 6 last year, clocking up an impressive twenty years of trading from the shop on their farm in Kent.
To mark this achievement, a patch of ground in Herefordshire was cleared this winter and planted with a variety of tree species all suitable for woodturning, the pictures in this article illustrating the transformation that took place thanks to Stiles & Bates' support.

Stiles & Bates is the only dedicated woodturning suppliers in the South East. They meet all woodturners' needs from their own buildings, for beginners and veteran turners alike. Not only do they supply local woodturners and woodworkers, but through mail order and online (www.stilesandbates.co.uk), they supply customers throughout the UK and beyond, many of whom have been with the firm since day one.

Their comprehensively stocked and very welcoming premises have now become 'a destination' shop for visitors

from all over the UK, who have used the firm's mail order services and need a winter coffee by the wood stove, a summer walk down one of the farm tracks, or maybe just the chance to talk about woodturning.

Stiles & Bates' product range includes woodturning bowl and spindle blanks (never less than 10,000 in stock), woodturning lathes, band saws, sanding machines, drill presses, dust extraction, air cleaners, pyrography machines, tool sharpening machines and jigs to name just some of the equipment in stock.

Stiles & Bates also holds woodturning chucks, lathe fittings and accessories, pen making kits and blanks, an eclectic

range of project accessories from clocks to peppermill mechanisms, tools, abrasives, finishing products, glues and a lot more.

Timber is the foundation on which Stiles & Bates has built its business and remains at the core of what it does best. But as demand for its timber has grown, so the days of nipping out to fell or pick up single local trees are sadly a rarity now, but the firm does buy as much as it can from local fellers and timber yards.

After twelve years of faithful service, a Trekkasaw mobile sawmill was replaced with a Forrester Tom Sawyer mill. Indoors, the machine shop is packed out with four bandsaws, radial arm, planer and saw bench.

As well as routine blank cutting, Stiles & Bates also cuts and prepares timber to cutting lists for furniture and other flat wood working projects. Hardwoods are milled as the tree dictates – not to set lengths as is usual in softwood mills – so for furniture projects or similar, cutting lists in component parts rather than by adding lengths together are requested, so the pieces can be found most economically. Stiles & Bates also mill beams, false beams and waney edged shelves.

An expert wood turner himself, David Bates ran a demonstration event on Fridays for five years. These became so popular that they spawned twice-monthly training courses that ran for fifteen years, ending only last June. During that time, over 1,300 turners were instructed, inspired and enthused by David to achieve a higher level of woodturning.

To celebrate Stiles & Bates' twenty years of buying, milling and selling UK timbers, under the stewardship of Woodland Heritage they have most generously donated £100 for each year they have traded. This gift had to be spent on planting a selection of native timber species with the stipulation that the trees would be planted for harvesting and subsequent re-planting – the bottom line of all good forestry management.

After almost a year of seeking the most appropriate site on which to plant the trees, the site of an old pasture at Whitney Sawmills was chosen last autumn, with site clearance and re-planting taking place in March of this year. The species chosen were Yew, Hornbeam, Small-leaved Lime, Wild Service and Cherry, all appropriate not just for meeting future timber needs, but also to the site and with an eye too on potential pests, diseases and climatic changes.

Visit Stiles & Bates. They can be found at Upper Farm, Church Hill, Sutton, Dover CT15 5DF, or you can contact them on **01304 366360** and **sales@stilesandbates.co.uk**

Fine furniture maker offers a bright future for workshop-based training

by Guy Corbett-Marshall

Lewis, Belinda and I had the good fortune to be welcomed to the Edward Barnsley Workshop in March thanks to the kind invitation of its Designer-Manager, James Ryan. Situated in Froxfield, just north of Petersfield in Hampshire, the workshop and cottage were built in 1908-09 by Geoffrey Lupton.

The Edward Barnsley Workshop

Lupton was assisted by Edward Barnsley (1900-1987) in the construction of Bedales School Library in 1920, one of the finest Arts and Crafts buildings in the country. Barnsley had been educated at Bedales and went on to take over Lupton's workshop in 1923 and in so doing to continue a family tradition of fine furniture making; Edward's father, Sidney, and his uncle, Ernest, having established a workshop in the Cotswolds in 1893 that could embrace the inspiration that they had both gained from William Morris. (Sidney and Ernest were friends of Ernest Gimson, the designer of Bedales School Library.)

Unlike his father, who worked alone, Edward Barnsley always employed craftsmen and apprentices, the first of whom he inherited from Geoffrey Lupton. Barnsley's desire was for his craftsmen to be fulfilled by their work and in so doing to produce furniture of the highest quality, this in turn developing a strong reputation for the business that relied upon making items to commission.

Keeping faith with that tradition of developing skills, the Edward Barnsley Educational Trust, which was established in 1980 and which owns and runs the workshop, can now boast a list of over sixty trainees who have been helped by the charity.

Trainees are carefully selected each year for an initial one-year apprenticeship with many staying for a second and sometimes even for a third year. Selection is based on many criteria, with an important element being that each new trainee arrives with some experience and an embedded interest in craftsmanship. This is an outlook that works and, as the list of trainees reveals, the majority who have worked and learned at the workshop over the last 35 years have developed enduring careers in furniture making, that longevity being aided by the Trust's focus that trainees should always be aware of the need for commercial viability as well as craftsmanship.

