

THE ORIGINS OF THE OAK COLLECTION AT CAERHAYS

BY CHARLES WILLIAMS
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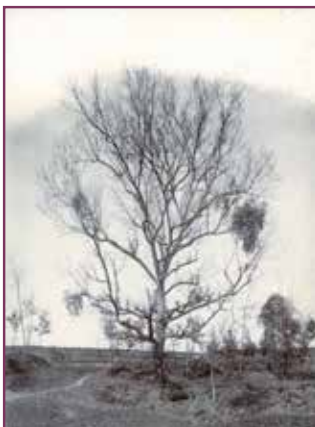
Caerhays Castle © Charles Francis

Since the onset of his Alzheimer's a decade or so ago I have been attempting to consolidate and publish some of the detailed notes and research undertaken by my father. This may be of interest to CGS members wishing to understand more about the arrival of some of the rarer and better known Chinese oaks into cultivation at Caerhays and, as applicable, an indication of their current size and longevity.

Unlike rhododendrons, the reclassification and renaming of oak species over the years has perhaps been more limited but there are still many puzzles in the field and archive records which I am not competent to resolve. All this information has come directly from the garden archive and library at Caerhays so I have therefore made little attempt to give detailed sources for my father's research in the normal manner.

The starting point has to be a sample of the range of Forrest and Wilson's oak collections from China.

Most of these species were collected several times under different numbers on the same and indeed separate expeditions. →



Quercus serrata Western
Hupeh 03 March 1908



Quercus serrata Western
Szechuan 18 May 1908



Quercus variabilis Bark
removed from trunk Western
Hupeh_27 January 1909



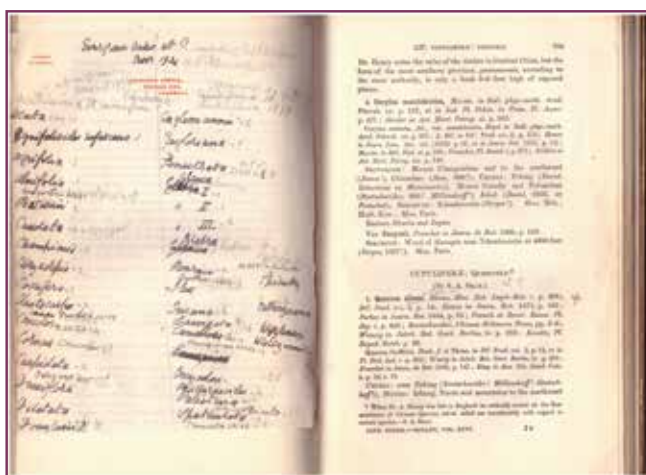
Quercus variabilis
Young tree Western Hupeh
25 January 1909

