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Report from the Chairman

Colin Hall

Significantly extending our knowledge

Owen Johnson's Urban Tree Project was a formidable achievement in 2004, with Owen visiting 136 towns and cities, exploring 750 parks, gardens, and other public places, to identify and measure 6560 notable urban trees and 2600 others. This valuable data has been added to The Tree Register database, with 66 towns getting their first mention in the Register. And all this was achieved in one year, and on foot or on public transport!! This project, financed by the RHS and the Tree Register, has extended significantly our knowledge of our urban arboreal heritage and should result in public authorities being better informed to ensure appropriate management and protection of their urban trees.

Important influences

I lament the tales of insurance loss adjusters and road safety advisers recommending the felling of older or notable trees in urban areas and/or near to buildings. Safety is, of course, very important but so are our urban trees which are one of the most important influences on the urban landscape. The role of experienced arboricultural experts to achieve the right balance is crucial.

Alan Mitchell Lecture

We enjoyed seeing many of you at Nymans last summer and the 2005 Alan Mitchell Lecture at the Sir Harold Hillier Gardens. We are very grateful to Roy Lancaster, Woolfgang Bop, the Director, and to his staff for making this event so successful; and also to Harry Hay and Chris Carnaghan for providing so many rare and unusual trees for the silent auction. In 2007 this biennial lecture will be in Ireland. Finally thanks are due to all our volunteers—our tree recorders and all our officers for another successful year of progress.



Roy Lancaster leads members around Nymans in 2004 (Philippa Allen)

TROBI Giant Redwood plantings

It is now 10 years since the planting of 100 Giant Redwoods (*Sequoiadendron giganteum*) across Britain and Ireland in 1994/5 to celebrate the successful computerisation of Alan Mitchell's hand written records and we now want to find out how these trees have prospered and which is the biggest so far! Trees were planted in Ireland, Isle of Man, Scotland, England and Wales. Last October trustees measured the tree at Chatsworth (6m tall x 15cm diameter) planted by our Patron. So for those who planted these TROBI Redwood trees you will soon be receiving a recording sheet to complete and the results will be announced on our web site and in the next newsletter.

Registrars Report

David Alderman

Exceptional exotics and notable natives

Like our Chairman, I can not start without paying tribute to Owen Johnson's fantastic achievement during 2004, measuring a record 9,200 trees! His Urban Tree Project discovered many previously unknown champions, helping raise local awareness and in doing so promoting their protection. We are aiming to highlight many of Owen's exciting discoveries on our web site over the coming months.

Champion Judas Tree

When Janet Brunswick called the Tree Register after seeing an article on champion trees in the Telegraph, she hoped a Mulberry in her garden, overlooking the Aylesbury Vale in Buckinghamshire, would be of interest. The Mulberry is indeed a fine specimen, still intact on a single 2m girthed bole, but next to it stands a more remarkable tree. Although not in leaf or flower, its seed pods confirmed a huge Judas Tree (*Cercis siliquastrum*) 11m tall x 2.17m girth (69cm dia.) Pleasantly surprised that she was now the custodian of a champion tree, Janet confirmed it was particularly superb when flowering during 2004 (photo on web site), visible from miles around!



Mrs Janet Brunswick and champion Judas Tree (Tree Register)

Web Site – latest news monthly!

Our web site will now be updating latest news monthly. Members with email addresses can receive a summary of what is appearing and for those of you without access to this information an e-news sheet can be provided.

