Colin Hal

The Tree Register goes to Europe

It is commonly said that the biggest and oldest trees in Europe can be found in the British Isles. But is this really true and what evidence is there to support it?

What data exists about tree measurements in other European countries? And what organisations and groups are there throughout Europe that record data about their notable trees? With these questions in mind a Tree Register delegation set out in October for Wespelaar Arboretum in Belgium to host the first European Champion Tree Forum.

It was very encouraging that representatives from some 10 countries attended. We heard some very professional presentations from tree enthusiasts and many friends and contacts were made. A fuller report appears later in this Newsletter. Many thanks are due to Chris Carnaghan for his tremendous work and enthusiasm in taking charge of the organisation and running of the Forum.



In Leuven, Belgium, big tree enthusiasts were shown the Belgium and European champion Pagoda Tree or Japanese honingboom (Sophora iaponica)

In view of his widening role within the Tree Register, we have appointed David Alderman as our Director, a new position, and Owen Johnson has stepped up to become our Registrar. David continues to be the linchpin in our joint project The Ancient Tree Hunt with the Woodland Trust. Owen edited our Champion Tree Book, published in 2003, and I am delighted to announce that Owen is now working on a new Tree Register Handbook on Champion Trees. Watch this space!

Once again thanks are due to all our supporters during 2010 and to David, Owen and all our other tree recorders and Pamela Stevenson, our hard working secretary.

We thank Paul McCartney for his continued generosity in sponsoring this newsletter.





Champion trees at Herkenrode, Belgium

The Tree Register Registered Charity No.801565

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Registrars Report

Owen Johnson

A year of record breaking finds!

So far in 2010, 14,600 new record-sets have been added to the Tree Register (either as new specimens, or updated measurements), bringing the total number of trees within the database past 190,000.

1260 champion trees for Great Britain and Ireland (a quarter of the total) were updated, or in several cases newly discovered. New record-breaking finds include Hazel (Corylus avellana) 80cm diameter on a single pollard trunk, in wood-pasture above Loch Arklet, Stirling; Black Italian Poplar (Populus x canadensis 'Serotina') 34m x 242cm, beside the river Anton above Goodworth Clatford, Hampshire; Wild Black Poplar (P. nigra subsp. nigra) 232cm@1m, broken hulk Rossett, at Whitebeam (Sorbus Denbighshire; 105cm@1m on a single trunk, within Vernditch Chase, Dorset; and Rowan (S. aucuparia) 139cm on a single pollard trunk, near Kingussie, Highland (these five records through the Ancient Tree Hunt Project); Santa Lucia Fir (Abies bracteata) 37m x 158cm, at the Kilronan Castle Hotel, Co. Roscommon; Strawberry Tree (Arbutus unedo) 10m x 101cm@0.7m, in the Killarney National Park, Co. Kerry; Cabbage Palm (Cordyline australis) 9m x 94cm, at Kylemore Abbey, Co. Galway; and Western Red Cedar (Thuja plicata) 26m x 235cm at Woodlawn House, Co. Galway (these four found by Aubrey Fennell for the Heritage Trees of Ireland Project); Corsican Pine (Pinus nigra subsp. laricio) 160cm on a superb trunk, near Bramley, Surrey; and Caucasian Oak (Quercus macranthera) 19m x 138cm, in a private part of Clandon Park, Surrey (these two from the Surrey Tree Survey Project); Italian Alder (Alnus cordata) 113cm, at Linton, Kent (from our recorder Steve Young); and Wild Cherry (Prunus avium) 15m x 178cm, above Evanton, Highland (from John Miller, author of Trees of the Northern Highlands).



Wild Black Poplar at Rossett, Denbighshire (Author)



Caucasian Oak at Clandon Park, Surrey (Author)



Wild Cherry above Evanton, Highland (Author)

Indicative of the Tree Register's role in international conservation, over 2000 of the new records include details of the tree's wild origin, in most cases a collector's number enabling us to know which individual wild tree was the mother of each plant.