George Forrest's oak collections with Caerhays connections

Collector's Number	Collected as	Location	Altitude	Date
2055	<i>Q delavayi</i>	Lichiang range	9-10,000ft	May-06
2056	<i>Q semecarpifolia</i>	Lichiang range	8-11,000ft	May-06
2229	<i>Q dentata</i>	Lichiang range	9-10,000ft	Jun-06
2565	<i>Q spicata</i>	Dry side Lichiang valley	9-10,000ft	Jul-06
9052	Q ?	West flank Sehveli / Salwior	9,000ft	Aug-12
10098	Q ? ('nine at Werrington' notes J C Williams in 1927)	Descent to the Yangtze from Lichiang valley	9-10,000ft	Jun-13
10600	<i>Q spathulata</i> ('eight plants in Tin Garden at Caerhays' JCW 1913)	Chumstien plateau	10,000ft	Jul-13
11394	<i>Q dilatata</i>	Chumstien plateau	10-11,000ft	Sep-13
16505	<i>Q spathulata</i>	Yung Peh mountains	8-9,000ft	Jul-18
16522	<i>Q parvifolia</i>	Mekong / Salwin divide	8,000ft	Jun-18
17794	<i>Q variabilis</i>	Schweli Salwin divide	6-7,000ft	Apr-19
17862	<i>Q spicata var brevipetiolata</i>	N'Maikha - Salwin divide	?	May-19
19422	<i>Q variabilis</i>	Yangtze valley	6,000ft	Jun-21
19770	<i>Q aff glauca</i>	Mekong / Salwin	9,000ft	Jul-21
20216	<i>Q fenestrata</i> ('cuttings to Edinburgh October 1931' JCW)	Salwin / Kio Chiang divide	8-9,000ft	Sep-21
20288	<i>Q phyllyreoides</i>	Mekong valley	6-7,000ft	Sep-21
20741	<i>Q semecarpifolia</i>	Salwin / Kiu Chiang	10,000ft	Oct-21
24033	<i>Q augustinii</i>	Schwali Salwin	6,000ft	Apr-24
24183	<i>Q lamellosa</i>	North west Yunnan	10,000ft	May-24
24396	<i>Q serrata</i>	Schwali Salwin	7-8,000ft	Jun-24
24697	<i>Q griffithii</i> (JCW queries if this is <i>Q dentata</i>)	Salwin divide	8,000ft	Jul-24
25153	<i>Q glauca</i>	Schweli Salwin divide - mid west Yunnan	8-9,000ft	Oct-24
25405	<i>Q lanata</i>	West flank Chimili - N'Maikha - Salwin divide	10,000ft	Nov-24
26600	<i>Q augustinii</i> ('one small plant in frame 1928' JCW)	Upper Ming Kwong valley ('later introductions called <i>Lithocarpus spicata</i> ' JCW)	8,000ft	May-25
26611	<i>Q langusinosa</i> (<i>lanata</i> - JCW)	Hills around T31-T30-Ti	8,000ft	May-25
27432	<i>Q glandulifera</i> ('a fine deciduous form' GF)	Around Lung Fang	9,000ft	Oct-25
27419	<i>Q serrata</i> (<i>variabilis</i> - JCW)	Around Ying-Pan Kai	8,000ft	Oct-25



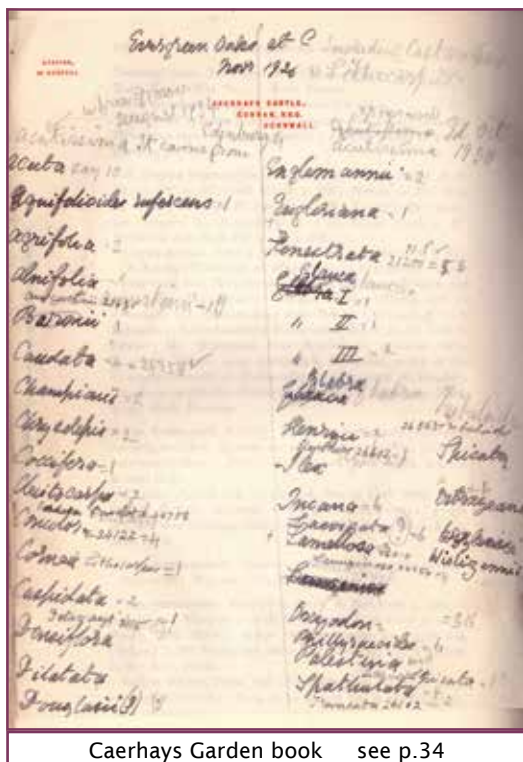
Lithocarpus cleistocarpa see p.34



Caerhays Garden book see p.34

Many of Forrest's oak collections 1924 to 1926 were later classified as lithocarpus or castanopsis families:

