

THE INTRODUCTION OF OAK SPECIES INTO BRITAIN AND IRELAND

Mary Forrest

Dept. of Crop Science, Horticulture and Forestry,
University College Dublin,
Belfield, Dublin 4, Ireland.

Introduction

While sessile oak (*Quercus petraea*) and English or pedunculate oak (*Quercus robur*) are native in Britain and Ireland and have made an important contribution to the development of parks and estates, so too have some of the introduced oak species. This paper examines firstly, the introduction of oak species from temperate regions of the Northern Hemisphere, and secondly, their use by plant enthusiasts and botanists to develop collections of oak and their role in the broader landscape development of estates.

The main sources for this review were *Arboretum et Fruticetum Britannicum* (Loudon 1835-1838), *Trees of Great Britain and Ireland* (Elwes and Henry 1906-1913), and *Trees and Shrubs Hardy in the British Isles* (Bean 1976-1988).

Introduction of Oak from the Mediterranean Region and Western Asia

From the 16th century to the 19th century deciduous and evergreen oak species were introduced to Britain from the Mediterranean and western Asia (see Table 1).

- *Quercus ilex* is native to the Mediterranean region. The Flemish botanist Clusius (L'Écluse) in 1581 knew of two trees growing near London. It is common in cultivation.
- *Q. suber*, or cork oak, was introduced in 1677 from the Mediterranean area. It is infrequent in cultivation.
- *Q. coccifera* was introduced in 1683 and is native to the western Mediterranean region. It is used as a symbol of one of the London Livery companies, the Dyers Company.
- *Q. macrolepis* was introduced in the early 18th century. It is native to Greece, Albania, and Turkey.
- *Q. cerris*, Turkey oak, is native to southern to eastern Europe. At Royal Botanic Gardens (R.B.G) Kew, a specimen more than 200 years old was blown down in 1987 (Desmond, 1995). It is common in cultivation.
- *Q. calliprinos* — the date of introduction is uncertain. It is considered to an eastern Mediterranean sub species of *Q. coccifera*.
- *Q. pyrenaica* was introduced in 1822. It was recommended by Loudon 'for the beauty of its spring foliage'.
- *Q. fruticosa* was introduced before 1827 from the Iberian peninsula. A specimen was planted in the Milford Nurseries in 1827 (Loudon 1835).
- *Q. canariensis* 1835 (*Q. mirbeckii* 1844) is native to Algeria, Spain, and Portugal. It was introduced from Gibraltar to gardens of the Royal Horticultural Society. A specimen planted in the R.B.G. Kew was

supplied by Booth of Hamburg., Germany.

- *Q. castaneifolia* is native to the Caspian Sea. The specimen at R.B.G. Kew was raised from seed imported in 1843 and planted in 1846. It is now the largest tree in terms of volume in the Gardens. (Desmond, 1995). It is rare in cultivation.
- *Q. faginea* was introduced in 1835 from Spain and Portugal.
- *Q. frainetto* was introduced in 1837/1838 from Hungary. A specimen was planted in R.B.G. Kew in 1840. It is infrequent in cultivation.
- *Q. libani* was introduced in 1855. It is native to Syria, Asia Minor, and Kurdistan and is rare in cultivation.
- *Q. macranthera* was introduced in 1873 from the Caucasus and Transcaucasus and northern Iran. It is uncommon in cultivation.
- *Q. alnifolia*, the golden oak of Cyprus, was introduced in 1885.
- *Q. pontica*, or the Armenian oak, was introduced in 1885. It is native to Anatolia, Caucasus, and Transcaucasus. It was introduced by Dr. Dieck to the nursery company Zoeschen.
- *Q. trojana* was introduced in 1890 and is native to southwest Italy and the Balkans. There is a specimen at R.B.G. Kew.
- *Q. pubescens* is native to a broad region from Spain to the Caucasus and was introduced long ago. It is rare in cultivation.