Mark W Hanson

The pioneer tree recorder

Maynard Greville was born on 21st March, 1898, fourth of five children of Frances Evelyn Maynard (1861-1938). Heiress to the vast wealth of the Easton Lodge estate from the age of three, she was noted as one of the most beautiful women of her day, attracting suitors who included Prince Leopold, a son of Queen Victoria, before marrying Charles Greville, Lord Brooke, heir to the earldom of Warwick, at Westminster Abbey in 1881.

Settle Committee Appley in 1881.

Great or Minc Easton

Settle Committee Com

Easton Lodge - detail from the Chapman and Andre map of 1777 and pastel portrait of the Countess of Warwick (1861-1938) by Ellis Roberts 1904

Lady Warwick is probably better known today as 'Daisy', her numerous affairs (including one with the future Edward VII) having overshadowed her later social and animal welfare work. The affair with the Prince of Wales ended acrimoniously in 1898 shortly before the birth of Maynard. Assuming Maynard was not permitted to use the baton sinister as a device, he was entitled, as the younger son of an Earl, to be styled the Honourable (Hon.).

Ministry of Information

Maynard had hoped to go up to Cambridge but the First World War intervened and he became an airman in the Royal Flying Corps (later the RAF) in 1916, marrying Dora Pape in 1918. His daughter Felice was born in 1919. The war over, he became a journalist on the Daily Express (1919), Morning Post (1921, motoring correspondent 1927-29), Daily Mail (1929-31) and Country Life (up until the outbreak of the Second World War). During the War he is known to have worked in the Ministry of Information and the ARP.



Old oak tree in Easton Lodge Park c.1950

He inherited Easton Lodge on his mother's death in 1938 and became a member of the Royal Forestry Society (Chairman of the Home Counties Division, 1954-56). Sunday Wilshin, a friend, commented that he had acquired the passion for trees when 'the Air Force took over his Essex estate and tore down two dozen 500-year-old oak trees to make a runway.'

Tree-snooping

He started measuring notable specimens - 'tree-snooping' as he humorously described it - on a visit to Ireland in 1947 and over the next decade recorded more than 3000 trees, most of them previously undocumented, at hundreds of estates around the country. Maynard was an inveterate cyclist and did much of his recording by bike; in London he would leave bikes at the tube stations that he regularly used to get to his clubs (the Bath, Press and Royal Automobile).

Six bicycles

Alan Mitchell, who began to measure trees during this period and who inherited Greville's tree papers (now a part of the Tree Register archives, housed in the Library at Kew), described 'Grev': 'he usually had about six bicycles, assembled from Italian, French and British parts according to fancy, and on whichever machine seemed right for the day he started from his home near Dunmow and worked rapidly over East Anglia.' His records include many unique measurements of great East Anglian elms, soon to be lost to disease, and of many of the veteran trees in which Essex in especial is uniquely rich.



Maynard Greville

Darker undercurrent

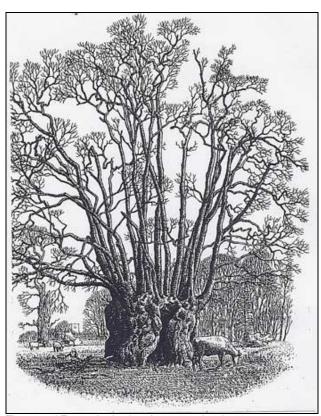
Sadly there is a darker undercurrent to Maynard's life; like his elder brother he was treated for alcoholism, his wife Dora died in 1957 and it is fairly certain that Maynard took his own life, on 22nd February 1960. He said he had cut himself while pruning a poplar in his gardens at Easton (other reports say he fell out of the tree and stuck himself on the knife), but the coroner at the later inquest at Bishop's Stortford ruled that he had killed himself.