Collector's Number	Collected as	Location	Altitude	Date
24122	<i>Q concolor</i> = <i>Castanopsis concolor</i> ('a free flowering attractive shrub' GF)	Schweli Salwin		June 1924
24758	<i>Q caudata</i> = <i>Castanopsis concolor</i>	Schweli Salwin		July 1924
25152	<i>Q tribuloides</i> = <i>Castanopsis tribuloides</i>	Schweli Salwin divide - mid west Yunnan		October 1924
26543	<i>Q cuspidata</i> = <i>Castanopsis tribuloides</i>	Near Pan Ti Ho		May 1925
27427	<i>Q ceracantha</i> = <i>Castanopsis tribuloides</i>	Schweli Salwin		October 1925
26612	<i>Q hystrix</i> = <i>Castanopsis hystrix</i> ('at Caerhays' JCW)	On hills around Htaw Gaw	8,000ft	May 1925
27681	<i>Q polystacha</i> = <i>Lithocarpus polystachum</i> ('at Caerhays' JCW)	Western flank N'Mikah / Salwin	9,000ft	Nov. 1925
27708	<i>Q fenestrata</i> = <i>Lithocarpus</i> aff. <i>fenestrata</i> ('fine deciduous tree' GF)	North of Ho Too	8,000ft	Nov. 1925
26102	<i>Lithocarpus induta</i> ('one of the finest oaks I have seen' GF)	Schweli Salwin	8-900ft	Nov. 1924
27431	<i>Lithocarpus spicata</i> ('six plants at Caerhays' JCW)	Schweli valley three days south of Tengyueth	9,000ft	October 1925
27151	<i>Lithocarpus polystacha</i>	Around Lung Fang	7-8,000ft	August 1925
26796	<i>Lithocarpus spicata</i> var <i>moupinensis</i>	Around Lung Fang	10,000ft	June 1925



Caerhays Garden book see p.34



Quercus acuta see p.37

Ernest Wilson's oak collections with Caerhays connections

Collector's Number	Collected as	Location	Altitude	Date
678	<i>Q engleriana</i>	Western Hupeh – north and south of Ichang	1,600m	Nov 1900
1204	<i>Lithocarpus cleistocarpa</i> (given to JCW by Peter Veitch 1913)	Western Hupeh – Changyang Hsien	1,300-1,600m	Nov 1901
3643	<i>Q spinosa</i>	Western Hupeh – Hsing-Shan Hsien	2,000-2,600m	July 1902
3645	<i>Q serrata</i>	Western Hupeh – north and south of Ichang	30-1,000m	May 1907
543	<i>Lithocarpus henryi</i>	Western Hupeh – Khang woods	1,000-1,500m	June 1907
525	<i>Q glandulifera</i>	Western Hupeh – Hsing – Shan Hsien	600-1,500m	October 1907
516	<i>Q aliena var acuteserrata</i>	Western Hupeh – Fang Hsien	1,000-1,600m	October 1907
539	<i>Q variabilis</i>	Western Hupeh – Hsingshan Hsien	300-1,500m	October 1907
541	<i>Q glauca</i> ('came from cuttings of the Werrington plant' JCW)	Western Hupeh – Patung Hsien	600-1,000m	October 1907
544	<i>Q oxyodon</i>	Western Hupeh – north and south Ichang woods	1,100m	October 1907
3626	<i>Q aquifolioides var rufescens</i> ('came from Kew spring 1921' JCW)	Western Hupeh – Tachien-lu	2,600-4,680m	Sept 1908
4579	<i>Q semecarpifolia</i>	Western Hupeh – Ta-P'ao-Shan	3,000-4,100m	October 1908
4584	<i>Q dentata</i>	Western Hupeh – Fang Hsien	1,000-1,300m	June 1910

Despite a few clues, quite how many of these collections were actually sent direct to Caerhays or Werrington and have grown on here ever since it is impossible to ascertain today. We do however have fairly accurate 'planting out' records at Caerhays as well as details of plants received from other nurseries, gardens and horticultural institutions. There are records also of plants distributed to other gardens. More importantly, there are notes and comments in the archive about the progress of certain oak species both at Caerhays and in other Cornish gardens. These come from the Caerhays Garden book (in effect a daily diary for each day of the year from 1897), JCW's correspondence with and from George Forrest and other members of the Rhododendron Society (founded 1916); notably P D Williams of Lanarth.

In 1927 J C Williams wrote as follows about '**Evergreen forms of trees and shrubs growing at Caerhays**' in the Rhododendron Society notes:

'[...] To take the things which may be expected to grow to 30 feet or more, and so may be called trees, the two most important families tried here have been the evergreen oaks and the nothofagus. There are about thirty oaks, but many are quite, small and have not been here long enough to test their worth as regards vigour, beauty, or ability to bear cold. [...]

