Stepping up to make a difference

The late, great Sydney Draper (long-standing supporter of WH) used to berate us for not waking up the World to recognise the importance of trees to climate change. His mantra was consistently “without trees there would be no life on Earth, as we know it”.

I always had to protest that we were a tiny woodland charity with no full time staff, so we simply could not bestride the world like Giants and influence world opinion as Sydney expected of us. Sydney often wrote to me on his 1920’s typewriter to say that we needed to “step up and make a difference”. Despite my protestations, Sydney still chose to endow us with the funds. I still do not fully understand why Sydney chose to believe in us.

I personally feel a huge responsibility has been placed on our small charity. What if the ripple can become a wave? A man from humble beginnings who became the Head Forester for the World Bank had every right to dream dreams. We are determined to try and make the dream a reality.

Speaking about how one person can make a difference, please read about the first six months of Guy Corbett-Marshall, our Development Director, and the considerable impact that he is making.

Woodland Heritage has ambitious plans for the future and intends to become an integral part of the wood chain, living up to our promise of “Action, not Words”. We aim to make our voice heard on matters affecting the future of forestry in the UK.

We have arranged a fascinating Field Weekend in Yorkshire in June when we hope our members and their guests will join us to hear more about our development plans.

Recently, we were honoured that our Patron, His Royal Highness The Prince of Wales popped in to meet some of our trustees at Whitney Sawmills on St David’s Day to learn more about our “From Woodland to Workshop” training courses and to hear of our future plans. His inspiration runs deep within us all as we strive to expand our work and our horizons.

Lewis Scott
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## Patron

His Royal Highness The Prince of Wales

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## Development Director

Guy Corbett-Marshall

## www.woodlandheritage.org.uk

Woodland Heritage, PO Box 168, Haslemere, Surrey GU27 1XQ

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Our 2016 Field Weekend

YORKSHIRE

The Howardian Hills in North Yorkshire are home to some of the finest private forestry estates anywhere in Britain. Our connections with the county and its foresters go back many years. The nearby Yorkshire Arboretum at Castle Howard is the home of Woodland Heritage’s memorial Cruck Shelter to our late patron Peter Garthwaite OBE.

Friday 24th June a.m.

The Castle Howard Estate Woodlands

By kind permission of the Howard Family

Arriving at this famous Yorkshire estate, we will first view and discuss the designed landscape from Eastmoor Banks before walking on to Pretty Wood with Nick Cooke, the Forestry Manager. This is one of the family’s largest Oak woodlands, planted in the late 1800s and which needs very sensitive management. Containing a pyramid and an impressive statue, the wood also has many archaeological features. We will discuss the thinning regime and 20 year old plantings, comparing the most recent work to establish young Oak.

Friday 24th June p.m.

The Hovingham Estate

By kind permission of Sir William Worsley

Led by Consultant Forest Manager David Brown from Tilhill Forestry and the owner Sir William Worsley, we will be given a tour of two of the outstanding woodlands on this well-managed estate. Discussion topics of the tour will include restock species, merits of using nurse species, pruning, thinning and finally admiring the outstanding Larch within the ancient semi natural woodland.

Saturday 25th June

The Settrington Estate

By kind permission of the Storey family

Woodland Heritage Trustee, Graham Taylor, consultant to the family, will be joined by Kenelm Storey and his father Sir Richard Storey. The estate has practised the ‘art of the possible’ in both its forestry and by creating a private arboretum of over 2,000 trees and shrubs over the last decades. We will be touring the woodlands looking at a Walnut plantation, Cricket Bat Willows, uneven aged broadleaved forestry with Beech, Oak and Sycamore in a grey squirrel-free environment.

(Please note that our AGM will be held at 2pm in the Riding School prior to the afternoon walk)

Sunday 26th June a.m. only

The Thorp Perrow Arboretum, Bedale

By kind permission of the Ropner family

Thorp Perrow is considered to be one of the finest collections of trees and shrubs in the United Kingdom. The Arboretum was created by Colonel Sir Leonard Ropner (1895-1977). He began the Arboretum in 1931 and in July 2006 the gardens celebrated their 75th anniversary by planting the 1,750th tree. We had been promised a special tour by his son, Sir John Ropner, but he sadly passed away in February. Faith Douglas, Curator of the Arboretum, has kindly stepped into the breach and will give us a two-hour tour of this outstanding arboretum.

Members and their guests will be very welcome

To book, please contact Woodland Heritage on 01428 652159
or enquiries@woodlandheritage.org.uk
The MSc Environmental Forestry course at Bangor University was all that I had hoped it would be. It had been a year of intensive learning through which I had gained a broad understanding of how our global forests are changing in a context of increasing human pressures and climatic change. I had developed a clear and clinical approach to critically analysing information and to compiling well referenced scientific reports and essays. However, as I worked through the final weeks of my dissertation project I began to consider what role I might fulfil in the forestry sector. I went to Dr James Walmsley to seek advice on how I could get a better understanding of the practicalities, roles and relationships in the UK timber industry. He was quick to recommend the Woodland to Workshop course as an opportunity to learn such lessons from tutors each with decades of experience in their chosen specialities.

A few weeks later I found myself retracing some of the route that I had just cycled on my way back from Bangor to Bristol. This time I was travelling by car and heading up the beautiful Wye valley to Hay-on-Wye. The musky aromas of freshly cut Oak hung heavy in the damp air at Whitney Sawmill. The cool and humid atmosphere is regulated by the river Wye itself flowing alongside the yard and by the dappled shading of surrounding deciduous woodland. I would later learn the significance of these environmental conditions in the gradual and controlled air drying of timber in the sheds on-site.

As I strode up the wooden staircase to the workshop and classroom, I was glad to recognise the mutual excitement on the faces of my fellow students, conjured up by the sights and sounds of our surroundings. Both the students and tutors collectively represented all stages of the timber supply chain, from land owners, foresters and arborists, to saw millers, timber framers and carpenters. Such diversity in backgrounds and our unifying interest in wood and trees proved to be an exciting platform for lively debate and was a rich source of illustrative anecdotes over the following days. The course provided a solid foundation of theoretical essentials covered in the classroom, but the majority of the time was spent honing our newly acquired skills in the timber yard, discussing the subtleties of standing timber valuation and forestry management in the surrounding woodland, and trying our hand at bowl turning and wood carving in the workshop.

The Woodland to Workshop course has boosted my technical skills and my knowledge of timber products and markets that I can supply as a forester. I have since secured my first forestry management contracts, operating as a self-employed forest manager. One contract is for a particularly handsome woodland of high quality Oak, from which some timber may one day pass through Whitney Sawmill and perhaps on to stand as a beam in a timber-framed building, or to be crafted into a beautiful piece of furniture to live a life long beyond its years as a tree.
Dr Joan Webber
WINNER OF THE 2016 PETER SAVILL AWARD

Joan read for her first degree at the University of Wales Aberystwyth, and during her studies did a small project on Dutch Elm Disease (DED) – this was the moment that ignited her interest in tree pathology. It proved to be the ideal platform for her PhD on insect transmission of DED which was achieved under the mentorship of John Hedger at Aberystwyth and John Gibbs at Forest Research. This led onto a life-long career in forest pathology where a stint at Southampton University was a stepping stone to a permanent position at Forest Research, Pathology branch, Alice Holt.

Joan became Principal Pathologist for FR in 2000 and Head of Tree Health in 2011. She has a 30 year international track record of research and collaboration on pathogens of forest and woodland trees, their population biology and epidemiology, and the use and deployment of biological control agents in the management of tree diseases.

Over the past ten years her particular area of work has been on alien invasive pathogens including Phytophthora and most recently Chalara dieback of Ash. This work has a European dimension as she contributes to EPPO panels on forest pathogens, their detection and management, thereby working toward protecting Britain’s forests and trees. Her particular research area is centred on the threat introduced pathogens pose and their potential long-term impact on trees and forest ecosystems.

Joan has steered the Tree Health group at FR, sometimes through choppy waters of funding uncertainties and political sensitivities about the increasing threats to tree health. At the same time she has enjoyed very fruitful scientific collaborations with some of her FR colleagues including Sandra Denman and Clive Brasier (who also happens to be her husband – a partner in science and life!).

Joan has guided 14 students through their PhD studies and has published around 100 scientific papers in peer reviewed journals. In 2014, Joan Webber was awarded the Institute of Chartered Foresters (ICF) Medal, the highest award, in honour of her professional excellence in forest pathology.

In recognition of the way her work has made an impact and difference to forestry in the UK, the Woodland Heritage trustees have awarded Joan 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.
Sydney Draper's 90th birthday and tree-planting ceremony
Dunkeld, Perthshire
Dear Lewis,

Together with many other former World Bank colleagues, including especially Chip Rowe, and my wife Kathleen McNamara, we would like to send a tribute to the late Sydney Draper.

Back in the 1960s Sydney joined a small World Bank/Agroforestry team which assumed responsibility for trying to make sure that the future Country Development Programmes being supported by the World Bank and the Internal Finance Corporation, would include specific proposals for incorporating significant investment activities aimed at conservation of indigenous forests and for sustainable forest management.

Sydney contributed in a major way to analysis of the most effective strategies for containment of major constraints to forest and agroforestry investment.

During the period he worked with the World Bank Group, forest related lending more than doubled to about $100 million a year. Sydney’s analyses focused in particular on quantifying the potential of forest related investment to address issues such as alleviation of rural poverty and containment of illegal logging. He developed partnership arrangements between many thousand small scale forest enterprises and larger more responsible companies that were in the process of developing local and overseas market outlets for the output of these so called SMFEs.

Sydney was not only a highly competent forest economist (who spent most of his professional life working on issues such as those summarised above), but he was also a talented musician. I have fond memories of the many evenings he and I spent playing classical and jazz duets on the piano.

As his sister Joyce commented in a recent letter:

“He will be sorely missed by all of us.”

It came as a great relief to learn from Joyce that Sydney died peacefully in his sleep.

With kindest regards,

Dr. John Spears

Formerly Head of the World Bank Forest Team and: (in earlier days) Secretary General of the Switzerland based World Commission on Forests and Sustainable Development.
The Prince of Wales Award for Sustainability 2015

by Christine Leduc

Having been a member of the Canadian Institute of Forestry (CIF) since my years as a green forestry student, it has been a pleasure to grow with the institute. After spending so many years in school learning about forestry science, it seemed obvious that forestry should simply be about the science of trees. Having now spent just a short time in the workforce, it quickly became more apparent that forestry is more about people than it is about anything else. And today, more than ever, people care about trees and forests.

Unlike other nations, Canada is blessed with vast forest resources that belong to the people. 94% of Canada’s forests are publicly owned and managed by provincial, federal or territorial governments. These forests are not only meaningful to Canadians, they represent 10% of the world’s forests. Discussions about the health of Canada’s forests, particularly the Boreal Forest, are often of global interest. Even as Canada has established a robust regulatory framework for forest management that ensures healthy forests, something we can be proud of, Governments have the growingly difficult duty of managing forests in a way that meets the expectations of First Nations, communities, companies, environmental groups and the public.

The CIF, with its ability to connect professionals with different backgrounds from all over Canada and now the world, has a tremendous opportunity and task of being a key player in the new chapter of Canadian forestry. I say new chapter because the Canadian forest products sector has emerged from years of hardship, affected by the crash in the US housing market and the declining market for paper. Today, as forestry companies work towards the anticipated recovery, a new vision for Canada exists with a focus on climate change, green energy and sustainable economic development. There is an incredible opportunity for Canada’s forestry sector in this new vision.

My science foundation and professional experiences have nurtured in me an unwavering faith in the ability of forestry companies to deliver both sustainable economic development and the protection of our forests in Canada. For this, I am committed to a career with Canada’s forest industry.

My desire is to find optimism in the dialogue about Canadian forests. I applaud the CIF’s efforts to inspire confidence and pride in Canadian forestry – nationally and internationally. I have seen the CIF act as a constructive and credible voice in the dialogue, providing national leadership to foster public awareness of Canadian forestry.

It was a great honour to be chosen as the 2015 recipient of The Prince of Wales Award for Sustainable Forestry. For me, the award represents a call to reconfirm my commitment to the CIF and to the Canadian forestry sector. www.cif-ifc.org

We all have a responsibility to be informed and engaged about the management of our resources and I know the future for Canada’s forests is bright.
In 1976 Susan Kirk began her career in the Forestry Commission as what was then known as an Assistant Scientific Officer at Forest Research, Pathology branch, Alice Holt. Working on decay fungi of amenity trees she provided technical support to Dr Peter Mercer, and many of the techniques they tested such as when and how to prune trees, are now part of standard arboriculture practice.

In 1982 she was promoted to Scientific Officer assisting Professor Clive Brasier in researching the 1970s resurgence of the Dutch Elm Disease pandemic. From 1990 until 2002 her technical support led to uncovering the cause of various Phytophthora epidemics (P. alni; P. ramorum; P. kernoviae). This period was a golden era in knowledge advancement on understanding gene flow in fungal pathogens and the implications for tree diseases, as well as the realisation of the risks the global plant trade poses to trees and forests. In 2003, following Clive Brasier’s retirement, Susan became assistant to Dr Sandra Denman working initially on P. ramorum, where a key discovery was that this pathogen could infect plants without causing symptoms, influencing disease management decisions. From 2009 the research focus shifted to Oak. Through the superb technical support that Susan provided, she played a major role in pioneering research on understanding the causes Acute Oak Decline (AOD), which attacks Britain’s native Oak species.

Susan has always striven to achieve technical excellence, combined with a strong commitment and loyalty to protecting British trees. Over her career she has given vital technical support to seminal pathology work at FR irrespective of the causal agent and carried out her duties with diligence, good humour and wit. Her input has been recognised in 48 scientific publications in which she features as a co-author. Susan has also been a mentor to many students and visiting scientists passing on the tricks of the trade and instructing them in lab lore.

Susan retired at the end of May 2015 after 39 years of service to the Forestry Commission. Her endeavours were recognised through an MBE honours award in December 2015. She is married to John Kirk, and they live in Alton, Hampshire where she is now able to pursue her gardening and reading interests and service to Oxfam charity with even more zeal. She maintains her connection with the Pathology group at Alice Holt, where young trainees are always free to contact her for sage advice when needed.

**Editor’s Note:**
In 2013 Susan took part in the Woodland Heritage “From Woodland to Workshop” course at Whitney Sawmills to further her knowledge of silviculture, sawmilling and timber processing. Our tutors were impressed by her enthusiasm and determination to maximise her opportunity in this new field.
My contract with Woodland Heritage started officially in early-July, although in the time between being offered the post of Development Director and taking it up, I did attend May’s ‘From Woodland to Workshop’ course and the Field Weekend in Herefordshire and Worcestershire. Both events provided me with an excellent induction into the work of the charity, whilst giving me the chance to meet some very knowledgeable and friendly people along the way. Most appropriately of all, I had the pleasure and privilege of talking to Sydney Draper, whose support had made the post of Development Director possible at all, an encounter that sadly would never be repeated as he died just one month later.

Whilst I had a clear Job Description, how that was to be translated into action depended upon what needed to be done and when. So, after a couple of months of looking internally, September saw me ‘on the road’, raising the profile of Woodland Heritage amongst other charities and organisations, whilst seeking to establish how best we could make a difference to the worlds of woodlands, forestry and timber production.

Even after just the first half-year of having a Development Director role, Woodland Heritage has been able to take an active part in three initiatives that would potentially have passed it by previously and which would not therefore have been influenced by the charity’s thinking:

**Climate Change Accord**

A call for resilient Forests, Woods and Trees and to which Woodland Heritage is a signatory. I was able to attend the launch of this sector-wide policy document at the Game Fair in July, an event marked by the presence of the forestry Minister, Rory Stewart MP *(full story on p112)*. This theme of resilience continued into a major Woodland Trust/Royal Forestry Society conference in October and will remain a topical issue for the foreseeable future.

**Charter for Trees, Woods and People**

In 1217, only two years after the Magna Carta was signed by King John, his heir Henry III signed the Charter of the Forest. The aim of this document was to protect the rights of people to access and use the Royal Forests. The Charter of the Forest provides a window to a time in history when access to woods was integral to life. Being denied access for grazing livestock, collecting firewood and foraging for food was a real concern for the people of that time.
Leading up to the 800th anniversary of the original Charter, Woodland Heritage is one of 48 organisations in a campaign calling on people across the UK to stick up for trees and help create a new Charter for Trees, Woods and People.

Our nation’s woods and trees are facing unprecedented pressures from development, disease and climate change. They risk being neglected, undervalued and forgotten. Woodland Heritage and other organisations involved believe that action must be taken before it’s too late.

The principles set out in the final charter will redefine the relationship with people and trees in the UK for present and future generations, providing guidance and inspiration for policy, practice and innovation for Government, businesses, communities and individuals.

60% of wildlife species are in decline across the UK and there’s been a huge reduction in enrolments in forestry education. The UK is planting fewer trees; not even planting enough trees to replace those we have lost.

With issues such as the ones above being tackled, the Development Director role is enabling Woodland Heritage to join and influence the Steering Group for the new Charter.

**Forestry Learning and Development Working Group**

Led by the Forestry Commission, this sector-wide group is concerned with ensuring that there will be enough skilled people working in the forestry sector in the years to come.

Woodland Heritage members have immense skills, knowledge and experience, but there has to be continuity of these human resources into the future to ensure that today’s good practices are carried on and enhanced still further.

With reductions in the number of both further and higher education places on forestry courses in recent years and with an ever-changing range of learning options and providers for those in employment in the sector, Woodland Heritage wants to influence skills development and this will be more achievable with the Development Director being a member of the Working Group.

As well as raising Woodland Heritage’s profile, which will include forthcoming improvements to its website, the role of Development Director is concerned with raising funds. In my first six months, I worked with Belinda and Lynn to maximise interest on deposits, as well as improving subscription renewal and Gift Aid processes, all of which has generated substantial returns for this year, whilst ensuring that the ‘backroom’ progress made in 2015 will continue in the future.

With the ‘basics’ in place, it’s also been possible to seek new supporters, with Wood-Mizer happy to create both a new bursary scheme for the ‘From Woodland to Workshop’ courses and to become a Corporate Member.

The Development Director role has brought an extra pair of hands to help Woodland Heritage achieve its aims, as well as helping others achieve theirs too. This has been the case with Atlantic Association Futari Irreguliere (AAFI), where I have helped to set up financial arrangements for them to undertake pioneering research work on mature stands in the south west, thus bringing to bear key European expertise to add to the pool of knowledge already here in the UK.

In a similar way, the Acute Oak Decline (AOD) research programme has benefited from the time I have been able to add in terms of helping to set up research projects and to plan how the income that has been won can earn most revenue and for all of that to be spent to maximum effect over the rest of the decade; so much has been achieved already in seeking to tackle AOD, although the scale of frontline work is set to rise substantially over the next three years.

Perhaps most excitingly, Sydney Draper’s legacy has created a unique opportunity for Woodland Heritage to consider increasing its positive effect on the timber supply chain in a way that it has never been able to before. Negotiations are ongoing to try to make this dream a reality, run in parallel with administering Sydney Draper’s estate and exploring how some of his gift might be invested in the future to enable the charity to have a permanently greater effect on the worlds of woodlands, forestry and timber production. Woodland Heritage’s plans for the future should be ready to be announced at its Annual General Meeting within the Field Weekend in June; so I hope to see you there!
This year’s Bodger’s Ball was held at Walesby Forest, Newark, Nottinghamshire, over the weekend of the 8th-10th May 2015, in the heart of Sherwood Forest, with the famous 800 year old Major Oak which came sixth in the recent European Tree of the Year competition, just down the road.

There was a superb range of high quality craft demonstrations, and some very interesting workshops and talks. In particular Phillip Gregson (a Member of the Worshipful Company of Wheelwrights) talked widely about wheelwrighting – ancient and modern. 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 by providing prizes for the Best Newcomer and for the Best in Show competition entries.

The award for Best Newcomer went to Robert Nicholson who got into greenwood working as a historical re-enactor. He has researched medieval tools and has been turning excellent wooden bowls at re-enactment events, keeping the historical context of greenwood working alive for the next generation, as well as developing the craft.

The award for Best in Show was won by David Saltmarsh for his wonderful armchair. David is the chairmaker behind Fivepenny Chairs, living and working on his family smallholding in Dorset.

The interest in greenwood crafts is growing all the time with local groups springing up all over the country as people become inspired by using natural materials, and simple tools, to create beautiful things. The organisation has nearly 900 members worldwide, and membership is growing 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.

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 2016 Bodgers Ball will be held from Friday 6th to Sunday 8th May at Tyntesfield, a National Trust property near Bristol.

For the latest information please visit: www.bodgers.org.uk

Harry Rogers
APTGW Secretary
Forestry@Bangor alumni, Graham Taylor (BSc Forestry and Soil Science, 1990) and Geraint Richards (BSc Forestry, 1992) have both carved out notable careers and returned to Bangor University in March to speak to the Bangor Forestry Students’ Association (BFSA) at the request of BFSA President, Dewi Roebuck. As well as talking about their exciting and varied career paths to-date, Geraint and Graham spoke about the many links between Bangor University and Woodland Heritage.

Their presentation was digitally recorded and is available online at:
https://panopto.bangor.ac.uk/Panopto/Pages/Viewer.aspx?id=2c8a9790-cd60-40d1-a35d-eb199e103024

Graham is director of the leading forestry consultancy Pryor and Rickett Silviculture whilst Geraint is Head Forester for the Duchy of Cornwall. They are a thought-provoking double-act and willingly shared invaluable experience and wisdom gained from their successes and mistakes. Perhaps it’s no surprise that they also became Trustees of Woodland Heritage in an attempt to revive our woodland culture.

Woodland Heritage has also developed a strong reputation for helping to fund research into Acute Oak Decline at Bangor University, Forest Research and a number of other universities and amongst the audience at the talk were the research team based at Bangor.

Woodland Heritage also runs the ‘From Woodland to Workshop’ training courses with the top student each year receiving The Prince of Wales Award. The 2015 recipient is a Forestry@Bangor graduate, Nicholas Hill (MSc Environmental Forestry, 2015), who received his award from Geraint and Graham as part of the event on 15th March.

Bangor scientists help AOD research

Dr Sandra Denman works closely with this group of talented scientists whose contribution to the Woodland Heritage AOD research programme has been immense. It was fitting that our Director could meet them for the first time and gain an understanding of their work.

www.facebook.com/groups/2223783770
In August, I had the honour of judging the Woodland Heritage Award at The Celebration of Craftsmanship & Design Exhibition in Cheltenham, alongside Peter Goodwin. The show is packed with the finest of modern craftsmanship but, even by its high standards, we were both stunned by a bow-fronted, Olive Ash chest of drawers.

The award we were judging honours the Best Use of British Timber and we both instantly decided this would be a very worthy winner. There was simply nothing in the show as good. It was distinctive and stylish. The entries are not of course labelled but I had a pretty good idea who was behind it: Matthew Burt, who has made a career out of such striking and original designs these 40 years.

Matthew was born and brought up near his current home in South Wiltshire, and initially went to university to study zoology. Although he loved the subject, he gradually realised that it was more the beauty of nature that he appreciated, rather than its science. After graduation, he had a major re-think and persuaded Rycotewood College to admit him to its two-year furniture-making course. He was in a hurry to get started, so much of a hurry in fact that he persuaded them to compress the course into just twelve months.

On leaving the college, he started a three-year apprenticeship in the Cotswolds, where he came to respect the clarity and beauty of form and function found in the Arts and Crafts tradition. Now married to Celia, who was to become a crucial partner in his furniture business, and restless to explore his own ideas about contemporary furniture, he set himself up in his tiny garden shed.

At first he made anything -- from bridges to boxes -- that paid the bills, but gradually he built the brand that has become so respected and recognised. Working largely with British timber, particularly Oak, Elm, Ash and Sycamore, his furniture has received the Bespoke Guild Mark Award from the Worshipful Company of Furniture Makers; and he has exhibited, among many other places, in the House of Commons’ One Tree Show.

A few months after the Cheltenham Show, Peter Goodwin and I met up again in South Wiltshire. We had been invited to see the workshops that produced that stunning bow-fronted chest of drawers. His newly-built workshop is spacious, light, tidy, efficient...
and clean. Matthew has come a very very long way from his garden shed.

We saw the fine machine shop, and the separate making area, the design shop and the office space. Uncannily, there was not a speck of dust in the place, which was indicative of the level of care and attention expected from Matthew’s crew. Matthew is dedicated to the tradition of the five-year apprenticeship, and most of the people we met had risen through the programme. We also met the latest recruit, just starting out on his apprenticeship, and were delighted that he is due to attend this spring’s W2W course. And finally, we were introduced to the beautiful showroom run by Celia.

Our tour concluded with a trip to a local pub which had recently been through a complete refit featuring 123 fabulous pieces of Matthew’s furniture. After a glass or two, and a few stories about the world of wood, I found myself pondering on the tough road that Matthew and Celia have travelled. Very few people survive that trip, and fewer still do so without compromising on the quality and integrity of their work.

I left that day thinking there was an important message for all of us here. To use Matthew’s words “I urge you to positively discriminate in favour of people starting up in sheds, and to recognise their great cultural worth”.

This seems to me to be the very essence of the Woodland Heritage mission and I salute Matthew, Celia and their team for all they have achieved.
At the end of day two of the Woodland to Workshop courses, students always gather around a particularly fine Oak specimen (above) to firstly assess the stems size, and quality and then became part of the haggling process between the Timber buyers (Peter Goodwin and Gavin Munro) and erudite Foresters (Geraint Richards and Graham Taylor).

From a forester’s perspective of course, all offers from timber merchants are dealt with a healthy degree of scepticism and distrust, whilst from a merchants view, all defects lead to a loss and should be accounted for in realistic pricing and fair offers made, accommodating risk in the timber. Hence on each course a robust and healthy debate developed around the merits and ultimate value of the beautiful oak that had grown for 145 years in the woodland.

Debate on the course forestry days had centred on both volume and Gavin Munro was adamant that the volume of the prime length up to a main intersection of knots was 160hft. Offers often ranged from £1000 to £1400 (£6.25-£8.75/hft) for this piece of Oak on a standing basis. The highest one year that the forester’s accepted as being a fair value was £1500 (£9.37/hft) from a Mr P Goodwin who would have had the considerable on-cost of transporting it to Suffolk.

In Spring 2015, after quite a few years of saying ‘it’s about time that Oak came down’ and being confident of the quality of the timber, the Oak was marked, felled and included in a parcel that was put to roadside.

The parcel as a whole was sold to Mendip Forestry for just over £35000 (or £4.02/hft at roadside) with the quality timber element being milled by Vastern Timber in Wiltshire. Roger Austin, proprietor of Mendip Forestry was asked to pass on his own valuation of the Oak log and confirmed the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (hft)</th>
<th>Price (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Length</td>
<td>156.26</td>
<td>1,875.12</td>
</tr>
<tr>
<td>Second Length</td>
<td>31.45</td>
<td>141.53</td>
</tr>
<tr>
<td>Total Price for Log</td>
<td></td>
<td>2,016.65</td>
</tr>
</tbody>
</table>

With felling and extraction costs of £0.85/hft or £159 for this tree, giving a net value or standing equivalent of £1857. With firewood fetching more value, an additional value of £225 could be attributed to the standing crown wood element – giving a total figure in the region of £2240 for the tree as a whole.

Stuart Roberts, having cut the “gob” as a hinge for directional felling, now makes his back-cut to drop the tree accurately.
Lessons for readers:

1) A Good merchant knows how to estimate standing volume. Gavin’s estimate of 160hft, compares very closely with the felled measure of 156hft for the prime length.

2) If you’re selling, don’t take the first offer, seek advice and where possible, use a formal tender process.

3) The firewood has some value, and on a standing basis some allowance for its value must be taken into account in an offer.

4) If you’re confident of the timber quality, and know that the market is buoyant – always put a parcel to roadside, it removes risk from the purchaser’s perspective and you should achieve more. In this case £2240 versus £1500 – that’s a 49% increase!

5) Selling timber this way involves some additional costs (management), has cash flow and possibly some VAT implications.

6) Timber merchants are out to maximise profits, cover their own risk and fund the job. This needs to be understood by vendors.

7) At 145 years old, this tree has increased in financial value by £15.44 for every year of its existence – and they say money doesn’t grow on trees.

8) The tree grew into its first fine length before grey squirrels arrived in Herefordshire. Replacing it will take more investment, but as the figures show – you cannot say that you cannot afford to protect young oak trees from damage. You can’t afford not to!

I will leave it to the reader to judge as to whether the merchant (including our erstwhile Founder) and the foresters did their jobs well.

At time of writing the newly created coupes have been replanted. With the area under the infamous oak tree having been swiped for several years, an abundant seed mast year several years ago has combined with the felling operations to leave a carpet of seedlings to now grow on from excellent provenance. They will continue to provide future generations with employment, interest and all of the things we know that trees provide.

A hugely satisfying outcome!

Heavy machinery is needed to winch out a tree of this size. The butt alone weighs 5.5 tonnes.

Prior to the butt being winched out of the wood, the buttressed “toes” are carefully dressed out by the feller to minimise space on the trailer.

Editor’s note:

Our trustees have suggested that this story can be brought to a satisfying conclusion by asking the sawmill to let us know when the planked log is ready for sale after kiln drying. We would like to demonstrate to our readers how a magnificent tree can make equally superb products which will last for generations.
Dr Sandra Denman’s young team
at work on Acute Oak Decline
Our Furniture & Craft Awards
by Peter Goodwin and Will Bullough

Woodland Heritage “Adding Value Award”

Awarded to the exhibit which best demonstrates our aims and objectives, with consideration to ‘adding value’ to the wood chain by creating beautifully crafted items.

Richard Warmisham – Made by 68°

‘The Pen Portmanteau’ www.madeby68.com

This award winning Pen Portmanteau is a collectors dream. It has been exquisitely crafted from 5,300 year old bog Oak and is cleverly inlaid with silver to create a truly timeless design.

The interior of the box is lovingly crafted in rippled Sycamore with solid silver collets which have been precisely milled to locate and display the writing instruments.

This special edition pen box also features a secret compartment which can be used to store two ink cartridges.

Judges’ Comment:
“A collector’s dream. This exquisitely crafted luxury item is cleverly inlaid with silver which complements the bog Oak. A timeless design.”

Highly Commended

Aidan McEvoy
– Aidan McEvoy Fine Furniture

‘Aestas’ Jewellery Box www.amfinefurniture.co.uk

English Walnut & English Cherry

‘The jewellery box was inspired by the wild spring primroses that overflow the country lanes where I grew up in West Cork.’

Judges’ Comment:
“A very clever use of off-cuts. This simple object has structural complexity and clever grain selection which creates a valuable piece from waste timber.”

Anthony Gray – Anthony Gray Furniture

“Orb” money box www.anthonygrayfurniture.co.uk

English Walnut

‘Based upon a sixty sided form. This sculptural money bank is made from 55 equal sized triangular faces and a pentagonal base that form a faceted sphere.’

