



# International Oaks

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# Oak Open Days

## Gredington Park and Ness Botanic Gardens, United Kingdom

### July 11-12, 2015

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## Gredington Park,<sup>1</sup> 11 July

A small but select party of IOS members and friends gathered on a bright but showery day at Gredington Park in North Wales, the home of our hosts (and IOS members) Lloyd and Sally Kenyon, and were struck immediately by the beauty of the site. The house, its formal gardens and park are set in gently hilly country, lying at about 300 ft altitude. The park of some 80 acres was created during the early 19<sup>th</sup> century from natural oak woodland, as evidenced by a score of fine *Q. robur*, the native English oak, dating from around 1760, and other mature non-oak native species.

Less than 50 miles to the west, the mountains of Snowdonia National Park, rising to 3,600 ft, capture much of the rain driven in by the prevailing west and southwest winds. Precipitation there reaches a near-tropical 175 inches a year; while at Gredington a much more tolerable 30 in, plus a mean annual temperature of around 50 °F, provide a welcoming climate for growing most temperate trees. Abundant lichens on trunks and branches bear witness to the clean air and relatively damp climate.



Photo 1/ The house at Gredington Park.

The higher ground to the west enhances the landscape and takes the bulk of the rain but provides only partial shelter from the winds that test all of the trees, especially challenging the resilience of younger specimens. The soil is neutral clay, some of it heavy but generally draining well, partly down to a small glacier-gouged lake (known locally as a mere). Conditions are good for sheep and a large flock contentedly grazes the parkland.

The planting of oaks in the park began in the mid-1980s, starting with a handful of more common species like *Q. rubra* to complement the established *Q. robur*. They have grown well, gracing the slopes of the park close to the formal gardens, and stand witness to the affinity of most hardy oaks to the site. Lloyd's first major development of the arboretum was in 2003, largely thanks to a generous selection of acorns acquired at the International Oak Society conference in Winchester that same year. Since then he has planted more extensively and his collection now boasts about 275 taxa, with roughly 1/3 cultivars

1. For more information on the oak collection at Gredington Park, see Haddock 2015.



**Photo 2/ Numerous very old and magnificent *Quercus robur* add majesty to the landscape.**

and 2/3 botanic taxa (species, subspecies, and hybrids).

The saplings, many on more exposed slopes, are initially staked to help resist the wind, and they are enclosed by sturdy wire tubes to protect them from the sheep and rabbits. Lloyd manages his collection with DEMETER, the database application developed – with Lloyd’s help – by Plant Heritage. DEMETER users can link photos, documents, and record descriptions of each plant. It can be used at a basic level just to record the plant’s name, its source, date of acquisition and location in the garden and then more detail can be added as required.



**Photo 3/ Part of the formal gardens.**

Lloyd’s impeccable labels are developed from the database and then printed on a Brother printer on plastic tape (18 mm wide) developed for use on oilrigs in the North Sea. The plastic labels are then affixed to 20-mm-wide aluminum strips. The labels include name and accession number, hybrid formula where necessary, as well as distribution information. As the park is freely grazed by sheep, each tree is surrounded by a metal cage, ideal for supporting the labels that are screwed on using a backing plate. Once the trees are large enough for the cages to be removed, a rubber string is passed through the screw holes and tied around the tree, allowing for several years of expansion with no damage to the tree.

The trees are generally healthy, with no incidence as yet of *Phytophthora ramorum*



(the agent responsible for Sudden Oak Death) or Acute Oak Decline<sup>2</sup>, both now troubling British foresters. A few younger specimens – e.g., *Q. buckleyi* ‘Carlsbad’ – were suffering from dieback (maybe Chronic Oak Dieback?<sup>3</sup>), but this was rare. According to Lloyd, there is some defoliation by insects in the spring but it is of no consequence. The oak processionary moth, another recent and unwelcome immigrant to the UK, is fortunately absent.