Ancient woodland coppice

Our partnership with the Woodland Trust and Ancient Tree Forum, helps record veteran trees reported by members of the public. Much of our ancient woodland has been cleared within the last 100 years and it is here that “ancient” trees often relate to a stool or root system supporting young stems and therefore may not be visually imposing. However, occasionally a coppice stool of such magnitude is found that stands out from all others and warrants further investigation. Neville Fay (arboricultural consultant and founder member of the Ancient Tree Forum) and colleague Nigel de Berker have recorded a great Oak coppice stool in Hatfield Forest, Essex they call the “Palm of Hand Oak”



Neville Fay (Ancient Tree Forum) with the “Palm of Hand Oak” an ancient Oak coppice in Hatfield Forest (Neville Fay)

Palm of Hand Oak

Aging such coppice stools is fraught with uncertainty. Neville explained that if assuming coppice girth is 35% greater than pollard girth, when measured at the least girth (with these specimens this is a basal measurement and is made up to account for an entire circumference where gaps are present) the "Palm of Hand Oak" could have its origins 900 to 1300 years ago. Neville accepts this may be quite "fanciful" but without further research, simply standing by such a remarkable tree who is going to argue?

Wordsworth's Temple a victim of nature

Gale force wind and rain battered the trees across Scotland and the north of England earlier this year. Cumbria was particularly badly hit with thousands of trees blown down. Four months on and we are only just receiving information on some of the more notable victims.

Tragically the largest of the Borrowdale Yews has been devastated. The following was reported by Ancient Yew Group member Paul Greenwood.

"I visited on 14th March 2005 and discovered the largest tree has been devastated by recent storm damage. Needless to say it was a personally upsetting experience having visited the location on many occasions prior to its depletion in the last decade and being within the 'green temple' which the combined canopy of the close growing pair of yews of the grove created. But the damaged yew remains alive and will regenerate, as this apparently drastic event to our eyes is nevertheless part of a life cycle which more evidence suggests is quite normal to the yew; the loss of large branches around and above 10 - 20 ft (3 - 6 m approx) after a prolonged stage of hollowing. Perhaps it may influence the development of an aerial root. A clean up operation at Borrowdale following recommended best practice to leave fallen yew wood in situ, as fragments are proven to regenerate into a new tree long after being separated from the root system, is being managed by Maurice Pankhurst of the National Trust."



The Borrowdale Yew 2005 (Derrick Holdsworth)

Urban Tree Project

Owen Johnson

A Year of Urban Trees

Most tree measurers, when they find time to go taping, head for large and famous gardens, or at least for beautiful places which grow trees well, such as the New Forest. In fact, the majority of the nation's town parks and cemeteries had never been visited by anyone with an eye for rare or exceptionally big specimens.

RHS grant

Nevertheless, such places are full of locally much-loved trees, and have been looked after by generations of often tree-mad park superintendents. So in 2004, with a grant from the Royal Horticultural Society to help cover train fares and bed and breakfast costs, I headed off to Truro and to Aberdeen, to Crewe and Bridgend and Sunderland and to 130 other towns and cities, to fill in the biggest blanks on the Tree Register's database.

Record 9,200 trees

Admittedly, this wasn't the kind of adventure where you discover trees new to science. I didn't even get attacked by lions or kidnapped by guerrillas, though it did rain on me rather a lot. But I did measure 9200 trees (a record I suspect which will stand for some time) and by the end of the year had come to some slightly surprising conclusions about our urban trees: conclusions which could never have been drawn without the existence of the comprehensive template the Tree Register provides.

28% of our champion trees

Limiting myself to forms I was able to identify in the field, I found that there are about 1360 different kinds of trees growing in Britain's towns, in public ownership alone. In other words, scrunch together all our urban parks and you get an arboretum more diverse than Kew's. Add the independent sites, like Kew and the Edinburgh Royal Botanic Garden, and you find at least 2200 distinctive kinds of tree which have managed to grow well in towns, and which now account for 28% of Britain and Ireland's 'champion trees'.

At risk of extinction

This is startling because so much of the time in a city you are looking at only a repetitive handful of trees – the London Planes, the Horse Chestnuts, the Common Limes and Sycamores. In fact, of the 1360 kinds in the public domain, 390 seem to be represented by a single example. Another 150 have only two or three plantings, and 275 seem to have fewer than ten examples. Only 340 can be called 'widespread', and a mere 150 are at all 'common'. In other words, a third of our urban tree forms are at risk of extinction in Britain, while opportunities to create beautiful, stimulating and ecologically sustainable townscapes by planting them with the huge diversity of trees which thrive here have been, and continue to be, missed on a monumental scale.