Judges’ Comment:
“A very clever use of off-cuts. This simple object has structural complexity and clever grain selection which creates a valuable piece from waste timber.”

For full story of this piece see pages 22-23.
“Best Use of British Timber” Award

Awarded to the exhibit which demonstrates the best use of British timber. Consideration will be given to "locally grown and locally used" especially where an entrant is able to provide proof, as well as use of timber, design and craftsmanship.

Matthew Burt

Bow-Fronted Chest Of Drawers  www.matthewburt.com
Olive Ash, Oak & Ash

‘All drawers are on full-extension, soft-close runners allowing full depth access. The sides are ‘pyramidalised’ to enhance the jewel-like quality of wood.’

Judges Comment:
“Simply exquisite craftsmanship: Imaginative quartered Ash drawer construction. The British Ash is enhanced by careful selection of the olive colour on the carcase. The design is simple but entirely original.”

Highly Commended

Gareth Batowski
– Gareth Batowski Furniture

‘Ely’ Drinks Cabinet  www.garethbatowski.co.uk
English Elm, Laburnum, Sycamore, White Gold, Glass, Brass, Carbon Fibre & Deodar

‘Here the elegant open-frame plays with negative space to give body whilst the glass top offers a peek into the white-gold interior.’ Studio made English Elm veneers from an Elm tree felled in Witcham, Isle of Ely.

The Laburnum was felled in Cheshire. The Sycamore felled Northamptonshire. Due to glass being used in a structural way and its minimal elements, with wide veneers, it has a carbon fibre core.

Judges Comment:
“A perfect solution to a challenging structural concept using multiple timber species. Glass and carbon fibre have given a well-lit interior which is beautifully crafted.”

Commended

William Self

‘Quilted Perception’  www.williamself.co.uk
English Bog Oak, Native Ripple Sycamore

‘A chair that questions notions of material and uses endgrain for colour variation, durability, and detail.’

Judges Comment:
“A striking chair of heavily contrasting timbers. Surprisingly comfortable and perfectly finished.”

Woodland Heritage will return and encourage more craftspeople to use timber grown in Britain at the 2016 event which runs from 20th to 29th August.
The Orb Money Box
by Peter Goodwin

When Will Bullough and I were judging the CCD Awards and looking for furniture and related pieces, there was one extraordinary piece which caught our eyes. This orb money box was incredibly complicated and yet the final product was both tactile and downright clever.

The one thing which we queried was “How on earth did Anthony cramp together the different triangles to give such perfect joints?” Apparently, his father came up with the solution which was to use industrial masking tape produced for the car body industry, which is both strong and elastic.

The use of English Walnut to enhance a small piece like this was a masterstroke and Anthony is to be congratulated not only for his skilled construction but the fact that he could use Walnut offcuts to such pleasing effect. This box was a “natural” prizewinner for this reason.

p.s. I couldn’t resist buying it! And the minute it graced our home it was a favourite for visitors to touch.

Peter
Here is Anthony’s guide as to how The Orb took shape.

**Step 1.**
We select and machine timber into strips approx. 1000mm long x 70mm wide x 10mm thick.

**Step 2.**
We rough cut these pieces of timber into 55 oversized triangles.

**Step 3.**
Using a pre-made jig we cut the 2 short grain edges of the triangles to the correct angle on our table saw using a fine tooth blade.

**Step 4.**
After changing the angle on the saw, we use a second pre-made jig and cut the remaining long grain edge of the triangles to the finished size.

**Step 5.**
We then machine a coin access slot into one of these triangles.

**Step 6.**
The next task is to glue five triangles together forming 11 pentagons with raised centres. After the glue has dried the pentagons are now sanded to remove any surplus glue.

**Step 7.**
The 11 sanded pentagons are now glued to each other to form the finished shape. Once again after the glue has dried all excess glue is sanded off. It takes 12 pentagons to form a perfect sphere, but using only 11 raised pentagons enables us to have a space into which we can fit a flat panel which forms the base.

**Step 8.**
The base is cut and the edges angled to fit exactly into the remaining space. We then cut a hole into it and fit a removable bung.

**Step 9.**
Final sand and clean up ready for polishing.

Anthony in his workshop in front of some English Walnut boards which were salvaged from a wind-blown tree near Saffron Walden.

The Orb displaying its beautiful Walnut grain with perfect joints prior to polishing.
Stuart began his working life on the family’s Lincolnshire farm where he augmented his earnings by working in wood. It was his clever design of a cradle to carry oil pipes safely during the oil boom that caught the eye of a sawmill owner near Brigg. He persuaded Stuart to come and run his mill (at double the money!) because it was clear that with farm mechanisation on the cards, there would be little future for him on the farm.

However, the Brigg sawmill was not only dilapidated and flooded on a daily basis, but the owner refused to invest in upgrading the machinery, so after only eight months, Stuart decided to go on his own and in 1969 he set up SH Somerscales Sawmill. By this time, Stuart’s oil pipe cradles had taken the haulage industry by storm and he was inundated with orders, so he bought a second hand Stenner bandsaw and began buying logs in earnest. In addition, he spotted a good trade in supplying shipwrights in nearby Grimsby, where at least two wooden trawlers could be found on the slipway every day – all needing Oak and other timbers such as Larch.

However, most sawmillers in those days were busy cutting Elm (the sad result of the Dutch Elm Disease outbreak) and Elm “chock wood” was in great demand for all the coal pits. There was also a considerable demand for Elm by the pallet makers because this timber nailed well and did not split. But when the Elm log supplies dried up, the pallet makers turned to importing cheap Portuguese softwood and that market dried up.

By this time, the reputation of Somerscales Sawmill was well-established and Stuart was already looking for new markets. He began buying prime logs for furniture and joinery. The business expanded again and a new Stenner log bandmill with a 36ft log carriage was bought.

Even during this busy time of business expansion, Stuart managed to find the time to build, personally, “Acorn”, his magnificent 50ft cutter (see below). The hull was made from “heavy” English Oak, of carvel construction with Teak decking. The main mast (70ft) was made from Colombian Pine. She displaces 28 tons and can be found in France on the Gironde and most of our coastal estuaries. “She does look a picture,” Stuart sighs.

The extra long bandmill carriage had paid dividends and Somerscales were now recognised as long beam specialists by architects and timber engineers. One day Stuart was proud to locate a special 54ft long Oak, growing at Blickling Hall in Norfolk, which enabled the company to provide the beam which spanned the stage at The Globe theatre in London. Its 27” x 20” section (inside the sap) will long stay in the memory of the sawmill team. As well as Oak, in which Somerscales specialise, some of their Douglas...
Fir beams were also incredibly long, providing load-bearing capacity for big spans and, as a result, many special and prestigious commissions have come the way of Somerscales.

Regrettably, the decades since the end of World War Two, have seen a steady decline in smaller, specialised sawmills particularly those using British timber. The reasons are many but here is a mill that is thriving and that clearly warranted a Woodland Heritage visit! I was joined by Suffolk forester Miles Barne and his consultant, Andrew Falcon. They were keen to see where Sotterley’s finest Oak trees end up – and more often than not, they find their way to Summerscales! It was fascinating to hear Stuart’s preference for Pedunculate Oak which is “more forgiving” than the Sessile Oak which dominates woodlands in the West Country. Its knots seldom penetrate far into the log and it is ideal for beaming quality. Added to this, he reluctantly admitted,

Running two log bandmills on parallel lines was an amazing sight. The biggest saw has 10” wide blades and can cope with almost anything grown in Britain, but easily converts massive logs from West Africa (all FSC certified) so that the company has a complete range of species. In addition to the latest kilns (from Kiln Services), they can “add value” by machining to

Andrew Falcon (left) chats with Stuart in front of a busy log deck.

The smaller Primultini bandmill cutting an Oak beam log using laser line technology.

Kiln Service heat vent kilns each with a 50m³ capacity.

The big Primultini bandmill converting a massive Oak log.

Sotterley’s 170 year old trees with their huge girths give far less wastage and this is a favoured place for him to buy. But he could not resist chiding Andrew: “I just can’t understand why you keep sending out those tender forms to other timber people!”

From the beautifully timbered and characterful family’s office and reception area, Stuart took us to look around the impressive sawmill itself. Here we met his eldest son, Dan, who is responsible for the running of this high-tec sawmill. He explained how, in recent years, the family had recognised that in order to survive, it was necessary to invest in the most sophisticated machinery. So began the family’s association with the Italian company, Primultini.
their customers’ requirements. They even have their own joinery shop, making gates, roof trusses and other special heavy timber frames with a team of four joiners.

The log yard was stacked full of logs of all types – even Burmese Teak – and their massive Volvo machine was kept busy sorting and supplying the hungry log decks.

We were then taken to see some of Somerscales’ huge air drying sheds where many hundreds of planked logs were meticulously “sticked” and piled. It was clear that their attention to detail would pay dividends and, when ready for kilning, their timber would be of a really high grade.

Back in the office, we were then introduced to Stuart’s other son, Andrew. His role is to oversee the supply of logs and planking from overseas. Their contacts in France, Belgium, Germany, USA etc., were visited regularly and trips with their African agents were also essential. Stuart is now spending time with Andrew, showing him the skills of buying English logs in the round. He has been doing it for so long that it is now second nature but all those “tricks of the trade” have to be passed on to the next generation.

The carved sign over Somerscale’s fireplace says it all – “The noble art of haggling is practised within”. This somehow summed up Stuart’s remarkable career. You would have to be incredibly skilled at so many aspects of the timber business if you were to catch him out – and I for one, wouldn’t give it a try!

**One of the company’s four drying sheds with square edged English Oak.**

**Square edged Oak beams labelled ready for dispatch.**

**Andrew Falcon, left, Miles Barne centre, with Dan and Stuart.**

**S H SOMERSCALES LIMITED**

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Sales e-mail: tpotter@shsomerscales.co.uk or alangridge@shsomerscales.co.uk
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 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 at the silviculture of transformation in more detail.

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.

For further information see the Courses section on www.selectfor.com or contact David Pengelly at david@selectfor.com
Day 1:
- Visit Krakow University’s Experimental Forestry Unit (EFU) in Krynica-Zdrój which is located at an altitude of 590m in the Beskid Sądecki range of the Carpathian Mountains close to the Slovakian border.

Day 2:
- Visit to ‘Reserwat Przyrody Łabowiec’, a natural (primeval) forest reserve composed of European Silver Fir (Abies alba) and Beech (Fagus sylvatica). This has been untouched by management since 1905 and has allowed the natural stand dynamics of these two species to be studied by many of the University’s students. Also, visit to nearby Beech seed stands managed as a uniform shelterwood, where seed is collected by climbers every five or six years.
- Visit to ‘Obrozyska’, a Lime (Tilia cordata) coppice-with-standards forest reserve, with an extensive Hornbeam (Carpinus betulus) understorey. The local landform and sheltered terrain gives the reserve a warmer microclimate compared with the surrounding forests, meaning these species can exist at an altitude of c.600m.

Day 3:
- Visit to Szczawiczne, a re-established state forest being converted from a Scots Pine (Pinus sylvestris) nurse crop to target tree species (European Silver Fir and Beech). Followed by a thinning exercise in an even-aged stand of European Silver Fir (compartment 90b).
- Visit to Mrokowiec, a forest of European Silver Fir (compartment 96b) which is managed by selection system (‘plenterwald’). A stand structure very close to an inverse-J has been achieved, with the largest trees being over 20m³ and approx. 200 years old.
- Visit to a stand of European Silver Fir managed by Swiss irregular shelterwood system (compartment 22) which is a widely used silvicultural approach in the region.

Ed Clark’s thoughts:

The focus of the trip was: to establish the natural processes facilitating the structures of natural forests by examining non-intervention reserves at Łabowiec and Obrozyska and then to examine how these processes are utilised in managed forests to achieve silvicultural aims. Silvicultural regimes were presented in the context of how they mimic natural processes, to a greater or lesser extent, depending upon the scale and intensity of interventions.

It is certainly the case that the forests of Southern Poland differ greatly from those in Great Britain. However there are several management principles and take-home messages that can be applied in a British context:

Firstly, the importance of having a long-term view. Before travelling to Poland I thought that I had a relatively long-term view as far as forestry was concerned. I am familiar with lowland estate forestry and very comfortable with considering a hardwood rotation in terms of 150 or more years. However, I was impressed with the exceptionally long-term view of the Polish Forest Service who more often consider their management approach in the context of multiple rotations.

For example, at Szczawiczne, a 6,900 hectare new forest had been created on vacated agricultural land between 1947 and 1951. The intended composition of the forest was European Silver Fir and Beech, however it was not considered appropriate to plant either of these shade tolerant species on open farmland, as the high levels of weed competition would make establishment difficult, and the high light availability would cause the trees to suffer from relatively poor form. Therefore, the area was planted with a combination of more light-demanding species such as Scot’s Pine, European Larch and Norway Spruce. These were allowed to develop as even-aged plantations, regularly thinned, and then a programme of restructuring was initiated in c.2000 by a combination of thinning and group felling (felling units of 0.05ha, which is the maximum area legally permitted to be felled in a mountain region). Canopy gaps are underplanted with groups of the desired species (European Silver Fir and Beech) once the site is in forest condition, and this restructuring process is not expected to be completed until 2035.

The first rotation of ‘pioneer’ conifers is considered to be an integral part of the establishment phase, in essence, a form of site preparation to ensure the correct light levels for the target species in the longer term. This approach made me consider the rationale...
behind woodland creation in the UK, in which we often plant the final target mixture of species first time around, and in some cases struggle with establishment, particularly in a more exposed location. There is merit in this long term view, and perhaps the use of nurse species, or even nurse rotations, could be more regularly explored in a UK context, subject to satisfying the requirements of the various grant schemes.

Another important ‘take-home message’ from my point of view was: the importance of viewing CCF as a spectrum of management regimes. This trip gave some excellent examples of various points along the CCF spectrum, with the uniform shelterwood system presented at Szczawiczne at one end, moving through group and irregular shelterwood systems at Krynica-Zdrój, and the true selection system presented at Mrokowiec at the other end. It was enlightening to see such a variety of management regimes in such a short period of time, which gave the opportunity for direct comparisons which are not always so readily available when visiting CCF stands in Britain.

Another aspect of great interest to me personally was the use of species currently outside the traditional mainstream palette of species in British forestry. Clearly the growing conditions in Poland are different to those at home, for example: the minimum altitude is over 500m, and the growing season is restricted by cold winters and heavy snowfall. However there are also similarities, such as similar rainfall (c. 1,000mm per year), and the majority of the soil is fertile brown earth.

European Silver Fir was by far the most commonly observed tree during the study tour. It is shade tolerant and cold hardy, and could be a viable option in a British context. It has been planted in the country before, but fell out of favour due to attack by a woolly aphid (Adelges nordmannianae). Forest research has recently produced an excellent paper (Kerr et al, 2015), which summarises this chequered history and explains the future potential, particularly for the use of this species in mixtures, and as a component of stands managed by CCF.

Other species which could be used alongside European Silver Fir could include Norway Spruce, Douglas Fir, Western Red Cedar and Western Hemlock.

Beech was widely seen during the tour and is native to southern Britain, and already planted on a fairly large scale. The challenges facing this species are the absence of a premium market for sawlog material, and the extreme likelihood of severe levels of bark stripping by the grey squirrel. However, if effective grey squirrel control can be practised then the shade tolerant nature of this species makes it a potential component for inclusion in mixed species CCF stands.

Hornbeam is planted throughout Europe and used extensively as an understorey species, which is also how it was observed in Poland. It is native to southern England, shade tolerant, and resistant to cold and frost. There may be scope to plant Hornbeam under Oak, as it could be coppiced to provide a good firewood crop and help to keep the Oak stems shaded and free of epicormics.

Lime is another species which is already present in a British context, but hindered by the lack of a marketable end product. Unfortunately, the situation is similar in Poland, and it is seen as a difficult species to sell, although some is used for turnery, sounding boards, and piano keys. Silviculturally, it is shade tolerant and well suited to lowland mixed broadleaved stands. However, for commercially managed sites it may be worth considering other species as well, perhaps Sycamore, Whitebeam, and Wild Service.
And so in summary, my three main learning points are:

- **Keep a long-term view.**
- **Think of CCF as a spectrum.**
- **Consider other species, and be open-minded to their silvicultural niches.**

My thanks go to Maciej Pach for so ably hosting us in Poland, and to Bill Mason, Donal O’Hare, and Mandy Clinch for organising the tour. I am also very grateful to Woodland Heritage for their support and assistance.

**Alan Hunt’s thoughts:**

The 2015 joint CCFG/Pro Silva project was hosted by the Polish State Forests Experimental Forestry Unit (EFU) based in Krynica Zdrój in the southern Carpathian Mountains. The EFU was established in 1968 and is part of the University of Agriculture in Krakow. The Experimental Forestry Unit is responsible for education and research, maintaining a number of research plots and experimental trials, and is also responsible for the management of 6,427 hectares of forest. Much of the management area is hilly and mountainous, with elevation ranging from 500 to more than 1,100 metres above sea level. The forest is predominantly composed of a mix of European Silver Fir and Beech on relatively good upland brown earths.

In common with other state forests in Europe, the forest management is based on a ten year forest management plan that sets out the management objectives for the site. For example much of the forest managed by the Experimental Forestry Unit is designated as protected forests that fulfil various environmental or social functions, as well as economic functions, such as water protection.

Poland was the first country in Europe to undertake certification of state forests, currently 85% of state forests are Forest Stewardship Council certified, with significant areas of forest also PEFC (Programme for the Endorsement of Forest Certification) certified.

One of the key management objectives being undertaken by the Experimental Forestry Unit over an area of 1,800 hectares, is the conversion of existing stands from nurse crops, and less well adapted species that are not of local provenance, to targeted mixed species forests of primarily European Silver Fir and Beech. Forest management is supported by a series of longstanding research plots and experimental trials, including a natural reserve at Labowiec reserve of 54 ha of natural (primeval) forest that is composed of predominantly European Silver Fir and...
Beech. The reserve was created in 1905 to preserve and study lower montane Beech and Beech-Fir forests that are remnants of the Carpathian Forest. The reserve has expanded in the last hundred years, beginning as a modest three hectares, however the whole site is now protected and has no active management. One of the most striking aspects of the site, other than the prolific mixture of regeneration, was the size and volume of standing and fallen deadwood.

Much of the forest managed by the Experimental Forestry Unit is managed under a mixture of irregular shelterwood systems and selection systems, with clearfelling all but banned. However perhaps one of the most fascinating sites visited was Obrożyska reserve, another remnant site of the Carpathian Forest, though dominated by *Tilia cordata* (small-leaved Lime) that has been managed for a significant period as coppice with standards. This area is protected and studied as a remnant of Larch-Lime primeval forest. Quite aside from the academic value of the reserve, the enormous Lime stands make for a particularly enchanting woodland.

On the final field day of the study tour we visited a number of stands where a selection system had already been established in stands of European Silver Fir and mixed stands. However of particular interest was a stand of Scots Pine that had been established as a nurse crop in 1952 on primarily open land that had been abandoned by agriculture. The objective for the site even then was to establish a native forest of European Silver Fir and Beech. In 2008 small groups of target species were underplanted as part of a group shelterwood system. The local forester was more than happy to allow regeneration of other species such as *Picea abies* (Norway Spruce) and *Acer pseudoplatanus* (Sycamore) as well adapted local species, but he was particularly scornful of a sickly stand of *Picea sitchensis* (Sitka Spruce) on the other side of the valley.

The clarity of objectives on the site, even 63 years ago, and the adoption of a more ‘natural’ process where light demanding nurse crops are established first, before shade tolerant target species are introduced was very interesting. The foresters were clear that the process would carry on long after their careers and the whole approach was particularly thought provoking when contrasted with the much shorter term vision applied by some foresters.

Much of the management in the stands visited also encouraged large diameter trees to be retained where they had good form and vigour, in order to obtain desirable growing stock from seed trees. A target diameter of more than 90 cm dbh was applied to many of the European Silver Fir stands, yet even at this size refreshingly a premium was paid for timber. These large trees are also seen as crucial in achieving the wider cultural and environmental objectives as well as being crucial for seed production. Research plots have also shown in stands with these larger trees that there can be economic benefits in retaining them since control sites have shown an increase in increment in trees in the upper story, even when more than 90cm dbh.

One of the most significant issues with the establishment of planted and the naturally regenerating European Silver Fir and Beech was browsing damage, a familiar issue to many of the visiting foresters. The trees planted in groups were all treated with a chemical deterrent applied to the leader each year, at significant expense due to the long establishment period of European Silver Fir. However, the natural regeneration was largely untreated and suffered considerable predation. Perhaps significantly however, the local foresters reported much lower levels of predation in stands with a more diverse age structure where regeneration was more sporadic and dispersed, despite significant deer population across the forests visited.

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Jonathan Burke’s thoughts:

On a whim and a suggestion from James Walmsley, the new Head of Forestry at Bangor University, I applied to be one of the Continuous Cover Forestry Group members on a trip to Southern Poland for a week in June 2015. The aim of the trip was to have a look at forest management options in the forest covered natural reserves of the Beskid Sadecki region of the Carpathian mountain range.

I thought this trip may be a bit out of my league as a 1st year Bsc Forestry student but although the other members were a range of particularly adept practitioners in their own fields, ranging from Forestry commission managers (Wales, Scotland and England), ecologists, independent foresters, land owners and high level researchers, I did nonetheless feel welcome and part of the group. I was encouraged to ask questions and voice opinions as the general atmosphere was one of collective study and seeking of the seemingly endless right answers to timeless problems – all of which are of course dependent on your objectives!

The group was quite large numbering 30 and was organised by CCFG chairman Bill Mason with support from Donal O’Hare of Pro Silva Ireland and hosted by Maciej Pach of the University of Krakow. After a three hour coach ride from our pickup point at Krakow airport we arrived at our base, the experimental forestry unit, which is one of four state run operations to support the management of the majority of 8.7 million hectares of forest of which seven million hectares are state owned. We were then fed, watered and distributed to our comfortable ground floor individual accommodation.

Over the next couple of days we went to see several plots looking at natural primary forests that are managed as reserves and also sites managed for timber production. I would like to tell you about the practical exercise we did at a site which was mainly in conversion from pioneer (nurse) species to mixed stands of mostly Beech and Fir.

My first thinning exercise

Normally done by one person, it would take a day to mark up the thinning of a 2–3 hectare site. On this occasion we were split into groups of three or four and it took 25 minutes to cover approximately ¼ acre. The site was natural regeneration of the native European Silver Fir on a steep slope. The job was to
choose the best crop trees for a first thinning and mark the nearest one or two competitors for extraction. Consideration was taken for crown classification, vigour and stem condition. The chosen crop tree would be marked at chest height with chalk and any close competitors, especially the ones with bad form, would also be marked. Then swiftly moving to the next five metre area and repeating the process. The chosen crop tree was not always the biggest and the small trees were mainly left for the future. Extraction would be by horse and then skidded out along the rides. The next thinning will be in another 15 years and the same rides will be used again. The target structure is an uneven aged continuous cover forest.

This was a rollercoaster experience for me. I was a little apprehensive, not only because at heart I really appreciate trees and have generally focussed on the planting of more trees rather than harvesting them, but also because I was on a very experienced team from FC Scotland, the Duchy of Cornwall and FC England – they all knew how to do this! So we set off and the guys, as I expected, started choosing and marking trees with confidence. It all happens remarkably quickly. I thought there would be deliberations and ruminations about the best choice but instead there is a steady sure rhythm to the process. Then Charlie turned to me and said “your turn…” and threw me the chalk. Beyond all my expectations I followed their lead and went up to my first crop tree, took a moment to confirm my decision, marked it and then instantly the two nearest competitors were obvious, they were marked, and I was on to my next crop tree. I really enjoyed it and after a discussion with the team it came apparent that there was an element of artistry within this process, not just technical knowledge but an awareness of the management of light. Because the greatest effect of the thinnings, apart from the substantial timber harvest, is to open up new areas of the canopy and encourage growth under adjusted light conditions. Succession will happen right here. What an amazing experience!

A Polish cultural point: If it was known that a large area of forest was being cut down then it would be assumed that the owner was in desperate need for money because this act would be seen as being similar to selling the family jewels.

The perspective of being a student forester means I can have ideas and concepts revealed to me whilst I am looking at a stand of trees. It is the most wonderful feeling to gain an insight just through some patiently measured words and this happened to me several times on the CCFG Poland 2015 trip. Here are some examples:

- Deer management by wild animals does not necessarily solve the problem but the presence of a predator or the possibility of its presence can keep deer on the move which means minimal time to cause too much damage.
- Poland has trees above 600 metres which means there are not many romantic 19th century landscape views but lots and lots of tree covered mountains.
- One of the main reasons why Poland operates on a variety of shelterwood and continuous cover systems is because it is illegal to clear fell woodland in these huge reserves.
- Deadwood, standing or fallen, is a very important part of continuous cover forestry, not just for the increase in biodiversity but also to provide a source of nutrients and maybe also as a development aid for mychorrhizal relationships that can happen only in old age forests.

The trip ended with a fire, good food and chat discussing subjects as wide as what is the best concise definition of social forestry to whether broad management objectives in business plans can be translated into more sustainable forests on the ground or just cause more confusion.

There were no right answers that night, just a palette of right answers dependent on your objectives.

Special thanks to Woodland Heritage for the bursary that supported me.
Much thought is being given to alternative tree species that might be used in Britain as climate change proceeds, and in the light of the threats posed by recently introduced pests and diseases. Extending the suite of species grown under continuous cover systems is also important as the existing choice of shade tolerant species is limited.

In a series of articles in the Quarterly Journal of Forestry we have considered how various candidate species might perform in Britain. So far we have dealt with the ‘true’ Cedars, Japanese Red Cedar, Maritime and Macedonian Pines. This is a summary of these papers. An extended summary, including references is on the Woodland Heritage website.

**Cedrus species (true Cedars)**

There are four species:
- *Cedrus deodara* (Deodar) – from mountainous regions in India and Nepal.
- *Cedrus atlantica* (Atlantic or Atlas Cedar) – montane Morocco and Algeria.
- *Cedrus libani* var. *brevifolia* (Cyprus Cedar) - montane Cyprus.
- *Cedrus libani* (Cedar of Lebanon) – montane Lebanon, Syria and Turkey.

These constitute the ‘true Cedars’, to distinguish them from numerous other trees, both broadleaved and coniferous, that are customarily referred to as ‘Cedars’. Deodar and Cyprus Cedar have received little attention in British forestry.

True Cedars are commonly cultivated in Britain as specimen trees in landscaped parks and large gardens. ‘Capability’ Brown popularised them, having designed more than 170 parks in England, planting Cedars in many. Part of their attraction is that they rapidly develop an air of antiquity compared with native trees. There is little experience of them as plantation trees in Britain, but as climate change proceeds they may have a place as productive species on drier sites. In denser stand conditions, Cedars grow like other conifers, with straight stems and fine branches.

Atlas Cedar is frost hardy to at least −20°C, but growth and survival are poor in higher rainfall areas. It should be confined to regions with less than 1500 mm. Most Cedars of Lebanon were killed during the exceptionally harsh winter of 1739/40 and almost all of the huge and ancient-looking trees on lawns of stately homes date from after that year. Cedars do not withstand wind exposure well and suffer during cold winters on affected sites. They grow best on lighter soils and can tolerate periods of moisture deficit. Cedar of Lebanon is thought to be more drought tolerant than Atlas Cedar and hence possibly more suited to lowland sites. Peats and heavy or wet soils should be avoided. Atlas Cedar grows well on dry calcareous soils. Growth starts slowly but eventually becomes vigorous. It is moderately shade tolerant, but said to grow faster than the Cedar of Lebanon.

The true Cedars are difficult to transplant successfully due to damage to their tap-roots. Cones should normally be collected in April of the second year, before they begin to disintegrate, and the seed should be sown immediately, otherwise viability is lost.

No provenance testing has been carried out in Britain and there are no established plots on which to base information. Selected material is however available from France.

The wood of Atlas and other Cedars is renowned for its persistent fragrance caused by oleoresins which are natural repellents to moths, hence it is a popular lining for chests and wardrobes in which woollens are stored. Cedars were major structural and ship-building timber species in the Mediterranean and Near East in antiquity.

**Cryptomeria Japonica (Japanese Red Cedar)**

This tree is related to the Sequoias of North America as well as to *Taxodium distichum* (Swamp Cypress). There are two varieties: the Japanese *Cryptomeria japonica* var. *japonica*, and the Chinese *Cryptomeria japonica* var. *sinensis*. The latter is sometimes called *C. fortunei*.

*Cryptomeria* has a clean, straight, tapering, trunk rising above well-defined buttresses, a conical crown and a characteristically slender trunk.
Var. *japonica* comes from a warm maritime climate in Japan, where it has been widely planted. The best growth in Britain is in areas with more than 1200 mm of annual rainfall but which are sheltered and where the summers are warm. There seems to be no clear drought limit however, since it grows reasonably well on the Isle of Wight and in Alice Holt Forest with 600-800 mm rainfall. The tree does not withstand exposure, especially in spring, and exposed sites should be avoided. It grows best on deep, well-drained slope soils. It is not suited to very infertile or dry soils, to peats or to calcareous soils. Heathy sites should be avoided.

Var. *japonica* was a regular inclusion in early 20th century forest gardens in Britain. It has grown very well at locations across the country, including in Argyll, where it is among the most impressive species. Larger-scale trial plantings took place from 1930 to 1965 in Argyll, Wales, Cornwall and southern England. The need for warmth means that the best stands are in Wales and south-west England, but it also does well in Wester Ross and Argyll, where it can be a very high-volume producer. On good sites in Britain the tree will grow to over 30 m tall. It is sufficiently shade-tolerant to be of probable use in continuous cover systems, possibly with Western Red Cedar, Western Hemlock and Douglas Fir on sites where selective thinning is feasible. The tree is said to self-prune well, in a similar way to the Larches, although it is frequently pruned in Japan. Unusually for a conifer, it coppices vigorously and also produces root suckers.

Japanese Red Cedar is easy to propagate from cuttings. *Cryptomeria* has been described as ‘one of the great timber trees’. The wood is strongly rot resistant, has a natural lustre and is easily worked. It is valued for the beauty of both the tree and wood.

The timber is strong and has been used for construction purposes for centuries. There is very little experience of processing British-grown material and attempts are being made to get thinnings from older stands tested in a laboratory. Most material is probably processed along with that of Western Red Cedar with which it can be confused by sawmillers.

### Pinus *pinaster* (Maritime Pine)

This species is native to the central and west coast and islands of the Mediterranean, the Atlas mountains and the Atlantic coasts of France and Portugal where it has also been extensively planted. It is common in small plantations in the south of England where it grows to a maximum of 30 m. At least 20% of older, unimproved trees have a pronounced butt sweep, crooked stems and relatively heavy, upright branching though improved strains are available from France.

This species does best in Mediterranean climates. Sensitivity to cold and exposure restricts its use to southern and coastal regions of Britain. The species grows best on lighter, acidic or neutral sandy soils. It does not tolerate peats or calcareous soils.