The best evergreen oak is cleistocarpa of Wilson. It came from Coombe Wood about 1912, and has grown faster than any other, whilst the cold of 1917 made no mark on it. —>

Cuspidata, if encouraged to grow up by pruning, makes a nice tree, but whether it will make 30 feet I do not know. It is a really good evergreen.

Henryi, kindly given me as a struck cutting by Kew, has reached 8 feet in a short time, coming here about six years ago, but it is in a hot place and strong land, with good drainage.

Delavayi, as yet a small plant, has been here only twelve months, but has grown very fast out in the nursery, and is a very distinct oak. It was given me by the Edinburgh Botanic Garden.

Spathulata of Forrest's sending, once started, has a bright glistening foliage showing it up well, and is a very distinct species.

Incana, from India, is growing fast from seed sent here, and put out in the wood when a few months old. This makes a great difference in their rate of progress, as Mr Bean told us long ago, and so, too, it pushes the Magnolia family along much faster than some of us are aware of. [...]

JC's increasing interest in oaks (as opposed to rhododendrons) was prompted by an article in the Journal of the RHS in 1920 entitled 'Oaks at Aldenham by the Hon. Vicary Gibbs'. In 1902 Gibbs visited the nursery of Muskau near Dresden where he 'secured a great many out of the way oaks' which he planted out on his estate in Hertfordshire. The 68 page article showed that Aldenham was leading the field in the number of varieties of oaks that were growing there.



Lithocarpus uvarifolius see p.37

This appealed greatly to JCW who, by February 1921, in his own notes, had already procured 26 different evergreen oaks and 28 different deciduous oaks. He was, as usual, moving into action with a vengeance. It was clear that he was becoming interested in evergreens and, fortunately, Forrest's 1924 to 1926 expedition produced a wide range of collections of this sort in addition to oaks. It is apparent that while many rhododendrons came to Caerhays from Forrest's 1921/2 expedition very few did so in his 1924/5 expedition. JCW's interest and emphasis in the garden had moved on. →