Urban arboretum

It would be easy to imagine that all these 'rare' urban trees are to be found in one or two fortunate collections like the Bath BG. But one heartening discovery has been that this is far from the case. The 540 kinds of tree represented in towns by fewer than four public examples are actually scattered across nearly 260 separate sites under the remit of 110 local authorities. Hundreds of different park keepers and tree officers have helped to create our 'urban arboretum' by planting rare but beautiful species.



Acer palmatum 'Albomarginatum' in a public park (Tree Register)

Parks full of surprises

A few places stand out as examples of good practice. Cardiff is Britain's tree capital, with two parks (Bute and Roath) considerably more diverse than any found elsewhere. Brighton preserves its unique wealth of different and sometimes disease-resistant elm clones. Coastal resorts (Torquay, Penzance, Hastings, Scarborough) all tend to have gardens with many rare and exciting trees. Even in the industrial north, cities such as Liverpool have a wealth of parks full of unexpected varieties. Surprises have been far too many to mention here, so I'll end with just one. The Chinese Swamp Cypress, *Glyptostrobus pensilis*, is a fascinating deciduous conifer which, books will tell you, scarcely survives even in the mildest parts of Britain. Fortunately Barry Pugh, retired Wolverhampton parks superintendent, had other ideas, and so West Park now boasts a thriving young 8m tree, to take over from the defunct champion at Dunloe Castle in Kerry.

Remarkable trees of Ireland

Aubrey Fennell and David Alderman

Aubrey Fennell poured over his meticulous records, the result of five years recording for the Tree Register of Ireland (TROI) and announced with great enthusiasm that we would visit the largest Walnut in Ireland and largest Monkey Puzzle in all of Ireland and Britain. Not that he needed to look up the information, each tree being firmly imprinted in his mind as many were his own discoveries as he has quickly become the leading authority on notable trees in Ireland.

Perfect tree house

We had hardly left our bed and breakfast on the outskirts of Dublin before pulling into the driveway of Gormanston College to see a huge multi-stemmed candelabra shaped Sycamore. With an 8m girth this remarkable tree has self-braced itself with various inosculating branches and created the most perfect tree-house.



Aubrey Fennell contemplates in the "tree house" Sycamore at Gormanstone College. (Tree Register)

Boyne Walnut

Oldbridge House, Drogheda is the Battle of Boyne heritage site where hopefully they will also promote some of the superb trees planted since 1600. The star is surely a 5.87m girthed Walnut (*Juglans regia*), the largest in all Ireland and 4th biggest ever recorded throughout Britain and Ireland. It has found the fertile Boyne valley conducive to good growth and looks in fine condition. Nearby is a group of four of the largest Single-leaved Ash (*Fraxinus excelsior* 'Diversifolia') you are likely to find anywhere.



Despite the rain the Boyne Walnut looked stunning. (Tree Register)

Champion Monkey Puzzle

Major Shirley was at home at Loch Fea, Co. Monaghan and proudly produced references to the 1845 planting of the Monkey Puzzle in the garden. Aubrey had already shown the Irish Tree Society this tree and was justifiably pleased with his discovery. Hidden amongst dense Holly this short tree could easily be over looked as other Monkey Puzzle more visible are quite modest in size. However, this tree has such a huge (4.24m girth) bole it made little difference whether the tape measure was placed between 1m-1.5m above the ground where its elephant-like foot swelled in typical fashion.



One of his greatest discoveries? Aubrey admires the champion Monkey Puzzle at Lough Fea (Tree Register)

Cavernous interior

At Tynan Abbey Co. Armagh Alan Mitchell recorded a 27ft girthed Ash (*Fraxinus excelsior*) in 1976, but ignored a slightly smaller tree nearby. The big tree blew over in the 1990's and was found to be completely hollow. The smaller tree is heading the same way as Aubrey discovered when he climbed into its cavernous hollow interior through a hole between its root buttress's. On the outside it is superb and this "small" tree is now 25ft (7.62m) in girth and one of the biggest in all of Ireland.