**A Maritime Pine stand near Leiria in Portugal.**

*Pinus pinaster* is one of the most important forest trees in France, Spain and Portugal. The largest man-made forest in the world, the 900,000 ha Les Landes on the Atlantic coast of SW France, was planted from 1789 onward, almost entirely with Maritime Pine, originally for reclaiming a huge area of shifting sand that threatened fertile farms further inland.

It is moderately susceptible to red band needle blight and is likely to be affected by Fomes root and butt rot, especially on dryer sites. Infection by the Pine wilt nematode, which is established in Portugal, can also result in high mortality.

Maritime Pine has a yellowish white sapwood and a reddish heartwood. It is mainly straight-grained with a medium texture. The uses for sawn timber are joinery, both interior and exterior, as well as furniture and frameworks, packaging, crates and pallet production. Originally *P. pinaster* was the most important source of resin in Europe.

### Pinus *peuce* (Macedonian Pine)

*Pinus peuce* is one of only two European five-needled Pines, the other being *Pinus cembra* (Swiss Stone Pine).
It is native to the highest parts of the Balkan peninsula and occupies a total area of no more than 30,000 ha near the timberline. Its current range consists of two distinct populations separated by the valley of the Vardar River: the one in the west is centered in Albania and the eastern one is in West Bulgaria.

Between 30 and 40 small trial plots were established in Britain between the 1920s and early 1960s. So limited experience exists with the tree. It appears likely to grow well on a wide range of soils, including inhospitable sites in the Highlands of Scotland. In its native range, it grows on soils derived from acid parent materials, and also on serpentine and carbonate soils. The tree is adapted to cold mountain climates but is not particularly drought sensitive. It does best where the climate is humid, especially in summer, and can withstand deep snow in winter. It will grow up to 35 to 40 m tall.

Germination is often poor or delayed and difficulties also arise during the establishment phases, which is probably why it has received so little attention up to now. Until the fifth or sixth year the trees have a dense, bushy “grass stage” before making stronger vertical growth. It continues to grow very slowly when immature, and has intermediate shade tolerance. The bark remains thin for up to 30 years and so is susceptible to stripping by deer.

The root system eventually penetrates deeply into the soil, providing the basis for Macedonian Pine’s reputation for stability. The species is notable for its resistance to the diseases and pests that affect so many other Pines. Unlike New World five-needled Pines, Macedonian Pine is resistant to attacks not only from blister rust, *Cronartium ribicola*, but also the Pine beauty moth caterpillar. It is less susceptible to red band needle blight that is affecting other Pines grown in Britain, and the Pine wood nematode, another potential threat. In fact, it seems likely to be a remarkably hardy and healthy tree in Britain.

A 1995 experiment near Llandovery in mid-Wales investigated the effects of fertilizer and herbicide inputs on survival and growth of trees planted on either a cultivated (scarified) site or uncultivated ground. Scots Pine was also planted for comparison. After six years, the main result was an increase in survival of Macedonian Pine with cultivation, but height growth was slow; less than half that found with Scots Pine, though height after 50 years can be equivalent to that of Yield Class 10 Scots Pine.

There is increasing evidence that the Macedonian Pine could be a high-volume producer in Britain compared with other Pines. A feature is that in comparison with other Pines, basal area growth can be up to 50% greater for any given height. This makes it of particular interest where the risk of windthrow is high.

Preliminary studies in Britain indicate that one attribute of the wood is its stability compared with other common coniferous timbers, although it is lighter and weaker.

In summary, of the two Pines, improved varieties of *P. maritima* are available, with greater straightness and more resistance to pests and diseases. Because of its sensitivity to frost, and the scarcity of suitable coastal sites, it is unlikely ever to become a major species in British forestry. In marked contrast, *P. peuce* shows much greater potential for a range of sites. Its low susceptibility to biotic and abiotic hazards, suggest that this Pine should be given greater attention in current attempts to increase the resilience of British forests through species diversification. In particular, forestry in the uplands is often regarded as being too dependent upon very few coniferous species.

Sufficient evidence exists that *Cryptomeria* will perform well, thriving under a wide range of conditions including moderately exposed mountain slopes. It may prove to be a high volume producer. Climate warming should extend the range of sites where it will grow well. It is one of several species that seems worthy of more serious trials.

The Atlas Cedar is a tree that might be suitable for wider cultivation, particularly on drier, warmer sites in southern and eastern Britain. In common with Macedonian Pine, Atlas Cedar is among the very few conifers that will grow well on calcareous soils. It could have a place in mixed coniferous stands in areas where Corsican Pine is currently planted, for example in lowland heathland forests.
Chilean Beech

by Graham Taylor and Avery Howell

Chilean Beech (Nothofagus procer and N. obliqua) were part of a second phase of exotic species with potential timber uses that were introduced to British Forestry in the 1960s and 1970s. Many stands exist in both publicly owned forests and private woodlands in England. Offering significant growth rates (Yield classes of 10-16) with some stands of up to YC 20, compared with our native Beech typically YC 4-6, it presented the potential to shorten rotation lengths significantly and to offer a return much closer to that being anticipated from conifers at the time, but with a hardwood. Whilst some stands have suffered from frost, squirrel damage and butt rot, other stands have developed well and are now producing material of a size for milling.

I do not know of anyone who buys Nothofagus and turns it into a useful product in the UK, hence when a millable log was needed to be felled at Whitfield Estate in Herefordshire in 2014, after some fruitless telephone calls to sawmillers, the estate embarked on a little experiment to pay for the milling and sticking of a Nothofagus log, with a view to allowing careful handling, milling, sticking, drying and storage at Whitney Sawmill in Herefordshire in order to understand more of its inherent timber qualities when grown in good UK conditions.

The log was milled into 1” boards and left to air dry in the ‘mixed minor timbers’ stack and then subsequently kiln dried during spring 2015. Following a chance discussion with Avery Howell who attended the ‘From Woodland to Workshop’ course in May 2015, it was agreed that a sample of Nothofagus timber would be sent to see what he might make with it. Below are his thoughts.  

Graham Taylor

I said I would give you some feedback on Chilean Beech from a furniture maker’s perspective, which I took away with me from Whitney Sawmill last year when I attended the Woodland to Workshop course. What a fantastic time I had at the course – “Disneyland for wood geeks” is a better name for it!

I have used it on two jobs in the last few months and both times I treated it like a paint grade Poplar. I think possibly that is not doing it justice.

The timber has a nice creamy and pleasing Cherry like figure. The pink and cream colouring is interesting too and deserves further exploration on how to make the most of it.

The grain wanders, but isn’t interlocked and so it planes up nicely. There was some tear-out but nothing like you would get on Poplar. It sanded up well and although quite soft for a hardwood, it didn’t dent or scratch too much. I can tell that with some oil it will be quite beautiful.

There are two things which have been problematic – the stresses which seemed inherent (maybe just this particular tree?) and it seemed to bend off the saw quite a bit. The second is the dead knots which are quite plentiful.

However I think with the right design, knots are not going to be the end of the world. In fact, with the last two coffee tables which I made for a gallery I intentionally incorporated knots and other imperfections.

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In North Norfolk there are many hidden special places, however perhaps more hidden and more special is Gunton Park and more notably, the water-powered sawmill in its heart. Once the centre of a 12,000 acre estate belonging to the Suffield family, the estate dwindled over the years until by the 1970s all that remained was the half derelict Gunton Hall, lived in by an elderly family member, a park long since split up and ploughed and a selection of buildings well past their glory days when they fulfilled a vital function for the Estate.

The Gunton Estate has been owned by the Harbord family since the early 17th Century. In 1742 Matthew Brettingham was instructed to build Gunton Hall by the newly created first Baron Suffield. The Hall, further extended by James Wyatt in 1810, was set in extensive landscaped parkland including significant man-made water features.

The sawmill

By the 19th century the family was in its heyday and the third Lord Suffield capitalised on this with further improvements including the building of the sawmill taking advantage of the potential of the existing lakes. The sawmill was built in 1825, and was at the time, a vital asset for the infrastructure of a large Estate. William Hasse a local blacksmith and self-taught engineer, was instructed to build the mill, with, it is assumed, the estate staff constructing the building. It appears that William Hasse, whist an accomplished blacksmith, had never designed or built a mill before and it is likely it was copied from a machine elsewhere. Hasse latter fell out with Lord Suffield (involving work on a slipway at Overstrand) so the details of his skills, ingenuity and personal designs were erased from the records.

The framesaw mechanism

It has always been said that a picture paints a thousand words so it is probably best to keep the working description to a minimum…. The lake water is used to drive a large water wheel and through gears and belts, this in turn drives a crankshaft which, with its large flywheel, is mounted above a large sliding...
iron frame. The blade (which can be changed to alter the size of cut) is fixed in the frame and is able to move up and down. The log to be sawn is held on a carriage which is drawn through the saw, moving only during the downward cutting stroke. The mechanism which achieves this is very unusual and therefore it is thought that it may have been invented by Mr Hasse. The timber sizes that can be cut range from large saw logs down to fencing posts or smaller.

**Nearly lost**

During the ‘swing’ riots of 1830 (‘uprisings’ of agricultural workers against the mechanisation of agriculture and loss of rural jobs) Lord Suffield got wind of an attempt to burn the mill. He therefore ‘deployed’ his 177 estate workers to defend the site. When the mob arrived in the Park and became aware of this they dispersed, with the ring leaders admitting later in court that they realised that ‘Lord Suffield was a courageous man and dared not encounter him’. During the riots a sawmill at Catton, Norwich was destroyed so the threat was very real. The estate continued to be passed through the family, with the mill providing timber for the estate’s buildings, improvements and developments. A second water wheel was added to power a corn mill and circular saw.

**The decline**

The fifth Lord Suffield had become close to The Prince of Wales and became a courtier, which involved spending much time with the court and significant funds on maintaining his lifestyle. In 1882 there was a fire in the house (history being clouded whether it was during a party for The Prince of Wales, or a deliberate act to avoid having to have a party for the Prince of Wales), the result being substantial damage to the Hall. This also appears to be the turning point for the fortunes of the Estate and a combination of death duties and management issues brought total decline. Likewise, the sawmill went into regression with the last meaningful work being carried out around the time of The Great War and subsequently the operating skills were lost.

**The resurrection**

The rebirth starts in 1970 when it was ‘rediscovered’ during a visit by the Norfolk Industrial Architectural Society. They found that the building was in a poor state, but luckily the machinery, whilst dismantled, had not been sold or scrapped. The NIAS, realising that this was gem that needed saving, opened negotiations with The Hon Doris Harbord who was living in the house and owned what was left of the estate, and began to gather partners for the restoration. The Norfolk Windmill Trust agreed to oversee the restoration and a formal agreement was signed in Oct 1979. Three months later Miss Harbord died and the estate was put up for sale.

**The arrival of Kit Martin**
At this stage two phoenixes emerge from the ashes. The estate was bought by Kit Martin who converted the hall and other properties to a remarkable portfolio of self-contained dwellings of a high standard. With two other interested parties, Kit began to restore the park to its former glory, reverting arable land to grass park, planting trees and traditional fencing. It stands today as a remarkable testament to the work, vision and time that has been spent.

As this was happening the mill was also creaking into its second life. The initial work was carried out by Manpower Services, a government scheme to provide work for unemployed craftsmen. This involved the stripping down of the remaining thatch and all the site clearance. Whist a lot of the timbers were saved, many had suffered from rot so were replaced where necessary. The water wheels were badly rusted so had to be rebuilt in parts. The sluice had to be cleared of mud, the gates repaired/replaced and the mill race emptied and cleared. A team was assembled to carry out the work – it should be noted that it was mainly done in the winter, with no electricity and with the average age of the ‘workforce’ being over 70!

John Lawn of Caston was instructed to undertake the restoration of the frame saw. The roof was re-thatched by Farman’s of North Walsham who were shown in the records as the firm who last thatched the building in 1913. This thatching was Mr Farman’s last job before retirement.

The work to the building and ancillary ‘workings’ were completed in 1982, the thatching in 1983, the framesaw in 1984, the wheel finally restored in 1985, the second wheel in 1986, new blades sourced in 1987 and then the first water powered cut was in 1988.
Since that time the mill has been operated by a wondrous gang of volunteers whose expertise has grown. In light of Health and Safety regulations the operation is limited to selective open days throughout the year when the team assembles, the sluices are opened and The Magical Beast comes to a clanking, whirring, buzzing life.

A star was born

The mill has not been neglected, she has appeared on television, in films, been visited by many including the Queen Mother, The Prince of Wales, and then, in the summer of 2015, by a rapt audience from the Royal Forestry Society. What a treat it was when, after a background history by Kit Martin on the park, the house and its subsequent restoration, the ‘mill team’ opened her up.

We were transported back 180 years as the green lake waters were ‘invited’ in, rushing to the wheel and the process began. Sitting on the carriage was a length of mighty estate Oak, and as the momentum gathered, the ingenuity of the system was so apparent as the great saw inched its way through the timber. Belts galloped, flywheels spun as the immense power was harnessed with complete precision.

The mill really is an unsung hero, not shouting loudly like museum or park farm, not dazzling like stately homes or show gardens, but equally as fascinating and important. By standing next to this living, shuddering being you are able to share all the sights sounds and smells it offered to Lord Suffield’s loyal men…. and that is a true hidden gem.

For further details about the Gunton Sawmill see www.guntonsawmill.com

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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 just under eighty, 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.
New perspectives on growing Oak
WH specialist forestry group in France
by David Taylor

I don’t know if it is a distant folk memory from my forestry student days but I have always had the impression that, in some important areas, they order things better in France.

France has an ancient forestry tradition; it has growing conditions which are as far from the peats of Scotland, Wales or England as chalk is from cheese. It operates on a scale at which we can only wonder; for example, it has one third of Europe’s Oak forests, some 4.5 million hectares, with a standing volume of, wait for it, 565 million cubic metres. France is the country for Oak. So when the opportunity presented itself to join the Woodland Heritage excursion to the Loire valley, I jumped. The objective was to further our knowledge of how Oak can be grown to marketable sizes in less that 100 years, a prospect which arises from 30 years of study of Oakwoods in Central France, and which has been admirably set out in Jean Lemaire’s book, in English (courtesy of Bede Howell), “Oak – fine timber in 100 years”.

But in the middle of all this bounty, France has a problem. There is a serious shortage of young Oakwoods, and an imbalance of age and size classes so that 60% of the volume is in diameter classes 30 to 50 cms. Not big enough. And prices have remained static, and felling has slowed down over the decades since World War II. So there is a need for increased restocking and new planting, plus an innovative approach to marketing small-diameter Oak timber. The response, in the last thirty years, has understandably enough, been conversion to Douglas Fir, where conditions, especially rainfall and droughts allow. This is by no means everywhere, for even if other non-economic cultural factors come into play, the area visited by WH, Central France, lacks sufficient rainfall to grow conifers. Can Oak be grown in such a way as to attract investment? Could it compete with coniferous yields? How can the rotation be cut from the traditional 250 years, to something around 100 years, without sacrificing quality?

So our group, predominantly English, but with a strong Irish element, convened in beautiful autumn weather in the city of Tours, or should I say almost did, as some notable members had travel problems with their origins in the fogs of Norfolk. And one member confessed to dozing off on the Train Grand Vitesse, and nearly overshooting his destination to finish up in Bordeaux. We dined ensemble but caused something of a brouhaha by requesting that the restaurant doors be closed against the night air, requiring a major re-organisation of furniture. This was successfully achieved when the management were told that we were in fact the English Rugby team, recuperating away from the excitement of the World Cup. We didn’t ask where the French had got to.

We breakfasted in the small hours of the next morning, and set off in a luxurious bus to drive for 90 minutes or so to our first woodland stop. M Lemaire was sadly unable to join us because of a family crisis, but we were indeed fortunate to have as our leader Eric Sevrin, of ODF, who has been a prime mover of the study since its outset. We were introduced to M Bernard Lenail, a dynamic individual who had enthusiastically set about planting 400 hectares of redundant farmland made available through some manipulations of the CAP of a kind totally unknown this side of the Channel. The managers observed that the hedgerow Oaks, left to their own devices, actually produced vast girth and ample production with massive spreading crowns. We have some of those ourselves. The challenge was to channel all this...
bounteous energy into trees of the desired better form, in the shortest practical time. We looked at the results of various establishment techniques, chiefly direct seeding. Experience had shown timing to be critical. Autumn sowing at the rate of 10-15,000 acorns per hectare meant losses to predation over the winter; too early spring not good, too late and prone to mildew attack, but April to May, just right. But planting, at 1,600 plants per hectare, produced the same results after 20 years. The ruling factor in establishment was cost, with a ceiling of €5,000 per hectare to include early selection and cleanings. But no fences, mechanical ground prep, and little bramble or competition to contend with.

These woods began to look pretty good reaching over ten metres high at 19 years, but more was to come. We moved on to crops where the critical thinning process reduced the overall tree numbers but more importantly began the selection of what were destined to become the final crop trees. The shape of the crown is all important. The very best selected trees, around 70 per hectare had a clean stem and crowns which spread out freely, seen at their best in glorious autumn sunshine, which they were shaped to collect. They looked as if they were enjoying themselves; I was. Here was Oak maximising its old alchemy with air, water and sunlight to produce the desired quality and volume of wood in the shortest possible time. Regular four year thinnings maintain the status quo and produce fuel-wood, a useful form of interim income.

One of the many things ordered better in France is, of course, le déjeuner. Promptly at one we found ourselves enjoying the plat du jour in a local village restaurant. Throw away those soggy English sandwiches – here we started with wild boar terrine, followed by rabbit in mustard sauce, then cheese and then tarte tatin, apple tart, served with pichets of local wine, and concluding with coffee. Amazingly at 2.30 we were off again to the woods.

We looked here at the process of selection, and re-learned one of the basic rules of forest management. You must not only choose your final crop trees carefully, but you must be even more careful with your clients. Not everyone, by any manner of means, was prepared to pay for management costs, in particular pruning, a vital process if the ultimate quality of timber is to be achieved. The managers set themselves financial targets which were strictly observed.

Some very deft coach handling by our driver saw us back on the road to Tours as darkness fell. Here we were reunited with our missing members, and far from being daunted by a good lunch, we had an excellent dinner in town and retired to bed tired, full, and oh, so happy.

The next day again started early, and first gave us a glimpse of the extraordinary Loire valley, with its chateaux and vernacular architecture, its vineyards and, of course, its forests. After trundling along on excellent tarmacked forest roads we alighted at the Forêt d’Amboise, thousands of hectares of predominantly Oakwoods privately owned by the same family for some 300 years. Our hosts and guides were the French management co-operative Unisylva, a very major force in the French private sector and active through most of the country. Here we met the Directeur General Gilles de Boncourt and the remarkable Unisylva manager for Loir et Cher, Indre et Loire, Laurence Degoul. She had, in another existence, worked for the UK Forestry Commission. Her encyclopaedic knowledge of her subject entranced us all, and we enjoyed her account of trying to explain the Forest of Ae, in Dumfriesshire, delivered with a French accent, to a Carlisle taxi driver when she underwent her first job interview with the Commish.

Here we saw the establishment and selection process applied to Oak natural regeneration starting at something like 40,000 seedlings per hectare to a number which would permit the fast open growth silviculture basic to the 100 year rotation target. The
best have got to start off from the word go along the right path. The alternative is a persistent loss of vigour and quality which once started is difficult, but not impossible, to correct. 100 years can easily become 120 years. Or more.

The economics of all this depends very much upon producing what the market wants, and the highest prize is producing Oak of the right quality for cooperage. The right ring width, colour and of course size are added to more esoteric charms, such as the taste of the wood, experienced by sucking sawdust, and how it will react with the taste of the maturing wine in the barrel. I couldn’t resist trying the sawdust test on a fine Oak butt, and was in return amused by its presumption. But make no mistake, here is serious money, with a premium of perhaps 30% on the standard price and occasionally a jackpot for just the right product at just the right time. The time, incidentally, set by felling dates in tune with lunar cycles. Don’t smile. It’s true.

We were then shown some of the auction lots of Oak in the length being prepared for one of six events each year, all carefully laid out along the roadside.

Need I say, at 1.00 pm we again sat down to lunch and this had a variety of plus factors, not least of which was the further development of a spirit of bonhomie amongst the party. Once again we were indebted to our coach driver, who took a keen interest in “la querciculture” and drove with great skill in difficult circumstances.

The afternoon we spent at a local sawmill, which, surprisingly enough, had an English sales manager supplying customers of all kinds both in England and France, from construction timbers to furniture. We were able to see just some of the results of breakdown and selection, from barrel stave material to Oak flooring. The millers buy whole tree lots and then sell on the cooperage material to the specialists, before milling the remainder.

If we thought lunch was special, better was to follow. On our way home from the forest, we were invited to dine at the spectacular Chateau de Montpoupon, famed for its connections with “la venerie”, or stag hunting. The museum contained a vast collection of trophies, of hunting gear and memorabilia. As we arrived, the weather broke, and lightning played around the towers of the castle as a team of uniformed “trompeurs” played atmospheric hunting calls on French hunting horns. We dined on braised venison with locally produced vin rouge finishing with a mysterious spirit, described by our host the ebullient M. le Comte de Louvencourt, as “rhum.”

Our final day dawned dull but dry. We started off in a set of experimental plots which ranged from identification of the final crop trees and then removal all competition. As you might expect, this led to short boled wide crowned Oaks with wide open spaces between. Now, we can do that in England. It’s called pasture woodland, but it’s nothing to do with real silviculture. At the other extreme were plots with no intervention at all. We can do that, too.

We then moved on to plantations on former fields where selection and improvement had been somewhat delayed by the lack of investment from the owner. What to do? We looked at crown thinnings and considered what they might achieve, and were then set to select and mark a first thinning in teams. This, I am sad to report, gave rise to some horseplay, with markers from selected trees being shifted to less desireable subjects when backs were turned. Our coach driver observed this silently. “Comme des enfants”, he muttered to me as I passed.

All that remained was to thank our hosts, who so willingly gave of their time and experience. Things are not all that easy in France. There seems to be a lack of political structure, with responsibility for forests far from clear. Sound familiar? Like us, they face savage cuts and no grants; they run up against environmental pressures and problems with an urban mindset in the general population. They are struggling with the implications of climate change just as we are, complicated in France by strict rules governing the use of seed, restricting it to its local provenance, which stops southern provenances being transported north as conditions predictably change.

It can be fairly said that conservatism and sticking to traditional methods has slowed down French attitudes to forest management, and it is now just as fair to say that this study, and M Lemaire’s book, represent a challenge to 250 year rotations, and a non-interventionist systems of growing Oak, which will surely gather force. It won’t work everywhere, and unless something drastic takes care of the deer and the squirrels, it won’t work here. But if I were fortunate enough to own an Oakwood, I’d give it a try, especially if my wood was in France.
In the Living Woods
– an account of my apprenticeship with Mike Abbott
by Peter Nyby

Sitting in my office, glancing between the rain-bung woods across the valley and the forgotten shavings of reddened Alder curling on the floor, I reflect upon my season assisting Mike Abbott at Brookhouse Woods.

Mike, for those of you who do not know him, is an old time woodsman and craft revivalist, with peculiar keenness as a chair maker and woodland educator. This isn’t meant to be an advertisement or appraisal of Mike, but that is certainly difficult to avoid given how much he taught me. He wrote his first book ‘Green Woodwork’ in the year that I was born, 1989. Since then he has done as much as any to bring the woodlands back to life with the sound of tools, song and laughter. He now specialises in teaching a group of people the process of making a chair from log to finished product in six days. I, on the other hand, have done little more than enjoy the occasional walks and hikes through woodland and appreciate its beauty.

As has been Mike’s tradition for many years, spring marks the start of the season. Friends, ex-course participants and other good folk join in for a couple of weeks, bringing the workshop back to life after a winter’s hibernation. The dust is wiped off, surfaces scraped and polished, firewood for the summer and autumn is cut, split, stacked and general maintenance is seen to. Fire, music and ales fill the evenings. For me, an unseasoned wood worker, these weeks – full of hard, gratifying work, good company and merrymaking – were precious and special. It was my first time laying hands on a two-person cross-cut saw, a drawknife and a felling axe. For the uninitiated, these tools border on the magical. They are timeless, eminently efficient, sweetly slow and quiet – and...
when time is not of the essence, and if one is partial to the song of the forest and the bite of steel on the tension of raw wood, then slow and quiet are good.

As my time with Mike unfolded, I came to realise that I was suffering from the endemic condition Simon Fairlie once termed as “dystechnia”. It defines the condition of being practically incompetent – not because of inherent ineptitude, but simply due to a lack of tuition. No one ever showed me how to sharpen a chisel, how to carve with an axe, how to make a good joint – let alone how to use a pole lathe. So I came to Mike with a very limited practical skillset and a bundle of nerves. I was dumped into an environment saturated with people able to turn their hands to any new task with ease, or at worst a graceful clamour, and I couldn’t figure out which way to sit on the shave-horse.

For this reason the prospect of being an assistant chair maker to Mike was daunting, bordering on intimidating – but for the same reason, it was one of the most empowering things I could have done at the time. Having been put in a position of “expertise”, I was immediately regarded as skilled and knowledgeable. I remember introducing myself to the first group of course participants, plainly explaining that I had never worked green wood and never made a chair; though that was all but forgotten as they mounted the shave horses: as far as they were concerned, I was Mike’s expert assistant and had to rise to the challenge.

Under Mike’s hilarious, and at times outrageous, yet eminently precise and skillful tutelage, I learnt to make a number of useful objects: chairs, stools, mallets, rakes, rattles and spoons, from a fresh piece of wood, and using mostly hand tools. I came to the realisation that this is a most fundamental building block of practical ability. Now I can go out into a woodland, pick a suitable tree for the project I have in mind, cut it down and transform what to most people would have been a piece of firewood into a thing of utility and beauty. Most importantly however, now I can see that it is still possible to make an honest living and live a full, satisfying life without wreaking havoc on the ecology that sustains us.

This account would be grievously lacking without granting due praise to the oft-neglected Ash tree. As many of you will know, Ash is admired for its elasticity and strength, making it the ideal wood for chairs. Its grain is attractive and so is its creamy yellow hue. It’s had countless functions and uses throughout human history and prehistory, spiritual as well as material, as Oliver Rackham’s book *The Ash Tree* pays great testament to. Mike was often fond of misquoting Henry Ford: “You can use any wood you like for making chairs, so long as it’s Ash”. Fortunately they abound near the workshop in Herefordshire. Wild Cherries make company for them along with the occasional Oaks and Lime trees. Many were planted almost thirty years ago, but a fair proportion is the result of natural regeneration, and it was these trees that Mike has come to favour for chair making. He’s found that they harbour more of that famed elasticity and flexibility, whereas the planted specimens are more brittle and had a tendency to crack and split during steam bending. Such are the mysteries of wood; every time you break open the body of an Ash tree there is a different story to be read in its rings, felt in its fibres.
I left Brookhouse Woods in late September, as the summer was turning. I retired from my simple responsibilities in the woodland workshop and ventured west to start a family life based in a community in a wooded valley south of the Preseli Mountains. The cottage that we share with a few other families butts against a wide reaching forest, much of which is young Oak woodland. A short walk southwest, across a field, takes you into a 25 acre Douglas Fir woodland with a good amount of Ash; it is quiet and beautiful and the water and air are clean. My partner and I had just had a baby, and this is a lovely place to start a family, but work does not come easily. Saying that, I have been lucky enough to land an order for forty chairs from a Danish Hospice. I’ll be working alongside Ben Hughes from St. David’s, with a good amount of support from Mike. The chairs will be made Abbott-style, with hand tools and traditional methods, and a not so traditional cordless drill. The deadline is this spring, and excitingly the chairs are due to be shipped by wind freight, on a wooden tall ship sailing from Bristol docks.

Beyond that, I don’t know. I am hoping to land an apprenticeship somewhere in Pembrokeshire. Woodland Heritage has been most helpful, dishing out advice and a chainsaw ticket, for which I am most grateful.

I can only hope that many more people discover the magic of the woods and their related crafts, once again coming to cherish and protect our most precious and versatile resource – living wood.

One of Mike’s finished chairs.

Eating lunch on the “veranda”.

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Sweet Chestnut to the fore and in the firing line
by Dr Terry Mabbett

Following a spate of hotter and drier than usual summers during the final two decades of the twentieth century, with claims that Common Beech (Fagus sylvatica) was on the wane and the way out, climate change cheer-leaders ‘collared’ Sweet Chestnut (Castanea sativa) as a bulwark species against climate warming.

Woodland Trust was quick off the mark in 2001 with publication of ‘A Midsummer Night’s Nightmare – The future of UK Woodland in the Face of Climate Change’. This document predicted the demise and disappearance of Common Beech from swathes of southern England within half a century (35 years from now).

Approving eyes that were already gazing on Sweet Chestnut started to ‘pop’ as the species was thrust to the fore after Chalara Ash Dieback escaped into the wider environment and Ash tree planting was essentially stopped in its tracks during autumn 2012. Forestry Commission (FC) immediately recommended Sweet Chestnut as a replacement species and suddenly everyone wanted to plant Castanea sativa.

Forester Matthew Allen told Woodland Heritage about a re-planting site in Suffolk delayed for this very reason. “Planting year 2012/13 was with a large Common Ash component but when that option was taken away we opted for Sweet Chestnut, but apparently so had everyone else. High demand on Sweet Chestnut meant final planting was delayed until spring 2014 when a 0.5 ha area of Sweet Chestnut was planted. The site is now 30 per cent Sweet Chestnut, 50 per cent English Oak and Field Maple, 10 per cent ‘shrubs’ species like Hazel with a ‘sprinkling’ of Scots Pine,” said Matthew.

David Gwillam at Prees Heath Forest Nurseries also recalls the sudden pressure on Sweet Chestnut which is not the easiest of seeds to obtain from UK sources. However, David says sales of Sweet Chestnut have not yet reached levels expected although he thinks this could be due to poor tree planting figures overall, rather than any sudden disenchantment with Sweet Chestnut. “Only time will tell,” says David Gwillam.

However, even if Sweet Chestnut planting firms up it could all turn out to be in vain. In November 2015 David Gwillam was informed by Forestart that ‘the cupboard was bare’ of Sweet Chestnut seed for planting in spring 2016. Traditional UK provenances had ‘failed’ and issues around Sweet Chestnut blight severely restricted the import of traditional EU grown provenances. Sweet Chestnut could only be imported from seed grown in the Republic of Ireland, Sweden and several of the Greek Islands. Neither the Republic of Ireland nor Sweden can supply seed, while the Greek Islands are too far south to be considered as a source of suitable seed.

Clouds over Castanea

Clouds had been cast over Castanea in 2011 when Cryphonectria parasitica (Chestnut blight) was found on trees in Warwickshire and Sussex, but discovery of the Oriental Chestnut Gall Wasp (Dryocosmus kuriphilus) in North Kent and mid-Hertfordshire in June 2015 meant this once apparently ‘safe as houses’ tree species was now on a cliff edge. Naturalised Sweet Chestnut which had been thrust to the forefront of UK forestry to replace ailing true native species now found itself firmly in the firing line of the alien tree pests and diseases wading into British wayside and woodland.