All trainees have to make a small range of set pieces during their apprenticeships which are then sold at the workshop. But the majority of the income from furniture made in the workshop remains, as it always has been, from commissioned items.

Apprentice Ian Towers

Apprentice Warren Bentley

As well as a string of pieces for private buyers, notable contracts over the last two years have included a ceremonial mace stand for the Worshipful Company of Management Consultants and new chairs for the dining hall at Magdalen College, Oxford, with the latter a particularly large commission that involved everyone in the workshop making a contribution.

Some of the 111 chairs made for Magdalen College

The Edward Barnsley Workshop exhibits annually at Masterpiece London at the Royal Hospital Chelsea and, although commissions are generated at this event and via many other sources, in order to enable the trainees to benefit as effectively as possible from their time at the workshop, the Edward Barnsley Educational Trust fundraises each year to help subsidise the costs of teaching and bursaries for the trainees.

The Edward Barnsley Workshop promotes Workshop Open Saturdays each year with the last for 2017 on 21 October. Having been there myself I can only commend the visit.

In 2016 the timber-drying sheds were moved across the road and are a joy to behold both in terms of the lovely stocks of stickered planking and the design of the timber framed constructions. This move has freed up space for the creation of a new machine shop which in turn will allow the current machinery to be moved out of the main workshop to provide more working space there. This will also create the potential to train more apprentices each year.

The relocated and restored timber-drying sheds

In order for the improvements to be made to the workshop and its listed Arts and Crafts buildings, the Edward Barnsley Educational Trust has established a £500,000 Buildings Improvement Appeal to which donations can be made at **www.barnsley-furniture.co.uk/about/fundraising-appeal** or by sending a cheque made out to EBET to **Cockshott Lane, Froxfield, Petersfield GU32 1BB**.

Letters to the Editor...

Dear Chris (Sharples)

Thank you for your photographs of the Field Weekend last year and the attached article from 1957 which you thought might be of interest to our readers.

Regards
Lewis

"Journal of the Forestry Commission 1957

I do not support the contention that a large conifer forest will always be a blot on the landscape. I have for a long time studies the reaction of the public to our work, and admittedly it has sometimes created a great hullabaloo, but I am convinced that it is, more than anything else, the sudden change which is brought about when a new forest is created that people object to. They do not realise that, whether you are building a new cathedral or planting a new forest, you will make a sudden change in the appearance of the land on which you are working, and beauty is not made overnight. But if we as a nation are not prepared for any changes, and quick changes if necessary, we shall stagnate.

There can be no disputing the fact that forestry, just exactly like agriculture, is normal land use. Timber is just as much a crop as is wheat. Many people do not realise this. And the argument that forests are not natural to the landscape of Britain is of course untrue. It is the thousands of acres of bare land which man has created by centuries of forest destruction which are not natural. Re-foresting some of our bare land gives us the chance of recreating the beauty which we destroyed generations ago – especially during the industrial revolution. It also gives us the chance of adding to the wealth of our country a much needed natural resource for which there is a very rapidly increasing world demand. In doing this we not only stop the depopulation of the countryside which I mentioned earlier on, but in fact we reverse the trend.

We have got to have more forests in this country. That is a MUST, whether we like it or not. I personally like it; and the aim is to have, by the turn of the century, five million acres of fully productive forests in private and Commission ownership. We shall then produce each year about one-third of our annual requirements of timber.

What we must do is so to design these new forests that they fit in with the scenery. That is not impossible. A forest may perhaps bring in a rather smaller financial return if attention is given to aesthetic considerations. But does that matter within reason? And there will be an enormous indirect gain by the pleasure afforded to the community if amenity is taken into consideration; if edges are softened; if hard, geometrical lines are avoided; if informal outlines are created; if dense forest is made to merge naturally by groups and isolated trees into farm land; if viewpoints are left unplanted; if species are mixed whenever possible; if the forester looks ahead – and thinks."

Dear Lewis,

It's been a while since I last contacted you and I just wanted to say hello and let you know that working with Woodland Heritage changed my life – seriously!
I've always been nomadic, but now, after turning 40, I really want to put some roots down.

Making that short film for you was a turning point in my life and meeting all those forestry experts and craftsmen opened my eyes to that world. My love for photography and film work has waned, but my love of all things wood has blossomed.

Last autumn I did a timber-framing course with Jamie Miller and loved it and subsequently I went on to help build this tree house – lovely work!

I am returning to the UK this summer to work and get paid for doing what I now love best. I would really appreciate knowing if you might have any contacts who produce wooden buildings.

Warmest wishes to you all,
Jules May

Dear Lewis,

Forestry Skills Study

I would like to thank the Trustees of Woodland Heritage for their support with the Forestry Skills Study for England and Wales, taking place this year.

Together with the Royal Forestry Society and Forestry Commission England, and with financial support from the Scottish Forestry Trust, we will be undertaking the first comprehensive review in some years of skills and training, and will deliver research on future requirements for the forestry sector. The study is due to be completed in October 2017 and published before the end of the year.

I would like to acknowledge the vital contribution Woodland Heritage is making to this work, and its leadership in driving forward the agenda for skills and training in British forestry.

Results of the study will be made widely available, and we will provide a summary report in the next issue of the Woodland Heritage Journal.