Quercus Hancei see p.37



Lithocarpus uvarifolius see p.37

Oaks which came to Caerhays before 1939 and their origin

1912		<i>Lithocarpus cleistocarpa</i>	Coombe Wood sale
1916	6	Unnamed oaks from Lanarth	
1917	2	<i>Q mirbeckii</i> (now <i>Q canariensis</i>)	Backhouse, York
1919	2	<i>Q glabra</i>	Veitch, Exeter
	1	<i>Q dentata</i>	Edinburgh RGB
	1	<i>Q oxyodon</i>	Kew RGB
1920	2	<i>Q laurifolius</i>	Newry, Northern Ireland
	1	<i>Q sessifolia</i> (now <i>Q petraea</i>)	Vicary Gibbs
	1	<i>Q phillyreoides</i> (introduced by Oldham 1861)	Wakehurst (G Loder)
	1	<i>Q glabra</i>	Wakehurst
	1	<i>Q pannonica</i> (now <i>Q frainetto</i>)	Veitch, Exeter
	1	<i>Q macedonica</i> (now <i>Q trojana</i> , <i>Balkans l.</i> 1890)	Veitch, Exeter
	2	<i>Q prinus</i>	Veitch, Exeter
	1	<i>Q macrocarpa</i>	Veitch, Exeter
	4	<i>Q G Forrest 10098</i>	Iver
	4	<i>Q acuta</i>	Dickinson's, Chester
	3	<i>Q bambusifolia</i>	Dickinson's, Chester
1921	1	<i>Q oxyodon</i>	Kew RGB
	1	<i>Q engleriana</i>	Kew RGB
	1	<i>Q glabra</i>	Kew RGB
	1	<i>Q x libanerris</i> (<i>Q cerris</i> x <i>Q libani</i>)	Kew RGB
	1	<i>Q acuta</i>	Kew RGB
	1	<i>Q palestrina</i>	Kew RGB
	1	<i>Q incana</i> (now <i>Q leucotrichophora</i>)	Kew RGB
	1	<i>Q aquifolioides rufescens</i>	Kew RGB
	1	<i>Q alnifolia</i>	Kew RGB
	1	<i>Q henryi</i> (now <i>Lithocarpus henryi</i>)	Kew RGB
	1	<i>Q chrysolepis</i>	Borde Hill (Stephenson-Clarke)
	1	<i>Q incana</i>	Glasnevin
	2	<i>Q alnifolia</i>	Glasnevin
1923	2	Oaks	Edinburgh RGB
1924	1	<i>Q baronii</i>	Arnold Arboretum
1925	1	<i>Lithocarpus cornea</i>	Arnold Arboretum
1928	6	<i>Q myrsinifolia</i>	Wakehurst
	1	<i>Q championii?</i> <i>chapmanii?</i>	Edinburgh RGB
1930	1	<i>Q laurifolius</i>	Borde Hill (Stephenson-Clarke)
	1	<i>Q acutissima</i>	Kew RGB (ex China)
1931	2	<i>Lithocarpus pachyphyllus</i>	Hillier & Sons
	2	<i>Q fenestrata</i> ('already three at over 6ft at Caerhays' JCW)	Bruce Gardner
	2	<i>Q dealbata</i>	Bruce Gardner
	4	<i>Q griffithii</i>	Bruce Gardner
	3	<i>Q holzstachya</i>	Bruce Gardner
	2	<i>Q rex</i>	Bruce Gardner
1932	1	<i>Q G Forrest 30404</i>	Bodnant
1933	1	<i>Q pachyphyllus</i> (now <i>Lithocarpus pachyphyllus</i>)	Borde Hill
1936	1	<i>Q x ludoviciana</i> (<i>Q pagoda</i> x <i>Q phellos</i>)	Borde Hill
	1	<i>Q chrysolepsis</i>	Borde Hill
	1	<i>Q wislizeni</i>	Borde Hill
	1	<i>Q priocii</i> (?)	Borde Hill



Oaks distributed to other gardens

To Wake-hurst	Mar-21	1	<i>Quercus</i> (Forrest 10090)
	Feb-26	1	<i>Q glabra</i>
	Nov-26	1	<i>Q oxyodon</i>
		1	<i>Q lamellosa</i>
	Oct-28	6	<i>Q vibreyana</i>
To Kew	Jan-22	1	<i>Q spathulata</i>
	Mar-24	1	<i>Q lamellosa</i>



Quercus glabra or *Lithocarpus edulis* see below

Based on what still survives today at Caerhays it would appear that, with a few exceptions, most of our current longterm survivors or Record (oak) Trees were not grown directly here from wild collections but were instead gifted or perhaps bought in from third parties (albeit often themselves being from wild collections).

Quite a number of the Chinese oaks arriving at Caerhays had simply a collector's number and no name. Others appear to have been renamed or reclassified either as the levels of knowledge grew during later expeditions or because of observations made in gardens or botanical institutions in the UK. There are numerous unexplained puzzles in the archive records and this shows only too clearly that what one collector is convinced is a novelty and a new introduction need not necessarily prove to be.

It is however extremely difficult for oaks to be categorised until they have flowered and set seed. It was only in the 1970s when it was spotted in flower that *Q hancei* (see p.35) was actually given a name. Its name suggests that it had already been discovered by an earlier plant hunter in China; H F Hance (1827-1886). From its location it had very probably been planted in the 1920s and cut to the ground in the cold of 1963. Several side shoots have reemerged from around the former trunk and it is again today a 20 foot tall spreading evergreen tree. Sadly there is no trace of its true origin in the archive.

Another spectacular query is the origin of *Q uvariifolius* (now *Lithocarpus uvariifolius*) (see p.35). We had thought that there was no record of the arrival of this unusual broad leaved tender evergreen Japanese oak. Perhaps this should have been no great surprise as none of us knew its name or even if it was indeed an oak until a visit to Caerhays by a Japanese botanist some 15 years ago. However, very recently, I have found the correct name written in one of JCW's notebooks in his own hand with no date or comment. One must presume a Wilson collection from Japan.

