

## The Tree Register

With a quarter of million records of individually exceptional trees across Britain and Ireland, covering 8,700 taxa and 17,000 parks, gardens and parishes, The Tree Register is the most nearly comprehensive database of its kind in the world. In describing its history and organisation, **OWEN JOHNSON** aims to suggest some ways in which such a resource can be utilised by the tree-growing community, and how similar ventures might be established in other countries.

The backbone of today's Tree Register derives from the life-work of Alan Farley Mitchell, who in the years from 1954 was employed by the UK Forestry Commission as a geneticist, researching clones and species for their timber potential. In this role he visited thousands of estates and arboreta, building a meticulous hand-written card-index to show which trees existed where and the soils and microclimates that suited each best. Large-growing conifers were his focus, but he soon began to measure broadleaves and smaller species of garden merit. This data uniquely equipped him to prepare the *Collins Field Guide to the Trees of Britain and Northern Europe* in 1974; it also enabled him to remind gardeners that most trees grow faster when young than popular imagination supposes, and to promote the planting of several, then rare, favourites such as the Hungarian oak (and, it has to be admitted, the *Leylandii*).

Alan's research did not arise out of nothing. Through the 1950s, his activities complemented those of the Hon. Maynard Greville, who brought a gardener's and landowner's eye to recording trees of stature and beauty in southern England; Greville's Essex estate, Easton Lodge, had lost much of its timber in the Second World War when its park became an airfield. Generations earlier, Sir Henry Elwes and Augustine Henry had measured 3,500 timber-sized trees for *The Trees of Great Britain and Ireland* in 1906–1913; in the 1830s, John Claudius Loudon had used a questionnaire system to furnish his monumental *Arboretum et Fruticetum Britannicum* with variously reliable records of 1,800 exceptional trees, while the Royal Horticultural Society repeated this method to amass 5,000 sets of measurements for the 1931 Conifer Conference. Alan incorporated these statistics and others into his card indexes, and also relied on volunteer enthusiasts, such as John Miller in Alness and the late Jim Paterson MBE in Nairn, to research and reconnoitre new sites.

As a teenager in the 1980s, I enticed Alan twice to Sussex and Kent to re-measure and identify the notable trees I'd started recording. Among the sites we visited together was Chilham Castle, in part of whose grounds there was then a small zoo; one compound contained a tree new to me which Alan immediately saw was a record-sized hybrid bean, *Catalpa × erubescens* 'J. C. Teas'. I was impressed by the tree but even more by Alan, who didn't pause to check on the cage's official occupant before vaulting the safety-barrier, tape-measure in hand. (The tree survived in 2018, its environs restored to parkland.)



Chilham Castle's champion *Catalpa × erubescens* 'J. C. Teas' in 2018 when its height was measured at 17 m and diameter at 149 cm (467 cm circumference).

In the days before security gates, Alan—an imposing man, and a stubborn one when provoked—seems to have been able to cajole his way into nearly every estate in Britain and Ireland where research suggested that exceptional trees might stand hidden. And in general it remains true that tree-planting landowners are pleased to meet someone who shares their enthusiasm—particularly if that person can state categorically that their trees surpass any of their neighbours' and rivals'.

The times through which Alan worked were more interesting than he may have wished. Intensely cold winters culminated in the easterlies of January 1987, when many of the unique assemblage of tender trees in Cornwall and the Isles of Scilly froze. Later that year, the 'Great Storm' felled up to half of the finest specimens in the great gardens of south-east England. Cool, dull summers limited the performance of many warmth-loving kinds—such as Chilham Castle's bean—while the severe droughts of 1975 and 1976 affected the



Vicky Schilling at Chelsea Flower Show in 1990 on the exhibit that she organised on behalf of The Tree Register.

growth of species such as Alan's beloved giant conifers from the American northwest. From the 1930s until the 1980s, worldwide politics meant that very few new trees could be introduced, and recording was a matter of refining the information available for the relatively restricted range of clones and species already in cultivation.

From the 1970s, Alan was assisted as a volunteer by the late Vicky Schilling (née Hallett) who

took on the secretarial work of extracting information from the card-index to supply botanists and landowners with lists of particular trees. She also converted Alan's measurements to metric units, and helped with the logistics involved in visiting hundreds of private estates each year.

Through this article I shall indicate some of the benefits to accrue from amassing data about tree growth. One that quickly caught the popular imagination was the concept of 'champions'—the tallest known example of each species, and the largest in girth. Alan and Vicky, along with Alan's co-worker John White, compiled the first *Champion Trees in the British Isles* in 1985. This booklet was published under the Forestry Commission's imprint and at the time it seemed natural that, following Alan's retirement, the Commission itself would curate his register.

Vicky Schilling, however, along with other independent dendrologists, saw the advantages of forming an independent Charity: such an organisation would be continuously able to attract funding, and landowners would be less likely to refuse entry to recorders if they were seen as fellow-enthusiasts rather than civil servants. The Tree Register of the British Isles (TROBI) was accordingly founded in 1988.

By 1993, advances in home computing had made possible the conversion of Alan's card-index into a database. David Alderman—then Bedfordshire County Tree Officer and now The Tree Register's honorary Director—helped tailor the software, and Vicky recruited a team of volunteers to input the data. The addition of 100,000 records to the new database was celebrated in 1995—the year of Alan's death—by the planting of a hundred giant sequoias across Britain and Ireland. Controversially, it was decided to limit online access to the database to members: besides indicating that its statistics were



A list of champion trees can indicate the ideal growing requirements of each species. The biggest Russian-olive (*Elaeagnus angustifolia*) in Britain and Ireland, grows on the Esplanade at Ryde on the Isle of Wight.

indeed of value, this ensured that a regular fund of subscriptions was available to maintain the website, and could reassure landowners that some control was exercised over how details of their trees would be publicised.