Best wishes
Ted Wilson
Education Manager, Royal Forestry Society

Dear Lewis,

Attached are a couple of photos I took in Getxo (Basque Country) in February this year.

An extraordinary sight of the dreaded Oak Processionary Moth caterpillars in procession and too long for my iPhone camera to take them all in.

A woman passer-by separated off the leader (larger) and said that would send the rest into a panic not knowing what to do or where to go. This duly happened – see the second photo.

Thought you might like to 'share'!

All the best
Susan Bell

Dear Lewis,

Peter Goodwin

I would like to add a short note of appreciation. Over many years, Peter was a constant friend and supporter of the National School of Forestry, Newton Rigg. He and fellow Trustees of Woodland Heritage provided travel grants, funding and training opportunities for many young foresters, and also several lecturers, at the college. Peter recognised the importance of apprenticeships, training and skills development in the forestry sector. He was dedicated to nurturing early career professionals who had a passion for British Forestry. Many young people and new entrants to the profession benefited greatly from his support and encouragement.

Peter has left his mark on British forestry, of that there is no doubt. His contributions are many, but for me his commitment to early career foresters is an important part of his legacy. Peter's inspiration and vision lives on.

Best wishes
Ted Wilson

Letters to the Editor...

Dear Lewis,

Myth and reality concerning deadwood

In Jonathan Burke's thoughts on a visit to Poland ("Woodland Heritage 2016, p33) I note that he repeats what I regard as something of a myth; namely, that deadwood in forests is an important source of nutrients for the growth of the forest. I have heard the same view advanced in the past by Professor Dusan Mlinsek, a highly respected professor of silviculture and the first president of ProSilva, during a visit to Slovenia in 1996, and by Ted Green of the Ancient Tree Forum at a meeting in Derbyshire some years ago. However, from my time as a student more than 50 years ago, it has been my understanding that the amount of mineral nutrients in timber is relatively small, and that most of these nutrients are to be found in the leaves, roots, bark and twigs rather than in the timber. The timber contains large amounts of carbon which has been captured from the atmosphere, but only relatively small amounts of elements such as phosphorus or potassium; and it should be possible to harvest timber from the majority of sites without any significant effect on productivity, provided that the smaller branches, leaves, and roots are left on site.

I have recently been perusing *'Ecology of Woodlands and Forests'* by Peter Thomas and John Packham (Cambridge University Press 2007). I would recommend it to anyone who is seriously interested in this topic. As these authors say, "Coarse woody debris has an important part to play in carbon budgets of forests (which is related to the amount of carbon dioxide in the atmosphere and its effect on global warming) but much less of a role in nutrient budgets, simply because wood is so poor in nutrients."

The facts appear to be that deadwood in forests contains carbon that might take decades or centuries to break down completely and return to the atmosphere as carbon dioxide; which, under present circumstances, is useful, as it could make a small contribution to countering the vast amounts of carbon dioxide that have been, and still are being, emitted from the combustion of fossil fuels. In addition to this, deadwood can also provide a habitat for a range of specialist insects and fungi, and nesting holes for bats and birds. Fallen deadwood can also provide a habitat for mosses, liverworts and other plants, or a suitable seedbed for the germination of seedlings of some tree species. However, deadwood is not likely to be a major source of nutrients for plant growth, and woodland is unlikely to suffer from a significant reduction in nutrients, at least on most types of soil, if timber is harvested rather than being allowed to decay on site. In short, deadwood is an important part of the woodland ecosystem, but not in exactly the way that some people seem to think.

Regards
Rodney Helliwell

Editor's Note:

Rodney Helliwell BSc (Hons) MSc obtained his forestry degree in 1961 with forest soils as his optional subject. In 1978 he became an independent consultant carrying out numerous surveys, management and advisory work in forestry, ecology and arboriculture throughout the UK, as well running workshops and publishing many books and papers.

He was involved in the setting up of ProSilva and the Continuous Cover Forestry Group, as well as being the terrestrial ecology consultant to the Channel Tunnel Project from 1985 to 1996.

The Helliwell System for amenity valuation of trees and woodlands is the only such system which has been accepted in British courts of law.

He retired from consultancy work at the end of 2013, but continues to take an interest in forestry matters.

The Wood Awards
The Worshipful Company of Carpenters

The Wood Awards is the UK's premier competition for excellence in architecture and product design in the world's only naturally sustainable material. The Awards aim to recognise, encourage and promote outstanding design, craftsmanship and installation using wood.

The competition began in 1971 as the Carpenters' Award 'for the very best work in joinery or other woodworking'. Originally run by Terence Mallinson, a Liveryman of the Company, the Carpenters' Company has supported the Awards from their beginning. The annual award winners' presentation ceremony is held at Carpenters' Hall. The competition was relaunched in 2003 as the Wood Awards.

The Awards have had an impact on the architectural and design landscape, becoming a 'mark of excellence' in wood with past Gold Award Winners including Ditchling Museum of Art + Craft by Adam Richards Architects, Niall McLaughlin's Fishing Hut in Hampshire and, most recently, Maggie's at the Robert Parfett Centre by Foster+Partners.

The Wood Awards 2017 shortlist will be announced in July and displayed at the London Design Festival in September. The winners will be announced at the Wood Awards ceremony at Carpenters' Hall in November.