Radiating avenues

Greville's Easton Lodge estate is first mentioned in 1302. Matthew de Loveyn (Louvain) is recorded as owning two parks in the Inquisitions Post Mortem of this date at Little Easton, thought to be the Great and Little Parks, though the parks themselves are obviously much older than this. The estate passed through the hands of the powerful Bourchiers and then the Throckmortons before being acquired by the Maynards in the late Tudor period. The Great and Little Parks had been disparked by 1576 and are shown as farmland on an estate map of 1594. A new park was subsequently created with virtually the same boundaries as the medieval Great Park; a county map of 1777 shows this was one of the few in Essex to have a goose-foot (patte d'oie) - a series of radiating avenues giving distant views across the park from the house. The house and park were requisitioned in the Second World War and in 1942 many trees were blown up to create an airbase. Extraordinarily, a handful of trees spared in 1942 were in view of their size relics from the original medieval park, having survived the 16th century return to farmland.

Vast pollard

Among these was a vast hornbeam pollard, measured by Greville at 933cm in girth in 1949. The tree was figured by the artist S. R. Badman (aka 'the Tree-man') in Richard St Barbe Baker's 1952 book *Famous Trees*, which used many of Maynard's records; sadly, it was burned down in 1956. Another, the 'burry maiden' oak, is now the largest standard (unpollarded) oak in Essex with a girth of just under 10m.



The record Easton Lodge hornbeam was lost in 1956

Memorial tree

Maynard planted a variety of trees in the garden of Easton Lodge, but lack of funds led to the abandonment of Harold Peto's formal garden here and the demolition of the bulk of the house in 1948-9. A Lucombe oak in the visitors' carpark, planted on 8th September 2002 by the dendrologist Henry Girling (who began his career working for Greville), is dedicated to Maynard Greville's memory.

A tree in the wrong place

Owen Johnson

To most people, a tree in the Wrong Place probably means a big tree in a small garden. For the tree recorder, a tree can be in the Wrong Place for quite different, and quite fascinating, reasons. In the summer of 2009, a Tony Vincer contacted the Tree Register to announce that he had a Willowleaved Podocarp 20m tall in his garden in Hastings. This, I knew, was impossible: *Podocarpus salignus* comes from the cloud forests of the southern Andes and so is only really at home in the west of Britain; while I happen to have lived in Hastings for most of my life.

Nevertheless, I arranged to visit Tony, who lives at Hazel Court, a Victorian mansion now divided into flats in Stonestile Lane, which skirts a steep narrow valley on the northern side of the high sandstone ridge where the High Weald meets the English Channel. I had, in fact, looked into this valley from the lane several times, without appreciating how steeply the land falls away behind the houses. From Tony's window, I could see into the valley for the first time: a long-neglected Victorian garden, with conifers characteristic of the period – and a *Podocarpus salignus* in the centre, 20m tall. The clean trunk, 71cm thick at its narrowest point, means that this tree is challenged in England only by one at Tregrehan in Cornwall, and surpassed in these islands only by one at the Ellen Hutchins Arboretum in Co. Cork.



Podocarpus salignus in Hastings, East Sussex (O. Johnson)

Christopher Carnaghan

The European Champion Tree Forum

For some fifteen years we have had limited and intermittent contact with a handful of fellow tree hunters from elsewhere in Europe, who found us through their interest in the notable trees of the British Isles. And through them we learned of organisations similar to our own, although it seemed that few were quite as focused as us on finding and recording all the finest trees in their countries, whether native or exotic. Surely, we thought, we would have much in common with our Continental confrères – not only knowledge and expertise but also our shared enthusiasm for finding great trees.

However it was not until 2008 that we started to search systematically for such organisations and enthusiasts. Some were easy to find but - even with the help of the Internet - it took many months to locate others, especially those enthusiasts who seek and record notable trees on their own.

Mutually beneficial

Early this year we felt that we had made enough promising English-speaking contacts to plan a meeting, to get to know each other, to exchange information and ideas, and to discuss how we might co-operate in mutually beneficial ways. So we set about organising what we believe to be the first international meeting on notable trees in Europe, if not the world. (Please let us know of any others). And to give the meeting a clear identity we decided to call it the European Champion Tree Forum.