Since its inception the Tree Register has been international, in that it respects geographical rather than political boundaries; Augustine Henry was an Irishman, and Alan himself studied forestry in Dublin. The Irish Tree Society helps maintain the legacy of records across the island of Ireland, and the Tree Register of Ireland project which the Society funded in 1999–2000 was the first to incorporate GPS-generated grid references and digital images for each specimen. Since then, Aubrey Fennell has been part-funded by the Society as Ireland's lead recorder.

Another invaluable partnership within the UK since 2007 has been with the Woodland Trust, developing the Ancient Tree Inventory (<https://ati.woodlandtrust.org.uk>) by tapping into the experience and enthusiasm of a huge network of volunteer naturalists; thousands of exceptionally old and large wild trees have been recorded for the first time. Several of the project's volunteers have gone on to measure ornamental trees for the Register itself.

In 2010 the Tree Register inaugurated the European Champion Tree Forum (see article in the *2010 IDS Yearbook*, pp. 58–62), with the aim of sharing the charity's ethos and its practical know-how and inspiring the establishment of similar campaigns across continental Europe.

When I became actively involved in recording for the Tree Register in the early 1990s, I estimated that its tally of 100,000 records would have to double before it became usefully close to comprehensive. I actually underestimated



photograph © Owen Johnson

the rate at which new species were being introduced from tree-rich ecosystems such as the mountains of Mexico and south-western China, and the value of the Tree Register's data in keeping track of these introductions as thousands of new taxa began to prove their worth in gardens across Britain and Ireland: the record set is now three times its size in 1988, whilst great trees continue to be found by our expanding network of skilled local volunteers. Interesting specimens are also still getting planted faster than old ones are lost.

As a fairly raw recruit, I was thrown in the deep-end by Vicky Schilling who suggested that I undertake a thorough update of the Borde Hill estate in West Sussex, where an unparalleled plant collection had been established over

**Opposite.** Britain and Ireland are full of abandoned gardens for which the data held by The Tree Register now serves as the only equivalent to a catalogue. This *Catalpa bungei* planted by Maurice Mason in private woodland in Norfolk is now in its prime.

**Right.** The champion example of the tree-sized *Rhododendron barbatum* with its exquisite bark grows in Greenock Cemetery, Inverclyde.

the course of a century by generations of the Clarke family. The estate is still gardened, but its outlying parts are overgrown and unlabelled and I quickly appreciated that, armed with my dangerously little knowledge of the rare trees I was looking for, I would be quite lost without the hand-drawn plans which the late Hatton Gardner, an amateur tree recorder who was active from the 1950s to the early twenty-first century, had produced and whose Tree Register copies Vicky had photocopied for me. I came to see that cataloguing arboreta like Borde Hill's might be the most valuable role the Register could fulfil: whether a label lasts for three years or 30, the time is bound to come when a collection's trees have entered their prime but their planter is no longer with us to tell what they are and how they were sourced. In an increasingly formal capacity, the Tree Register, with its secure long-term future, hosts default catalogues on behalf of many private tree collectors, curating GPS coordinates and collectors' numbers for tens of thousands of noteworthy plantings.

Early editions of *Champion Trees* limited themselves to taxa with at least five records on the Register—the equivalent of a birdwatcher not bothering to record golden eagles because 'they're rare'. (Alan himself was also a keen ornithologist.) With increasing comprehensiveness, the Register now provides reliable information about the very scarcest—and most vulnerable—of Britain and Ireland's trees. For example, my first survey in 2009 of one of the late Maurice Mason's astonishing Norfolk gardens turned up a fine example of the Mexican walnut *Juglans hirsuta* with its soft, greyish foliage and deep red flush, which Keith Rushforth had grown and donated from a nut he had collected in Nuevo Leon. (The garden was totally overgrown by this stage; fortunately Maurice has made his labels to last.) This seemed the only example of its species in cultivation; Keith plus Matthew Ellis from the nearby Grange Farm Arboretum have now successfully raised cuttings from it.

In its early days the Register excluded plants with any tendency to bushi-



photograph © Owen Johnson

ness, informed by Alan's trenchant views on a subject about which vocabulary alone is vague. (English speakers, for instance, naturally accept 'palm-trees' as 'trees', while Germans insist that a *Palme* cannot be a *Baum*. Fortuitously, no Arecaceae are really hardy in Germany!) The database has expanded to accept any plant which can live long enough and grow big enough to be individually remarkable, and includes variably comprehensive data for 150 large *Rhododendron* taxa.

I feel privileged to have recorded trees through decades when thousands of new introductions, like Keith's *Juglans hirsuta*, have begun to reach maturity, and when an increasingly warm, wet climate has allowed our tallest trees such as Douglas-firs to reach new heights and for astonishing numbers of half-hardy species to survive in the front gardens of inner London or the wooded valleys of Cornwall. As a barometer of incipient Climate Change, the success of such new plantings can quickly be seen in the Tree Register's data; it will take longer for negative changes, such as the arrival and spread of new tree diseases, to show so clearly.

The value of the Tree Register's data can only be maintained by continued fieldwork—checking on growth and survival, visiting new arboreta once rare plantings become established, and keeping a knowledgeable eye open for unexpected trees in everyday places. The Vicky Schilling Bursary was established by The Tree Register in her memory in 2020, to nurture our next generation of skilled tree measurers by funding their expenses.

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Visit [www.treeregister.org](http://www.treeregister.org) to see information on the top tier of over 70,000 trees in the interactive database within the members' section (or to add updates and photos of your own); additional details are supplied on request. Projects for 2021 include a mapping facility for all champion trees on the website.