While reclassification of some Chinese oaks as *castanopsis* and *lithocarpus* is perhaps obvious from their seed pods and fruits there still remains the puzzle of *Q glabra* and *Lithocarpus edulis* (see above). We can identify seed and at least three plants of *Q glabra* arriving at Caerhays of which one survives (as a robust side shoot) today. However *Lithocarpus edulis*, introduced from Japan in the first half of the 19th century, is not recorded as arriving here. *Q glabra* is not actually glabrous (hairless) but *L edulis* is. *Q glabra* is distinguished by the dense grey or yellowish down on the young branchlets. My father always argued for *Q glabra* but other oak experts disagree.

One of the problems is that, possibly because of old age, very few of the rarer species ever set seed at Caerhays in our mild wet climate. There is only one recording of *Q cleistocarpa* (see p.38), which flowers regularly, producing a small acorn here although this species can be propagated with difficulty from cuttings. *Q lamellosa* (see p.38) has never, to our knowledge, set seed and nor has the original *Q oxyodon* (see p.38) although it flowers profusely most years. *Q lamellosa* will also propagate from cuttings but is probably too tender for flower and seed. *Q uvariifolius* appears to try to produce flowers and is clearly very tender but quite easy from cuttings. *Q acuta* (see p.38) produces seed clusters but the tiny acorns never swell and mature. The same is true of *Q myrsinifolia* (see p.38).

The great exception is *Lithocarpus pachyphyllus* (see p. 40) of which there are four fully mature and several younger plants here. One of the four has never set seed in our two generations while another produces huge seed clusters every year which become so heavy that they can break branches. Younger plants here grown from seed also produce clusters of exceptionally large fruits after 15 to 20 years. The female inflorescences are obvious in March but this year (2015) has seen a second flowering with the upright male flowers appearing again in late June even though the seed clusters are already two good handfuls each in size. →



Lithocarpus cleistocarpa see p.37



Quercus oxyodon see p.37



Quercus lamellosa see p.37



Quercus acuta see p.37



Quercus myrsinifolia see p.37

Measured 2006 and on the county/national
champion tree database by Owen Johnson

Measured 1971

Measured August 1966
(Alan Mitchell)

	Height in meters	Diam in cm	Girth at 1.5m in cm	Height in feet	Girth at 5ft	Height in feet	Girth at 5ft
<i>Q x ludoviciana</i>	21	71	223	70	5'8"	68	5'1¼"
	Subsequently condemned by Defra						
<i>Q languinosa</i> (planted 1931)	Dead					26	1'10¾"
<i>Q glabra</i> (<i>Lithocarpus edulis</i> ?)	Main plant dead – side shoot survives			30	1'9"	31	1'9"
<i>Q lamellosa</i> (planted in 1924 – Forrest 24183)	20	29	91			32	3'6"
<i>Q engleriana</i>				Dead		18	1'10"
<i>Q glauca</i> (planted 1929 – Wilson 571)	10	44	139	20	1'5"	18 ½	1'5"
<i>Q marylandica</i>	Not measured					46	2'7½"
<i>Q cuspidata</i>	Dead					37	2'10½"
<i>Q cleistocarpa</i> (<i>Lithocarpus cleistocarpa</i>)	?12	109	343	62	5'10"	56	8'3" (at 2'6")
<i>Q henryi</i> (<i>Lithocarpus henryi</i>)	11	44	139	?	3'	30	2'10½"
	Currently nearly dead						
<i>Q acuta</i> (planted 1920)	14	56	177	42	5'7"	40	5'1" (at 3'6")
<i>Q libani</i>	8	25	77	33'	2'4"	Not mea- sured	
<i>Q oxyodon</i> (planted 1920 – Wilson 1571)	10	33	103	30'	1'1"	27	1'9"
<i>L pachyphyllus</i>	10	53	165			33	2'8½" (at 3')
<i>L pachyphyllus</i>	16	60	190			41	3'7"
<i>Q crassifolia</i> (Wilson 6402)	8	57	180			39	1'10¾"
		Now dead					
<i>Q laurifolia</i>	19	51	160	44	3'5"	45	3'3"
<i>Q lanata</i> (Forrest 25405 – now <i>Q lodicosa</i>)	8.5	14	44			28	1'7"
<i>Q phillyreoides</i>	11	43	135	26	1'11½"	23	1'8¾"
<i>Q dendata</i>	15	57	179	47	4'3"	46	4'1½"
<i>Q cerris</i>	Not measured			93	12'2"	?	11'10"
<i>Q myrsinifolia</i> (group of six originally grown as a wind- break)	Not measured			30	1'11'	Not mea- sured	
	Four of the six still prosper						
<i>Q variabilis</i>	Not measured					30	3'6"
<i>Q macranthera</i>	13	32	100	52	4'8"	Not mea- sured	
<i>Q marylandica</i>	Not measured			39	2'9"	46	2'7½"
<i>Q alnifolia</i>						Dead	
<i>Q insignis</i>						Dead	
<i>Q incana</i>						Dead	