9.6m girth Sycamore (Acer pseudoplatanus) in the Swiss mountains (Michel Brunner)

Tree hunters

We are grateful to Philippe de Spoelberch, founder of the Wespelaar Arboretum in Belgium and a keen student of notable trees, for inviting us to be the first users of its fine new Visitors' Centre. The meeting brought together some thirty five experienced tree hunters from nine countries in northern Europe, each active in identifying, recording, photographing, and/or promoting the appreciation of notable trees in either a professional or amateur capacity. Several of them have created their own websites dedicated to notable trees in their own countries (or, in a few cases, to trees in several countries). Also present were members of the Wespelaar team and representatives of the Tree Register; David Alderman, Christopher Carnaghan, Maurice Foster, Colin Hall, Tony Kirkham, Thomas Pakenham and Roy Lancaster.

Our guests:

Belgium: Tim Bekaert, Koen Camelbeke, Christophe Crock, Guy de Broqueville, Philippe de Spoelberch, Marc Meyer, Abraham Rammeloo and Marc Struelens France: Jean Francois Breton, Frédéric Cousseran, Olivier Colin and Jean-Francois Dewilde Germany: Michael Dreisvogt, Detlef Ehlert, Gabrielle Glass, Lutz Krueger, Marcel Robischon, Dr Heinz Schirnig, Dr Ralf Tegeler and Dr Reinhard Weidner Hungary: György Pósfai Ireland: Aubrey Fennell Luxembourg: Eike Jablonski Netherlands: Martijn Essers, Nick Gordon, Frank Moens, Jeroen Pater, Jeroen Philippona and Bas van Griesven Poland: Krzysztof Borkowski and Piotr Krasinski Switzerland: Michel Brunner.



To visit Wespelaar Arboretum www.arboretumwespelaar.be

Great trees across Europe

David Alderman, our Director, set a fine pace and tone for the Forum in introducing the aims and activities of the Tree Register. Then came speakers from Belgium, the Netherlands, Germany, Poland, Hungary, France, Switzerland and Ireland. (We'll be putting the full list on our website). Some presented the work of national societies or group projects while others talked about their own research and discoveries. There was plenty on recording and databases, and a wealth of splendid images, some familiar (great oaks in Polish forests) and others unexpected (massive black poplars in Hungarian wetlands). Time being short this was clearly only a taster of the many great trees scattered across northern Europe.

General agreement

We closed with a brief review of what we had learnt about each others' groups, and listed topics of mutual interest – such as international databases, finding funding for research projects, helping to establish new groups in countries without them – that could set the agenda for future meetings. There was general agreement that these initial exchanges had been productive and enjoyable, and that we should remain in regular contact. As a first step we have established an email group to share information among those who attended the meeting and others who were invited but unable to attend. We really want this to be co-operative federal movement, started but not dominated by us, so that the next meeting of the ECTF will – we hope - be in another country and organised by another group.



White Poplar (Populus alba) in Hungary (György Pósfai)
György set up and runs the champion tree register of Hungary on his
own. His website is www.dendromania.hu (in Hungarian and English)

Extending our contacts

In future issues of the Newsletter we plan to introduce some of our new friends from across Europe, their activities, their websites and their societies. Meanwhile we will be putting links to them on our website. And we will be extending our contacts to other countries, notably in southern and eastern Europe. We know for example that Spain has very active groups and individuals devoted to recording and conserving notable trees, but our lack of Spanish means that we must find English speakers among them to permit easy dialogue. Please let us know if you could help us in this regard.