## A model nursery

If you were a baby oak tree and could choose what nursery you would like to grow up in, you would be well advised to choose Lloyd’s. Impeccably cared for, bursting-with-energy seedlings and saplings wait their turn to enter the park. Lloyd raises many of his oaks from seed, much of it obtained via the IOS as well as from the expeditions he has helped to finance over the years as a long-standing member of a dedicated group of quercophiles (of which the late Michael Heathcoat Amory was a driving force). After germination the young oaks are potted on progressively, finally into air pots, the soil

enriched with mycorrhizal fungi (in tablet form) but no bone meal or other fertilizer. If more proof were needed, here at Gredington it can again be shown that automated watering in the nursery is a boon for busy gardeners!

There are a bunch of oaks, rare in cultivation, in Lloyd’s nursery – wonderful things like *Q. championii*, *Q. crispipilis*, *Q. daimingshanensis*, *Q. delgadoana*, *Q. inopina*, *Q. invaginata* – that are all in excellent health but Lloyd is hesitant about planting them outside, “When you have only one of something and you are almost certain that planting it outside is a death sentence, is there an alternative?” Lloyd has found an alternative for one of his *Q. insignis*: after testing it in North Wales with regrettable though understandable morbid results, he has donated one to Kew for their new temperate house which is to be inaugurated later this year.



Photos 4a-b/ The polytunnel and nursery.

2. Acute Oak Decline is a disease that appeared about 35 years ago affecting mainly native oaks in Britain. The responsible pathogens are not known exactly.

3. A complex disorder or syndrome implicating several damaging, interacting agents that cause serious decline in tree conditions.

Both Lloyd and Sally are long-standing and very active members of the IOS and so it may come as a surprise that, yes, they are also interested in other plants! In addition to the fine oak collection, Lloyd and Sally hold National Collections of *Viburnum*, *Geum*, and *Sarcococca*. The *Viburnum* collection, comprising about 230 taxa, some very rare, is housed in a beautiful old walled garden (well worth a visit even for oak lovers!). Gredington also hosts a fabulous kitchen garden of which Sally is the *maîtresse d'oeuvre*.



Photo 5/ *Quercus insignis* in the nursery.

### ***The arboretum***

Armed with Lloyd's detailed planting list, it was, as always, intriguing to compare growth rates and speculate on the reasons for the varied progress of specimens of the same age, some indeed planted on the same day. With so much space available Lloyd can plant plenty of specimens of the tried and tested species that can be relied upon to grow well to help provide shelter for the less hardy. These include, in addition to the many *Q. robur* (including over twenty cultivars) and *Q. cerris* (half a dozen cultivars plus a couple



6a



6b

Photos 6/ (a) In the *Viburnum* collection; (b) *V. lanata* 'Aureum'.



Photo 7/ *Viburnum erubescens*

of *Q. ×libanerris*), 17 *Q. imbricaria*, 11 *Q. shumardii*, 9 *Q. aliena*, and 9 *Q. coccinea* ‘Splendens’.

Another good “mini-collection” is that of *Q. dentata*, the well-known daimyo oak, represented by seven examples of the species, one of the rarer *yunnanensis* subspecies, and two cultivars, ‘Carl Ferris Miller’ and ‘Sir Harold Hillier’. It’s well known that the young growth of this handsome Far-Eastern oak is susceptible to the late frosts that can strike well into spring in the UK, and consequently it is not widely grown; even those in botanic gardens are typically small and tending to the shrubby, and occasionally rather sad. So planting them is something of a leap of faith, which in Gredington – with less exposure to killing late frosts – has so far been well rewarded.