Award categories

There are eight main categories:

- Commercial & Leisure
- Interiors
- Small Project
- Production Made
- Education & Public Sector
- Private
- Bespoke Furniture
- Student Designer

A Structural Award is given to the building project that the judges deem most worthy. Special Awards are given at the judges' discretion. The Arnold Laver Gold Award, the winner of winners, is chosen by the judges from the winners of all eight categories.

For more information
www.carpentersco.com
www.woodawards.com

Past winners

Maggie's at the Robert Parfett Building

Arnold Laver Gold Award & Structural Award Winner 2016
Location: Manchester
Architect: Foster + Partners
Client/Owner: Maggie's
Structural Engineer: Foster + Partners
Main Contractor/Builder: Sir Robert McAlpine
Specialist Contractor: Blumer Lehmann AG / SJB Engineers
Photography: Nigel Young
Wood Supplier: Metsa Wood
Wood Species: Nordic Spruce

The Fishing Hut

Arnold Laver Gold Award & Private Winner 2015
Location: Hampshire
Architect: Niall McLaughlin Architects
Structural Engineer: Price & Myers
Main Contractor/Builder: Inwood Developments Ltd
Joinery Company: Inwood Developments Ltd
Timber Consultant: Wood Architecture and Building
Project Manager: Padstone Consulting
Landscape Designer: Imagination Design
Wood Supplier: E.C. Forest Products, East Brothers Timber Ltd
Wood Species: European Oak from France, Douglas Fir from Southern England

Silver Jubilee of the Continuous Cover Forestry Group

by Bill Mason based on an original article by Dainis Dauksta published in The Forestry Journal in November 2016

2016 was the 25th anniversary of the formation of the Continuous Cover Forestry Group in 1991: this was celebrated in late September at Llandovery in mid-Wales with a celebration dinner followed by a field meeting.

After the dinner members listened to ProSilva President Philippe Morgan describing the stages of development of continuous cover forestry (CCF) in Britain since 1991 using business management terms such as 'trough of disillusionment' and 'slope of enlightenment'. These terms seem apposite with large scale clearfelling still the principal harvesting method in Britain and a general scepticism towards close-to-nature silviculture techniques amongst mainstream forest managers. Our forest industry needs to develop diversified and resilient productive forests to survive the challenges posed by climate change and new pests and pathogens.

Professor Jurij Diaci of Ljubljana University spoke about the development of a close-to-nature (CTN) forestry culture in Slovenia using simple clear principles: no strict rules, adapt silvicultural tools to the goals for individual forests, maintain forest fertility through retention of biomass, carefully manage or constrain disturbance whilst accepting windblow events as opportunities e.g. to create reactive irregular shelterwoods.

Strategies for forest adaptation will need to be pragmatic in order to increase resilience of forests to biotic and abiotic stresses, including appropriate use of non-native species. The term 'freestyle silviculture' best describes this use of a range of silvicultural techniques.

Within a fog of contradictory factors CCF needs to provide added value, whether in biodiversity, amenity, creating resilience or growing specialist premium sawlogs.

Professor Diaci concluded by remarking that scientists and practitioners need to reconnect and learn to be more open because there are no universal approaches to silviculture. Copies of both presentations can be found on the CCFG website at **www.ccfg.org.uk/events/eventsarchive**

The field visit on September 30 took place on the edge of the Cambrian Mountains along one of the most picturesque valleys in Mid Wales. The group was introduced to the history of Bryn Arau Duon by Andy Poore, supported by Phil Morgan.

The area comprises 702 hectares of mainly Sitka Spruce at about 400 m elevation afforested in four phases from the 1960s to the 1980s and purchased by Ilchester Estates in 1998. The owners are agnostic about silvicultural methodology as long as a steady income is generated and the capital asset is maintained. So far all financial targets have been met. Objectives depend on improving resilience to reduce financial risk, an interesting challenge in an area classified as windthrow hazard class 5. The orthodox prescription for upland Spruce forests in this class would be a non-thin management regime followed by clearfell. Many British foresters believe that CCF management is not suited to such sites.

However, the current management team have not found thinning to cause serious windthrow despite the apparent high wind hazard. As a result of the greater than predicted stability of the spruce matrix, they have been able to foster an irregular structure and to start introducing other species (e.g. Douglas Fir, Western Red Cedar and Norway Spruce). The only exception has been on peaty soils (less than 15% of the overall forest area) where clearfell operations are still required. Regular thinning operations produce logs for local sawmills and an annual profit of around £6,000.

During several stops Phil Morgan showed examples of

typical practice in stands growing at up to Yield Class 18. Poor tree form has been ameliorated by removal of undesirable trees in up to three thinnings since 2000 using graduated density thinning (GDT) originally pioneered by the late Talis Kalnars. GDT has reduced the expected impacts of windthrow while Spruce natural regeneration has appeared in thinned areas. Thinning will continue on a five yearly cycle, taking about 20% of basal area in each intervention removing diseased or damaged trees and those with larger branches. Baseline monitoring data are generated from 268 sample plots located across a 200 m grid, each marked by a permanent steel stake.

The good growth rates and the thinning regime mean that a proportion of larger logs (> 55 cm) will be produced in the next 10-20 years. While some sawmillers do not want 'oversize' logs, the group recognised that these trees may be converted into some of the highest grade softwoods by bespoke mills. Furthermore, old large trees of good form are highly desirable as seed trees in irregular forests.