Lithocarpus pachyphyllus see p.37



Lithocarpus pachyphyllus see p.37



Quercus acuta



Quercus hancei



Quercus phillyreoides



Quercus variabilis



Quercus variabilis



Quercus oxyodon

So it is easy enough to identify the successful survivors and near centurions today; rare in cultivation though some of them may well be. One can also identify those original species which have died more recently from old age or weather related disasters. However the casualties to immature seedlings and young plants in the cold winters of 1919, the 1920s and 1948 are not known. Nor is it clear, possibly from my own inexperienced and inadequate research, what has happened to those Chinese oak species which have dropped out of sight? (*Q aquifolioides*, *bambusifolia*, *baronii*, *delavayi*, *fenestrata*, *gilliana*, *spathulata*, *spinosa*, *vestita* – to mention some of the more obvious candidates.) Were they reclassified or did they simply fail to germinate or grow and survive? Other Wilson/Forrest collections have clearly been rediscovered and reintroduced (sometimes supposedly as new species) rather more recently.

Quite recently in 2009, and with the help of Susyn Andrews, we were able to identify what we had thought to be a *lithocarpus* growing away but hidden amongst other tall rhododendrons in the Chinese Garden at Werrington as *Q engleriana*. Another Chinese survivor at Werrington but not here.

More interesting still has been to compare the large serrated leaves of our original *Q oxyodon* to the new plants of this species with much smaller less serrated leaves collected by Nigel Holman and Tom Hudson which now grow well at Caerhays and Burncoose. They appear quite different. Susyn Andrews and the Kew records however suggest that *Q oxyodon* is variable and that herbarium specimens at Kew from the Khasia Hills in India do resemble the Tregrehan/Chyverton collections. As an aside Nigel Holman's collection of *Lithocarpus variolosus* is currently perhaps the outstanding performer of the newer Chinese evergreen oaks.

Some of the oaks and *lithocarpus* now included as recent introductions in 'New Trees' clearly arrived in the UK nearly 100 years ago but have either not survived at all or only as very occasional obscure and unidentified plants.

In this category can now demonstrably be included *L corneus*, *L hancei* and *L uvariifolius* as well as *Q engelmannii*, *Q fabri* and *Q griffithii*.

There remain at least two oaks at Caerhays which have so far successfully defied all the experts and, secretly, I rather hope they remain in this happy state. I have therefore deliberately not included pictures to tempt readers to visit here and ponder for themselves.

One can however be fairly certain that our successors will need to indulge in just as much head scratching to be able to understand just how many of the newer Mexican oak species have survived and prospered in the UK since their introduction. It might even be as interesting as writing this article and I can give you a quick answer about survival rates here: no more than 40% of the 30 or so new species given to us by Lady Anne Palmer, Hillier's and Allan Combes have lasted even 20 years and we really only had one coldish winter in that time. 🌸