The great Tynan Ash (Tree Register)

Tallest trees

Avondale Forest Park was developed in 1900 as the first college for Irish Forestry. The conifer plots 100 years on are themselves now quite remarkable. Set in the valley floor alongside the river, a plot of 1900-1910 Douglas Fir (*Pseudotsuga menziesii*) are forcing themselves ever upward. Young trees growing with vigor and with all important shelter these trees will surely soon become the tallest trees in Ireland. Taking our time we recorded three trees greater than 54m and settled on 55m for the best. The current champion Douglas of 56m at Powerscourt will have to look out!



The evening sun catches the tip of one of Irelands tallest trees at Avondale (Tree Register)

Hard graft

Owen Johnson

The relationship of rootstock and scion

Grafting is a tricky skill but one which nurseries have found several reasons to perfect. One, since fallen from favour, was to speed the production of saleable standard trees by grafting scarce material at head-height onto something quick and easy. Older parks are full of Yellow Buckeyes perched awkwardly on

Horse Chestnut trunks and Silver Limes piggy-back on Common Limes.



Aesculus flava on *A. hippocastanum*. Regent's Park, London (Tree Register)

The ugliest of grafts

To propagate a special clone, grafting becomes the only alternative to striking cuttings. I've never seen a grafted willow: a cut twig stuck in the ground and left to grow meant much less work. Poplars strike easily too, so I've only seen Golden Poplar grafted once (Danson Park, Bexley). An exception is the sole monoecious poplar, the Chinese Necklace Poplar, which is often seen worked onto Black Poplar with results among the ugliest of all grafts.

Helpful clues

Grafts can offer the tree-recorder helpful clues. An ordinary-looking but grafted Sycamore is very probably 'Corstorphinense', which only stands out during its couple of weeks of spring-time golden glory. 'Miltonensis', an old clone of weeping Beech, isn't spectacular but has an odd bark, with criss-cross ridges, making the graft, onto the smooth-barked type, particularly obvious: it can still be seen in the Cambridge and Sheffield Botanic Gardens, the Yorkshire Museum garden in York, Canterbury's Dane John Gardens and in front of Bath's Holburne Museum. Tell-tale grafts in the Double Horse Chestnut 'Baumanii', meanwhile, can be very hard to spot. A Swamp Cypress on the north-east side of the boating lake in Gunnersbury Park, west London, has what is surely a graft-mark at chest-height, but I've yet to catch it doing anything atypical. Grafting is also a way of speeding up a tree's adult behaviour, especially fruit-production. Brewer Spruce branches are sometimes grafted straight onto the rootstock to create a tree that weeps from the word go (but is unlikely to grow big and strong).

A Cherry lawn

Some clones, like the Yoshino Cherry's 'Perpendens', have only one direction of growth – downwards. To get anywhere they need to be grafted high on a tree of normal habit (although one particularly vigorous 'Perpendens' in Belleisle Park, Ayr, grows along the ground after hitting it to make a kind of cherry lawn, 8 metres across). Westonbirt Arboretum's pair of 'Perpendens' benefit greatly from the trouble taken to graft them on a Wild Cherry stem 4 metres long, rather than the standard 1.5m. A Camperdown Elm in Ayr Cemetery was also grafted at 4 metres and has grown into the biggest and best I've seen - while the ungrafted 170-year-old original sport in Camperdown Park remains a 3-metre bush. In 1848, Barron's Nurseries grafted scions of Weeping Ash at 27 metres in the branches of a wild Ash at Elvaston Castle near Derby, though the stock eventually took over. Presumably the nursery that grafted the big Silver Pendent Lime in Bath Botanic Gardens at 3 metres was under the impression that this was going to grow directly earthwards too. Some big old weeping Willow-leaved Pears (as in Cannon Hill Park in Edgbaston and Prince's Park in Liverpool) have graft-marks at the base and again at the top of the 2-metre trunk, though all three bits are clearly *Pyrus*.