This pair of unresolved pest problems, representing the single worst insect pest and disease of the genus

Sweet Chestnut trees in 1-year seed beds (1+0) at Prees Heath Forest Nurseries at Whitchurch in Shropshire. Pictured here in late September 2014 the trees had already achieved a height of 30-45 cm. (Picture Dr Terry Mabbett)
Castanea worldwide, could conceivably finish Sweet Chestnut as a commercial timber tree in the UK. And with dire consequences for Kent and East Sussex where over 90 per cent of the country’s Sweet Chestnut woodland (coppice and standards) is found. Even the amenity sector in these counties invests heavily in Sweet Chestnut with wall-to-wall Sweet Chestnut along the 18 holes of some golf courses in Kent.

One off collateral damage levels caused during control operations will invariably be greater than any direct damage caused by Chestnut blight or the Oriental Chestnut Gall Wasp (OCGW). Both are notifiable quarantine pests under EU regulations which means UK plant health authorities are forced to issue Statutory Plant Health Notices (SPHNs) for destruction of affected trees and invariably requiring heavy machinery.

Trees affected by OCGW are felled and the affected material burned or mulched while infections of Chestnut blight require affected trees to be uprooted, ‘grubbed’ and destroyed. And not the sort of activity compatible with maintaining the rich biodiversity which thrives within sequentially coppiced Sweet Chestnut coupes or for that matter on golf courses with professional turf worth millions of pounds.

**The honorary native**

Sweet Chestnut is a naturalised tree species and generally considered to be an ‘honorary’ native having been in these islands for nigh on 2,000 years. The word “naturalised” describes a species established outside its natural range by regeneration and without man’s intervention.

Sweet Chestnut arrived with the Roman Invasion of Britain beginning around AD 43. Trees were brought in and planted for their high-starch, low-fat nuts that were ground up to make a porridge-like staple called ‘polenta’ to feed and fortify Roman Legions. High-starch meant high-energy provision while the low fat content marginalised rancidity problems.

However, the Romans must have been disappointed because the intrinsically cool and short British summer season, even in southern England, meant the tree would have trouble producing full, mature Chestnuts. Castanea sativa is a late flowering tree with inflorescences that do not appear in UK until June generally leaving insufficiently long periods of favourable conditions for seed growth and maturation. Prime British Sweet Chestnut seed orchards and provenances do exist but are few and far between.

However, what Castanea sativa lacked in edible nuts was compensated for by its wood and timber. Sweet Chestnut became ‘a darling’ of woodland owners in southern England where this species did best. Timber hewn from mature trees is useful but by no means as good as English Oak because of a natural tendency to split in a condition known as ‘shakes’.

It was the ability of Sweet Chestnut to rapidly produce ‘spring’ (shoots) following cutting to ground level which secured its place on the landscape. This age old practice of coppicing allows woodland owners to harvest Sweet Chestnut poles on a set cycle, the stools re-growing to provide cyclical harvests for hundreds of years. Young Sweet Chestnut wood cleaves easily and has long been used in fencing and other applications. What’s more the synchronised coppice compartments (coupes) within correctly managed Sweet Chestnut woodland, representing various stages of regrowth with differing light regimes, are havens for wild flowers and wildlife including rare butterflies.

The UK has some 20,000 hectares of Sweet Chestnut coppice, some with standard (uncut) trees, and about half of which is designated semi-natural Ancient Woodland. The bulk is concentrated in Kent and East Sussex with some in West Sussex, Surrey and Hampshire. Elsewhere Sweet Chestnut is widespread, though generally not concentrated in...
woodland environments, but increasingly popular as landscape trees in the amenity and sports sectors.

**Plan ‘B’ under threat**

By autumn 2012, with chalara spreading in the wider environment and restrictions on the movement of planting material, new Ash planting was essentially stopped in its tracks. Forest nurseries destroyed Ash stocks and started to look for alternative replacement species with Sweet Chestnut high on the list.

The only real worry at that time was whether the industry could provide enough Sweet Chestnut planting material. There were only a few seed orchards in southern England and the noose was tightening around foreign sourced seed and seedling trees traditionally imported from southern European countries where Chestnut blight is endemic.

Worst fears came true in November 2015 when commercial sources of Sweet Chestnut seed ran dry. David Gwillam told Woodland Heritage how his existing beds of Sweet Chestnut which we saw in July 2015 would have to last for the next two years at least.

**Blight**

Sweet Chestnut blight caused by the fungal pathogen *Cryphonectria parasitica* had reared its head in 2011 on trees imported from France and planted in Warwickshire and Sussex as early as 2007. *Cryphonectria parasitica* is a dangerous plant pathogen causing a highly damaging disease (Chestnut blight) in the same ‘mould’ as chalara Ash dieback, disseminated by spores, destroying the wood and killing trees.

Chestnut blight is a notifiable quarantine disease and the UK a ‘Protected Zone’ (under EU legislation) which means the UK government has a statutory obligation to eradicate the disease. It was these mandatory requirements which triggered the issue of Statutory Plant Health Notices (SPHNs) and the destruction of all affected Sweet Chestnut trees at the sites in Warwickshire and Sussex.

Since then the UK plant health authorities have been very cagey and non-committal about the status of Chestnut blight in the UK and for very good reasons. A large number of tree consignments sourced from the same French nursery which supplied the unfortunate landowners in Warwickshire and Sussex were delivered to customers throughout the UK. A trace back exercise identified a number of diseased trees on various sites and these were destroyed, but a considerable number of potentially infected sites have never been identified due to a lack of documentation.

**Oriental Chestnut Gall Wasp in Kent**

The situation for Sweet Chestnut worsened considerably in mid-June 2015 when Oriental Chestnut Gall Wasp (OCGW), described as the worst insect pest of *Castanea* (Chestnut) worldwide, was found in the UK. *Dryocosmus kuriphilus* was confirmed in Farningham Woods (near Swanley in North West Kent) an ancient semi-natural woodland, with medieval roots, SSSI (Site of Special Scientific Interest) status and rich in Sweet Chestnut coppice.

Statutory Plant Health Notices (SPHNs) were issued and contractors sent in by the Forestry Commission (FC) to clear the site of infested aerial growth. Speed was essential because adult wasps would start to exit the galls in early July and lay eggs for the next generation. Initial reports suggested FC would play safe and clear all Sweet Chestnut from the 79 hectare site, but a subsequent statement said only trees in the most heavily affected part of Farningham Woods had been felled. FC said the strategy was to minimise the risk of the pest spreading into other areas but by the same token, this also suggests some high risk trees were left standing.

In the event FC said it initially felled about four hectares of the most affected trees at Farningham Woods representing just five per cent of the 79...
hectare woodland and claimed this would prevent or minimise any expansion of the outbreak area caused by emerging wasps. Following ministerial approval trees in a further seven hectares of Farningham Woods were felled and mulched in August 2015. FC said this was done to destroy trees on which any emergent adults had laid eggs and to therefore prevent or to minimise the extent of another pest generation developing.

FC said surveys “of varying intensity” were conducted between 16th and 26th June within a ‘core or inner zone of 1 km radius’, a ‘5 km zone’ and an ‘outer 10 km zone’. Of the 3,200 Sweet Chestnut trees covering these three zones, 20 trees within the ‘core or inner zone’ were identified as infested. Private sector foresters working on site for FC told Woodland Heritage that the initial aim was to conduct a transect survey across Kent but this idea was subsequently abandoned in favour of radial surveys around the focus of infestation.

Despite surveys showing that wasp infestation was concentrated within the 1 km ‘core or inner zone’ it is somewhat surprising that, faced with such a serious new quarantine pest, FC did not ‘bite the bullet’ and fell all Sweet Chestnut in the woodland. Reading between the lines it becomes increasingly clear that FC was in some way restricted in what it wanted to do and what it knew should be done, and why it appears not to have gone all out for eradication.

Woodland Heritage is reliably informed that organisational and operational problems prevented more woodland from being felled. Felling the entire wood would clearly have been a drastic measure but let’s hope FC doesn’t look back in five years’ time and realise that it would have been a small price to pay to save Sweet Chestnut.

Attack by OCGW can reduce seed yield by between 50 and 70 per cent. The UK is not a major producer of Sweet Chestnuts partly due to climatic constraints says FC, while adding how any potential to do so in future may have been compromised by the arrival of OCGW. Heavy attacks reduce tree vigour, hit biomass production and in some instances may even kill the tree (Morath et al., 2015).

**The pest ‘pops up’ in Hertfordshire**

Within days OCGW had been found on half a dozen 30-year old Sweet Chestnut trees lining a street in St Albans, Hertfordshire. Enquiries made to the local authority were met with very defensive comments, apparently coached by ‘the centre’, along the lines that “the pest had gone away”. This Hertfordshire outbreak is harder to fathom and much more worrying because it means the pest could be literally ‘anywhere’.

OCGW almost certainly arrived on Sweet Chestnut planting material from Europe despite increasingly tighter import restrictions including notification of consignments to APHA (Animal and Plant Health Agency) for subsequent inspection on arrival in UK. The outbreak in Kent, where large expanses of commercial Sweet Chestnut woodland require continual re-planting and re-stocking, is not really a big surprise. Some planting material will inevitably have come from gall infested sources in Europe and ‘got through’ despite the ‘protection’ supposedly afforded by ‘floppy’ EU Plant Passports. But how did this insect pest find its way onto 30 year old street trees in the City of St Albans?

**The souring of Sweet Chestnut**

Where does all this leave *Castanea sativa* and the thousands of hectares of Sweet Chestnut woodland in southern England? We will not know the answers until the situations around these potentially devastating alien pests and diseases are resolved one way or another.

Claims by FC that Chestnut blight has been eradicated from the UK should be treated with caution. Even if correct, it does not necessarily mean the fungus has been completely eliminated from the environment. *Cryphonectria parasitica* can exist in a saprophytic state on *Castanea* tree debris but also as a pathogen on other genera like *Quercus* (Oak) in the same plant family (*Fagaceae*) as *Castanea*.

Scientists in Slovakia have isolated pathogenic strains of *Cryphonectria parasitica* from cankered tissue on *Quercus robur* and *Quercus petraea* (Adamcikova et al., 2010). UK government’s APHA currently inspects Oak trees imported from EU countries and Switzerland for *Cryphonectria parasitica* as well as Oak processionary moth. The fungus is presumably able to move back into parasitic mode on Sweet Chestnut when favourable conditions re-present. Damage caused by OCGW is known to increase susceptibility of Sweet Chestnut trees to...
infection by *Cryphonectria parasitica* and the manifestation of blight disease.

Pre-emptive felling in the face of invasive alien pest and disease outbreaks, is always a potential danger and certainly no answer to the problem. An Italian scientist speaking at the Fraxback seminar on Chalara Ash Dieback in London commented how his country lost more Sweet Chestnut trees to pre-emptive felling (in the face of Chestnut blight) than it ever did from the disease itself.

The situation surrounding OCGW will become clear in 2016 when any residual infestation shows up as gall damage on Sweet Chestnut trees. If any insect infestation remains in Farningham Woods and more so if the residual infestation has spread, then there is a strong likelihood of OCGW spreading and establishing more widely in the UK.

If the worst happens to Sweet Chestnut then we will simply have to put up with at least one or perhaps both of these problems as do other European countries. Both France and Italy live with Chestnut blight and OCGW and still grow *Castanea sativa* for timber and nuts.

UK plant health authorities are already talking up the few marginal pest management options that currently exist. For instance, the ‘hyping up’ of hypovirulence for Chestnut blight which is a form of biological control based on naturally occurring viruses that slow down disease development and spread by reducing the pathogenicity (virulence or aggressiveness) of the fungal pathogen *Cryphonectria parasitica*. However, ability to manage Chestnut blight by utilising hypovirulent strains of the pathogen is erratic and patchy because it relies on there being limited genetic diversity within the fungal population.

For OCGW there is some upbeat talk about natural control by native parasitoid beneficial insects although European research shows such natural enemies from outside of OCGW’s native Asian range cannot ‘cut the mustard’. This leaves the identification and collection of suitable parasitoid insects in Asia and their introduction into the UK. All this will provide more ‘rich vittles’ for research organisations but offer few ‘crumbs of comfort’ for woodland owners.

### Genetic modification

For plant pathogens like *Cryphonectria parasitica*, which invade the cambium and vascular tissue thereby girdling and killing twigs, branches and main stems, there is very little which can be done. Having failed to exclude the blight pathogen from the UK the only option now is development of trees which are genetically resistant. That means trees which are not infected and therefore do not develop blight disease.

Conventional plant breeding for disease resistant trees is a long, costly and often soul-destroying road because the more genetically versatile microbial pathogen is invariably ‘one step ahead’. But the alternative modern way is to genetically modify *Castanea sativa* for resistance to *Cryphonectria parasitica*.

The efficacy and success of fungi like *Cryphonectria parasitica*, as disease-causing plant pathogens that systemically invade trees destroying lateral meristems ( cambium) and vascular tissues, is largely down to the production of specific toxic chemicals. In the case of Sweet Chestnut blight the chemical is oxalic acid, the same one that causes irritation and rash when you brush against the leaves of the stinging nettle.

North American scientists have harnessed this mechanism to resurrect *Castanea dentata* (American Chestnut) all but wiped out decades ago by Chestnut blight after the pathogen arrived in the US on imported *Castanea crenata* (Japanese Chestnut trees). A gene sourced from wheat which directs synthesis of the enzyme oxalate oxidase (breaks down oxalic acid) was inserted into the American Chestnut genome. Detoxification of oxalic acid radically alters the relationship between the Chestnut tree and the *Cryphonectria parasitica* pathogen. The latter is downgraded from fungal parasite to a fungal saprophyte living on the outer bark without causing significant harm.

**American Chestnut genetically modified for resistance to Chestnut blight has been replicated on a large scale and awaits approval from the US authorities before planting in the wider environment.**

Genetic modification is an altogether swifter, easier, more precise, sustainable and probably cheaper option for the design and development of disease resistant trees compared to conventional plant breeding. The UK has more than enough scientific expertise to genetically modify *Castanea sativa* for resistance to *Cryphonectria parasitica* especially since the Americans have already done the hard part (locating a suitable gene in the wheat plant). The trouble is, UK politicians and their counterparts in Europe are good at erecting insurmountable hurdles to progress in fighting tree pests and diseases. Government scientists should be telling ministers in no uncertain terms how genetic modification is now the only real long term hope for Sweet Chestnut in the UK.

### References


Dear Peter,

I really loved Day 3 of the W2W course as we were putting our new knowledge into practice and measuring logs. It was well organised in that we measured the round timber in Hoppus feet in the a.m. Then the Wood-Mizer milled those logs so we could measure content in cubic feet. Whilst this was happening there was great and informative chat about pricing, profit or loss on real examples. Then sticker-ing the boards gave the whole day a continuity and the feeling of ‘start to finish’.

Tilly Boggia
Furniture maker

Dear Trustees,

What a magnificent (and welcome!) Award the Peter Savill is!

I am most honoured to be in the company of previous holders, as well as being tickled pink to be inscribed next to Felix Dennis, RIP. I do hope that woodlands within his Trust fare better than those now in the National Trust.

This year’s WH meeting could be described by a wine coterie as ‘well oaked’ and the underlying messages were to be advantageous (adventurous?) in the planting plans, to select ‘winners’ early, be guarded more carefully against epicormics and grey squirrels.

All conscientious foresters acutely feel helpless in the face of AOD and it is much to the credit of Woodland Heritage that it has stepped forward so readily to facilitate Sandra Denman’s work. The Report on AOD was universally praised – and gives us the first signs of hope.

Finally, I must second how sad we were that Peter Goodwin and Lewis were absent. It’s a three-line whip for 2016!

Again my great thanks

Bede Howell

Dear Belinda,

Just a brief email to thank you for posting the new issue of the Woodland Heritage magazine to me – it arrived this past week. Is this in fact a magazine? It seems too substantial to call it a magazine. An annual, I guess, is perhaps a better term.

Anyway, I enjoyed seeing my article in print and Rozie from Permaculture Magazine (she is the editor there and is the partner of Dave – an apprentice of Ben’s from a couple of years back whom you will not doubt remember) got in touch to say that she very much enjoyed reading it and thought that it was very well written. I had been intending to write some articles for them (I am currently doing one about some of the things we are doing on the land here in France) so hopefully such an enthusiastic review from the editor will give me even more of a foot in the door.

I hope you and the family are all well.

Speak soon

Millar Hammond

Dear Belinda,

Just wanted to say thanks again for all the effort in organising another superb Field Weekend. My Scottish students all enjoyed it and found it very useful, absolutely buzzing with enthusiasm and amazement at the huge amount of knowledge and information they had access to.

Without my asking, they are planning to write something up about the visit to share with other students, and thinking about how they can encourage more to attend next year.

They also all noted how welcome everyone had made them feel and how privileged they felt at being able to meet and mix with so many key people, all of whom were so generous in sharing their knowledge and expertise.

On a personal level I too felt it was an excellent weekend (as ever) and it is always good to catch up with everyone.

Thanks again,

Judith Webb MBE
Forestry Lecturer at UHI Scottish School of Forestry

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Thanks again,

Judith Webb MBE
Forestry Lecturer at UHI Scottish School of Forestry

Dear Belinda,

Sarah and I just wanted to say a big thank you to yourself and all the other people who helped to organise the recent Herefordshire trip. It was a fantastic couple of days in my favourite county and with pretty decent weather. Well done to all and now we hope you are having a well-earned rest!

Many thanks

Jim Buckland
Gardens Manager, West Dean Gardens

Dear Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,

Hi Belinda,
Day 1: Whitbourne Estate

When Bill Evans of Whitbourne Estate offered Oak to the market, potential purchasers sharpened their pencils and reached for their cheque books. For at least the last half century parcels of long, clean Oak have come from these woods and we assembled at Longlands Farm on the opening day of our 2015 Field Weekend visits to see, to admire, to discuss and endeavour to learn.

This is a diverse estate on the Herefordshire/Worcestershire borders managed in hand by the Evans family, with forestry and sporting enterprises running alongside a high quality local restaurant. The farm is run commercially but also operates, under Bill’s wife Julia’s management as a Care Farm regularly supporting young people from a variety of challenging backgrounds. Bill and his son Joe (above), who took over management of the estate in 2011, greeted us with a brief introduction to the estate.

We then set off on trailers to Willy Hill Coppice where amongst the splendidly-formed mature Oaks, ready for market, we were saddened to see some of the trees exhibiting slight dieback and minor bleeding. This led, not unnaturally, to discussion on the threat of Acute Oak Decline (AOD) – so close to Woodland Heritage’s heart – and the ticklish question of thinning. Throughout the day the question of epicormics was raised – how serious are they, whether and when to prune, what makes a good “Pippy” Oak but above all, what precautionary methods of silviculture to use in the long years of Oak growth.

Bede Howell described the geology upon which these woods are seated (the Downtonian Series of what used to be called the Devonian, now re-classified as Terrestrial Silurian) is highly significant. In these long-ago near-deserts, made red by the oxidised iron which coats the small mineral particles, the Old Red Sandstone beds formed, often in estuarine conditions. This material weathers very slightly to become deep, fertile, moisture-retentive soils and the rock itself is readily eroded to produce steep-sided, moist valleys ideal for the growing of

Joe Evans welcomes our group.

One of Whitbourne’s finest Oak stems – of potential veneer quality.
Bede also waxed lyrical on the specific ‘columnar’ form of the Oak on this site and elsewhere in the Teme Valley, which he believed was due to a common genetic heritage.

In general, the Oak used in re-stocking is derived from “our own” acorns and in the autumn after our visit over four tonnes of acorns were harvested by Forestart (www.forestart.co.uk) from the Estate. It is no surprise that Whitbourne, and near-neighbours Hungry Dean have contributed Oak genetic material to Future Trees Trust in their search for highly-improved Oaks for the long term. Discussion turned to management of seed stands as there is no official encouragement by grant-aid to facilitate collection of what is, in fact, an important national resource. Both working in the canopy, by thinning to give most room to the best trees, and at ground level to produce conditions where nets can be spread and acorns etc readily gathered up, are important. In the case of Oak it is only at the ends of the overwintering twigs that any flower, then seed, is formed. Thinning which encourages healthy, vigorously-growing crowns is therefore essential.

As usual in Britain, a dense understorey of bramble in oakwoods precludes natural regeneration on the French scale, but timely swiping (where the site is flat enough!) can reveal a useful spread of seedlings after a good seed year. The problem then is how to give them ample light, as an acorn carries only enough energy to form its main root and a short shoot; thereafter it must have the essential energy of light, or its exhausted remains are quickly colonised by fungi.

We saw sites where Oak and other mixed broadleaves had been nurtured through the weeding stages then allowed to grow together; the potential damage done by Sally Willows was evident, as was the evident risk of damage by removing the Willows! Another approach shown to us was formal replanting with Oak in a nurse crop of Norway Spruce; indeed, it has been commented that “if you want to grow Oak, plant Norway”, as observation has shown that the ambient conditions within weeding-stage Norway Spruce do definitely favour Oak regeneration, be it by jays secreting their future food sources, or simply by acorns scattering from nearby Oaks.

The options for maturing Ash in the light of the spread of Chalara fraxinea were debated at the Ashbeds stand of P1930 Ash. Should the trees be felled sooner rather than later in advance of Chalara or wait until the disease struck? With his knowledge of the current market, Will Bullough warned against reacting too hastily and flooding an already challenging market.

Steep-sided, fertile valleys grow good trees but make working awkward, typically leading to delayed thinnings. We saw a patch of P73 Oak/Norway Spruce and nearby, some Douglas Fir which had
been thinned as well as earlier, P56 Oak with the Spruce removed. In these tricky conditions extraction by horse was being used but, although there was general agreement that this was a good approach, it was also considered that horse-logging was only really viable where extraction was relatively short. They were not necessarily lower impact – many passes resulting in as much mess as a few with a tractor. Our walk was lightened by the joy of spotting an otter at Sapey Brook, the first which the owner had seen there.

Lunch was taken either in the field, or in the cattle shed where future tasty meals loved and munched. Herefordshire does “do” beef cattle! During the break Geraint Richards (Woodland Heritage Trustee and Head Forester to the Duchy of Cornwall) presented the 2014 Prince of Wales Award to Finbar Vesey. This prestigious award is given each year to the outstanding student on the Woodland to Workshop courses run by Woodland Heritage. Finbar works for the National Trust and Geraint, and his fellow tutors on the course, were particularly encouraged that Finbar would share his passion and knowledge with his colleagues in the Trust.

Also during lunch, Julia Evans told us more about her work on the Longlands Care Farm (www.longlandsarefarm.co.uk). We later saw the smaller woods in the park amongst which these activities took place.

Joe and Bill showed us a P63 Oak/Norway Spruce area where too much light had been let in, too soon, resulting in epicormic growth. This conifer/broadleaf mixture is now frowned upon by rural purists and in later years Oak nursed by mixed broadleaves, and possibly with a little Larch became acceptable. A P98 area we saw near a release pen did also look as though epicormics would be a problem, though another, planted in 1987 using closer spacing, looked well and where an “all broadleaves” policy is enforced the inclusion of small numbers of Beech or Hornbeam in the mixture is invaluable in the middle years as these shade-tolerant species can keep the Oak’s stems shaded to minimise the development of epicormics.

Other woodlands gave us the chance to look at and discuss the management of Sweet Chestnut, P1988 Poplar and Cricket Bat Willows. A nice surprise was spotting some pigs (Tamworths) hard at work in the woodlands.

So we came, as ever, to that most important item – grey squirrel control, without which later generations of the Evans family will have no good Oak to sell. The present control is the responsibility of the young, keen and well-motivated keeper and as this is being written (mid March 2016) his score is already at 350.

Finally it was back to the cattle shed where expressions of appreciation and of thanks were given to the Evans family while we enjoyed a lovely tea – and they do “do” teas at Longlands Farm. As is Woodland Heritage’s custom, this included the presentation of a wonderful Richard Chapman turned vessel to Bill Evans.
Day 2: Morning at Stoke Edith Estate

Not many estates would have the temerity to set out to recreate a Repton landscape, lost by the effluxion of time. Just such an estate is Stoke Edith, owned, managed and run for many years by the redoubtable late Andrew Foley, scourge of the CLA, the Forestry Commission and any other bureaucracy trying to impinge on his will, but formidable and highly knowledgeable as a forester and an estate manager.

Our group, led by Geraint Richards and Andy Shirley-Priest of Abbey Forestry, instructed, no less, by the Wizard Bede, were guests of the present incumbent, Rupert Foley, drawn away from the woods by a happy event in his family, for which our congratulations are due. But we enjoyed the story of the creation and development of the amenity woods, planted on a low escarpment across the valley from the site of the original Stoke Edith house, with the aim of establishing a point of reference which drew the middle and distant views into the nearground. Repton’s Red Book provided a vivid insight into the original landscape, now sadly lost, together with the mansion it was created to enhance. And, of course, some of Repton’s marketing methods to his wealthy clients. Nothing changes.

We then set off in a somewhat precarious convoy up onto the wooded high ground to the south of the estate, and like Moses, viewed the landscape o’er. Work of this nature depends, we discovered, not only on the broad sweep of the landscape but on minute attention to detail. We progressed deeper into the woods, successfully managing to turn back on our tracks, and considered the fate of Corsican Pine, chosen as the ideal commercial species some thirty years ago, and now sadly in Dophistromal decline. Such is going to be the nature of so much well intentioned forestry over the coming decades. Fortunately there is very little Ash. But contemplation of the future cast a slight air of gloom over the party.

Deeper into the woods, and our spirits were somewhat lifted by some fine P70 Douglas giving every indication of growing into really big trees if allowed to do so. The woods need to balance the books, though, and careful thought was being applied to rotation length and maximum prices.

Stoke Edith woods are predominantly Oakwoods, and we heard an interesting account from Roger Venables of past fellings, though here is some very nice Oak remaining, too. Sweet Chestnut coppice often formed an understory, supplying hop poles in particular to local growers which at one time were legion. But new plantings of either to replace felled areas soon come up against the scourge of the grey squirrel, which in spite of the efforts of both the forestry department and the very well-known commercial shoot, seem to present an insurmountable problem to growing quality timber in an extensive woodland estate such as Stoke Edith. Surely there must be an answer? The party were unconvinced about the practicality of introducing polecats or pine martens. And sure as eggs are eggs, the Head Keeper would be unlikely to enthuse either.

It remained to thank Bede Howell, who appeared revitalised by the acquisition of a new magic wand during the visit, Andy Shirley-Priest of Abbey Forestry, the woodland managers, and, of course, Rupert Foley and the Stoke Edith Estate before we decamped to Westhide Estate, not far off across the valley.
Afternoon at Westhide Estate

Here we were received by Luke Thompson-Coon and Julian Burchby, Forest Manager at Pryor & Rickett Silviculture, and our first act was to have lunch in the very pleasant Estate Office yard, next to an agreeable pond. This became something of a social event – it was good to see Susan Bell again after some years, but nothing could detract from the eagerness of the party to get back into the woods, for which they were rewarded by a light shower of rain.

Bede Howell’s Peter Savill Award was presented by Peter Savill himself (below left) just before we set off.

There are some 400 acres of woods at Westhide, and the whole estate was in a somewhat run-down condition before Luke took over in 2002 and set about putting things to rights.

Undeterred by the weather, we walked smartly uphill, passing a fairy-tale cottage, into the main block of woods, which had been systematically sorted out and replanted with a mix of hardwood species, regrettably featuring Ash. There followed a discussion on how best to plan and prepare for the inevitable die-back. This reinforced the difficulties faced by managers over choice of species, timing, policy and future management. Here again the threat of grey squirrels looms over the future, even for an active “hands-on” estate like Westhide, where a shotgun is kept on the estate office desk to blast unwelcome visitors from the window – just squirrels, you understand.

We then progressed to see things on the replanting front being done properly, pausing briefly to get another taste of what the absence of Ash, this time as natural regeneration, will actually mean in practice. A mixture of native and exotic species is happily seeing off the competing vegetation, and appears to have the necessary variety and resilience to confront most bio-threats. Then the roads. Having learnt the value of good forest roads at Stoke Edith, we saw the lessons applied magnificently to roading at Westhide, all, believe it or not, grant-aided with the only proviso being all the hoops and obstacles the forest owner has to go through, over and around to get any worthwhile financial support these days.

We looked at some quite nice 150-year-old Oak on the way home for tea, served both efficiently and deliciously by our host. Susan Bell thanked Luke Thompson-Coon, Julian Burchby and his team and we departed. A thoroughly enjoyable day.

David Taylor
Our first visit on the Sunday was to Oxlodge Wood in Gorsley, Herefordshire, where we were very warmly welcomed by owner Edmund Dorman and his wife with coffee and doughnuts being served in their barn.

Seven years ago Oxlodge Wood came up for sale after the then owner received a hefty quote to manage roadside trees. Edmund had lived next to the wood for 30 years, during which time he looked at the lovely Oak woodland and its lack of management; he estimated that there hadn't been anything done in the woods for at least 50 years. Edmund's knowledge of trees, timber and sawmilling enabled him to see the potential and he decided to buy the ten hectare woodland.

As we all gathered in the barn, enjoying the provisions, Edmund gave us an introduction to his woodland and business. The yard comprised a high spec area of hard standing and good access, which was laid down during the building of the adjacent M50, providing an ideal work and storage area for the business. Edmund formed a cooperative with two forestry contractors so they could pool experience and resources. With the help of funding from a local Woodland Enterprise Grant, they bought a mobile sawmill, a firewood processor and handling equipment for extracting and converting the timber felled in the woodland.

Edmund described his Swedish style open sided timber drying barn which he has built in the yard. It is designed with a vented roof, creating a vortex which allows a constant airflow and fast, even drying of the sawn wood. He told us that 50% of the timber sawn from Oxlodge Wood so far has been joinery grade, with the lower grades being creatively marketed to get the best price possible. Edmund told us that in business terms, marketing is the most important thing he does; lesser material is used for small bespoke furniture, shingles and decorative pieces. Even interesting pieces of slab wood are marketed as decorative items, and anything remaining goes in the firewood pile. Thrift was something that rubbed off on him from his time working in South American sawmills, where nothing would go to waste.

As we started off on a walk through the woodland, Edmund explained some of its history. The name came about because the stream to the eastern edge of the site would have been an overnight stopping point for the drovers bringing cattle, sheep and geese from Wales to the markets in Gloucester. In the middle of the woods where there is evidence of historic charcoal burning, with black soil and very little vegetation. The charcoal would have been used for the nearby limestone kilns, steel works and

One of several impressive sculptures within Oxlodge Wood.
brickworks. The underlying clay was used as the raw material in the neighbouring brickworks; a nearby field is called “brick kiln meadow”, and there is a steep drop from the woods into the field which is likely to have been the face of the clay workings. This would have been a much more industrial area than it is today.