This visit showed that greater use of irregular forestry can address many of the negative concerns about conifer forests that have influenced British silvicultural policy in recent decades. Forests such as Bryn Arau Duon can be extremely productive whilst delivering biodiversity (e.g. red squirrel habitat) and protecting water quality. Much credit is due to those few dedicated foresters within the CCF movement who have doggedly worked against the grain of orthodox opinion to demonstrate the value of reactive CCF in a changing climate.

Contact:
www.ccfg.org.uk
administrator@ccfg.org.uk

Photograph courtesy of Dainis Daukšta

ProSilva President Philippe Morgan at Bryn Arau Duon

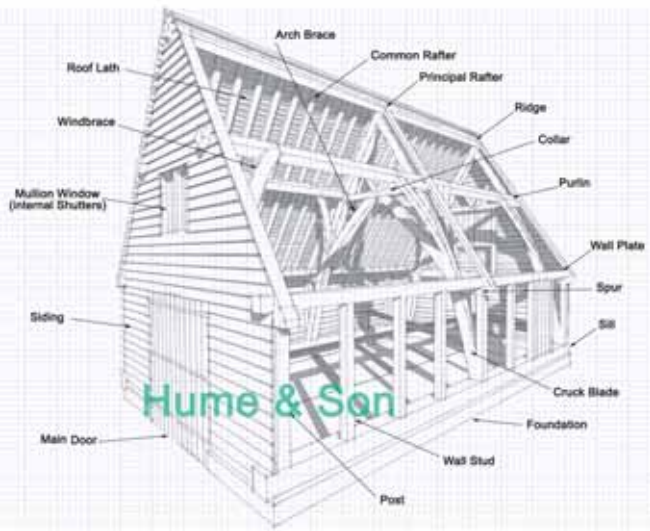
A Woodland Cruck Barn

"Part 1 - In the beginning....."

by Ken Hume

Following the article published in Woodland Heritage 2014 (pp 86-87) re Continuous Cover Forestry Course, we decided to follow the recommendation to build a two bay cruck framed barn in the woodland using only timber felled and converted in the woodland.

Corbishley & Hume undertook a vernacular cruck building research programme during 2015/16 covering the local villages and hamlets around the woodland with six cruck houses and a barn being surveyed. Findings were used to produce recording reports and 3D CAD models of the buildings. This has helped establish in some detail the typical design, style and method of construction to be employed in building the new cruck framed barn.



Permitted development planning permission was sought and obtained from South Oxfordshire District Council in January 2016. It was pleasing to receive approval to build the barn in The Chilterns Area of Outstanding Natural Beauty without any objections being raised.

Prior to starting any building works an archaeological survey (geophysical and metal detectoring) was

undertaken and this found civil war musket balls at the forest duff / subsoil interface level.

The chosen barn site required levelling and it was decided to do this by hand. Forest duff was scraped off and redistributed in the woodland. Thirty tons of soil, clay, sand and flint were dug out with the spoil being sorted for reuse (clay, sand and flints) with the balance of soil being deposited in a long redundant woodland quarry. Additional flints were salvaged from local field edge and garden tips. These will be used to underbuild the cruck frame with a flint dwarf wall foundation.

A woven phormisol membrane was laid on the levelled site and a framing floor was made on top of it from recycled

plywood fixed on top of pallets. The cruck sills were laid out, levelled on blocks and then scribed, cut and joined on the framing floor. The cruck frame timbers were then laid out on top of the sills using a string line template pinned to the floor.

With the support of Woodland Heritage a grant was obtained from The Postcode Local Trust to help support the involvement of volunteers and aspiring career change trainees in the cruck building programme. This has proved to be quite a challenge. A good number of people have expressed interest or enthusiasm to get involved in the project. However participants have to be able regularly to devote one day a week to this work and stay the course to make it worthwhile spending quality time teaching them the ancient craft of traditional timber framing.

Persons showing promise were sent on the Weald & Downland Living Museum "Timber-Framing from Scratch" course run at the museum by Joe Thompson. Others were equipped with tools, personal protective equipment and training to enable them to fell, extract and convert trees safely into useable timbers. European Larch and Douglas Fir timbers were felled, extracted and converted by hand using a long handled Kent pattern axe for the larger diameter timbers (cruck blades, tie beams, long sills, wall plates, etc) and Swedish broad axes for hewing smaller timbers (cross sills, purlins, rafters, studs, etc).

The hewing programme was undertaken over a period approaching a year with converted timbers being stacked off the ground on bearers and covered with corrugated iron sheets. We found that two men would take seven man-hours to fell, extract, debark, hew and stack a 30 ft long continuous

sill timber. An Oxfordshire Woodland Group Fellow – Herbert Russell – made a medieval style framing saw used to scie-saw (halve) selected timbers (mainly brace stock).

Other timber-framing projects have established that women appear to be better suited than men to undertake scie-sawing due to their different tummy muscle structure and so we have been somewhat disappointed about the lack of women coming forward to get involved in the project!

The first two cruck frames are expected to be raised during the late spring/early summer 2017 with work to complete the cruck frame and close it in with shingles and cladding by the end of the year. We will have to make over 5,000 Cedar and Larch shingles. This is good sit down type work for volunteers to get involved in where lively banter is the order of the day!