Big mistake

Sometimes the stem below the graft is a selling point in itself. Thirty years ago, 'Sheraton' cherries were popular: roots of Wild Cherry, trunk of the satin-barked Tibetan Cherry, crown of Japanese flowering cherry. But these productions must have been unstable as today they are very seldom seen. *Prunus x schmittii* is another cherry with pretty red bark, so grafting this, Japanese cherry-fashion, at head height (as along Coldershaw Road in Hanwell) was a big mistake. I've even seen a large Tibetan Cherry on a high graft of Wild Cherry in a garden in Eastcote, and can only assume that an unscrupulous nursery was trying to make a saleable tree out of the bits left over from the production of 'Sheraton' cherries.



Fraxinus angustifolia on *F. excelsior* (Tree Register)

Sheer sense of fun

Occasionally grafts seem to have been made from a sheer sense of fun. A Copper Beech at Enys in Cornwall is grafted at 3 metres: high enough for the stock to contribute big branches and a bottom green layer to the crown. A big Weeping Wych Elm ('Horizontalis') in Stamford Park, Ashton under Lyne, grafted at 2 metres onto the fastigate 'Exoniensis', has to come into this category too.

Evolutionary relationships

The compatibility of different trees for grafting sheds interesting light on their evolutionary relationships. Rose family trees, so varied in appearance, are in general a promiscuous lot: rowans will graft on thorns; Amelanchier on thorns or rowans; Quince on Common Rowan (West Ham Park, John Fothergill's old garden); pears on Quince; Medlar on thorns or pears. Apples, however, can only be grafted on other *Malus* (and it's interesting here to note that *Malus trilobata*, a crab so distinctive that it's sometimes transferred to a separate genus, *Eriolobus*, has made a superb 15-metre street tree in Abbey Road, Westbury-on-Trym, when grafted at the base on what seems to be Wild Crab).

Growth rates

For the tree measurer it's fascinating to observe how grafts can affect vigour. Japanese cherries are sometimes worked onto Oshima Cherry (*Prunus speciosa*) with its silky-smooth, pewter-grey bark, and grow slower than the same clone grafted onto Wild Cherry. (Oshima Cherry, incidentally, makes a beautiful tree in its own right, but whole ones are hardly ever sold.) The biggest flowering cherries I know – two Yoshino Cherries south of the lake in Mote Park, Maidstone – are grafted high on Wild Cherry and have somehow managed to grow faster than either partner has any right to, had a graft never been made.

Biggest examples

It's not surprising that the two *Pyracantha coccinea* I've seen making the best impression of standard trees (in St Michael's Square, Gloucester) are grafts at the base on a stronger tree, Hawthorn. But Whitebeam outgrows Hawthorn, so why are the biggest examples of *Sorbus aria* 'Lutescens' found so far grafts on Hawthorn, in Hull's East and Pearson Parks? The 'Embley' Rowan does well on Hawthorn too (eg Fletcher Moss Park, Manchester) - but even better on Swedish Whitebeam, east of the lake in Cirencester's Abbey Grounds.

Bizarre results

Narrow-leaved Ash used to be commonly high-grafted on wild Ash, with bizarre results – not only is the bark a mismatch but the partners never agree on how big a tree they want to make: the stock stays slim, the top grows fat. Old trees look improbably top-heavy but seem surprisingly wind-firm.

Clean break

There is always the proverbial calm still day. A grafted Hungarian Oak at Kew toppled off its pedestal in 1986 in just such weather, revealing a perfectly clean break where the graft had been.



Rare trees grafted at the NBG Glasnevin, Dublin (Tree Register)



Quercus dalechampii *Fraxinus anomala* (Tree Register)