*Quercus ×hispanica*, that generally does well in the UK, and Gredington’s many specimens are no exception, was first raised in around 1763 from seed of *Q. cerris* that had been pollinated by *Q. suber*. Although the name, published by Lamarck, was given to trees growing in the gardens of the Trianon at Versailles, the first cross would appear to have originated in England, raised by the Exeter nurseryman Lucombe – hence ‘Lucombeana’, and was widely distributed as a grafted plant. The seed of this cultivar produces offspring with varying degrees of corkiness in the bark and evergreen-ness depending on the predominant parental genes. Altogether Lloyd has six cultivars including ‘Fulhamensis’, an early clone, and more recent selections including ‘Waasland Select’ (a renaming of ‘Waasland’, to prevent confusion with other selections from the Arboretum Waasland in Belgium). Although still listed under *Q. ×hispanica*, the bark and acorns of ‘Waasland Select’ are more akin to *Q. ilex*, just to add to the confusion. To appreciate fully the complexity of the cross – and particularly if you enjoy detective stories! – it is worth reading with a clear head, on steam-driven pages (or now online thanks to the IDS) the pertinent section in Bean’s, *Trees and Shrubs Hardy in the British Isles*. Then apply cold compress to head... *Quercus coccinea* ‘Splendens’, an Eastern American oak is doing, well, splendidly. *Quercus pubescens* ‘Aydin’, growing very nicely at Gredington, is a bluish-leaved form of the species, that was found by Eike Jablonski and Dirk Benoit during the 2002 IOS Tour of Turkey. The name honors Aydin Borazan who sadly passed away only three years after he had accompanied the Tour. *Quercus look*, a distinctive Asian oak, is grafted and, according to Lloyd, “not one of the remarkable oaks in the

collection, though it has grown to 8 ft, and has the potential of forming a good specimen once, or if, it gets going.”<sup>4</sup>

In such a large and varied collection each of the visitors will have had particular favorites. The writer found much of interest, including a *Q. castaneifolia* ‘Green Spire’, noted by Lloyd as a trouble-free good grower making a nice shape and demanding no attention growing not far from a *Q. nigra*, planted on the same day in 2004 which is rather shrubby and has grown to about 15 feet. A lovely specimen of *Q. ×haynaldiana* (*Q. frainetto* × *robur*) ‘Crisnetto’, with its small dense bunches of leaves deserving to be modeled in stone or wood and a *Q. robur* ‘Menhir’ (provisionally accepted), stout, sturdy and almost fastigate in form, much like its stone eponym.<sup>5</sup>

Amongst the more recent introductions, Gredington has residents from Mexico, including the very elegant *Q. acherdophylla*, *Q. grahamii* (grown as *Q. acutifolia*) and the vigorous hybrid between *Q. grahamii* and *Q. mexicana*. *Quercus canbyi* is, as always, a good grower as are the bushier *Q. greggii* and *Q. miquihuanensis*.

Numbers of trees were sporting the bright new foliage called “Lammas growth” (the free growth of newly made leaves put on, in good years, around the Celtic harvest festival of Lammas Day, celebrated on the first of August),

notably a young *Q. affinis* with new leaves so richly red they might have passed for those of a photinia and a fine *Q. rysophylla*, planted in 2003 that has attained a height of 25 ft. It has done exceptionally well, after a bad hit from frost in the winter of 2010/11 it recovered strongly, now with no sign of having lost its top. With rather long petioles,



Photo 8/ *Quercus pyrenaica* ‘Pendula’



Photo 9/ *Quercus castaneifolia* ‘Green Spire’



Photo 10/ *Quercus × haynaldiana*

4. For a detailed account of this taxon see Avishai 2017, this volume, pp. 73-88.

5. A menhir is a massive standing stone, as erected by the native Celts in pre-Christian times.



Photo 11/ *Quercus sartorii*

Lloyd suspects that it might be a hybrid, not unlike a similar fine specimen at Chevithorne Barton identified as a hybrid by Allen Coombes.

### ***Ness Botanic Gardens, 12 July***

The following day several members of the group visited the Ness Botanic Gardens – some 30 miles to the north, where we were welcomed and guided by Ness botanist Tim Baxter, who generously gave up a Sunday morning with his family to guide us. While not rich in oaks Ness is nonetheless deserving of attention because of its wide range of unusual and interesting woody plants, a large number grown from wild-collected seed.

The original garden was created in 1898 on the Wirral Peninsula, lying close to Liverpool between the estuaries of the Dee and the Mersey. The soils vary markedly from acid and sandy but well-drained to lime-rich clay. As at Gredington the moist southwesterly winds, although partly screened by the mountains of North Wales, deliver annual rainfall of about 30 in and blow briskly throughout much of the year.