(Right) A 9m girth Sweet Chestnut (Castanea sativa) at Schouwbroek Castle, near Ghent, Belgium (Jeroen Philippona). Jeroen founded and runs www.bomeninfo.nl (in Dutch and English)



Norway Spruce (Picea abies), Switzerland (Michel Brunner) Michel spends six months in the year hunting and photographing amazing trees in the Swiss mountains. Find out more about Michel on his website www.proarbore.com (in German)



Larch (Larix decidua), Switzerland (Michel Brunner)



Sycamore (Acer pseudoplatanus), Switzerland (Michel Brunner)



Tallest tree in Britain

Jean Maskell

The King of Ardkinglas regains crown

In April 2010 the Ardkinglas Grand Fir (*Abies grandis*) regained its title of the tallest tree in Britain and Ireland. The Grand Fir situated in the Woodland Garden of the Ardkinglas Estate on the banks of Loch Fyne in Argyllshire was measured at 64.28 m, over 210' tall.

Taller than Nelson's Column

Local tree surgeon lain Campbell Duncan of ICD Tree Services, Alistair Cameron and Chris Betts, supported by colleague Dougie Cameron climbed the tree hoping that it would be in excess of 64 metres, approximately 8 metres taller than Nelson's Column in Trafalgar Square. The title of tallest tree was held by a Douglas Fir at Dunans Castle also in Argyll. It was measured as being 63.70 metres tall in February 2009.

Sponsored climb

Asked why Scotland is home to so many of the tallest trees in the country lain Campbell Duncan said 'Scotland provides the ideal growing environment for these trees. The Ardkinglas Estate in particular is a sheltered spot and is generally mild and moist with excellent soil. The long hours of summer sunshine also make a significant difference'. They were sponsored for their attempt and will raise cash for two charities — Air Ambulance and Erskine (homes for retired ex servicemen and women). Dougie Cameron said 'We chose these charities as the Air Ambulance is hugely important to parts of rural Scotland like this. Erskine does a wonderful job looking after service men and women with sometimes dreadful injuries'.

Little Big Horn

It is thought that the Grand Fir was planted in the Woodland Garden of the 12,000 acre estate around 1876 (battle of the Little Big Horn, Alexander Graham Bell demonstrated the new fangled telephone to Queen Victoria and the inventor of the bicycle Kirkpatrick McMillan died). The planting of unusual and exotic species was a common practice of Victorian horticulture, with many examples being introduced from the far flung corners of the British Empire. It is thought that the Grand Fir was brought to Argyll from North America. Today, the Ardkinglas Woodland Gardens includes a huge range of often rare and unusual plant species including a collection of unique rhododendrons and azaleas.

Outstanding collection

The 25 acre garden is open to the public daily and has one of the most outstanding plant collections in Scotland. There are 7 'champion trees' on the Estate all in excess of 60 metres. This includes the 'mightiest conifer in Europe', a European Silver Fir which is almost 10 metres in circumference



Preparing for the ascent (Ardkinglas Estate)



Climber Chris Betts takes a breather (Ardkinglas Estate)



View of Loch Fyne from near the top (Ardkinglas Estate)

Mrs Jean Maskell is Estate Manager at Ardkinglas www.ardkinglas.com

Arboretum Britannicum: recording Britain's tree collections

Owen Johnson

This is an edited version of the Introduction to Owen Johnson's report on the 2009 Arboretum Britannicum project; the report itself, introducing a thousand individual collections, is lodged at the RHS' Lindleyan Library, while the full text can be emailed to Tree Register members on request.

During 2009, a Royal Horticultural Society bursary helped cover my expenses as I measured trees in collections across England, Scotland and Wales – visiting in particular important younger arboreta few of whose trees had not been recorded before, such as Thenford House, the Bodenham Arboretum and Castle Howard. Over the course of the project I surveyed 90 significant arboreta, measuring nearly 8700 trees and finding 540 champions.

In addition I wanted to explore the cultural factors that have helped to make Great Britain the richest place in the world for garden trees. What stimulates different people to create an arboretum? How widely may the histories of these sites diverge as the trees mature?



Sequoiadendron form a dark backdrop for the golden bark of *Betula alleghaniensis* in the Savernake Forest Arboretum.