On the way in to the woods we passed a firewood stack of Oak, which was the branch wood of the trees felled for their sawlog potential. The firewood stacks are left to season in the round for two years before being processed in the yard. It was noticed that there was some shake in the wood, and a discussion broke out about its causes. Edmund told us that there was very little shake in the stems, and the shake seen in the firewood stack was probably caused during felling. Bede Howell and Roger Venables told us that shake can be much more of a problem on lighter soils, especially on sand and gravel, where the soils readily dry out. Oaks in some areas such as the Forest of Dean are more susceptible to ‘shake’ than trees grown on clay as at Oxlodge.

Currently the woodland is made up of almost pure Oak p1905, on a clay soil. We walked through areas thinned in the last five years, and the consensus was it had been well selected. In some of the thinned area, the understorey has since been kept clear for use by schools, which use Oxlodge for nature days. The children learn and play in the woods, and have planted 200 Oak saplings in clearings. This prompted a discussion about the importance of keeping and encouraging the understorey, which would keep the stems of the Oak shaded and hinder epicormic growth and which is also beneficial to woodland biodiversity. The group then discussed some ancient woodland indicators that had been spotted including Wild Service, bluebells and wood anemone. It had also been spotted that there was some very good natural Oak re-generation. Edmund then waxed lyrical about one of his favourite things the woodland has to offer – a carpet of wild daffodils each spring in the west of the wood which is advancing from Wales!

We finished our visit by spending time amongst some fantastic large wood carvings within another small clearing in the woodland, which along with some reclusive trolls are a big draw for the school groups. Teaching children about the importance of trees, woodlands and forestry is one of the most important things we must do as foresters, as it is general knowledge that has been sadly absent for generations.

**Parks Farm Forest Nursery**

Later in the morning we had the pleasure of a tour of Parks Farm Forest Nursery near Newent in Gloucestershire led by the owners Liz and Bob Taylor. They grow broadleaved transplants, whips, hedging and game cover plants for forestry, farm hedging and landscaping.

Liz and Bob have been growing trees for more than 30 years, with the majority of plants they sell grown on their 60 acres of land on light sandy loam, producing sturdy plants with good root systems. Parks Farm uses British seed provenances wherever possible, and we began the tour looking at long lines of Oak of different provenances. Bob explained how although most of the trees they grow are British, some timber growers of high quality Oak request European provenances such as Elsendorf, which grows very straight. Other species were discussed, with Liz telling us about the wild collected Hazel nuts they use to grow on rather than cast offs from Kentish cobnut production which are often used in nurseries.

**Slow germination of Oak under bird netting**

Liz and Bob grow mainly bare root stock, with some transplants and stock which is good for difficult ground conditions. Two year old bare root tend to be the most reliable, and we heard about the
technique of annual undercutting in the bed, to keep the roots in order, which is done at a depth of nine inches. A discussion developed about some of the other aspects of growing trees, such as fertilising and pest control. Bob explained how they now have to find replacement muck due to the decline in dairy cattle locally. One technique they use is growing Caliente Mustard each year which is an excellent green manure, and also has bio-fumigant properties, suppressing soil-borne pests and diseases. It is grown for a few months and then ploughed in to the ground to do its good work.

A particularly important pest to control is the Oak tip midge which lays its eggs in buds, which then ruin straight seedlings, essentially turning them into bushes – useless for growing on as timber trees! We also discussed the importance of biosecurity, with Phytophora and fireblight being of main concern to Liz and Bob.

After a thorough and interesting tour of much of their stock, from Oak, Cherry, Beech, Sweet Chestnut and Walnut heading to become fine timber trees; to Hazel, Hornbeam and a large variety of sub dominant and shrub species for under planting; to the dreaded game cover; it was agreed what great quality trees Parks Farm Nurseries produce.

We finished the tour back in the farmyard where we were able to view some of the machinery and equipment used for seeding and planting, undercutting, weeding, lifting and grading. Thanks to everyone involved for a thoroughly interesting, informative and varied day.

Nick Shanks
Field Day

Andrew Shirley-Priest and Chris Armstrong.

Will Bullough and James Walmsley.

Geraint Richards and Oliver Evans.


Some of our younger members.

Andrew Shirley-Priest and Geraint Richards.

Bede in the nettles.
Snapshots

Our thanks to Andy Pickup for his support.

Bede Howell speaks about the Repton landscape at Stoke Edith.

Nick Shanks and Sydney Draper.

Julia Evans.

Setting off at Whitbourne.

Julian Burchby.
Salvaging the Giants
How Far West Forest Products/Wood-Mizer California Tackled Three Windfall Sequoia Trees
by Jennifer Alger

Sometimes major events in our lives begin in the most unassuming ways. In February of 2011 we were demonstrating a Wood-Mizer LT50 sawmill at the World Ag Expo in Tulare, California, when a guy came up and said something along the lines of “I’ve got trees on my property that will blow the logs you’re using out of the water”. We have been doing Wood-Mizer demonstrations for about ten years now and it never fails that, at every show, someone comes up and tells us their own “big log” story. Usually the “big logs” are almost never as large as they were described to be. But this guy was insistent, and then he showed us the pictures.

Wow! He had three, old-growth Giant Sequoia Redwood trees on his property that had fallen in a storm and he needed them removed. These amazing trees were estimated to be between 2,000 and 3,000 years old before they finally succumbed to the forces of nature. The opportunity of having the honor to salvage these pieces of history that were alive at, or before, the time Christ walked the earth, was very exciting to us.

It is every logger’s dream to get a “one log load,” meaning only one log would fit on a log truck at a time. Looking at these windfall trees, we knew that every load was going to be a one log load. In July, my parents Jim and Diane Evans made the trip to determine if this was a project we were going to tackle. They noted the road conditions, and that there was a tunnel that had a maximum clearance of 14’4”, so that would be a factor hauling the logs out and the equipment in.

When my dad and brothers Cody and Jason Evans started the job, the only equipment they had on day one were the chainsaws. The chainsaws being used were: a 090 Stihl gear drive with a six foot bar, a Stihl 880 with a five and six foot bar, a 394 Husqvarna with a 48 inch bar for limbing, and a 46 Stihl. We found a 090 direct drive with a 6 foot bar later on Craigslist and added it to the line-up. We tried desperately to find a nine foot bar, but they were three months out on special order, so we borrowed a nine foot bar from a friend.

The first log was 16’6” diameter inside the bark, and the bark was 18” thick on the north side. There was no way we could have hauled a log that big off the

The logging team readies another log for transport to the WM1000.

An LT50 sawmill is dwarfed by quartered sections of Sequoia.

The WM1000 makes the last stage of the project the easiest.
Woodland Heritage 2016

property so we had to break it down first. This first log was bucked to 24 feet and was ripped into five pieces. The bar wasn’t long enough and didn’t open the log all the way, so wedges and gluts were driven in to spread the opening wide enough to get choker cables around the log sections. Scaffolding had to be built to rip the logs as they had to be ripped from the top and from both the sides, and it was 20’ from the top of the log to the ground on the downhill side. Logging on steep ground is always a challenge, so limb wood and debris were piled on the lower side to keep logs from rolling downhill when bucked.

The saws had to be filed perfectly. If they weren’t, they would have easily drifted in the cut. Since we were coming in from both sides on logs this big, matching them up horizontally and vertically was no easy feat. If your saw is not sharp and your hands are not steady, the cuts could be off several feet when they meet in the middle, and the wood was far too valuable to allow that to happen.

While they were working up the first log, I was back at the shop scheduling the first piece of equipment to ship to the jobsite, our 1450 Case Crawler. It was way too small for the job, but it’s all we had. When the driver got to the bottom of the hill with it, he panicked, as the road was more extreme than he expected, and waited there for half a day until he could locate two pilot cars for the rest of the trip up. The road was laden with switchbacks and climbed from 800 feet to 7,000 feet over approximately 30 miles, and every trip required a pilot car.

This first log was skid with just a 1450 Case. Even though this 24’ log had been split into five pieces, the 644D still wouldn’t lift them, so the sections had to be loaded onto the trailer one end at a time with a ramp made out of round logs to block it. The first piece to leave the landing went out on our 30’ Gooseneck FeatherLite trailer being pulled by Cody’s F450, as it was the smallest section of log, and he took it back to our facility in Sheridan. The next piece to leave the landing was a ¼ section of that first log, and we were able to put the one section on the short logger. We then decided to start using low beds and sent the logs down the hill where we had a cold deck. We started hiring 25 and 35 ton low beds to haul the logs out for us, and later added a low bed of our own.

We finally located a 350 JD excavator, but it didn’t arrive on the jobsite until log eight of the first tree, so we were loading with the 644D loader using ramps we made out of logs. We would put logs up alongside the low bed that were about 2” lower than the bed and decreased in diameter as they went down, and then roll the logs up onto the deck.

Every log was logged uphill. One guy would be in the excavator pulling the log and tracking backward up the hill, while the dozer would be pushing it from the bottom at the same time. It was a slow process – pull and track backwards, pull, and track backwards. If you went too quickly or if the dozer broke traction, you would snap a one inch choker in a split second. I shot some great video footage while riding on the dozer with my dad driving. We were below the log pushing and going straight up a hill while my brother Cody was pulling with the excavator, and I was praying that we would not break traction during the more than ¼ mile skid up to the landing. When you’re in the woods on steep ground, you really want to work with someone that you know and trust. You
know what their skills are and can anticipate their next move instinctively.

When we got to the third tree, the butt log was buried in about five feet of dirt. When this massive tree fell, it pulled dirt up with the root wad and covered the log with it. We had to go up about 25' from the root wad to make the first cut and then buck two 16' logs out of it. When we pulled the center log out, the log on the uphill side slid down into the butt log that still had the root wad attached and it shook the ground like an earthquake. The impact knocked a “splinter” out of the log. It measured 3' x 12" X 12' long!

We sold several logs whole in order to pay for the job, and then started sending them back to our facility for processing. Due to the size of these logs, we still had to quarter them before putting them onto the WM1000 with the 67" throat capacity. We are now able to cant these out using the WM1000 and then take them over to our LT40 Super for further processing. We are also using the WM1000 to cut 67" Redwood slabs that people are buying for tables and bar tops. We've salvaged close to 100,000 board feet of Redwood on the Scribner scale from those three trees, and aren't even finished yet. It wasn't all good wood, as there was fall crack, cull centers, wind shake, ring shake, and cat face. But there has been a lot of amazing clear wood in it, and it has been a lot of fun! We feel truly blessed to be a part of giving these trees a second life and allowing them to “live on” and be enjoyed by others for many years to come.

About the Author:

Jennifer Alger operates the Wood-Mizer California Authorized Sales Center with her father Jim Evans. She has years of experience matching people with the best sawmill to fit their needs, and has helped support their success by providing dedicated service and support.

She also runs lumber sales and promotion for Far West Forest Products, actively promoting west coast hardwoods, and the utilization of urban logs for lumber. She has a passion for helping other sawmill operators achieve success, and has organised training workshops for skill development including marketing and operating a small sawmill business.

Far West Forest Products
www.farwestforest.com

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I suppose we all have milestones in our lives that can result in a reassessment of that ‘grand plan’. One of mine came 20 years ago when, as a craft teacher, with over 20 years’ experience, I was told by my area advisor that I was no longer required to pass on my skills, but simply to train the students to pass exams.

That however wasn’t the reason I went into teaching. Passing on my skills in wood, metalwork and technical drawing was what I wanted to do. I even accepted the introduction of plastic with some reluctance knowing that at least the students were still learning bench skills. However, the writing was plainly on the wall with the introduction of the National Curriculum and League Tables; no longer the need to set up a bench plane to plane an edge and face edge at the start of the project – no longer the need to ‘measure twice and cut once’. The students were now given – by any other name – a kit of parts that simply required gluing, stapling or nailing together. Blue Peter would have been proud, with the use of hot glue guns, bits of string and toilet roll centres! Design was now the key, never mind the lack of making skills.

Design was carried out using paper and scissors only – no pencils allowed! Joints were no longer taught; students were expected to ‘discover’ how to join wood and metal by trial and error. Thankfully my sixth form kept me sane. Between us we could ‘design and make anything’! From hydraulic waste compacters, solar powered boats, steam bent furniture through to traditional cabinet making.

My next milestone was fast approaching – getting out! Having missed redundancy by a whisker – proper craft teachers were no longer required. Being too young to retire early and with the escape tunnel from the staff room being over booked, there seemed only one way out – self-employment – arghhhhh! “Wot no regular salary.”

Thankfully as a breed, craft teachers could usually turn their hands to skills outside the classroom. One of my sidelines was the manufacture of cast aluminium and wrought iron village signs, and that together with a chance remark regarding parish church notice boards led to a hurriedly hand drawn and photocopied A4 price list which then quickly turned into a 15 month order book. Was it really going to be that easy? It seemed that the ‘escape plan’ was in place.

Notice boards still form the backbone of our work, and with few competitors producing a premier range and none specialising in English Oak, we quickly became firmly established with customers ranging from Town and Parish Councils to those with listed buildings and conservation areas to consider. In those early days when good quality English Oak seemed impossible to find, our introduction to Peter, whom we have to thank enormously for his help and advice so freely given, saved the day.

Over the years our range has increased enormously, so too has our customer base. A number of National Trust properties have not only helped to expand our range from simple signage, replica rocking horses, to large below stairs kitchen tables and church furniture. A thoroughly enjoyable milestone with the only regret of not starting it earlier. However the next milestone is now upon us, and that is to move the business on. The whole of the English Oak product range is for sale, whilst the village signs will remain as I’m sure I can still fit those in and around all those unfinished jobs. Not least of which is the building of a green framed garden room and who knows a green framed two storey orangery – well one can only dream!

So if anyone out there is looking for their next milestone either as a career change or a ‘bolt-on’ to an established joinery/furniture making business take a look at www.barrystebbing.com

Life’s Milestones
by Harry Stebbing
Reflections on my woodland crafts

by Mike Abbott

A couple of weeks ago I received an email from Belinda giving me details of the WH Field Weekend 2016 and sending me a copy of the article by Peter Nyby describing his summer as assistant during my green wood chair-making courses. Belinda went on to ask if I could write a short article to accompany Peter’s, ‘something along the lines of your contribution and achievements in education, reviving and promoting traditional crafts....’

Reading through Peter Nyby’s article, I can see that he has given a very good impression of my approach to nurturing the next generation of green woodworkers. I was tickled by his description of me as ‘an old time woodsman’ pointing out that my book ‘Green Woodwork’ was published the year that he was born. That does make me realise that approaching 65 years old, I am now more of a Gandalf than my cherished image as Robin Hood with his band of merry men hidden away in a woodland clearing.

Peter’s departure at the end of September 2015 coincided with my final departure from the woodland workshop at Brookhouse Wood, where I had spent eleven very happy and fulfilling summers introducing around a thousand customers to the delights of turning trees into chairs. It was also the 30th anniversary of establishing my business, Living Wood Training, the aim of which was to earn a living running green woodwork courses, giving craft demonstrations, producing green wood products and writing about woodland crafts.

In fact yesterday I received a letter from the Department of Work & Pensions explaining how to claim my pension, which is due this coming May. It dawned on me while walking the dog, that I should now be able to escape the pressure of running a full-time business. However, with two teenagers still in full time education and a mortgage shortfall to pay off in twelve months’ time, I’m going to be working as hard as ever in the foreseeable future! Still, with Belinda’s request in mind, a brief reflection would seem to be in order, greatly assisted by referring to my book ‘Living Wood – From Buying a Woodland to Making a Chair’ (£16.95 from Amazon but only £15 from Living Wood Books with free p&p, smiley face!).

While in my twenties I had read two books which had a profound effect on my future direction. The first of these was ‘Woodland Crafts in Britain’ written in 1949 by Herbert Edlin, publications officer for the Forestry Commission, which carefully documents the wide range of woodland crafts in Britain, both past and present. The other book was published in 1854, entitled ‘Walden, or Life in the Woods’ by Henry David Thoreau, an American philosopher who recorded the two years in which he built a woodland
cabin in which to experience something of ‘the simple life’.

After several years working in amenity horticulture, which included a course in arboriculture, I spent a year on a Recreation Management course during which I undertook a project entitled ‘An examination of the role of Private Woodlands in providing for informal recreation in England and Wales’. I explored the many opportunities that woodlands provide for informal recreation and developed the concept of ‘A Living Woodland Environment’, and listed the following attributes of the typical private woodland:

1. Proximity to large urban conurbations
2. Multi-purpose capability, e.g. timber, shelter, wildlife
3. Ability to absorb many people without appearing overcrowded
4. Seasonal attractions e.g. spring bluebells, autumn colours and Christmas trees
5. Provide many useful raw materials e.g. steps, bridges, adventure playgrounds, buildings, etc
6. Yield a wide range of saleable products e.g. tools, furniture, household goods, etc
7. Potential base for running courses

My report finished by quoting from ‘Leisure in the Countryside’ produced by The Countryside Review Committee in 1977: ‘Forests and woodlands provide an immense and increasing resource for recreation in the UK ... they represent one of the big opportunities for the years ahead and are, perhaps, the last major frontier for rural leisure.’ In the summer of 1979 (yes, 37 years ago) I sent a copy of my report to the Countryside Commission and received a very positive reply from Keith Turner, their Land Management Advisor including the comment “The acid test would be to find an entrepreneur willing to have a go.” (see my review of ‘Thirty Years in Wilderness Wood’ on page 113 describing just such an enterprise)

I then spent a couple of years as a labourer for a landscaping firm in the Black Forest in Germany, followed by three years supervising a woodland youth training scheme and a year unemployed, before taking the plunge and setting up Living Wood Training in 1985. After a winter based at Windmill Hill City Farm, a summer running courses around the country and another winter with BTCV near Bath, I was put in contact with Brian Maggs, a friendly farmer with some woodland to the south of Bristol. With an old tarpaulin slung between some trees and a small collection of hand tools, I was back in the woods again.

It was certainly hard going at times but, on the whole, fortune was very much by my side. I was invited to attend some woodworking shows, I had a few brief TV appearances and then the lucky break of being asked to write a book about a subject that had been virtually forgotten just over the space of a generation or so. As is the tradition of the chair-bodger, I packed up my woodland workshop each winter and for the first ten years I moved from wood to wood. In 1994 a group of us got together to buy a Herefordshire woodland, which we renamed after a local Victorian chair-maker called Philip Clissett. Here I ran my courses, sharing the workshop with another ex-student, Gudrun Leitz, then ten years later I moved to my final woodland workshop at Brookhouse Wood.

With up to 100 customers on courses each year, I must have shared in the fulfilment of creating around 2,500 greenwood chairs, not to mention all the spoons, hay-rakes, shaving horses and other functional wooden artefacts. I derive great satisfaction from observing the careers of my ex-assists as I like to call them. Ben Orford is now selling highly sought after knives and other tools all around the world. Barnaby Carder (better known as Barn the Spoon) has run a flourishing shop in London selling spoons and is also one of the brains behind the extremely popular Spoonfest. There are many more ex-assists running successful coppice and craft businesses while several more now have regular jobs in therapeutic institutions catering for people with learning difficulties or with behaviour disorders. Others are using their green wood skills in the blossoming Forest Schools movement, while others have become involved in the mainstream forestry industry.

I know the main thrust of Woodland Heritage is to encourage the growth of high quality British timber and this is a very worthy goal indeed, but as I glide gently into being a quaint old rural chair-maker, I would like my legacy to lie with future generations who manage to embrace the wider population into the manifold delights that are offered by our diverse and magnificent woodland heritage.
“Le Chene Autrement” according to Jean Lemaire, but is it possible in the UK?

Well at 4.30 am on 1st November we set off to find out. Four hours later we arrived at Folkestone, all aboard the train for Calais; a new experience but very impressive. Soon we were speeding down the A28 for Tours, regaling stories of UK forest policy and imbibing the bucolic scenery. Finally at 6.00 pm we safely arrived in Tours, where one by one all our fellow delegates arrived and joined us for dinner - well almost all...

**Chemere Le Rois**

After an enjoyable dinner, a pleasant night’s sleep, and an archetypal breakfast, we boarded the coach and headed for Chemere Le Rois. There we were greeted by Eric Sevrin and his colleagues from the CNPF (roughly equivalent to Woodland Officers in the UK) and woodland owner M. Le Nail. He described his woodland techniques and success stories with such brio. First we were shown a stand of pure Oak of 19 years, which had been directly sown into a former arable field, following conventional cultivation techniques. The spacing and thinning regime proved very topical. The spacing was 2.5m between rows but sown densely within the rows to establish 15,000 stems/ha. To achieve this through conventional planting would prove very expensive, however when sowing direct this isn’t such a concern. It was however the thinning regime which proved to be the more radical aspect. As British foresters we naturally asked “at what age will you thin this?” A reasonable question we thought, only to be told “At 9-10 metres high – age is irrelevant,” and yes, we agree.

Once the trees reach this critical height the focus is placed on the best stems, to favour the likely final crop trees, and not necessarily worry about removing the poor specimens. An interesting concept to grasp perhaps?

Selecting too many final crop trees early on, with this system, doesn’t work. It seems very risky to put such faith in such few trees, however a key message from the CNPF foresters was ‘to decide on a system early on, and stick to it;’ a seemingly wise mantra, but dangerous in light of future climate, pest and disease issues?

Having seen the younger stands, we were soon whisked away to an older stand, 24 years old, and to possibly the nicest stem. The quality and size of stem at this age was clearly very impressive.

**Forêt D’Amboise**

Here we were met by staff of Unisylva, a large co-operative, Laurence Degoul, the area forester, and the Director, M. de Boncourt. The co-operative is the second largest in France and manages 360,000ha, including some of the finest northern Oak forests. The idea is that the group take a commission from timber sales, and charge time as necessary, within given budgets.
The first stop here was a 30-year-old stand, comprising Oak and Hornbeam. The Oak had been planted as one-year-old plants, in contrast to direct sowing methods seen previously. The Oak source was from a neighbouring stand, as the previous owner preferred local provenances. The Hornbeam was being encouraged within the stand to help keep the Oak stems clean, and again thinning will take place based on height of crown. We went on to look at various mid-rotation stands, applying the principles of Jean Lemaire. Key messages learnt from his principles are an ‘extreme vision’ and if this management principle is to be adopted, it should be carried forward throughout the crop cycle. The second mantra was always to think and work at the tree level, not on a stand level, and the selected trees are what matters, not what is left.

After witnessing some very fine stands and exemplar woodlands depicting the principles of Jean Lemaire, we discussed forest policy and timber utilisation. In France all woodland over 25 ha requires a compulsory management plan in order to carry out any operations; almost as bureaucratic as the UK!

The sawmill

Next we visited the Scierie Besson sawmill in the Chateaux de la Loire region. Founded in 1921 and now run by the third generation, the mill processes approximately 10,000 m³ of logs/year, predominantly Oak, but also some Douglas Fir. The French have been losing approximately 100 sawmills per year, in part due to strong competition from the Far East. The sector has been helped by new laws requiring timber to be milled before export outside the EU. However, imports of the finished products made cheaply abroad, often with French timber, are maintaining a downward pressure on prices.

Thankfully Scierie Besson is thriving and has an efficient and highly automated mill more familiar in the softwood sector in the UK. Careful grading of each log and an experienced eye is still key of course, not least for the lucrative barrel market. Sections for barrel making are cut to 1.1m lengths and sold on in the round to specialist coopers. They must be completely clean, although minor star shake is acceptable. Uniform ring width is important and the finest ‘chateau’ vineyards require barrels of a pale, uniform colour without visible rings. Buyers will often taste the sawdust to match it with specific grape varieties.

Perhaps only 10% of a typical parcel might meet these exacting requirements, but this can account for 40% of the parcel’s value, with prices of up to €600/m³ for the best cooperage grade logs. It is also a growing market as expanding New World vineyards seek the unique qualities of French Oak barrels. Driven by this demand, the barrel market in France has only recently started opening up to the private sector: historically only Oak from state forests was considered worthy of this prestigious market.

Second grades are planked and air-dried as ‘boules’ for several months before being kilned to about 10% moisture content. The mill does not re-saw any timber, although it does work with a local company producing tongue and groove flooring, of which an articulated load a week is exported to the UK. Various grades of beams are then cut from third and fourth grade logs, with lower grades going for railway sleepers and the very lowest grades, which would typically be regarded as firewood in Britain, being profitably converted to garden sleepers.

Hunting

That evening we were treated to a visit to the Chateau de Montpoupon, including a tour of M Louvencourt’s extensive museum of hunting. This offered an illuminating insight into the cultural importance of hunting in France. Nevertheless there are familiar challenges, for forestry as well as hunting, in areas where communities are increasingly losing touch with this culture.
The final two visits

Our third and final day began with a visit to another young, privately owned woodland: 20ha of pure Oak established on former arable land in 1995. Here we were given the opportunity to put what we had learnt into practice and mark a stand for thinning following the principles of *la sylviculture dynamique*. We were divided into two groups, one marking final crop trees or ‘winners’ and one marking the trees to remove. Although only an average quality stand by French standards, we soon discovered how difficult it was to limit ourselves to just 80 trees/ha (or approximately 11m spacing). The importance of a ruthless eye became clear, however, as the second group followed on behind marking the trees to remove: if too many final crop trees are marked, the ‘halos’ round them start to join up and the stand becomes too open, leading to epicormics. *This is the crucial difference between Jean Lemaire’s system and simply heavy thinning: free growth is allowed on the selected trees, but a dense canopy is maintained throughout the matrix to protect from too much lateral sunlight.*

Our final visit of the tour was to a state-owned forest and to experimental plots that were being used to collect data for yield and growth models. Here we saw different thinning regimes being applied to forest stands, all of which started in the same way as 1987 natural regeneration, initially at approximately 40,000 stems/ha. For research purposes, different treatments were being taken to the extreme, from no thinning at all to complete free growth applied at an early age. While neither extreme would be recommended in practice, it provided an interesting visual reminder of the effects that thinning has on form and girth increment and it is hoped that the data will test some of the anecdotal evidence collected by Jean Lemaire and his colleagues.

In particular, one of the central ideas to *la sylviculture dynamique* is that intervention has to be very early and that, once crowns become restricted, growth slows irreversibly and a 200+ year rotation is unavoidable. Some of the plots in this experiment were being deliberately thinned late to test this scientifically.

The intermediate treatments included an accelerated version of *la sylviculture classique*. Here stocking was taken down to 1000 stems/ha when top heights reached 9-10m (age 24 in this case – much earlier than traditionally), but selective thinning was applied across the whole stand in the more familiar way. It is hoped that this will produce 9m logs in 150-180 years.

Here an excellent trip drew to a close and we set off on our respective journeys. On the long drive home, we mulled over what we had learnt. It is hard not to be envious of a country without grey squirrels, where prolific natural regeneration can be relied on and prices of €600/m³ can be achieved. However, the French have plenty of challenges of their own from climate change to increasing market competition, but they are tackling these head on with radical and innovative silviculture. It hasn’t always succeeded, and classic silviculture still has a place, but at its best dynamic silviculture has produced some astonishing results.
**Introduction**

Oak as a timber has a long history in Britain. As an amateur woodworker, I choose Oak over most other timbers for furniture, turning and wood carving. This article looks at its history and its many uses, past and present.

**Early history**

Oak is perhaps the quintessential British tree. There are two native species; Pedunculate Oak *Quercus robur*, so called ‘English Oak’ and Sessile Oak, *Quercus petraea*. Both arrived in Britain around 11,500 years ago, first coming into the south west from Iberia and later into the south east from the near continent, following the first pioneers, such as Birch, Hazel and Scots Pine after the last ice age about 7500 BC. As the climate warmed, Oak and Pine both spread northwards at about the same rate, as evidenced by pollen records. The two Oaks cannot be distinguished separately in these records, although *Quercus petraea* tends to occur on lighter, less fertile, soils, whilst *Quercus robur* is more often found naturally on heavier clay soils, which is also an indication of where they are best planted.

The earliest references to Oak being recognised as two separate species can be credited to Loudon in 1830 in his *Arboretum et Fruticetum* rather than as differing forms of *Quercus robur*. At this time the controversy over the quality of the timber was being debated; that of sessile being regarded as inferior, however; there is no discernible difference in the timber quality of the two British Oaks.

By 4000 BC, temperatures in Britain had reached the ‘climatic optimum’ (about two degrees Celsius higher than today). Ancient Oak remains in peat bogs show that it grew to considerable sizes, occurring naturally alongside Elm, Birch, Rowan and Lime and in much wetter locations with Alder, Poplar and Willow. By then man was already having an impact on the natural forest, when felling and burning would have favoured Oak and Hazel over Pine as both Oak species coppice well by re-growth of several shoots from the cambium of the cut stump after felling. Oak thereby, began to dominate much of the British woodland.

**Early uses of Oak timber**

Man very quickly found many uses for Oak timber when it was realised that it could easily be cut and shaped with flint axes. By the Neolithic period (3000 BC) Oak bark and Oak galls were in use as a source of tannin to render skins soft and pliable for clothing. A Bronze Age canoe estimated to be about 4,000 years old and fashioned from an Oak log, was found in Yorkshire, and at this time Oak was also already
being used to make coffins and no doubt for early house building too. Oak, as well as other timbers, was used in the construction of early trackways across wet ground; both the ‘Sweet Track’ (3860 BC) and the ‘Meare Heath Track’ (1400 BC) in Somerset were constructed using Oak timber.

There are also many records showing Oak woods as a source of acorns for ‘pannage’ (forage for wild boar and later for domesticated pigs). In the Domesday Book, Oak woods were valued for this. It is likely that Pedunculate Oak was favoured because it fruits much earlier and produces heavier acorn crops than Sessile Oak.

For tanning, the bark of sessile Oak was preferred and the demand for it rose steeply in the 18th and 19th centuries. As well as obtaining Oak bark from large trees for this purpose, many coppice woods were established for this too, with the stools cut as low as possible in order to obtain maximum coppice shoots. Eustace Jones, writing as recently as 1959, explained, that with: “close cut stems many new stems arise from below ground level and form their own adventitious roots” thus giving a good reason for cutting low (though seldom practised now due to the use of the chain saw).

Other, more familiar uses of Oak, such as ship building and furniture making will be dealt with in Part 2 next year.

### Propagation and Establishment of Oak woodland

The clearance of woodlands in Britain commenced about 10,000 years ago but Oak does not regenerate easily from seed (acorns) because the seedlings need more light than occurs in woodlands. It seems likely therefore that coppicing was the more usual way to recreate Oak woodlands; indeed, there is evidence of this early in man’s cultivation of the land.

From Roman times onwards managed woodland regeneration was active. Oak was often grown in ‘pasture’ woods; the isolated, open grown trees having heavy, spreading branches, providing ‘crucks’ for house construction and ‘grown’ timbers for ship building. The Royal Forests in particular provided these conditions, as well as pasture for deer for the Royal Hunt. By the 16th Century Oak charcoal was required for the rising industry of iron smelting but this needed smaller trees (around 17 years old), whilst Oak coppice for tan bark was managed on a 24 year rotation.