Funding is currently being sought to engage a flint foundation wall builder and to purchase a small sawmill capable of producing wall cladding and floor boards.

Following the barn raising, festivities will take place including a traditional Chiltern's folk dance exhibition by Andrew Jarvis and The Chalgrove Morris Dancers.

Contact details:
trustees@oxfordshirewoodlandgroup.co.uk
www.oxfordshirewoodlandgroup.co.uk/contact

Refs:
HUME, K F, 2014. *Continuous Cover Forestry Course. Woodland Heritage*, 2014, 86-87.
CORBISHLEY, T, HUME, K F, 2016. *The Cruck Houses of Medieval Checkendon*. Oxfordshire: Checkendon History Society

Acorn storage: a project to extend shelf-life

by Shelagh A McCartan and Robert H Needham

The acorn storage project

Acorns are classed as 'recalcitrant' because they are shed at high moisture contents and they lose viability rapidly below a critical threshold (ca 38%). As such, acorns are usually kept under 'wet-storage conditions' to reduce the rate of water loss. Under these conditions, however, acorns are prone to premature germination and fungal infection.

The fungus, Ciboria batschiana, is a major acorn pathogen in storage

So, acorns cannot be easily stored from one season to the next without large crop losses. This creates supply and demand problems for seed traders and nurseries as Oaks produce good acorn crops only in so-called 'mast years'.

In July 2015, Forest Research met industry partners to discuss potential solutions to this problem. Later that year we started an 18-month project funded by the Agricultural and Horticultural Development Board, Forestry Commission Scotland, Future Trees Trust, Woodland Heritage and Woodland Trust. The overall aim of the project is to extend the shelf-life of pedunculate Oak acorns to at least twelve months, thereby ensuring year-on-year availability of fruits for seed traders and nurseries. The project is based on two different approaches that are used in the fruit and vegetable industries.

Coatings

The first approach focused on reducing water loss by coating the acorns with three different commercial anti-transpirant waxes (bees, soya, and microcrystalline), which were applied in two different ways, partially or entirely coated.

Acorns partially coated with bees wax

Acorns entirely coated with microcrystalline wax. The coloured threads were used to dip the acorns

In all treatments, partially coated acorns lost moisture at similar rates to the control acorns. In the best treatments, entirely coated acorns had moisture contents above or equal to the critical threshold after 36-weeks storage. However, the physical properties of two waxes (bees and microcrystalline), hampered germination although this could be overcome with different wax formulations or pre-formed weaknesses.

An acorn entirely coated with microcrystalline wax showing its trapped radicle

Bags

The second approach focused on reducing respiration by storing acorns in three hi-tech bags which passively modify the storage atmosphere. The control bags were constructed from thick polyethylene, which prevented water loss but also gas exchange. The acorns simply fermented due to oxygen starvation within 24 weeks of storage. The best hi-tech bag was constructed from metallised polyester, which is typically used for 'cooking or roasting' food. This bag maintained the moisture content of

Rob Needham heat-sealing bags of acorns

acorns above the critical threshold. Fungal infection was a slight problem but about 50% of the acorns were still alive after 60 weeks of storage.

What is next?

Our results show that it is possible to store acorns for at least a year but there are losses. We are currently analysing the data to examine the relative success of the treatments in terms of viability and out-planting performance. In addition, we are considering how the work in this initial study could be refined to reduce losses during storage.

Acknowledgements

The project is funded by the Agricultural and Horticultural Development Board (Grant HNS 197), Forestry Commission Scotland, Future Trees Trust, Woodland Heritage and Woodland Trust. We would also like to thank our industry partners, Forestart and Cheviot Trees, for practical and technical assistance.

Forest Research, Alice Holt Lodge, Farnham, GU10 4LH

shelagh.mccartan@forestry.gsi.gov.uk

SUMMARY

Pedunculate Oaks produce good acorn crops only in mast years which occur every few years. Acorns are classed as recalcitrant due to their high moisture content and are susceptible to desiccation, premature germination and fungal infection during storage. Seed traders are therefore unable to stockpile acorns collected during good crop years for subsequent sale during poor years. This project focuses on two approaches to extend shelf-life; firstly, to reduce water loss by coating acorns with anti-transpirants or waxes, and secondly, to reduce respiration by storing acorns in hi-tech bags. Initial results are promising and indicate that it is possible to store acorns for at least 12 months using these techniques.

Continuous Cover Forestry Group

2017 Events Programme

ProSilva Europe Annual General Meeting Sibiu, Romania

June 27 - July 1

Only one or two places are available to CCFG members. Contact the administrator if you would like to attend.

CCFG Foreign Study Tour to Denmark

September 4 - 7

Denmark has a similar forest history to parts of Britain with afforestation programmes in the nineteenth century being followed by a strategy of converting many of the even-aged stands to close-to-nature management.

Our trip will take us from Alborg in north Jutland to Zealand near Copenhagen and we will visit both state and private forests and see conifer stands, mixed forests and quality broadleaved woodland.

CCFG Scotland Field Visit to Buccleuch Estate near Melrose

Thursday September 28

We will be visiting the Eildon Estate and the Bowhill Estate at Melrose and Selkirk respectively.

We will be looking at the difficulty in regenerating mixed stands in moisture and nutrient rich sites. More details available in due course.