Record-keeping

An arboretum can be planted as an ornament, or an educational resource, or as a means of conserving trees which are threatened in the wild. It is valuable, in the first two cases, to know the planting dates and the species or cultivar name of each tree, and essential in the third case to know the exact provenance. The importance of record-keeping cannot be over-emphasised: few trees will come to maturity during the lifespan of the person who

planted them, and if we are to gain an understanding of the maximum sizes and potential lifespans of different species under varying conditions, this is an endeavour that has to span the generations. Though it is possible to identify most species of planted tree in the field, it is impossible to work out the planting date or to guess the provenance. This information is lacking, for example, in the case of nearly all the mature plantings in Westonbirt Arboretum, because records were never kept, or were lost during the break-up of the old estate.

Changing technologies

It would be easy to assume that, in the Information Age and with so many means of data capture at our disposal, the records of contemporary tree plantings should be more secure. In fact the opposite is potentially the case. One surviving Sweet Chestnut at Castle Leod near Strathpeffer is known to have been planted in 1550, thanks to a manuscript kept in the castle's muniments room. Today, records are likely to be stored on a CD which will degrade within decades, or printed on cheap acidic paper which may last little longer. When I first began surveying trees in the early 1990s, I was working on an Amstrad PCW that wrote three-inch floppy disks; fifty years from now, when most of the trees planted today will only be reaching their prime, it will presumably be a matter of serendipity or prohibitive cost to find a working model of a 'computer', able to read a 'memory stick' containing a 'database' designed by a company called 'Microsoft'. Obviously, institutions such as the Royal Botanic Gardens, and the Tree Register itself, will be able to update their methods of data storage in line with changing technologies. But a period of neglect lasting much more than a decade is likely to prove final. Tree-planting often seems to be an old man's hobby – Tom Hudson at Tregrehan and Thomas Methuen-Campbell at Penrice Castle stand almost alone in having a good chance of seeing the very rare trees they are planting reach their prime. Nor does it often seem to be the case that the father's passion is shared by the sons or the daughters: the presence of imposing old trees may come to inspire the third or fourth generation, but by this time the original records will have been lost.

Genetic diversity

A diverse planting is inherently attractive, and will also be more robust, in the face of a changing climate, than a monoculture. The arboretum may be planted specifically to conserve genetic diversity, or to trial different trees in a given environment: for example, Brighton's Stanmer Park arboretum, planted on a raw chalk hillside, or the Frank Best Memorial Species Plots, at 350m on a mountainside in Denbighshire. Educating visitors may be the priority. (The Forestry Commission used to make much of this, signposting its numerous 'forest gardens' and labelling each tree.

Recently, as a government department, it seems to have concluded that an ignorant populace will be easier to govern.) The trees may be planted as a memorial: *Eucalyptus* for Australian servicemen in the National Memorial Arboretum, or 'adopted' specimens at Bute Park.



Bute Park Arboretum, Cardiff

Background knowledge

The arboretum can be planned to group trees by family allegiance, or by natural provenance, or to provide picturesque contrasts and associations. The Victorians, with their love of cataloguing, typically planted pines with pines and poplars with poplars and this has become the default design. Certainly, it makes sense in that all pines enjoy a free-draining acidic soil and all poplars enjoy a moist, base-rich one, so are likely to remain segregated in a collection big enough (such as the Castle Howard Arboretum) to include soils of both kinds. Planting trees together that you can find in the wild on a single mountain in Yunnan or a single forest in Pennsylvania requires a greater depth of background knowledge but may be more robust, pleasing and informative; good examples, such as Tony Schilling's 'Himalayan Glade' at Wakehurst Place, are rare as yet. The conifers in the Pleasure Grounds at Bowood were 'placed geographically, the ground being laid out on the plan of a map, and the specimens planted, as far as is practicable, in the latitude and longitude of their natural habitat' ("W B R D", Wiltshire Archaeological Magazine, 1867). Regrettably this design can no longer be traced on the ground; a recent example on a much smaller scale is Tom Hart-Dyke's 'World Garden' at Lullingstone Castle.