Natural regeneration of Oak was also encouraged, often supplemented by ‘dibbling’ in acorns. It seems that the first pure Oak plantation, as compared with coppice or natural regeneration, is credited to Lord Burleigh in Windsor Park when 13 acres were enclosed and planted between 1550 and 1560.

By the 17th Century the raising of Oak seedlings in nurseries for some years before planting out, was found to be advantageous. Thus Church wrote in 1612: “And in this garden or nursery thus made you may, when they are grown to three foot high, remove them how many you please.” Whilst Evelyn, writing in 1664, strongly recommended raising Oak first in a nursery in order to get taller and faster growing young trees to plant out, rather than by natural regeneration and, indeed, this remains true today. He also realised the importance, when raising Oak seedlings, of transplanting in the nursery in order to cut back the tap root and thereby encourage fibrous root development, before planting out.

Evelyn, writing in the 17th Century, recommended what we would still regard as important for establishing Oak today; the importance of collecting acorns from good trees, sowing in the autumn rather than over-winter storage, the greater success of seedlings grown in a nursery before planting out compared with those from direct sowing, the importance of weed control, the care of roots whilst transplanting, the advantage of cutting back tap roots, the greater success of small transplants over larger plants and the need for shelter for Oak, as well as the success of cutting back the apical growth in young Oak in order to encourage a single leader.

Surprisingly, he did not understand how trees grow, believing that they expanded from the centre of the trunk outwards and upwards. It was not until Nicols, writing of Oak in the New Forest in 1791, stated that: “Trees of all kinds increase in their diameter by additional coats of new wood annually formed by the sap, between the bark and the coat of the previous year and these coats never increase in thickness. There is no expansion from the hearts of trees as some have imagined. Trees increase also, in height by the repetitions of new shoots, and these never extend in length after being once formed.” Incidentally, not many years ago, I met a woodman who had spent all his life in forestry but still believed, as Evelyn did, until he realised that the height below the branches of a woodland he had brash several years earlier, had not increased!
The fire of London in 1666 meant further demand for Oak as it was ordained that: “When rebuilding London after the fire only Oak was allowed to be used for roofs, doors and windows.” However, by then Oak plank was in such short supply for shipbuilding that it was imported from Ireland and from as far away as Poland.

Oak planted in response to Evelyn’s famous Silva (1662) was not always looked after and needed to be 120 years old to be large enough to contain sufficient heartwood for framing large ships. In the 17th and early 18th centuries therefore, suitable trees were in short supply.

**Natural regeneration of Oak**

Although natural regeneration of Oak has been widely practised over several centuries in Europe, it has never been very successful in Britain; in Evelyn's Silva it is not even mentioned. There are several reasons for this; damage to the foliage by Oak mildew, defoliation by Tortrix moths, the seedlings' sensitivity to frost and acorns eaten on the ground by small mammals. Perhaps the most important reason of all is that Oak seedlings require high light intensities after the seed has germinated. In 1745 Ellis commented on Oak seedlings colonising meadows near woods, a situation often seen today, particularly in the New Forests, as an indication that Oak seedlings need light.

Peter Savill, writing in 1991, goes so far as to say that: “Natural regeneration of Oak is usually accomplished in Britain with difficulty, if it can be accomplished at all.” He goes on to warn that: “Attempts to manage Oak by selection or group systems (except by using very large groups) are doomed to failure, and the concept of an intimately mixed, all-age climax woodland is impossible.” This is a salutary warning so far as Oak is concerned in view of the popularity of the ‘continuous cover’ concept today.

**‘Nurses’ for Oak**

Perhaps the most important lesson from the past for us today is the technique of ‘nursing’ to establish Oak. In 1671 Pepys, with regard to Oak in the Forest of Dean, wrote: “in divers places – especially where there are bushes – the Oaks come up very well but not so in bare places.” In other words, to establish Oak well ‘nurses’ are needed. Today evergreen nurses are available and are more suitable than bushes. Thus, Haddington in 1761 is credited with the first use of conifers to nurse Oak, whilst Nicol (1803) favoured Scots Pine to nurse Oak on poor soils and Larch on better soils, warning though that “in no case however should the nurse be suffered to overtop or whip” the Oak. The Deputy Surveyor of The New Forest in 1819 found Scots Pine the best nurse for Oak on poor soils, whilst Billington writing in 1825 with regard to the Forest of Dean, emphasised the importance of removing the nurses in time “otherwise they are the worst enemies”. Thus by the late 18th Century the value of nursing Oak was widely accepted.

On the value of conifer nurses for Oak, Evelyn quotes Claudian, thus: “the friendly Pine the mighty Oak invites” which was followed by much planting of Pine alongside Oak in Scotland as well as at Welbeck in Nottinghamshire where Pine was also used, being removed before they impeded the Oak.

Sang and Pontey (1809) used conifers – Scots Pine, European Larch and Norway Spruce – as nurses for Oak, pointing out that conifer thinnings are more valuable than young Oak. Both authors recommended three nurses to one Oak.

Blyth et al., writing in 1987 point out that: “The presence of an occasional conifer in a predominantly broadleaved woodland (and there are many examples for the observant) is a good indication that the woodland was originally a mixture. The conifers probably acted as a ‘nurse’ for the broadleaves and were mostly removed in early thinnings.” Similarly, Hart writing in 1991, states that “Oak appreciates a nurse, e.g. Norway Spruce, European Larch or Western Red Cedar, of which Red Cedar (Thuya plicata) is often the best as it has a narrow crown unlikely to suppress the Oak.”

One of the first research trials of Western Red Cedar as a nurse for pedunculate Oak was by the Oxford University Forestry Department in the University’s Wytham Wood in 1949. After 15 years it was reported that the Oak was doing well and it was noted that the early sales of Cedar foliage to the floristry trade was of significant economic benefit. Darrah and Dobbs writing in 1967 of the same experiment recorded “a good example of an Oak-Red Cedar mixture at Wytham”. Whilst an RFS visit to Wytham in 1998 reported: “The two species had grown very well together and the Cedar appears to reduce the growth of epicormics (adventitious shoots arising from dormant buds on the trunk when suddenly exposed to light) on the Oak.” However, this was followed by a period when ‘ecology’ took precedence over forest management and squirrels were allowed to destroy this promising stand. WRC was also used successfully on the Whitfield Estate, in this case with Sessile Oak, whilst at Garnons Estate in Herefordshire there have been a number of Oak-Red Cedar mixtures, their success attributed to the removal of the nurses before they impacted on the Oak.

Undoubtedly the most successful long term use of conifer nurses for Oak was at the Chichel Down Estate in Dorset where 57 year old Oak, originally...
planted with four different conifer nurses (Japanese Larch, Norway Spruce, European Larch and Corsican Pine), now long removed, has produced one of the potentially finest stands of Oak in Britain and may well achieve the original owner’s objective of veneer butts at 80 years.

Norway Spruce has also been used extensively as a nurse for Oak but as Julian Evans pointed out in 1984, Spruce grows too fast in the wetter west (achieving at least yield class 14) due to wetter conditions and suppresses the Oak, whereas in the drier east of Britain, Norway Spruce grows more slowly, at yield class 10 or 12, and is then an ideal nurse for Oak.

Thus we see that when Oak was the most important timber grown it was usually established initially with conifer nurses.

The management of Oak

Brown, writing in 1851, drew attention to the special silviculture needed to grow good Oak, emphasising the need to give it more room and light in the later stages of the rotation than other hardwood species. “Oak trees, after they are once properly established in the ground, and brought into shape by judicious pruning, must, through the whole course of their culture afterwards have more room and air than any other species of hardwood trees …”

Thus he captures the essence of growing Oak and gives us the guidance to the successful cultivation of Oak today. He continues: “There is no part of the forester’s education more neglected than a thorough knowledge of the size that trees ought to be at a given age.” Foreshadowing today’s yield tables, he provided a table for Oak which showed the average diameter of trees on good, moderate and poor soils, anticipating by 165 years what French foresters are telling us today.

Much of the direct knowledge of these 19th Century authors has been lost but their writings can still provide useful guidance today. As we have seen, they were aware of the silvicultural value of conifer nurses to ensure good early growth. Having obtained height growth by this means, they knew that Oak needs space to grow in order to get open crowns above the length of the bole required. They were conscious too
of the importance of controlling epicormics by limiting their growth through shading the young stem and they also gave due attention to pruning.

By the early 20th Century Beech was being used under Oak to control epicormics and this technique was following the practice used for the famous Spessart Oak in Germany. In Hungary today Hornbeam is used for this purpose in the early years of the rotation and this practice was adopted by the Earl of Bradford in his woods at Weston-Under-Lizard. Michael Harley, one time Manager of Dartington Woodlands, writing in 1982, considered the silvicultural problems of growing Oak and gave useful advice. “There are many problems in growing Oak, with many expensive operations and with very few returns.” He warned of: “The impropriety of growing Oak pure … and the folly of planting Oak under Oak.” He pointed out that: “The over-riding silvicultural characteristic of Oak is its light demanding nature which raises problems both when grown pure and in mixture.” He goes on: “Now, Oak is a light demanding species which does not tolerate shade at any stage of its development, so satisfactory restocking with Oak is not likely to be achieved except in the centre of large gaps. To plant Oak … into small holes in the wood is probably a complete waste of time even if it pleases the planters, and will delay the replacement of the crop.” Similarly, with regard to planting groups of Oak in a mixture of other species, he warned that: “The small size of the groups necessitates early reduction of encroachment by the surrounding nurse crop and the two metre spacing needed to allow mechanical weeding requires even earlier attention to pruning the low branching Oak.” Referring to the conversion of Oak coppice to high forest, Harley said that: “Selecting any maidens (seedling trees), singling the coppice stems on selected and sound stools and thinning gradually to develop ‘high forest’ is aesthetically pleasing but it takes a long time and the prospects of high quality timber eventually are not good.”

Evans considers that epicormic growth is more common on Pedunculate Oak than on Sessile although of course, ‘pippy’ Oak resulting from these adventitious buds is popular for decorative work.

**The future management of Oak**

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Epicormic growth on a previously hedgerow Oak, now exposed to full light, resulting in a profusion of leafy twigs sprouting from adventitious buds under the bark. Sudden exposure to increased light often has this effect.

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Oak timber had many uses in the past and was accordingly valued. Today its uses are more limited, so we need to grow it to a high quality to be marketable but there is much Oak planted today that will fail. Peter Savill, writing in 1996, pointed out that: “Oak which has grown very slowly, with annual rings less than one millimetre wide, is weak and brittle because it is composed almost entirely of spring wood (early wood), made up of large diameter vessels. It is very light when dry. The later formed summer (late) wood gives Oak its strength. Hence, the faster Oak is grown, the stronger it is.”

Oak is also prone to ‘shake’ (internal structural failure) which it shares only with Sweet Chestnut. There have been many theories put forward to explain this but only recently research by Henman and Denne ((1992) has attributed this to sudden changes in growth rate, thereby emphasising the need for regular thinning.

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Oak fruit bowl displaying the attractive effect of adventitious buds around which the wood has grown.

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This is the first of two articles. The second will appear in next year’s Journal.
Action from our
2015 courses
From Woodland to Workshop

One training course that covers growing trees to their final processing

As our 'From Woodland to Workshop' course celebrates its 200th student, recent attendee Jacob Mooney, Public Relations coordinator for Wood-Mizer Industries in Europe, Africa and Asia, reflects on his experiences on three unique days learning the Woodland Heritage way.

People often ask me to describe Wood-Mizer’s average customer and my typical answer is something like, “Anyone with a need to process logs into a semi-finished or finished timber product.” Quite broad, but true. We have large segments of customers who simply use the sawmill for their own hobby wood projects, farmers who produce their own timber for maintaining their outbuildings, masterful woodworkers who need specific species in specific sizes, and the list goes on. Our range of small to large sawmilling systems has resulted in a wide variety of customers, all using the sawmill to do the exact same thing – cut wood. But that may be the only similarity between them. Each is very involved with wood, but in different ways and at different points along the processing chain.

Many customers manage the entire growing, felling, sawmilling, drying and final processing in their own backyard, demonstrating the entire timber industry using their own woodland. That requires a lot of knowledge in areas of the timber industry that often do not overlap when it comes to educational courses.

I was pleasantly surprised when I heard about a course offered in Herefordshire twice annually – ‘From Woodland to Workshop’, run by the charity Woodland Heritage. I immediately grasped the value to be gained simply by the four-word title, which matched up surprisingly closely to Wood-Mizer’s own motto of ‘From Forest to Final Form’.

The course covers the use of timber from the planning and maintaining of a woodland, through to valuing trees, sawmilling logs, and then drying and turning the timber into a final product in the woodworking shop. Since Wood-Mizer’s customers are represented at each stage that the course covered, I felt this was a course I should attend. Prior to working at Wood-Mizer, my only connection to the timber industry was a framing construction job for a few years in the United States, and so I am always looking for ways to learn more.

“There are courses for cabinetmakers, there are courses for architects and designers, there are courses for foresters,” states Will Bullough, one of the course founders and instructors, as well as the facility host. “But the whole middle area of the timber industry – the sawmilling, the drying, preparing and so on – there is no system of education for that, and there never has been, it’s always been learned in the trade. So one of the main reasons for the course was to try to put those trades together in the same room. And put them all on a single course where they will learn a huge amount about all the different aspects. We feel they will benefit greatly from knowing about what their allied trades do.”

The Woodland to Workshop courses are so important because people come to it who are foresters that know nothing about woodworking, and woodworkers who know nothing about forestry.

The three-day course is hosted at Whitney Sawmill in Whitney-on-Wye, Herefordshire www.whitneysawmills.co.uk The instructors are all experts in their respective fields, and it was invaluable for all who attended to plumb their experience and knowledge during all three days.
The full list of instructors can be found on the Woodland Heritage website, and all of them earn their living from the topics they cover on the course. So their advice is highly practical and based on experience in the real workplace. My description of the course contents will follow a slightly different order than how it was presented chronologically.

From Woodland…

We spent a full day in the stunning Duchy of Cornwall Woodland, and were able to see a real woodland in various stages of development along the trail.

Planting trees

Deciding which species to plant is very important due to the length of time between planting and final harvesting. Once the tree is planted, it is there to stay until harvesting. A lot of discussion focused on what considerations should be made to determine the best possible planting strategy, and how to improve seedling survival rates during the first few years.

1. The Right Place – Start by looking at the climate, soil, local pest threats, existing trees that can provide shelter, etc. and know the conditions of your site.
2. The Right Tree – Then decide which species is best suited for the site. Once deciding on the mix of species, then it is important to use good quality tree seedlings.
3. The Right Reason – Think about how the planted tree fits into the overall planting and site usage strategy.

Shaping trees

Formative pruning when the tree is less than 3m tall can be very effective in producing a single straight stem that will result in a high quality timber yield after harvesting. The goal is to encourage one leader to grow straight and reduce the number of large branches. Forks in the main stem should be eliminated so that one leader is left. Large branches and branches that angle upward should be thinned. Trees that are planted closely (2,500+ stems per hectare) require less formative pruning than if they are widely spaced.

Around three seasons after planting, well-established small trees are ready for pruning. Pruned branches should not be larger than 2 cm at the base. Additional pruning can be done every one or two years. As a general rule, pruning is best done in late springtime, just before the trees come to leaf.

During the woodland walk, many additional details and topics were covered:
- Biodiversity benefits of a properly planned and managed woodland
- Coppicing strategies and benefits
- Pests and diseases and methods of protection
- Thinning strategies
- Using woodlands for sport and recreation
- Various forest management systems

Evaluating trees

In the classroom and in the forest, the basics of tree structure and markets for the various parts of the tree were discussed.

1. Veneer or planking butts are used to produce high quality timber for furniture generally and are the most valuable part of the tree. First grade log lengths should be at least 2.7+ metres long, and not less than 45 cm in diameter in the middle and with clean grain.
2. Beam logs come from the lower quality sections of the tree and are used for character planking and beams. Timber has strength but not the top quality appearance, with some knots visible. Beam logs should be 2.5+ metres long and at least 30 cm in diameter at the middle.
3. Fencing timber usually comes from the upper parts of the tree. This lower quality timber does not meet structural standards and so is used for non-structural applications like fence posts.
4. Most remaining parts of the trees are sold for firewood.
After the discussion about various log grades, our instructors launched into the various issues commonly found within logs that degrade their quality and selling price. Armed with this new knowledge, we had several opportunities in the forest and the log yard to examine logs and identify the problem areas.

• **Growth ring centre not centred in the log** is usually the result of the tree growing on a bank. This offset centre results in pressure-wood on one side of the log, and can create difficulty in sawmilling the wood because of the internal stresses.

• **Sapwood**, the outer ring just under the bark, is usually discarded after sawmilling, so the thinner the sapwood is, the better for the selling price of the log. Thick sapwood can significantly reduce the amount of usable timber from the log.

• **Ring and Star shake** are splits/cracks in the wood. Ring shake is curved with the grain, while star shake originates at the centre, shooting out through the wood. Trees that grow in sandy and rocky soils often have shake. Shake sometimes only appears after 3-4 days of cutting or felling. Logs with bad shake are often valuable for use only as firewood. Shake can look similar to natural drying cracks, so the instructors showed us how to determine what kind of cracks we were looking at. The instructors made sure we had a firm understanding of these problems and could identify them just by carefully examining standing trees and logs in the log yard.

Other issues with trees were covered:

- **Woodpecker damage**
- **Internal rot**
- **Spiral grain**
- **Blue stain and fungi**
- **Tree pests and diseases**

### Harvesting Trees

Quality timber is normally felled in winter and sawn as soon as possible. Felling and sawmilling second grade timber can be done year round. Sycamore should not be felled when the sap is high and is more susceptible to staining. Ash can tend to split if felled during winter.

One point made clear was never to cut a tree down that you do not know you can sell. It is better to leave the tree standing until you are certain you have a market for it. Wait to cut until the market demand and price you can get are ideal.

The question of selling timber standing or managing the harvesting process yourself was discussed, with the advantages and risks of each being laid out. When you sell your timber standing, the buyer assumes the risk and possibility of higher profits, but manages the whole harvesting process.

When selling ‘at stump’, the woodland owner manages the felling and extraction to the roadside, and can potentially get better prices. It is important that owners cut the logs in the right places. If a valuable log is sectioned in the wrong place, it greatly affects the potential selling price. Bends and problem areas in the log normally make the best places to make a cut. However, some bends may be saved, as they can suit timber frame beams very well. To maximise the selling price, logs should be left long and crosscutting decisions should be left to the buyer if possible.

### to Workshop

The ‘from woodland’ sessions gave me a great introduction to managing a woodland, and we were given a host of materials for further research. Then the ‘to workshop’ sessions began, as the instructors moved from growing and felling timber, into transforming that timber into a finished product.

### Sawmilling timber

In the classroom, we discussed the various methods of sawing logs into timber and why certain methods are used. Then we went outside for a hands-on demonstration of a mobile LT40 hydraulic sawmill. The attendees were impressed with the ease with which the operator could load, position and saw the logs into plank after plank. Then they took turns operating the sawmill themselves.

When you have logs sitting in the log yard, our instructors stressed that you should not try to pre-cut beams, but only cut a beam once you have an order for it. Beams are sold green, and are not kiln dried. Planks can also be cut green to order. If the buyer needs rustic timber that will be used outside, he may buy it green. Some buyers may buy the wood green with the intention of drying it themselves.

### Beam sawing techniques:

- **The boxed heart method** is simple and balances log stresses, resulting in a beam that stays straight.
- **Cutting halved beams**, sawing through the middle, is not good for long lengths, due to their tendency to curve, but can be useful for short lengths.
Planking techniques:

- **Through and through** is the easiest and most common method of sawing planks. The crown boards have a tendency to cup.
- **Billet sawing** releases stress in the log but reduces the maximum width of the planks. Thicker planks should come from the centre of the log, as they will be quarter sawn and more stable.
- **Quarter sawn** boards are the most stable and typically result in the most attractive appearance. Quarter sawn planks shrink less than planks sawn in other ways. Less risk of checking during the drying process. Best results come from logs of more than one metre in diameter.

Valuing timber

Then the clipboards and calculators came out as the attendees were split into groups and given the task of calculating the market value of the timber that had been cut on the sawmill. The teams were shown how to take into consideration sapwood waste, defects, etc. The final estimations were then reviewed by an experienced timber buyer, who helped to refine the price analysis.

Drying Timber

Cutting and pre-drying timber before selling is a speculation based on past order history. You must anticipate orders and know your timber stock, so try to leave planks as wide as possible when drying, so that there will be a lot of flexibility for future order fulfilment.

Drying timber is a whole science to itself, but our instructors did a great job of supplying us with general principles and recommendations to get the beginner started. We were divided into teams again and stacked a pile of timber for drying, using stickers between each layer of timber.

As a rule of thumb, one inch thick timber takes one year to air dry. Thinner stickers slow down the drying process by reducing the airflow. Stickers should never be green timber, but should be dried to around 18%; otherwise, they will stain the timber they are in contact with.

Many sawmill companies air-dry their timber for several weeks or months, and then place the half-dried timber into a kiln for final drying.

When boards dry, the grain will try to straighten out, which causes the boards to cup. Thin boards from a small log will dry straight, but thick boards from a small log have a lot of strength and a strong tendency to cup.

Something to remember is that timber only needs to be dried to match the moisture content of its final environment. Exterior wood products do not need to be kiln dried, air drying is sufficient. Interior woodwork is generally kiln dried to around 10-11% moisture content.

Working timber

Throughout all three days of the course, a master woodworker was busy in the on-site workshop, working on a variety of projects, and during breaks from the regular sessions, attendees could spend time with him, asking questions, watching him work, and get hands-on with several simple yet inspiring projects of their own.

A session in the workshop focused on various wood species, their qualities and common uses in woodworking, as well as their unique issues and challenges. The workshop time was very valuable, as we could all watch the timber being turned into the final product.

‘Renaissance of European Oak’ lecture

A highlight for everyone was a special evening session with Roger Venables, whose long career in the wood industry has seen him involved with projects such as the restoration of Windsor Castle, Shakespeare’s Globe Theatre, and more. What was so fascinating was that he offered an inside look at how they designed and executed their magnificent projects, with amazing amounts of behind-the-scenes details.

Attending

It was obvious that everyone immensely enjoyed the course, the content presented, and the interactions with instructors and the other attendees alike. Among the attendees were arborists, apprentices, landowners, sawmillers, woodworkers, foresters, etc. The range of experiences and knowledge from the whole group made every moment educational and engaging.

Everyone was incredibly attentive, each one scribbling notes throughout the sessions, a testament to the quality of the material being presented, and the value it held for the listeners.

The course is held twice a year, usually in May and September. Class size is limited.

An excellent video that summarises the course is at: https://vimeo.com/118825403

For further information, please contact Woodland Heritage: enquiries@woodlandheritage.org.uk
www.woodlandheritage.org.uk
Introduction

In 2013 a conservation assessment of the world’s 615 conifer species concluded that 211 (34%) are globally threatened and of these 29 are at high risk of becoming extinct if present negative trends prevail. For over 25 years the International Conifer Conservation Programme (ICCP), based at the Royal Botanic Garden Edinburgh, has been initiating projects which aim to help conserve this economically and ecologically important group of plants through integrating ex situ with in situ conservation strategies. This work has taken an enormous effort, working with a large number of people in over 30 countries. Part of the strategy has been to establish a unique network of ‘safe sites’ for threatened conifers. This out-reach programme is now recognised as one of the most significant ever developed for conifers anywhere in the world.

Conifers under threat

The main causes of threat concerning the world’s conifers are many – habitat degradation and loss (especially concerning forest habitats), invasive plant species, human-induced climate change and, especially threatening for conifers, over exploitation for timber and non-forest products. However, a very serious, relatively recent threat has been the spread of harmful plant pathogens, many of which are exotic to the areas they prevail in. Along with other tree species the conifers are of high ecological, socioeconomic and cultural importance. Conifers are one of the most important sources of timber, especially in the Northern Hemisphere where vast boreal conifer forests stretch across continents. Even though these forests comprise relatively few species, importantly they contain billions of trees and act as an important sink for carbon emissions. In the Southern Hemisphere members of the Podocarpus family are especially valued for their highly prized, durable wood. They are also important sources of a wide range of non-wood products coming from almost every part of the tree. The wood, foliage and resin of many conifer species yield highly prized essential oils, used in perfumes, disinfectants and cleaning products.

In the early 1960s paclitaxel (trade name taxol) was discovered from the Pacific Yew (Taxus brevifolia) which is considered to be one of the most important anti-cancer drugs known. The European Yew (Taxus baccata) contains a similar compound but is ten times more concentrated. Conifers are a popular choice when it comes to garden plants and form an important component of the landscape. In the British Isles most of the estimated 250 species of temperate conifer species are in cultivation with about 50 being frequently planted. However many of these, such as the Monkey Puzzle (Araucaria araucana), The Giant Redwood (Sequoandendron giganteum) and Serbian Spruce (Picea omorika), just to mention a few, are now listed as threatened with extinction.

Buying time for threatened conifers

As a result of a recent survey of conifers we know that that 81% of globally threatened conifers are in cultivation (Shaw & Hird, 2014). However it has to be emphasised that the preferred and most appropriate strategy for conserving biodiversity is by securing their long-term future in native habitats (in situ conservation). However, when native populations become threatened and reduced to small numbers, ex situ (off site) conservation has the potential of being a vital back-up strategy. This can be in the form of seed banking or cultivating threatened species in arboreta or botanic gardens that are genetically representative.

This strategy should be employed before the native populations become critically genetically depleted and there are some excellent examples whereby this rescue strategy is working. For example, the Critically
Endangered Stinking Cedar (*Torreya taxifolia*) now restricted to fewer than 1,000 individuals in a small area in northern Florida and southern Georgia due to harmful pathogens has been subject to an intensive ex situ programme involving propagating, cultivating and distributing plants to botanic gardens and arboreta.

_The now familiar Wollemia Pine* (Wollemia nobilis) is one of the most effective ex situ conservation initiatives of its kind. First discovered in 1994 in a remote part of the Wollemi National Park in Australia’s New South Wales, this Critically Endangered species has been commercialised and sold across the temperate world._

**The ICCP network of conservation sites**

Established at the Royal Botanic Garden Edinburgh in 1993, the ICCP has developed a network of ‘safe sites’, most of which are located in the British Isles. The Programme works with over 145 sites where 14,000 individual conifers representing 155 conifer taxa (species, subspecies and varieties), 95 of which are listed as being threatened. Sourcing the plants is carried out in collaboration with in-country partners and conducted in a manner that is careful to ensure wild populations are not placed at additional risk.

During the last 25 years over 30 countries have been visited in order to collect seed and cuttings from threatened conifers and once propagated this material is fed into the network of sites. The ex situ conservation sites mainly consist of private land, but also take in public gardens, golf courses and even a monastery in Ireland. The main criteria used for adopting ‘safe sites’ is that they should have a degree of longevity of future tenure together with a high standard of horticultural expertise to manage the tree.

An important development has been the inclusion of Forestry Commission land where the ICCP has helped to develop two important sister initiatives. These include the Bedgebury Conifer Conservation Project based at Bedgebury National Pinetum in Kent and led by Danial Luscombe, and the iCONic Project – Internationally Threatened Conifers in our Care, based in Perthshire, Scotland, co-ordinated by Woodland Heritage trustee, Tom Christian.

For the tropical conifers from the Caribbean, Indo China and New Caledonia, duplicate plants have been shared with Atlanta Botanical Garden and Montgomery Botanical Center in Florida. Some of the ICCP’s largest sites are to be found in Scotland. For instance Mount Stuart, on the Isle of Bute, has almost 1,000 conifers as part of the Programme and Drumlanrig Castle in Dumfries grows 300 conifers representing 45 species. In England, Bedgebury National Arboretum has 780 plants with some sites such as Goodwood House which had some of the first introductions of the Lebanon Cedar in the 18th century has recently planted 50 trees supplied by the ICCP. The highly threatened Monkey Puzzle (pictured left) features in about 25 sites with about 1,000 trees planted, all of which originate from known locations in Argentina and Chile. The largest groups are to be found at Benmore Botanic Garden (170), The Eden Project, Cornwall (110) and Torosay Castle, Isle of Mull (100).

**Success with Fitzroya**

Perhaps the biggest success story has been working with _Fitzroya cupressoides_. This remarkable endangered conifer is one of the largest and oldest trees in South America, but due to over-exploitation for its highly prized wood the native population in southern Chile and Argentina has become severely depleted. Its name honours Vice-Admiral Robert FitzRoy who captained _HMS Beagle_, which took the naturalist Charles Darwin on his famous voyage of discovery. Today, as a result of sampling seed and cuttings from across the natural range of _Fitzroya_, the ICCP has introduced 100 genotypes (both male and female) and distributed these in a network of 71 sites throughout the British Isles. Prior to the ICCP initiative there was only a single clone in cultivation. Recently a plant of _Fitzroya cupressoides_ was presented to Down House in Kent, the family home of Charles Darwin, and one to Ampton Hall in Suffolk, the birthplace of Vice-Admiral Robert FitzRoy.

Presentation of _Fitzroya cupressoides_ to Rowan Blaik, Head Gardener of Down House by Martin Gardner and Chilean botanist Dr Paulina Hechenleitner.
Walnuts are not an easy crop to grow for timber and this article is written in the hope that others can tell me how to do it better.

Over the last fourteen years, encouraged by Peter Goodwin, I have been experimenting in seeking to prove that one can grow Black Walnut for timber on the deer ridden gravelly soils of windy North Norfolk. I have planted 1,150 trees in five different locations with different nurse crops and varying distances apart in the hope that I could produce a crop of eventually highly valuable timber. Peter tells me that what the furniture makers really desire (and pay handsomely for) is an eighty year old thirteen foot or more straight and unblemished stem with a girth of eighty inches (more than two feet in diameter). Such a stem would go for veneer and I will refer to it below as the ‘Ideal Tree’. Alternatively a furniture maker will still pay handsomely, but at one third of the price for even six feet of straight stem for planking which I will refer to as a ‘Planking Stem’.

After fourteen years of trying every avenue I have now had to accept a 66% failure rate in achieving a likely Ideal Tree. Regardless of site, soil, or provenance, one third of my trees look promising, one third are misshapen, crooked, bowed or bent and only good for firewood while the remaining third have not grown at all. These trees emerge slowly from their deer protective tubes in a burst of energy which produces a mop head of small shoots – providing fresh salad for hungry red deer and an easy target for late frosts.

Every one of my trees is loved, cherished and pruned every year but, unlike obedient Chestnuts and Oaks which readily fall into line, Walnuts are different – being inconsistent and indeed capricious. They mostly grow perfectly well but often in any direction other than the right one.

So how do other English Walnut growers fare? I know of several where a few trees have done well but what of the serious growers?