The creator of the garden was Arthur Bulley. A wealthy cotton merchant, he was passionate about plants, especially those being introduced to European gardens from China, Tibet and Nepal by Western collectors, both amateur and professional. Initially obtaining seeds from diplomats and other travellers, he went on to lavish much of his fortune on his new garden, and – perhaps more importantly for posterity – on sponsoring professional plant collectors in the Far East, notably George Forrest and Frank Kingdon-Ward. Bulley also established Bees Seeds in order to distribute widely many species new to British gardeners. Bees grew apace to become a household name, eventually supplying one third of all the flower seeds sold in the UK.

Bulley's particular interest was in herbaceous plants, the rarer the better, and he also evidently liked shrubs (there is a splendid *Pieris formosa* 'Forrestii' grown from seed

originally collected by Forrest in China), but he seemed less interested in other woody plants; or perhaps his collectors brought back fewer trees and climbers that were new or rare in cultivation.

To protect his new plantings Bulley created deep shelter belts of more common trees and shrubs, including fine specimens of *Quercus ilex* and *Q. rubra* which have flourished mightily. While proximity to the Irish Sea already restricts the number and severity of frosts, the shelter belts – reinforced over time – afford further protection for more tender specimens.

After Bulley's death in 1942 his daughter presented the estate to the University of Liverpool. It was some time before the University could afford to remedy the necessary neglect of wartime, let alone expand the gardens or make them more accessible to visitors (Bulley had created many compartments, separated one from another with hawthorn hedges netted against rabbits). Under the leadership of Ken Hulme, appointed as Director in 1957, the ornamental gardens expanded from some two to eighteen hectares, housing new collections of camellias, rhododendrons, azaleas, cherries and heathers.

Regrettably there is no equivalent collection of oaks, although there are some good specimens, including *Q. variabilis* and several of the "usual suspect" US species (*Q. alba*, *Q. bicolor*, *Q. muehlenbergii*, and *Q. rubra*), all of these from their most northerly provenance in Ontario, Canada.<sup>6</sup>

There is also an interesting *Q. crispula* with an impeccable northern provenance – not northern England but Japan's northern island of Hokkaido, unusual as it is not necessary to stray north from Honshu to obtain wild seed. Perhaps it's



Photo 12/ *Betula pendula* × *papyrifera* (Ness Botanic Gardens).

6. For a detailed account of the oaks in Ontario, see Atkinson 2015.

just that little bit hardier.

*Q. crispula* is one of those oaks which has had more aliases than an international criminal (which makes me wonder in turn if oaks have been responsible for any as yet unsolved crimes ...). Blume's original *Q. crispula* (coined in 1851, the year he also confusingly coined *Q. grosseserrata*) was recombined by Menitsky to *Q. mongolica* subsp. *crispula* – the name under which it is grown at Ness – in 1973, whilst Rehder and Wilson had already given it a new name in 1916: *Q. mongolica* var. *grosseserrata*. IOS member Professor Hideaki Ohba, in the Flora of Japan (Iwatsuki et al. 2006) has, thankfully, returned us to the simplicity of Blume's original *Q. crispula*.

From 1972, largely thanks to the enthusiasm and expertise of resident botanist Dr. Hugh McAllister from the University of Liverpool, the gardens were enriched by a wide range of wild-collected trees and shrubs, including much material new to cultivation. *Betula*, *Alnus* and other genera that flourish in cool, moist conditions are well represented.

In particular, up to his retirement in 2010, Hugh selected and planted the extensive range of *Sorbus* that alone justifies a visit to Ness. Now a UK National Collection, there are over 500 taxa, notably including many of the intriguing apomictic microspecies that Hugh himself has documented in his definitive monograph (McAllister 2005).

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Marleen De Muyt, Patrick Vereecke (Belgium); Shaun Haddock (France), Wiecher Huisman (the Netherlands), Christopher Carnaghan, David Gooder, Helena Jamie, Robin Jamie, Des Needham, Gordon Simpson (UK).

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