Survive and thrive

Planting the conifers all together in a pinetum also forgoes the design opportunities of setting different kinds of tree against each others. Spruces are a natural foil for flowering cherries, forming a neutral backdrop when the cherry flowers but drawing the eye with their bolder architecture through the rest of the year. An arboretum can be a work of art on the grandest of scales, as at Westonbirt or the late William Sprower's Windlesham Arboretum in Surrey – albeit a somewhat aleatory one, thanks to the unfathomable diversity of form that different trees (individuals, as well as species) can adopt, and the impossibility of anticipating how well all of the different plantings will survive and thrive.

Maturing collections

Most trees enjoy growing branchtip-to-branchtip with others, and this poses two problems for the arboretum designer. If the trees are set at a 'comfortable' distance when they are small, they will either need to be thinned as they mature or will lack room to develop properly — an issue in many maturing collections. A solution is to interplant with fast-growing, robust 'nurse' species in the expectation that these will be removed as the rarities mature — though by this time the ownership of the site has generally changed and the nurse trees often get left, to suppress the choice ones.

Pioneered

The other problem with most trees' predilection for growing together in a wood is that the individual specimen can no longer be appreciated in the round, and shading of the lower branches may mean that no foliage is in reach. Planting trees so far apart that they can still be viewed in isolation when mature requires large amounts of land; one solution, pioneered so successfully by Robert Holford at Westonbirt, is to space the trees along either side of a woodland glade, so that they can be viewed from at least one angle, while still enjoying the benefits of shelter.



Attractive glade planting in the otherwise crowded Lorien Arboretum, Sussex.

Historic landscape

A tree is attractive to most people when it is still as small, and as vulnerable, as a person is, and again when it is mature and can overwhelm us with its scale and antiquity. There is a period in between – particularly from the age of ten to forty – when it has only the rampant vigour of youth to recommend it and when an even-aged planting may appear short of variety and charm. The landowner may not

be prepared to wait for the trees to come into their own and site management often gets abandoned at this stage. The young arboretum may even be clear-felled and the investment of years wasted, as happened during the recent 'restoration' of Repton's historic landscape at Hylands Park near Chelmsford.



Natural companions: giant Sequoia sempervirens underplanted with Acer circinatum by the Royal Forestry Society in the Ackers Memorial Grove.

Ancient woodland

The arboretum may occupy land which succeeding generations may feel ought to have been utilised differently. The Stanmer Park collection was planted on unimproved chalk grassland, which was kept in fair condition by annual mowing, although compromised by the increasing shade of the trees. The site was declared a Local Nature Reserve in the mid 1990s and, ironically, the abandonment of amenity management in the park has led to the loss of the grassland as self-sown ash trees and ruderal vegetation have taken hold. Exotic trees scattered in ancient woodland may have little real impact on the bird, insect and wild-flower communities that make this habitat so diverse; there is a school of thought that 'polluting' such sites by introducing exotic plants does itself detract from the wood's integrity and value, but I would question the philosophy behind such assumptions and hope that this idea loses favour in the face of the profound disruptions to our ecosystems which Climate Change seems bound to bring.

Careful planning

The default management for today's arboretum is as wood-pasture – trees scattered widely enough for grass to persist under their canopy. The grass is usually mown; grazing is cheaper and more

environmentally-friendly, but trees planted in pasture need expensive railings for some years to protect them. The woodland garden, where the arboretum trees form the uppermost storey of a complex planting scheme, can when mature need less maintenance, but demands careful planning and is unsuitable for very rich soils (where 'weed' species constantly invade) or very impoverished ones (where the trees monopolise the available nutrients). Other uses for the ground underneath the arboretum include graveyards (the City of Westminster Cemetery at Hanwell) and a children's playground (the Reg Hookway Arboretum at Rufford Abbey).

Managed as coppice

Less usually, the arboretum may form a shelterbelt (alongside a railwayline at Crespin Way, part of Brighton's urban elm collection - or even around a farm muckheap at Fontridge Manor, East Sussex). The trees themselves can be managed as coppice, as in the case of the stooled poplar collection at Alice Holt. (In the Derby Arboretum, conceived by Loudon in 1840, the idea was to cut down each tree every few years, so that the foliage remained in easy reach for public study. Some of the specimens still bear the signs of this treatment.)