Netherwylde Farm

Peter Goodwin referred me to an article in the Woodland Heritage Journal for 2001 by Mr Geoffrey Hopwood reporting on a pioneer planting in 1990 at Netherwylde Farm in Hertfordshire where the owner planted 1,500 Walnuts in three metre squares with no nurse crop on unpromising soil – a backfilled gravel pit. It seems that in those far off days his nurseryman had found it difficult to distinguish between Common Walnuts and the intended Black Walnuts so a mixture prevailed. Mr Hopwood reported that there had been no pruning in the first five years so that many trees had been of poor form.

However this had been substantially rectified by a major intervention in 1995 “where drastic reshaping took place” and “misshapen trees were cut back to the main stem”. Five years later when Mr Hopwood visited he was “pleasantly surprised by what I found” with the whole wood in excellent shape.

Twenty years have passed since this “drastic reshaping” with no further intervention as I discovered when kindly taken round by the owner. The Common Walnuts have lost all benefit from the intervention and will certainly never become the Ideal Tree. Conversely however most of the Black Walnuts have retained all their benefits and are growing tall and straight with very little branching. However alternate trees now need removing to create six metre spacings which would allow the crowns to spread and so fatten up the stems.

Walnuts in the National Forest

To continue my quest to find out how other English Walnut plantations have fared I visited the Jaguar Lount Wood, part of the National Forest which describes itself as follows:

“This unique 72 hectare woodland was created between 2001 and 2004 with sponsorship from Jaguar Cars. It is the largest area of Walnut planted in Britain. Eventually the beautifully marked timber from these trees will provide quality veneers for cars and furniture”.

25-year-old Black Walnuts at Netherwylde Farm planted in 1990 at 3 x 3 m with no nurse crop.
Sadly this hope will never be fulfilled. This woodland planted at three metre spacing (with nurse crops of *Eleagnus umbellata* in some places, perhaps now removed), seems to have enjoyed little or no loving care and without any apparent interventions there are hefty side branches at knee level and multi-forking up the trunk. Indeed to the curious observer the likelihood of an Ideal Tree for a Jaguar fascia board seemed to be about 3% while perhaps 10% might become planking stems. The message here is that without active management the planting of Walnut is a sad waste of money.

To return to my own puny efforts, I am sure that even with a properly recommended nurse crop - and I have tried with *Eleagnus umbellata* and Alder and both together - the Walnut will still be its own capricious self. The only way to produce the Ideal Tree seems to me to apply the saw in a merciless manner. The experienced forester will look at a poor tree and advise stumping it. This works happily for most other trees but Walnut seems to nourish a particular hatred of tubes (essential on this deer overrun area). I fear that the stumped Walnut will be as miserable as its predecessor taking two or three years to get out of the tube – and even then merely become another mop head.

Fortunately Walnut has one excellent attribute in that it produces very strong shoots when chopped at any level. Some trees do emerge from their tube in fine fettle and will grow straight for several feet before unaccountably suddenly bending or becoming misshapen. It seems that if one simply saws through the stem just below the kink several strong shoots emerge, growing several feet a year, some of which will be vertical. If one can reduce these shoots to say two in number after one year and to a single shoot after two years the chosen shoot may well grow straight and true and so transform itself into a continuation of the main stem. If so would there be an Ideal Tree after eighty years? Would there still be a kink in it? and if so would it matter?

With a third of my trees destined for firewood there is nothing to be lost by a policy of drastic chopping – even if some of the trees may perish as a result. At present I have chopped stems at four feet, six feet and ten feet and in every case strong shoots appear.

In the Woodland Heritage Journal for 2000 Mr Robin Bircham, reporting on Walnut growing in France, said that one of the best French growers had emphasised that “to grow Walnut well you have to caress them all the time”. This probably sounds better in French but I would like to add that you also need to discipline them. “A wife, a dog and a Walnut tree – the harder you beat them the better they be” may well, in the last case, be as true as ever.

How realistic are the experts who in general advise to plant in six metre spacing filling the ground in between with Alder or *Eleagnus umbellata* as a nurse crop which will produce nitrogen and provide wind protection? In my case the Alder overshadows the Walnuts and so needs topping while the Eleagnus grows so profusely, blocking access to the Walnuts, that controlling it is a major problem in itself.

I cannot help thinking (see first photo) that the extra expense of planting in three metre squares with no nurse crop would produce the best results with the minimum maintenance problems. I would like to see a pure Walnut plantation in this country as good as a French one. Does such a thing exist? Does anyone else find Walnut growing as difficult as I do? If so how do they cope? Does anyone grow the Ideal Tree in any quantity? How does one control this charming captivating but utterly aggravating tree?
David Jenkins, who was a key figure in the Welsh woodland, timber and farming sector, passed away on 11th August 2015. He was the Director of the public sector partnership and charity Coed Cymru for 27 years and will be remembered primarily for his role in championing native woodland and bringing innovative ideas into public policy and mainstream practice.

He initiated and facilitated significant advances across both the agricultural and the timber technology industries, a testament to the passion, skill, knowledge and integrity he brought to his work, and his ability to inspire and share his enthusiasm with others.

2015 was a busy year for Coed Cymru

EU RDP Supply-chain projects

Two successful Welsh timber supply-chain projects under the guidance of Tabitha Binding and Dylan Jones culminated in a stunning new permanent show stand on the Royal Welsh Agricultural Society showground near Builth Wells, showcasing Welsh timber – its uses, varieties and availability.

Using the Ty Unnos timber frame system, designed specifically to use the characteristics of Welsh Sitka Spruce in sustainable, affordable, efficient construction, the new contemporary 1.5 storey Tŷ Unnos Pavilion has vaulted ceilings, a mezzanine floor and glazed curtain walls – features that are normally only seen in high-end post and beam structures. Fully insulated, with added thermal mass and compliant with current building regulations, it was assembled and made weather tight in a day.

The Pavilion is linked by a terrace to a partially open-sided ‘Drying Shed’ which was the very first Ty Unnos building from the Smithsonian exhibition in 2009. It has been dismantled for a fourth time, shortened and reconstructed again, demonstrating the versatility and reuse of timber components.

The team of Wales based architects, engineers, timber suppliers, sawmills, manufacturers, building contractors and regulators worked together to use Welsh timber from eight sawmills: Sitka Spruce – box beam frame, structural panels and joists; Douglas Fir – staircase and balustrades; Larch – windows, doors, cladding, ovalgrain board flooring and scorched external cobbles; Scots Pine – decking; Western Red Cedar – cladding; Oak – flooring. Further species were used by the five Welsh designer/makers that furnished the buildings.

New Products

The Ty Unnos Pavilion also demonstrates some new value adding processes that use Welsh timber:

1. **Woodcrete flooring which uses waste sawdust and shavings from the manufacture of the Ty Unnos box beams in a concrete tile.** Manufactured in two thicknesses, they are being monitored by Bath University for their thermal mass properties.
2. Ovalgrain flooring, cut at an oblique angle between the long and endgrain small diameter logs. This gives a short parquet type board that dries well, is hard wearing, easily manufactured and attractive;

3. External scorched Larch cobbles – have been tested and proved to have increased slip-resistant properties. They are incorporated in the access ramp.

Trees planted to improve river catchments

A successful bid to the Welsh Government Nature Fund enabled Coed Cymru, its team of woodland officers, Rivers Trusts and land owners in the river catchment areas across Wales, to improve soil and water management on farms. The work included hedgerow restoration and woodland planting, delivering improved water quality, biodiversity, safeguarding agricultural productivity and reducing flood risk. 178 projects received capital support and over 200 long term plans were prepared which we will now seek to take forward into the new RDP.

Powys grown softwood in construction

Local Authorities are increasingly tasked with delivering multiple benefits with ever tighter budgets. Powys County Council are working with Coed Cymru to use timber from their estate in new construction projects to deliver affordable, energy efficient buildings using local supply chains. Sitka Spruce from North Powys has been thinned by a local contractor, as part of a long term woodland restoration plan, and purchased and processed by a local sawmill.

To use timber in construction it needs to be strength graded to at least C16. To upskill local businesses and sawmills, BMTRADA were engaged to deliver the five-day training and examination to BS 4978 Visual Strength Grading of Softwood. 18 delegates from 12 businesses have taken part and further courses are planned for 2016.

2016 onwards

Building on the work accomplished over the past 30 years, Coed Cymru is looking to the future with new staff being appointed and new projects being developed, enabling more trees to be planted, managed, felled and used – adding value to Wales’ natural sustainable resource and delivering multiple benefits.

www.coedcymru.org.uk
The current state of the forestry sector in Georgia and future perspectives

by Ilia Osepashvili
Forest Officer, WWF-Caucasus Programme, Tbilisi, Georgia

Georgia is located in the Caucasus, to the east of the Black Sea. Georgia borders Turkey, Armenia, Azerbaijan and the Russian Federation. The country regained its independence after the break-up of the Soviet Union in 1991. The total land area of Georgia is about 70,000 sq km. Forests cover about 2.8 million ha, which is roughly 40% of the territory of the country. About 98% of forests in Georgia are natural, mostly located on steep slopes of the mountains of the Greater and Lesser Caucasus. Beech, Oak, Hornbeam, Chestnut, Ash, Maple, Birch, Spruce, Fir, Yew and Pine are typical forest tree species. Of these, broadleaves represent about 80% of the total forest cover. The share of planted forests is very small – about 60,000 ha in total. The latter mainly consist of Pine.

Overall standing wood volume is about 430 million m³, while total annual wood increment is 4.0 million m³. Nearly all forests are owned by the state. The Agency of Protected Areas is in charge of over 450,000 ha of forests, mainly located within Strict Nature Reserves, National Parks and Managed Reserves. The Agency of Adjara Autonomous Republic (located in the south-west of Georgia) manages nearly 140,000 ha. About 170,000 ha of forests are used by private logging companies on the basis of long-term (up to 20 years) wood harvesting licenses. These licensed forests are also owned by the state. The remaining forests are managed by the Georgian Orthodox Church and municipalities.

The importance of forests

Georgian forests are very rich in biodiversity due to the combination of a complex terrain and a wide range of climatic conditions. The climate ranges from wet sub-tropics on the Black Sea coast to permanent snow cover in the high mountains. The lowest precipitation is about 400 mm/year in the south-eastern end of the country. In contrast, the precipitation can be as high as 5,000 mm/year on Mt. Mtirala, located near the Black Sea coast in Ajara.

The Caucasus, where Georgia is located, is one of the 200 global ecoregions identified by World Wide Fund for Nature (WWF). Of 34 biodiversity hotspots defined globally by Conservation International (regions which are richest in biodiversity, threatened by human activity), Georgia is part of two of them – the Caucasian and Iran-Anatolian hotspots.

About 400 tree and bush species grow in Georgian forests. Of these, 61 are endemic for Georgia. Typical representatives of fauna include brown bear, tur, chamois, wild boar, Caucasian red deer, roe deer, lynx, wild cat, etc. – all of them depend on natural forest. Pristine forests cover about 500,000 ha according to expert estimates.

Forests fulfill very important soil protection and water regulation functions, especially in the high mountains. They reduce the risk of soil erosion and avalanches and contribute to the reduction of greenhouse gas effects. They are a very important source of wood and non-wood products. The commercial timber production potential of Georgian forests is not very high. The total (official) annual logging volumes are about 500,000 m³ on average (while the maximum sustainable potential is about one million m³). Much of this is fuelwood. The main cause of such limited volumes of timber production is low forest productivity. Oriental Beech (Fagus orientalis) is a major source of timber in Georgia.

Current forestry problems and their causes

Despite the high importance of the Georgian forests, they are facing serious threats at present. Key problems include unsustainable (often illegal) logging, over-grazing of cattle and poor-quality forest management in general.

Over the last two decades, illegal logging has been a significant problem. Two major types of logging can be distinguished – for fuelwood and for timber. From the early 1990s until mid-2000s, the volume of illegal logging was extremely high, amounting to several millions of cubic meters per year. This exceeded the
natural regrowth capacity of forests. Reliable estimates were too hard to obtain, because no forest inventory was conducted in the last 25-30 years.

Economic problems and the energy crisis were major causes of these problems. The population, especially in rural areas, could not afford to purchase alternative energy resources for heating their homes (such as natural gas). The domestic and, especially international demand for timber was another driver of excessive logging.

In the last few years, the problem of illegal logging has been mitigated due to improved law enforcement, stricter border control and natural gas supply to some of the villages. However, this problem cannot be resolved until the fundamental causes, such as the poor socio-economic conditions of the population, are addressed.

Unsustainable grazing by livestock (cattle, sheep, goats and pigs, owned by local villagers) in the forest causes greater damage than illegal logging. Main causes of excessive grazing are insufficient control from the state authorities, rural poverty and improper pasture management (concentration of livestock in relatively small areas, absence of a rotation system, etc.). For many families, keeping livestock is the sole source of livelihood. The damage caused by wild animals (deer, roe deer, wild boar) is insignificant because of the very limited number of these animals. Their numbers have been reduced over recent centuries due to unsustainable hunting and poaching.

Legally permitted but improperly implemented silvicultural operations pose additional threats to natural forest ecosystems. Forestry-related legislation requires that logging should follow widely adopted practices such as selective, shelterwood and group-selective cuttings. However, as a rule, no cutting rules are observed. No Continuous Cover Forestry or any other innovative silvicultural methods have been used so far.

Often trees are selected for felling without due regard to the conservation values of forests. Improperly conducted logging results in serious damages to the remaining tree cover, natural regeneration and soils. The density of canopy has been reduced substantially. The canopy cover has reached critically low thresholds of less than 50% in more than 55% of forest area.

The main causes of these problems include limited financial and technical capacities of state forestry authorities. Also, there is a lack of foresters with adequate professional knowledge. Forest management within private logging concessions also needs to improve a great deal to reach the levels of sustainability.

At present, there is not much enthusiasm and capacity from the local communities or self-governing authorities to take over the responsibility for forest management. This is caused by the lack of relevant experience and capacities. The situation is better within protected areas, where forests are protected well – law enforcement is quite strict and biodiversity conservation and eco-tourism are key management priorities.

**Present efforts to resolve the problems**

There have been continuous efforts from the government and non-governmental sector to address the problem of illegal logging. Until recent years, these efforts were not very successful due to frequent changes in the priorities of the state forestry authorities.

The National Forest Policy of Georgia was approved by Parliament in December 2013. The policy recognises existing problems in the forestry sector and defines priorities for their solution. These include the maintenance and enhancement of the protective functions of forests, greater involvement of local communities in forest management, separation of policy and actual management functions of the state authorities and improved coordination of the forestry sector with related sectors such as energy, tourism and agriculture. Other priorities include restoration and rehabilitation of degraded forest ecosystems, rational use of forest resources, defining optimal institutional set up (i.e. the roles of the state and private sector) and raising awareness of the general public about the importance of sustainable forestry.

In order to support the implementation of national forest policy, the National Forest Program (NFP) was launched in 2014. The NFP is supported by the German Society for International Cooperation (GIZ). Within the framework of NFP, several thematic groups of experts with various fields of knowledge were established. The thematic areas include forest inventory and management planning, forestry
legislation, ownership and tenure, education and research, forest restoration, economic assessment of forest ecosystem services, forest monitoring, etc. Several meetings of these working groups have been held and were very productive. Their recommendations are provided to the key decision-makers.

Another very important process in the Georgian forestry sector is the roll-out of the new Forest Code. According to the majority of experts, the present Forest Code (adopted in 1999) fails to address current challenges faced by the Georgian forestry sector. Consequently, the need for the roll-out and adoption of the new Forest Code has been widely recognised.

The initial draft of the new Forest Code has already been distributed among key stakeholders for public discussion. The discussion process is expected to be finished in the autumn and, hopefully, the Parliament will approve the new Code before the end of 2016. The elaboration of the new Forest Code is supported by the World Bank within the framework of the “European Neighbourhood and Partnership Instrument East Countries Forest Law Enforcement and Governance II Programme” (FLEG II Programme). The Programme is funded by the European Commission and Austrian Development Agency and is to have been implemented over the four-year period ending in December 2016.

In addition to the efforts to improve legal and institutional framework, several projects are being implemented, aiming to improve the condition of forests. For instance, WWF-Caucasus Programme Office has conducted a number of projects aiming at forest restoration. These projects were mainly supported by the EU, German and Austrian Governments (including the FLEG II Programme). Forest restoration has been conducted by planting, seeding and promoting natural regeneration through fencing. Putting up fences is very important to protect the regenerated or planted seedlings from livestock grazing. Wooden poles and barbed wire are used for fencing. No chemicals are applied, while only native species are used in planting and seeding.

The experience obtained in the past few years proved that natural regeneration is by far the most effective and cost-efficient method. Natural conditions in most parts of Georgia (medium to high precipitation levels) allow for rapid regeneration of forests, as long as there is no grazing or other types of disturbance. Removal of grass cover and soil mellowing is sometimes necessary. Planting and seeding are only used in the areas where there is no potential for natural regeneration.

**Future perspectives**

It is very important to strengthen the capacity of the National Forestry Agency, which is in charge of managing state forests. The number of adequately trained professional foresters should be increased substantially. For this purpose, it is essential to introduce innovative curricula at the universities and training programmes for young foresters. In addition, the National Forestry Agency should receive substantial additional funding from the state budget and, possibly, donors, to purchase modern equipment and machinery.

In the future, community forestry schemes could be tested when sufficient capacities are created. The private sector could be actively involved in the establishment of short-rotation forest plantations, preferably on abandoned or low-productivity agricultural area (not at the expense of natural forests). This could significantly mitigate the pressure on natural forests for fuelwood and timber.

Georgian forests are rich in non-wood forest products such as fruits, berries, mushrooms and medicinal plants. The collection of these products within sustainable limits could become a profitable business activity if well organised (i.e. with well-established marketing networks). Forests can also support sustainable and ecologically sound livelihood bases such as bee-keeping and eco-tourism. Specific small-sized timber products can also be produced for domestic consumption and export.

Forest biodiversity and essential ecosystem functions are often under-valued, especially in economically less developed countries. This under-valuation results in over-exploitation of forest resources and forest conversion to other land uses such as agriculture. In order to resolve this problem, an innovative tool – The Economics of Ecosystems and Biodiversity (TEEB) is applied in several countries, including Georgia. The TEEB scoping study for the Georgian forestry sector was completed in 2013. At present, full-scale study is underway in one of the regions of Georgia – Ajara, within the framework of the FLEG II Programme. The outcomes of this study should help
demonstrate the true value of biodiversity and ecosystems of forests and, in this way, encourage decision-makers to provide greater support to and investments in sustainable forestry.

Voluntary forest certification, such as the Forest Stewardship Council (FSC) scheme, might also be an interesting perspective for Georgia. At present, it is not realistic to meet the requirements of FSC standards due to the above-mentioned problems. However, if a) the key forestry problems, such as illegal logging, are addressed and b) market links are established for certain Georgian forest products (both wood and non-wood), certification might become feasible.

Last, but not least – silvicultural tools and methods suitable for Georgian conditions should be evolved and implemented. In this respect, advanced experience from the countries where natural conditions, forest tree species and terrain is similar to Georgia, could be very interesting. In any case, selective cutting will be the most widely used method due to mountainous terrain. In this respect, Continuous Cover Forestry seems to have great prospects.

The Oak Group of Future Trees Trust is looking for suitable sites for Oak clonal seed orchards. Ideally we are looking for 2 ha sites suitable for either Quercus robur or Quercus petraea. We need sites in the north (northern England, southern Scotland), west (Wales, Herefordshire/Worcestershire border) and south (Region of Provenance 40, essentially lowland England). We are, in addition, seeking up to ten sites of about 0.25 ha suitable for laying out demonstration plots of improved Oak.

If you have a site that you would like to offer, please contact the Oak Group secretary, Jo Clark at jo.clark@earthtrust.org.uk

Ilia Osepashvili

We were first introduced to Ilia sometime in 2001. We first funded him to attend a Continuous Cover Forestry Workshop at the Boughton Estate, in Northampton.

At the time Ilia was doing PhD research at the University of East Anglia on “sustainable forest management and policy”. He was hoping that one day he would be able to implement this in his native country of Georgia in the former Soviet Union.

Ilia lived in Norwich and be regularly attended Royal Forestry Society (RFS) meetings in East Anglia, making new friends and contacts. He supplemented his research by working on the Sotterley Estate in Suffolk supervised by Miles Barne.

Ilia’s enthusiasm for forestry so impressed us that the WH Trustees decided to help him a little more. So in Sept 2003 we sent him off to the CCFG Study Tour, which was held in Ligist, Austria and hosted by Professor Josef Spoerk (see Journal 2004 issue 9) along with Ian Barrington, Paul Schofield and Michael Chapman. Surrounded by other experienced and eminent foresters, Ilia thrived on this Tour and wrote to say how this had been a wonderful opportunity for him.

Ilia returned to his native Georgia in 2004/5 and has kept in touch with us ever since, writing annual reports about his forestry work.
Wild Service Tree Trials
Sotterley Estate, Suffolk
Wild Service Tree – *Sorbus torminalis* – now reclassified as *Torminaria torminalis*
by Miles Barne

In November 2013, as a small contribution towards the search for alternative hardwood species, we planted Wild Service Trees with Oak in a restock plantation at Sotterley. The object was simply to see if plantation Oak and WSTs can be grown in mixture and to test if WST can be grown pure.

The Oak were spaced at 1.0 metres by 1.5 metres and the WST replaced the Oak in a number of different patterns to a design by Professor James Walmsley of Bangor University. A total of 150 WST were thus established in two plots and a further 400 WST were planted pure in an adjacent area.

We had planted WST in previous years dotted around the woodland to see how they responded to various conditions but the plants were of very poor quality, apparently from central Europe and, unsurprisingly, have not thrived. However, it did show that WST is a light demander and grows only slowly under shade.

The plants on this occasion were supplied by Barry Wellington of Elmcroft Nursery, Newent. They were of superb quality, some 30 cm tall in root trainers. The seed came from Italy. Another excellent source of well grown plants is Hugh Dorrington’s Aveland nursery near Bourne in Lincolnshire. Hugh collects his seed locally and his one year old plants are impressive.

I believed (or had been told) that Oak would outgrow WST and that WST was frost tender. In our case, WST can outgrow Oak at least in the earliest stage, and in May 2014, frost scorched much of the recently flushed Oak, but the WST which had flushed a month earlier was untouched.

A number of the plants in the first summer seemed reluctant to grow straight so we placed 60 cm tubes over these to force them straight. This seems to work. We were concerned that some of the fastest growing plants tended to flop but these have since returned to the vertical. The WST planted pure on lighter land have easily outgrown those mixed with Oak on boulder clay. At this very early stage, there seems to be little uniformity in vigour and form between individual plants.

Perhaps 25% of the trees had the tip of the leading shoot apparently nipped off, possibly by a sucking insect, during the period of maximum growth in the first summer. A replacement shoot quite rapidly emerged.

I am conscious that many if not all of the planted WST I have seen in the UK seem to adopt a coarse

![July](image1)

![August](image2)
candelabra branch structure which would require heavy pruning if timber was the objective.

We ought therefore to search out a source of seed from well formed parents.

In the Forêt Bourse with Jean Marie Allouard (ONF) in Normandy two years ago, we saw hundreds of naturally regenerated WSTs growing under natural 20-30 year old Oak but in many cases suppressed and distorted by the Oak. Those near the edge, showed better form and I saw one particular tree with near horizontal branching.

A year ago, some of us saw some fine (presumably native) English WST trees growing in Stooper’s Wood in The Heart of England Forest *(see last year’s WH journal)*. Form is likely to be an issue with WST but we know that excellent stems can be found on the continent. Scientists there have published a number of papers on WST and we should study their content and seek out the best north European parent trees before embarking on tree improvement trials here.

As part of a study that Woodland Heritage is funding the Future Trees Trust to undertake, we’d like to ask WH members for their help in locating excellent examples of reasonably mature Wild Service Trees, if possible with contact details of the landowner or agent in case FTT needs to visit the tree to collect breeding material. Ideally the trees should show the characteristics indicated below.

**An ideal tree:**

- Adapted to local climate
- Pest and disease free
- Rapid growth
- Straight stem
- Stem circular in section
- Fine branches
- Horizontal branches
- Desirable wood properties

Please send the information to Dr Jo Clark at: Jo.clark@earthtrust.org.uk or Dr Jo Clark, Earth Trust, Hill Farm, Little Wittenham, Abingdon OX14 4QZ
I have no particularly profound reason for choosing forestry, I simply have always enjoyed the outdoors, including the woody giants that frequent the landscape. After investigating some different outdoor occupations and degrees, forestry came out trumps!

University was a great introduction and grounding in forestry and that has given me a solid base to build upon. My placement with Forestry Commission Scotland and an internship with the Algonquin Forestry Authority in Ontario, gave me some much needed experience in the industry as well as introducing me to the art-form that is traversing a harvesting site (alas, I still can’t do this with any measure of dignity). I now have the opportunity to continue to cultivate and develop my range of skills and knowledge as an assistant forest manager with Pryor & Rickett Silviculture.

Since being hired by Pryor & Rickett Silviculture in November 2015, the variation in day to day work has been fantastic. I’ve had the opportunity to get to know the woodlands whilst writing management plans and am now getting to grips with operational components of the job. The many hours spent in the woodlands more than make up for the paperwork, although it’s always a bonus when the weather decides to play nice.

I’m also slowly building up a mental database of clients, woodlands and contractors (not to mention the road networks of both Devon and Cornwall) as well as coming to grips with the processes involved with actually managing operational works. I’ve slowly been taking the reins on some planting and restocking projects and will soon be getting back into harvesting!

Having studied and completed my placement in the upland of Britain, the sudden task of dealing with productive broadleaved woodland has been something of an eye-opener. Gone are the extensive plantations of Sitka Spruce with which I am familiar, and in their place, intricate mosaics of broadleaves and conifers situated within the rolling landscapes of Cornwall and Devon. My initial grasp of broadleaves was that they were mainly managed for landscape with their iconic autumnal colours, habitat and biodiversity. It’s fantastic to be able now to explore the productive elements of broadleaf management down here in the South West. Skills that I have learnt about but never used are slowly being drawn into practice which is great!

The realities of woodland management are not as surprising or foreign to me as I was worried they would be. Getting in some hands-on woodland management experience over the course of my degree and immediately afterwards gave me a good base to build upon, along with the theory gained at university. I’m pleased to find that this position is allowing me the room to continue to develop and grow as a forester and to cultivate and expand on my current skill-set.

Keira Tedd
The change over the last 18 months has felt both swift and profound. From running an internet retail company for 15 years, bound to the same desk and windowless four walls, I now count the Herefordshire countryside and parts of South Wales as my office (although admittedly I still spend some time at a desk).

When I told friends and family that I was going for a walk in the woods alone on my birthday in July 2014, they thought I was in the midst of a mid-life crisis. To me it was something more considered; an assessment of life and work and questioning exactly what it was I wanted from my working life. The yearning to be outdoors seems to abound, however most people satisfy themselves with the odd evening stroll or weekend trips away. I knew that I wanted to be involved in a sustainable industry which has a real impact on the world. Forestry seemed an obvious choice.

I knew that further education would be required and after researching the options available, I decided upon the MSc Environmental Forestry at Bangor University. Having persuaded the powers that be at Bangor that I was a suitable candidate for the course, I spent the next year learning about landscape scale impacts and the various silvicultural techniques used in modern day forestry. In addition, the forest management planning module was particularly interesting, and, based on my current role, it is abundantly clear why an entire module is devoted to it.

The dissertation part of the course led me to the SSSI Oakwood at Coed Dolgarrog, to re-enumerate permanent sample plots which had been set up 15 years prior to my arrival. Measuring the DBH, squirrel damage, death and recruitment of trees within the wood gave me an insight into the complexity of the processes at work as well as a feeling of just how much more work is required to understand them. My conclusion was that the Oakwood will not remain as such, as recruitment of new Oak trees is almost non-existent. Whilst many will find this undesirable, I find it difficult to lament the change, as the non-intervention management policy is allowing natural processes to influence the direction of change of woodland composition.

After completing the dissertation, I consider myself very fortunate to have landed a role at Pryor & Rickett Silviculture (based in Hereford) to manage a wide range of productive broadleaved woodlands, including a SSSI similar to that where I undertook my dissertation. Having learned a tremendous amount in such a short space of time I felt ready to begin my career in the sector. Whilst the information assimilated on the course is very valuable it was quickly apparent that I was at the bottom of a very steep learning curve.

The last four months have rushed by and I now feel that I have learned a lot but know very little. During my short tenure there has been a small amount of harvesting work, some ground preparation and almost a full planting season, which has shown me that forest managers are required to be project/people managers first and foremost. On top of simply getting the trees in the ground, there is also the looming threat of pests and disease, which, presumably due to time constraints, was not covered in depth on my course. The scourge of the grey squirrel was something I had been aware of as mostly an issue of Red Squirrel conservation, rather than the wide ranging impact they have on productive broadleaf forestry in the UK. In my opinion more information should be disseminated to the public to encourage a more robust response to the issue.

After parting ways with good friends made on the course at Bangor, I sit here feeling rather pleased to be one of the lucky few to be working with productive broadleaves rather than the ubiquitous Sitka Spruce plantations where most of the other graduates interested in commercial forestry are currently employed.

Chris Hamill
A group of British and Irish foresters who have long been convinced of the effectiveness of continuous cover forest management have set up a new organisation to demonstrate the practical advantages of managing irregular high forest in Britain and Ireland.

Over the last ten years these individuals have formed an alliance with the French group known as the Association Futaaie Irrégulières (AFI); the ‘Irregular High Forest Association’. Since 1991 the AFI have established a large network of research stands that monitor the performance of irregular forests across all parts of France and the network has expanded into Ireland, England, Belgium and Switzerland. The network chronicles the work of experienced practitioners in irregular silviculture and measures the biological and economic performance of their best-developed stands.

The new group is an autonomous branch of the AFI based in Great Britain to be known as the Atlantic AFI (AAFI). It has the aim of administering and developing the network in countries where English is generally spoken or widely understood. The AAFI will be a membership organisation open to managers, owners and scientists interested in using the monitoring methodologies. It is a technical organisation which the founders see as being complimentary to bodies with a wider, promotional role such as the Continuous Cover Forestry Group and Pro Silva Ireland.

AFI Research Stands are selected because of their significant contribution to the diversity of the network.

They should have a sufficiently irregular structure, or be in transformation and illustrate an interesting aspect of management. Generally, the research stand will be approximately ten hectares in size and consists of ten permanent sample plots, re-measured on a five-year cycle. The monitoring protocol also records economic data and integrates measurement of deadwood and other biodiversity indicators.

The benefit to the forest manager becomes most evident following the first re-measurement when detailed data on increment is provided. The relative performance of different species and different tree sizes is made clear and allows the evaluation of the developing structure. Economic performance measures are obtained by integrating price-size curves and records of costs of operations and overheads. Performance in one stand can be calibrated against similar stands across the Network.

Acceptance into the AFI Research Network is recognition of the special qualities of the irregular stand and also provides a direct link to the expertise of experienced irregular forest managers across Europe.