CCFG Wales Field Visit to Coed Llandegla, near Coedpoeth

Thursday October 5

A return to North Wales is planned after two years of visits in the South. Coed Llandegla is a privately owned forest in the hills west of Wrexham. Like Bryn Arau Duon, the location of last year's visit, it is a Spruce dominated upland forest. Management drivers are different, though, including heavy recreational use and black grouse conservation. For purists, the silvicultural methods adopted might not be considered CCF, but are they a pragmatic approach to achieving a degree of irregularity in an upland Spruce forest managed for multiple benefits?

CCF for Foresters Courses delivered by the Forestry Commission

The Forestry Commission CCF courses that were provided by Jens Haufe and which were available to CCF members and other interested parties will again be available in 2017. However, as a result of organisational changes they will now come under the auspices of Forest Research, although they will still be given by Dr. Haufe. Dates and locations of these CCF and related courses in 2017 will be announced in the next couple of months.

For further information contact Mandy Clinch:

administrator@ccfg.org.uk
www.ccfg.org.uk

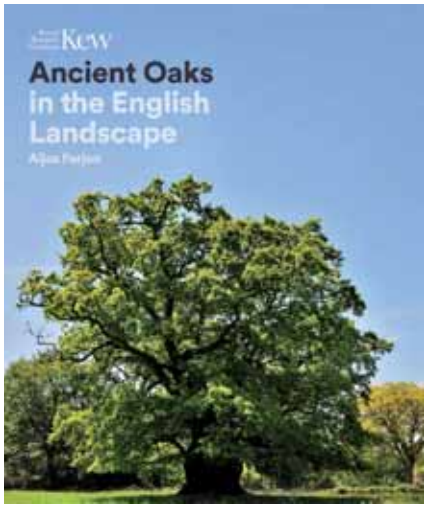
Editor's note: Woodland Heritage continues to support the CCFG by offering bursaries to its members to attend events at home and overseas. Students and young foresters, in particular, are encouraged to apply for support. Applications are judged on individual merit with preference given to those engaged in forestry, or the production of quality timber. Successful applicants are required to produce an illustrated report for publication by Woodland Heritage and the CCFG.

Book Review

Ancient Oaks

in the English Landscape

Gary Battell reviews a new 'milestone' book



It is always a pleasure to come across excellent books about trees especially when they are written by a person with a profound knowledge of the subject.

Ancient Oaks in the English Landscape is just such a book - well researched, highly informative and with fine pictures, charts and maps. It is skilfully written by Aljos Farjon with contributions on biodiversity from Martyn Ainsworth, Keith Alexander and Pat Wolseley, all of whom have enhanced the book by adding their expertise.

Aljos has applied scientific rigour to his research, thoughts and discussion. He starts off by making clear how significant ancient trees are within the English landscape along with their importance for both culture and biodiversity. The book is about the English Oak, both *Quercus robur* and *petraea*.

I can best give a taste of the book by describing the contents of each of its eleven chapters. The first is about the life of the Oak tree from acorn to maturity, senescence and death, along with the physical characteristics of each of these stages of life.

In chapter two the age of trees is assessed in some detail. Aljos focuses on estimating the average ages in years of Oaks of both a minimum and maximum girth and then up to the largest Oaks alive. He has sensibly chosen 1600 as the cut-off date after which Oak trees are not really ancient. He is interested in knowing what happened in the Middle Ages and Tudor times as these were when truly ancient trees still alive today originated.

Chapter three has maps of where the 6m+ diameter Oak trees are. They highlight both concentrations and where there are few. This leads on to speculation as to why there are these landscape differences. In chapter four Aljos discusses the Oak trees in pre-1600 deer parks and describes their landscape and land-use. He describes how the differences are of great significance even though 75% of their Oaks have now gone.

Chapter five tells us more about land-use types including royal forests and wooded commons which now account for up to 85% of the ancient Oaks in the English landscape.
In chapter six Aljos sets out which European countries have the most ancient Oaks. The discussion ranges through wars, revolutions, land ownership, deer parks, and modern forestry.

Chapter seven goes into why more ancient Oak trees have survived in England compared with continental Europe. In chapter eight the author goes further back in time describing how the ancient trees we see today take us back via only a few generations to pre-history. He goes on in chapter nine to evaluate nearly all the sites in England that have significant numbers of ancient trees. Out of these he describes the 23 which he considers to be the most important.

In chapter ten the three guest contributors write about the biodiversity associated with ancient Oak trees while chapter eleven is devoted to conservation issues including threats and mismanagement, Of course some of this is already questionable or even out of date with ongoing research into AOD revealing more and more.

Aljos Farjon is a wonderful writer; perhaps in the same league as Oliver Rackham or even Charles Darwin. He has brought alive the significance and importance of the ancient Oak trees in the English landscape and I am sure that this book will stimulate much discussion around the country. It will sit with my 'special' books on trees and will become one of my constant reference books.

'Ancient Oaks in the English Landscape', Aljos Farjon. ISBN: 9781842466407. Hardback £30. 360 pages, 190 colour photographs, six maps. May 2017. Kew Publishing. www.shop.kew.org/kewbooksonline

Wood-Mizer is working in partnership with Woodland Heritage

Editor:

I would like to express our heartfelt thanks to Wood-Mizer UK for their continued support for our 'from Woodland to Workshop' courses.