The arboretum as farm muckheap: rare oaks at Fontridge Manor Farm, East Sussex.

Entrepreneurs

Until the mid 18th century, exotic trees were so scarce that collecting them was the preserve of the wealthiest aristocracy, or of a few retired merchants and scholars whose work had taken them far afield. Around this time, entrepreneurs such as the American planthunter John Bartram and the London nurseryman James Gordon began to sell exotic tree seeds and saplings. The widespread assumption that Capability Brown's landscaping style relied entirely on common and native trees underestimates the role of the 'shrubbery' or 'wilderness' where rare trees could be cultivated. By the 1830s, Loudon was able to include in his Arboretum et Fruticetum Britannicum the returns sent in to him by over a hundred estates across Britain in which out-of-the-ordinary trees formed a feature.

Arboretum Britannicum: cont:

Obviously, the plantings that distinguished these early collections are relatively familiar to ourselves. At the time, they were cutting-edge experiments,

which poses an interesting problem to organisations such as the National Trust that have a remit to 'conserve' historic gardens. Replacing a *Ginkgo* in a late 18th century 'Wilderness' reproduces the letter of the original planting; to reproduce the spirit, something quite 'out of place' is probably needed, such as a *Nothotsuga longibracteata*.

Driving force

New trees began to flood into Britain from across the Empire through the 19th century. Conifers - a group seen as select and distinct enough for a comprehensive collection to be a tantalisingly nearpossibility - were a favourite subject and a pinetum became almost a fashion-statement among the more progressively-minded gentry. In southern and eastern England, most of the conifers that appear to have been planted during this time have proved short-lived and only some 'common' types survive; in Scotland, many early pineta retain much of their original splendour. Big commercial nurseries, such as Loddiges' in Hackney, and later Veitch, Lawson and others, became the driving force behind the fashion for rarities. Public parks were sometimes conceived as arboreta or botanic gardens, as at Bath, Liverpool, Walsall, Nottingham and Derby, helping to make the cultivation of rare trees a more universal part of the nation's heritage.



Victorian conifers, such as the champion *Abies magnifica* planted in 1878at Blair Atholl, only survive in variety in Scotland.

By the end of the 19th century, trees such as *Araucaria araucana*, which fifty years earlier had been elusive status-symbols, were beginning to appear common to the point of tawdriness. The focus shifted towards the sponsorship, by enthusiastic wealthy landowners, of independent planthunters such as E H Wilson and George Forrest, and many of the great gardens that now open to the public, such as Borde Hill and

Caerhays Castle, developed as private collections during this time. Keen plantsmen began to choose to garden in a few favoured areas (south-west Cornwall, the Sussex Weald), while their native neighbours swelled the trend by getting caught up in the general enthusiasm.



An 18th century landscape repopulated with late 19th century plantings: *Picea torano* at Stourhead.

Adventurous planting

The flood of new trees dried to a trickle from the 1930s, as political changes began to make much of the world inaccessible to British botanists. Domestic nurseries, once again, began to dominate the supply of choice trees. The range of species that could be obtained for a new collection from the 1950s to the 70s was more or less determined by the pages of the Hillier Manual of Trees and Shrubs (effectively the nursery's catalogue), while the genetic diversity in commerce tended to be so restricted that it is possible to recognise individual clones across many of the collections planted at this time. Unusual trees began to be planted on a much broader scale in public parks and gardens; only in London, where the tradition of adventurous municipal planting had an early start and where many public parks have their origins in richlyplanted private estates, does there seem to be a risk that urban tree biodiversity may be on the decline.

Unprecedented

Since 1980 the pendulum has swung once more. Political borders have re-opened, and international travel is cheap and easy. The consequence is that an unprecedented abundance of new trees has flooded into Britain, to be planted both in national institutions such as the Royal Horticultural Society's gardens, and in the latest generation of ambitious private arboreta.