The AFI have also devised an Abbreviated Methodology that can be used by individual managers independently of the Network. The Abbreviated AFI Methodology is cost-effective and can be used at the estate level to show the link between structure and increment and to investigate the economic performance of the best developed stands within a

**Setting up an AFI Research Stand in Ireland.**

**The AFI Sample Plot.**
woodland enterprise. *This is a very powerful tool to support the widespread development of irregular silviculture into Ireland and Britain.*

The AAFI will also be used to undertake other research projects, as demand and resources dictate, into irregular forest management. The first project, looking at the economics of harvesting in irregular coniferous stands in the Lowlands, is underway.

The inception of the AAFI could not have taken place without the assistance of a number of important donors who have very generously funded the start-up and the support of the owners of the pioneering Irish and British AFI Research Stands. Also key to the process has been the encouragement and support provided by Woodland Heritage. In 2005 Woodland Heritage funded a trip to France which established the initial link with the AFI and WH is currently providing administrative and financial support to the new group.

The inaugural Management Board meeting of the AAFI was held on 9th March and was attended by the two leading members of the AFI, Julien Tomasini, President, and Max Bruciamacchie, Scientific and Technical Director. The Board will be: Phil Morgan, Andy Poore, David Pengelly, Ted Wilson, Padraig O’Tuama and Paddy Purser. The launch of the AAFI coincides with the third re-measure of the first English AFI Research stand at Stourhead (Western) Estate, Wiltshire, and the second measure of the second on the Cranborne Estate in East Dorset.

*If you would like to get involved with the AAFI, or assist with a donation, please contact Phil Morgan at phil@selectfor.com. In due course a webpage on the AAFI will be added to the Woodland Heritage and Selector Ltd websites.*
The new signage for Woodland Heritage were major sponsors of the...
the Dunkeld Tree Trail signage according to the wishes of Sydney Draper
Ten years of Prickly Nut Wood apprentices supported by Woodland Heritage

by Ben Law

I have been running an apprenticeship scheme at Prickly Nut Wood for 15 years under the title ‘Woodsman’s lifestyle’, but for the past ten years Woodland Heritage have supported the scheme with places on the ‘from Woodland to Workshop’ course and contributions towards chainsaw assessment.

Many ex-apprentices have settled not far from me, in this well wooded part of West Sussex where they often work collaboratively on projects. Others have returned to their local areas and put into practice the skills they have developed. I felt the best way to review this scheme was to get in touch with my ex-apprentices and find out what they have been up to.

2006 Richard Ely

“Chestnut coppice and greenwood crafts. I cut my own Chestnut on a local estate near Battle in East Sussex, which I then use for materials in mostly rustic garden structures such as fencing, gates, benches, rose arches etc. Any left over wood is turned into charcoal or sold as firewood. I also do an assortment of greenwood crafts and interior furniture making.

www.greenwoodcraftsman.com

Chestnut arbor by Richard Ely.

2007 Richard Bates

“Since my time as an assistant with Ben and Mike Abbot I spent a few years working on projects with Ben’s Round Timber Framing Company. I have also been lucky to take on management of some good Chestnut coppice, where I have been able to set up a basic workshop and woodland camp. It is here that I run courses on chair making, timber framing, spoon carving and other green wood crafts. I also demonstrate at local fairs and festivals, which can lead to commissions, students and good ale!”

www.greenwoodcreations.co.uk

2008 Dylan Walker

“I originally served my apprenticeship with Ben and then continued to work with him until starting my own business, Artizans of Wood, in 2013. Now based just outside Rogate, we are natural builders, creating unique structures using predominantly wood in the round, although we occasionally build using green Oak as well.

Current projects include a garage using hand cleft shakes, a small timber-framed home, a straw bale holiday let and an extension! We’re involved at every stage of a build from creating the concept right through to handing over a finished building.

Training the next generation is important too, so we run courses, encourage volunteering and promote sustainability through learning.

www.artizansofwood.co.uk
2008 Rudi Meseg

“We moved to the Malvern area last summer, mainly to be nearer my wife’s family. I agreed to move to the Midlands as long as we could be in (or on the doorstep of) Herefordshire as there is at least some Chestnut there! I’m doing a bit of work with the guys at ‘Say It With Wood’ and building up my own work again. This winter is the first in five years that I haven’t done any work in the woods, which is a little strange, but also quite good for my back! In terms of summing up what I’m doing in a sentence I’d say... Timber-framed buildings, garden structures, and bespoke wooden products for the garden and home.”

www.roundwoodcraft.co.uk

2009 Barney Farrell

“Since spending eleven months at Prickly Nut Wood in 2008/9 I took on the management of a 55 acre woodland nearby. This kept me busy during the winters and in the summers I would sell off the timber and help out with other building projects for Ben Law. Recently I have been working full time with Dylan Walker at Artizans of Wood on various timber framing projects, often using Sweet Chestnut in the round and local materials whenever possible.”

barney_farrell@hotmail.com

2010 Kris Vill

“I now spend most of my time making playgrounds but the thing that I’ve enjoyed the most in the last 18 months is having the chance to pass on some knowledge. I help teach on Dylan’s framing courses which I’ve found very rewarding and I’ve got a young carpenter in the making called Styder who has turned out to be a little gem, enthusiastic and observant. I’ve just set up a joinery workshop to produce rustic furniture.”

kvj2@hotmail.co.uk

2010 Nick Owen

“Since leaving Prickly Nut Wood I have been involved with various building and carpentry projects. For the past two years I have been working with Alan Hepden at JJ Carpentry Services in Heathfield where we make a wide variety of joinery, such as bespoke kitchens, doors, windows, wardrobes, fitted furniture etc.”

www.jjcarpentrysevices.co.uk

2011 Dave Watson

“Since finishing my education at Prickly Nut Wood I have gone on to set up The Creative Coppice Company, offering both standard Chestnut Coppice products such as fencing stakes, rails and mortised posts through to handmade gates, garden structures furniture, fencing, buildings and bridges. The business has really taken off and I’ve come full circle and trained my first coppice apprentice who is now successfully utilising an area of woodland on his campsite to provide his campers with a sustainable source of firewood and in the not too distant future, BBQ charcoal. This year is an exciting year for me as I prepare to move into permanent premises in Stedham, West Sussex, where I intend to establish a woodyard, workshop and training area that will enable me to better serve the local community and increase the awareness of this most valuable of resources. Further down the line I hope to become involved with a homelessness charity and provide education, training and potential employment in coppice management and associated crafts for those less fortunate and wanting a second chance.”

www.creativecoppicecompany.co.uk

Chestnut and Oak table by Dave Watson of the Creative Coppice Company.
2012 Jack Fazey

“Since leaving Prickly Nut Wood I lived in London for a while before moving to Mallorca in the Med to work on sailing yachts and get some sea and sun back in my bones. I then came back to London, became a tree surgeon, met Hayley and moved to Dorset. I now work as a tree surgeon, teach bushcraft and wilderness living skills and carve spoons when I can, and make the odd bit of furniture from reclaimed timber.

Bushcraft is my big focus at the minute, and I’ve helped set up an axemanship and charcoal making course, as well as spoon carving days. My own projects (spoons, cups etc) are sold locally on a blueberry farm.”

jfazey@hotmail.co.uk
www.wildwaybushcraft.co.uk.

2012 Max Lyne

“Upon finishing my year with Ben I moved to London where I became a member of a community workshop. This enabled me to continue working on prototyping a range of rustic contemporary lighting products using timber sourced from the woods in West Sussex.

During this time I also worked on the Environments team at the Greater London Authority, helping with the delivery of an academic competition. I now work in Transport Strategy for the London Borough of Camden where I am leading on a new road safety project to improve the interaction between cyclists and construction vehicles. I am continuing to develop my range of lighting.”

www.maximlyne.com

2013 Claire Godden

“I live in Hebden Bridge, West Yorkshire, where I am a member of two workers’ cooperatives; Blackbark, who do woodland management and natural flood prevention projects, and LiveWild, who run a Forest School to get children and adults out into the woods through courses, play and skillshares.”

www.livewild.org.uk
www.blackbark.co.uk

2014 Paul South

“Countryside management and green wood work on Exmoor, focusing on utilitarian crafts, bowls, spoons, furniture. Using traditional tools and techniques.”

paulmsouth@gmail.com
www.facebook.com/moorcoppice

Coppiced Sweet Chestnut lamp by Max Lyne.

Claire Godden making a rustic bench with fellow ‘Livewild’ member.
“After leaving Prickly Nut Wood in July 2014, I returned to France and became a father just six weeks later. I found the time in those first few months to complete the yurt I began at Ben’s, the making of which is featured in his latest book. In the past year I have made a few local contacts and began working with a fellow Brit, with a plan to create fencing and structures locally and to run courses in green woodworking. There is also a plan to construct a few compost toilets at a local arboretum for use by the public and those attending woodland courses which they run.

At this moment in time, along with raising my daughter, I am enrolled on a full-time French course in an effort to finally learn the language. An element of the course is finding work after the course and I have recently been in touch with a couple of yurt makers with whom I hope to gain a little more construction experience and perhaps work with in the future.”

www.traditionalgreenwoodcrafts.com

2015 Tom Noyce

“My name is Tom and I was working at Prickly Nut Wood with Ben up until the end of last year. I am mainly interested in the management of woodland for Round wood timber framing which utilises coppiced wood of a wide variety of ages.

I’m currently travelling in Europe helping out on any interesting timber framing projects to improve the skills that I learnt from Ben Law.”

T_noyce@botmail.co.uk

2015 Alex Jones

“I am currently managing 40 acres of ancient woodland near Rye, East Sussex. Our long term vision is to build with coppiced materials and put into place an infrastructure which will allow us to expand the scope of our operations.”

Weald Woodland Management (Forestry and Arboriculture Services) alexdjones@live.co.uk

2016 Will Hannam

Will is my current apprentice and has joined me on a year where we are cutting quite mature Chestnut coppice and converting it to roofing shakes for the new gateway building at the Weald and Downland Open Air Museum.

So ten years on and the majority of apprentices are working with wood in some capacity. Even one or two who have tried other work are showing signs of finding their way back into the industry. When I evaluate the full 15 years, I have a 90% success rate of apprentices working with wood or in woodlands (considerably higher than the Governments apprenticeship scheme!) Many are self-employed, as I encourage apprentices to use initiative and make their own markets. There is no doubt a bias towards working with Sweet Chestnut and roundwood timber framing; which are two of the main components they learn whilst with me. Although like all of you at Woodland Heritage, I would like to see better quality timber grown. In the meantime we have to work with what we have and this often means resourcefulness and creating new markets and products from poorer grade timber. I hope those that have been through the Prickly Nut Wood experience have gained a wide skillset from forestry (in particular coppice management), through to adding value, sawmilling, timber framing and craftwork. This should leave them in a good place to find work in the industry going forwards.

I plan on training apprentices for the next 10 to 20 years and this should continue to help populate the woodland renaissance of craft work and coppice management. I thank Woodland Heritage for their support and hope they will continue to help young people to enter our industry.”

www.ben-law.co.uk
The British Oak Conference
Sponsored by Woodland Heritage
by Dan Stover

The British Oak: The past, present and future for this iconic tree featured as the topic for the 2015 annual conference of the Weald & Downland Open Air Museum. The conference was held on 19th June, just ahead of the museum’s weekend Wood Show. There could not be a more fitting venue for such an event.

Bayleaf Farmhouse, a Wealdon Hall House framed in hewn oak, attests to the durability of the wood. That house, constructed in the 15th Century, was moved to the museum from Chiddingstone in Kent and looks fit for a few more centuries.

The conference was held in the Jerwood Gridshell (below). ‘Gridshell’ is self-explanatory – a lattice work of 35 x 50mm oak, but why French oak? The quality of the conference proceedings no doubt left the majority of the 112 delegates enthused to do their part to see British Oak remain highly valued ecologically and socially and more valued as an economic resource.

The conference was ably chaired by Archie Miles, author of The British Oak, and covered a wide range of topics.

Jon Stokes of The Tree Council (organisers of National Tree Week since 1975) set the scene as he briefly covered the botany of Oak, as one only can, given the circa 600 species in the Quercus genus. Our meagre allocation of two native species, compared to Mexico with more than 160, suggests we best look after what we have, or an optimist might say we have many choices to fall back on as the climate changes and waves of disease strike.

Dr Pitman, a wood scientist from The Timber Research and Development Association (TRADA), gave insight to some of the factors which must be considered when using oak for building – the lower durability of older heartwood and sapwood, shrinkage predictions, importance of how the log is sawn to movement in service and appearance. The increasing popularity of wood as a sustainable construction material suggests TRADA and wood science have a bright future.

Neil Humphris, Head Forester for Leconfield Estate’s 1400 ha primarily broadleaf woodlands, captured the audience with his command of all the aspects (e.g. site, vermin, vegetation, genetics, constant care and attention) which must be managed in pursuit of growing high quality timber – and one must start by setting clear objectives.

Tom Compton of English Woodlands Timber, like Neil, left the audience in no doubt of his love for high quality timber and commitment to providing British buyers with the best product possible – and more British supply in the future by bringing more hardwood woodlands under management for timber.

Neil interjected a few words about a pair of impressive Oak doors built on the Leconfield Estate (below). The doors were destined for Hougoumont Farmhouse in Belgium to replace those long lost after the Battle of Waterloo – the North Gate that the Duke of Wellington was credited with for holding back the French at a critical time in the battle. The new North Gate was prominent in the Waterloo Battle Bicentennial celebrations this past June and it is fitting that it was constructed from a single English Oak.
felled on the estate about ten years ago, with planks laid up to air dry since, in sure knowledge they would find a good use.

Dr Ian Tyers, Dr Damian Goodburn and Joe Thompson showed how much we can learn about the past as a result of the characteristics of oak, scientific techniques and keen observation.

Dr Tyers, a dendrochronologist, showed how the distinct growth rings of Oak can be interrogated in a variety of ways to date wooden artefacts, e.g. from buildings, understand historic aspects of climate and even ascertain the approximate origin of a timber.

Dr Goodburn, an archaeologist with a speciality in woodworking, surprised at least some of us with a selection of worked wood samples dating from 4500 BP (Stone Age) to the 12th Century (photo below). His lifetime’s work suggested most of our wild wood oak had gone by 1250 AD, and average diameter had progressively declined to that point.

Joe, Museum Carpenter-in-residence, concluded the history topics by presenting an assessment of how many Oak trees it took to build Bayleaf Farmhouse. Oliver Rackham’s methodology for Grundle House was his model. The answer: about 232 trees, over 80% less than a foot in diameter and only one in the largest size class (18 – 25½”). Further details can be found in the Autumn 2015 edition of the Museum’s magazine.

Tony Whitbread, Sussex Wildlife Trust, and Dr Sandra Denman, senior plant pathologist at Forest Research, rounded off the day with reminders of how important Oak is as habitat and the constant threat of disease.

One need only briefly scroll through the Forestry Commission’s tree pest and disease outbreaks timeline to see the nature of the threat. It is clear that Sandra Denman and her team’s dedication to diseases and pests of Oak merits strong private, public and government support – hence Woodland Heritage’s massive fundraising campaign which has kept the research up to speed.

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www.kilnservices.co.uk
Dear Peter and Woodland Heritage Trustees,

Thank you so much for giving me the opportunity to go on the Fungal Biodiversity course at CBS in the Netherlands. I feel privileged to have you supporting me and my personal development as a scientist.

The course had a good balance of theory and practical, first learning about a group of fungi and then observing them under the microscope by making slides of the cultures they provided. There was a focus on Ascomycetes and Basidiomycetes which is very useful to us since these make up a large proportion of tree pathogens. We also learned about Oomycetes which include the fungi-like genus \textit{Phytophthora}. \textit{Phytophthora cambivora} and \textit{P. cinnamomi} can cause stem bleeding on Oaks in the UK, so it is important to be able to spot these organisms.

Hopefully I will be able to put these newly learned skills to good use. My early career has focused on bacteria, because of Acute Oak Decline. However, as you are aware our Oak trees can also come under threat from fungal pathogens as well, so it is important to have skill sets which can be used to work with both types of pathogen in Oak trees, in case we have new outbreaks in the UK.

\textit{So my thanks again,}

Sarah Plummer

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Dear Woodland Heritage,

I would like to thank you for sponsoring me to attend the CBS Fungal Biodiversity course. It was a fantastic opportunity for me to gain more practical skills and knowledge of the many different classes of fungi and learning how to identify them by their morphology. It was extremely valuable for me to learn how to differentiate the different fungi that I culture from the Oak samples, particularly due to the apparent increasing contribution of fungal pathogens such as \textit{Armillaria} in Oak Decline.

It was also very useful to learn of the techniques that are used at CBS to produce their clean cultures such as single sporing of the fungi and also having the opportunity to examine their culture storage and collections. At Forest Research, Alice Holt, we have begun to build a larger collection of fungal cultures that we sampled from the field such as \textit{Armillaria} and we also have isolated numerous fungi from the log pathogenicity trials that we are currently working on. I will now be able to use the insight that I gained from CBS to ensure that our fungal cultures are well maintained.

I thank you again for continuing to support my development as a scientist and I am sure that the skills that I have attained will be put to valuable use throughout my career.

\textit{Best wishes,}

Andy Griffiths

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Dear Belinda,

I have finished reading the 2015 issue of your annual magazine, which is considerably larger than previous issues and full of interesting and relevant articles.

One might think that the publications produced by the Institute of Chartered Foresters, the Royal Scottish Forestry Society, the Royal Forestry Society of England, Wales and Northern Ireland, the Small Woods Association, and other bodies would not leave a gap which needed to be filled, but Woodland Heritage have disproved this hypothesis, and should be congratulated for doing it so well.

I look forward to 2016!

\textit{Best wishes}

Rodney Helliwell

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Dear WH,

As a student returning to University studying forestry, your W2W course has set me up with the context for a huge part of my academic learning as well as priming me with enthusiasm for this industry.

\textit{Best wishes}

Jonathan Burke

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Dear Peter and Lewis,

WOW! I am just blown away by Woodland Heritage 2015 and the excellent Acute Oak Decline report. Just absolutely fantastical.

\textit{Regards}

Miles Barne

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Miles Barne
Continuous Cover Forestry Group
2016 Events Programme

CCFG England Field Visit
The Weasenham Estate & Sennowe Park, Norfolk
Thursday 2nd June, 2016

The 2016 England Field Visit will be held on Thursday the 2nd of June 2016 in Norfolk. The morning will be spent at Weasenham Estate courtesy of Toby Coke and the afternoon will be spent at Sennowe Park courtesy of Tom Cook with picnic lunch at Sennowe Park. Full details are yet to be confirmed.

ProSilva Europe Annual General Meeting 2016
hosted in Stirling, Scotland by CCFG
23rd-25th June, 2016

• Wednesday 22nd June – arrive
• Thursday 23rd June – Business Meeting followed by visit to forests around Aberfoyle
• Friday 24th June – visits to Native Pinewoods in the Spey valley
• Saturday 25th June – visits to Craighvinean and Faskally forests. Final evening dinner held at Stirling University Hotel
• Sunday 26th June – depart

CCFG Scotland
Field Visit to Argyll
Thursday 8th September, 2016

This meeting will be held in Cowal and involve visits to some of the finest stands of old conifers in the British Isles. More details available in due course.

CCFG 25th Anniversary combined with the CCFG Wales Field Visit
based in Llandovery
Thursday 29th and Friday 30th September, 2016

The field visit is planned to be at Bryn Arau Duon managed by Phil Morgan and Huw Denman. More details available in due course.

In addition – CCF for Foresters Courses

The Forestry Commission has kindly made these courses available to participants from the private sector. They are field based and are designed to provide a general introduction to the principles of CCF.

There are spaces remaining on the following courses in 2016:
• 24th & 25th May 2016 – Lyndhurst
• 26th & 27th May 2016 – Lyndhurst
• 7th & 8th June 2016 - Ruthin
• 9th & 10th June 2016 – Ruthin
• 5th & 6th July 2016 – Aboyne
• 7th & 8th July 2016 – Aboyne

Each course can accommodate 6-15 delegates and costs £220. Course leader Jens Haufe. FC course ref 3.48b.

Contact Katrina Gardner: katrina.gardner@forestry.gsi.gov.uk

Non-members are welcome to all events.
For further information contact: administrator@ccfg.org.uk
Or see: www.ccfg.org.uk

Editor’s note: WH continues to co-operate and support the CCFG by offering bursaries to its members to attend events both at home and overseas. Students and young foresters, in particular, are encouraged to apply for support. Applications are judged on their own merit with preference to those engaged in forestry and/or the production of high quality timber.
An illustrated report for publication in WH Journal or website and the CCFG Newsletter is required.
Once again, there has been much progress at Future Trees Trust this year as we continue to develop networks across the forestry sector and raise both our profile and significant additional funding, enabling us to spend more than ever on our vital tree-breeding work.

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. A healthy demand continues for copies of the important Oak silviculture book “Oak – fine timber in 100 years”. This definitive guide to growing superb quality Oak trees for timber was translated from a classic French text book by Bede Howell and funded by Woodland Heritage.

Our organisation

This year, two of our trustees retired, including Peter Savill, our long-standing chairman of trustees. Peter was the driving force behind the creation of Future Trees Trust’s previous incarnation BIHIP – The British and Irish Hardwood Improvement Programme – in 1991. His contribution to all we have achieved is incalculable and we owe him a huge debt of thanks. Despite intending to retire, we all suspect that Peter’s involvement with Future Trees Trust is far from over. We welcome Graham Taylor as our new chairman.

The last year – what has gone well and why?

Our research spend has increased in line with our income. Our total research and charitable activities spend in 2014/15 was £129,179, a marked increase on the previous year. The Sweet Chestnut and Oak Species Groups were particularly active, with many more projects undertaken. Some were funded by restricted donations, but many were only possible because we had unrestricted reserves available to support them. We are now the principal funder of broadleaved improvement work in the UK and Ireland, an achievement of which we are justly proud. A brief summary of our key achievements includes:

**Oak**
- We initiated a detailed, long-term study into inducing early flowering in Oak trees, in order to accelerate acorn production as there is a GB-wide shortage of home-grown acorns.
- We undertook a study into the timing of bud-burst and leaf-fall in Oak, to ensure future generations are not subjected to damaging late or early frosts.

**Sweet Chestnut**
- We finished the sampling of material from all of our ‘Plus Trees’ and subsequent grafting, in order to create future seed orchards from our improved material.
- We created a gene bank – a repository of improved breeding material – on the Duchy of Cornwall’s land in Herefordshire.

**Birch**
- We undertook a study into tree improvement and silvicultural research requirements for the potential use of Downy Birch and Aspen for upland wood-fuel production.
- We completed work on the long-term breeding strategy for our Birch improvement programme.

Finally, we would like to invite all Woodland Heritage members to our third Annual Supporters’ Day at the Torry Hill Estate near Sittingbourne, Kent on Wednesday May 25th. Come and hear more about how our work is breathing new life into our woodlands, our ambitious plans for the future and how you can get involved. The day includes a guided tour of the fantastic Sweet Chestnut coppicing that has made the Torry Hill estate the largest producer of Chestnut products in the UK.

Admission is free, but numbers are limited so please book your place by emailing Tim Rowland at tim.rowland@futuretrees.org as soon as possible.

www.futuretrees.org
I grew up under an Ash tree. Many of us did. Common or European Ash (Fraxinus excelsior) grows almost everywhere in Great Britain and it’s the third most populous broadleaved tree. Perhaps because of the tree that towered over my childhood garden, the Ash is also my favourite tree. I have always instinctively looked for Ash trees in the woodlands and fields, and even in the urban landscapes where I have lived. It may be that the Ash was a sort of lodestar that eventually brought me to settle with my family in a house within a small woodland in Wales, a place where Ash grows abundantly – at least for now.

Though second in value to Oak for much of history, Ash – fast growing, of moderate weight, strong, elastic, easily bent and readily worked – has always been more versatile and functional. Human beings have used Ash to make a vast array of quotidian items from ladders, tent pegs, spears, looms and clothes pegs to crutches, canoe paddles and arrows. Children have always known that Ash makes first-rate catapults and Ash has been used to make ploughs, harrows, wheelbarrows and the best tool handles for millennia.

Ash has been widely used in the manufacture of sporting goods: hockey sticks, hurley sticks, polo sticks, tennis rackets, squash rackets, badminton rackets, cricket stumps, skis, snowshoes, snooker cues and baseball bats. For at least 4,000 years, the rims of wooden wheels have been made from Ash. Coaches and then car bodies were built around Ash frames.

In considering the innumerable and important historical uses, I began to wonder if Ash might be the tree with which humanity has been most intimate over the ages. Yet today, mention Ash and most people can think of only one use for this noble timber – firewood.

To learn more about the Ash tree, I decided to fell one. The best timber would be distributed to craftsmen and women, artisans and makers, to be converted into artefacts and products. Every part of my Ash tree would be used: a zero waste policy would fence the project – to exalt the worth of a single tree. How many different uses could I get from one tree, I mused – ten, twenty, thirty, more?

Two years later, I have got forty-four different uses out of my Ash – and over a hundred items. Pride of place goes to the writer’s desk, made by Andy Dix, a local cabinet-maker. There are also kitchen worktops, bookmarks, benches and coat racks. I have a collection of axe handles, tent pegs, chopping boards and spoons. Some of these artefacts have a distant future, beyond the lives of the craftsmen who made them. Together, these objects speak of the long and creative relationship between humankind and Ash.

It has been a deeply satisfying venture which has left me feeling rooted to a place in the turning world; it has been a reminder of the continuity in the mutually beneficial relationship between people and trees over the ages. We are bound to our trees, even if we don’t know it, and at the heart of that bond is the story of man’s quotidian relationship with the Ash.

Rob Penn

In this most readable book, Rob Penn describes putting into practice what Woodland Heritage preaches! “The Man Who Made Things Out of Trees” is the story of man’s long-standing relationship with the Ash tree – a story made more poignant now we are aware of the threat to this most useful as well as beautiful of our native trees.

Observing that all too often, these days, the timber from Ash ends up in the log pile for firewood, Rob sets out to explore its uses over the course of human history. As he discovers it turns out that the Ash is probably the one tree that has provided the most varied uses of all those utilised by Man.

Rob Penn, in addition to being an author, is a journalist, TV presenter, public speaker and cyclist. He is, therefore, a most able and effective advocate for the untold story of ‘felling to final form’ and appreciation of both trees and the many and varied uses of their wood. This book is a real eye-opener.

Susan Bell OBE, Woodland Heritage

The Man Who Made Things Out of Trees by Robert Penn is published by Particular Books / Penguin. For more details: http://robpenn.net
Organisations from the forestry sector representing landowners, nurseries and forestry professionals, have come together and agreed to take action to secure more resilient woodlands to benefit business and wildlife in a changing climate.

Commitments include supplying and growing a greater diversity of tree species as well as considering the provenance of seed to give the forests of the future the greatest chance of continuing to provide the many benefits they do, particularly in the face of damaging pests and diseases.

There will be more sharing of skills and experiences from woodland managers who will look to expand alternative silvicultural systems such as Continuous Cover Forestry. It will expand understanding of the wider benefits including providing shade, cooling, improved drainage and weather shelter.

Forestry Commission Chairman Sir Harry Studholme said: “Forestry is a long term business and decisions we take today have to be relevant in ten, fifty or even a hundred years. In recent decades we have had the luxury of stability that has led our sector to grow and process a narrow range of species managed under simple silvicultural systems.

“The future is less certain but we do know circumstances will be different. Forestry professionals have always been adaptable and we can make informed decisions and take action now to reduce and spread the risk to our businesses and the benefits forests provide to society.”

Mike Seville, Forestry & Woodland Adviser, CLA said: “The forestry, agriculture and land use sector has significant opportunities to contribute to climate change mitigation but at the same time is one of the most exposed to climate impacts.

“The CLA has been pleased to be part of this important initiative to embed adaptation to climate change into woodland management nationally. We urge all woodland owners and managers to lend their support to the accord statement produced by the group and to let their views be known by completing the online survey”.

Environment Minister Rory Stewart added: “Building our resilience to climate change is important for everyone. That’s why we developed the first National Adaptation Programme report setting out actions for government, businesses, local councils and communities.

“It’s crucial we take the changing climate into account in all our decision making and I congratulate the forestry industry on these proposals. By ensuring we manage our woodlands carefully and plant more diverse species we can improve the resilience of our forests and safeguard them from the risks posed by climate change.”

Forestry professionals, including woodland owners and managers, agents, tree nursery businesses, and foresters, are being asked for their assessment on how well the sector is adapting to environmental change.

The British Woodland Survey 2015, funded by the Forestry Commission and Woodland Trust and hosted by the Sylva Foundation, is now live online and preliminary findings are expected to be revealed in early October.

The final results will inform the government’s second National Adaptation Programme report and will support forestry businesses as they make changes to adapt their businesses. The results were be published at a conference Resilient Woodlands: meeting the challenges, at the National Motorcycle Museum, Birmingham on 1 October 2015.
While writing my article (see page 68), I unearthed the copy of my woodland recreation project and found in the appendix a reference to an article entitled ‘Relating Forestry to Agriculture and Recreation’ in a supplement to the RFS Journal of 1973 by a certain C Yarrow. This name caught my eye as being the author of a book published last October (2015), whose title ‘Thirty Years in Wilderness Wood’ gives a pretty good idea of its subject.

Born towards the end of World War II, Chris Yarrow gained a degree in Forestry at Bangor followed by a masters in Forest Recreation at Montana in the USA. Together with his wife Anne, and inspired by John Seymour’s ‘Self Sufficiency’, they bought a Sussex Woodland in 1980, which would not only provide them with a livelihood but also a home. This book describes the whole process, warts and all in an informative, yet highly entertaining manner. It is well illustrated and has an informative pictorial record of his many projects, along with ‘step by step’ pictures and some useful tips.

He sums up the NIMBY attitude of some of the locals thus: ‘Allied to distaste for filthy lucre is the British disdain for overt happiness in others’. This book makes for a wonderful contrast to some of the learned yet relatively dry texts on the subject of Forestry.

For readers of this journal however, I’m sure the most interesting chapter will be ‘Growing Big Trees’ in which Chris describes very succinctly the much-misunderstood concept of Continuous Cover Forestry, including this beautiful analogy. ‘For a professional silviculturalist, it is the equivalent of cuisine as opposed to catering, and, if one has the time and inclination, something to embrace with enthusiasm. Sadly, many forests are still at the level of the factory canteen, churning out stodge at the lowest possible price.’ Surely there is no better encapsulation of the spirit of Woodland Heritage than this.

Ben Law’s ‘Woodsman’, Robert Penn’s ‘The Man Who Made Things out of Trees’ and Lars Mytting’s ‘Norwegian Wood’ are all doing a magnificent job at spreading an interest in trees and woods to a wider audience but for those of you who already have an involvement in Forestry in the 21st Century, then ‘Thirty Years in Wilderness Wood’ surely has to be the book to read.

Mike Abbott
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3 **PROTECTION**
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