Arran Dennis, who attended our May 2017 course was supported by a Wood Mizer UK bursary. Whilst working as a woodland consultant and contractor in the East of England, Arran felt that he could benefit from an understanding of the complete supply chain by attending a **'Woodland to Workshop'** course.

Oliver Rackham's notebooks

An amazing archive becomes available

by Guy Corbett-Marshall

A grant from Woodland Heritage has enabled the digitisation of five of Professor Oliver Rackham's field notebooks that recorded his observations of Staverton Park in Suffolk.

Listed by the Royal Society of Wildlife Trusts as 'primeval woodland', the site was described in 1986 as 'a famous and awesome place of Tolkienesque wonder and beauty'. Today, it is a Special Area for Conservation (SAC) and a Site of Special Scientific Interest (SSSI). It has an awesome woodland of ancient Oak and Birch, and part of the site has Holly trees reputed to be the largest in the UK.

Woodland Heritage, through its grant, has been able to support the project to digitise and display online the notebooks Professor Rackham kept during his life, and which are now in the Corpus Christi College, Cambridge, archive. There are some 1146 of these notebooks, kept by Rackham from his youth up until his death in February 2015, and the total cost of making them all accessible could exceed £40,000. At present the aim is to make a selection accessible and to add more as it is digitised over the years.

As Dr Lucy Hughes, Archivist at the college, said, "Thanks to Woodland Heritage, to the Friends of Oliver Rackham and to many other supporters, great progress is being made to make accessible to all the

incredible legacy of field observations that Professor Rackham made over almost six decades. However, there are over 600 red notebooks and around 250 blue notebooks left to digitise, so if anyone is interested in a particular place, region, or period of Oliver's research, we can help pick out the notebooks to sponsor. Present priorities include Hatfield Forest and Buff Wood, Cambridgeshire. All sponsorships will be acknowledged on the Cambridge Digital Library's website."

The red notebooks form a chronological sequence and record observations on plants seen on Professor Rackham's travels as well as in his home surroundings, together with other kinds of information, for example about weather and college duties. They are paginated continuously and include some sketches. A label on the outside usually lists the locations covered in each notebook with page numbers, thus serving as a kind of contents page.

The blue notebooks are more location-specific. They are divided into separate sub-groups according to location with an abbreviated key on the spine. Within each sub-group (for example the Hayley Wood books) pagination is continuous from notebook to notebook. They tend to contain more raw data than the red notebooks, for example tally charts showing frequency of plant species in particular areas of woodland, with photocopied maps of woodland areas often pasted in. Although sequence is roughly chronological, information is entered in a more content-led fashion than in the red notebooks.

Born in Bungay, Suffolk, in 1939, Oliver Rackham was educated at Norwich School, matriculated at Corpus Christi College in 1957, and was elected a Fellow of the college in 1964. Although he began by studying physics, as a graduate student he turned his attention to botany, particularly the physiology of plant growth and transpiration and became the subject of his thesis. From 1972 onwards he concentrated on historical ecology, especially the history of woodland and the landscape in England and Wales. He wrote prolifically on this, both in specialist journals, as well as for the general reader, and through a series of important books.

For further information about sponsoring a Rackham notebook(s), please contact Dr Lucy Hughes at **lcb15@corpus.cam.ac.uk**. To view the digitised notebooks on-line, go to **http://cudl.lib.cam.ac.uk/collections/rackham**

Get LinkedIn to Woodland Heritage's work

The Journal is quite unlike most communications sent to members and supporters by the majority of charities. Its ambitious and varied content that challenges readers to consider new and alternative approaches to often tried and tested thinking about the length of the timber supply chain, seems to be received with universal pleasure and acclaim but is sent to subscribers only once a year.

In a world where communications are increasingly constant and instant, that twelve-month gap, even if filled partly by joining fellow members at the annual Field Weekend, might be a long time between chances to be inspired by the thoughts of others in the forestry and timber sectors.

At present, Woodland Heritage offers its website as a further mine of information, and this will be revised and updated over the next year to make it even more topical and helpful. A monthly e-newsletter is also potentially on the cards, but in the meantime, and to replace the former Forum facility at **www.woodlandheritage.org.uk**, why not join the Woodland Heritage LinkedIn group?

Membership of this group is managed by Woodland Heritage staff and volunteers, but does try to be as welcoming as possible and to have a wide a range of participants throughout the length of the timber supply chain.

Conversations can be started by any member, and could include requests to help resolve tricky issues or problems, or they could simply be to tell people about developments and general news circulating in the sector which relate to the interests or business of the contributor concerned.

At the end of February, membership stood at almost ninety, but as it grows, so should the range of topics to read about and to take part in.

If you are a member of LinkedIn already, just use the link: **www.linkedin.com/groups/2444392/profile** from either the Home page of Woodland Heritage's website, or via the Forum tab on the website's menu to request to join.

If you aren't a member of LinkedIn, the service provides the following advice to enable you to join LinkedIn and create your profile:

1. Go to the LinkedIn sign up page. Type in your first name, last name, email address and a password you'll use. Note: You must use your true name when creating a profile. Company names and pseudonyms are not allowed, as we explain in our User Agreement.
2. Click Join LinkedIn.
3. Complete any additional steps as prompted.

We look forward to welcoming new members to the Woodland Heritage LinkedIn group and to seeing some healthy debate generated within the group as the year progresses.

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