Foliage of *Q. coccifera*

photo © Guy Sternberg

Table 1. Introduction of Oak from Mediterranean and Western Asia

Genus	Common Name	Date of Introduction	Occurrence *

<i>Q. ilex</i>	Evergreen Oak	pre 1581	Common
<i>Q. suber</i>	Cork Oak	1677	Infrequent
<i>Q. coccifera</i>	Kermes Oak	1683	
<i>Q. macrolepis</i>		1731	
<i>Q. cerris</i>	Turkey Oak	pre 1735	Common
<i>Q. pyrenaica</i>		1822	
<i>Q. fruticosa</i>		pre 1827	
<i>Q. faginea</i>		1835	
<i>Q. canariensis</i>	Algerian Oak	1835	Infrequent
<i>Q. frainetto</i>	Hungarian Oak	1837	Infrequent
<i>Q. calliprinos</i>	Sindian Oak	pre 1838	
<i>Q. castaneifolia</i>		pre 1846	Rare
<i>Q. libani</i>	Lebanon Oak	1855	Rare
<i>Q. macranthera</i>		1873	Uncommon
<i>Q. alnifolia</i>	Golden Oak of Cyprus	1885	
<i>Q. pontica</i>	Armenian Oak	1885	Rare
<i>Q. trojana</i>		1890	
<i>Q. pubescens</i>		long introduced	Rare

* From *Trees of Great Britain and Northern Europe* (Mitchell 1974)

Introduction of Oak from North America

With the increasing trade links between Britain and eastern North America in the 17th century, and the interest shown in trees and shrubs from this region, many oaks were introduced into Britain in the 17th and 18th century (see Table 2).

- *Quercus coccinea*, the scarlet oak, was introduced in 1691 (Mitchell 1974). It is native to eastern North America. A specimen grew in Bishop Compton's Garden at Fulham in London. It is frequent in cultivation.
- *Q. phellos*, the willow oak, was introduced in 1723. It is native to eastern North America and westward to Texas. It is rare in cultivation. There is a specimen at R.B.G. Kew.
- *Q. alba* was introduced in 1724. It is native to eastern North America from Florida to Canada. It is rare in cultivation. There is a specimen at R.B.G. Kew.
- *Q. marilandica* is native to the eastern United States and was introduced in 1724.

- *Q. rubra* was introduced in 1724. A tree planted about 1746 at R.B.G. Kew was blown down in 1916 (Desmond 1995). It is common in cultivation.
- *Q. nigra* is native to the southern United States. It was in cultivation in 1723 but is now considered rare.
- *Q. muehlenbergii* was introduced in 1737. It is very rare in cultivation.
- *Q. falcata* was introduced by 1763 by Murdoch Murchison (Elwes and Henry 1906).
- *Q. palustris* was introduced before 1770. It is native to the eastern United States.
- *Q. imbricaria* was introduced in 1786 by John Fraser (1750–1811). It is infrequent in cultivation. There are specimens at R.B.G. Kew and Syon House, London. John Fraser was a native of Invernesshire. He went on 12 expeditions to America and also went to Russia. He established a nursery in London, which was later run by his son John (fl 1790's – 1860's) (Desmond 1994). According to Loudon (1838), between 1781 and 1790 John Fraser introduced *Q. lyrata*, *Q. imbricaria* and *Q. rotundifolia* and between 1791–1800. Messrs Fraser introduced *Q. triloba*, *Q. tinctoria*, *Q. palustris* and *Q. Americana* into cultivation.
- *Q. lyrata*, the overcup oak, was introduced by John Fraser in 1786. It is rare in cultivation.
- *Q. bicolor* is native to eastern North America and was introduced in 1800. It is rare in cultivation.
- *Q. ilicifolia* is native to eastern North America and was introduced in 1800 by Messrs Fraser.
- *Q. prinus*, or chestnut oak, was introduced between 1721 and 1730. It is native to eastern North America.
- *Q. stellata* is widespread in the United States but is uncommon in cultivation. It was introduced in 1800.
- *Q. velutina* is native to the eastern United States in 1800. It is infrequent in cultivation.
- *Q. macrocarpa* is native to eastern North America. It was introduced in 1811, but is rare in cultivation.
- *Q. laevis* was introduced in 1823. It is native to the south eastern United States.
- *Q. prinoides* is native to the eastern and central United States. It was introduced in 1828, but being a suckering shrub with little ornamental value, is rare in cultivation.

Table 2. Introduction of Oak from Eastern North America

Genus	Common Name	Date of Introduction	Collector	Occurrence *

<i>Q. coccinea</i>	Scarlet Oak	1691		Frequent
<i>Q. phellos</i>	Willow Oak	1723		Infrequent
<i>Q. alba</i>	White Oak	1724		Rare
<i>Q. marilandica</i>	Black Jack Oak	c. 18 th C		
<i>Q. rubra</i>	Red Oak	1724		Common
<i>Q. nigra</i>	Water Oak	1723		Very rare
<i>Q. muehlenbergii</i>		1737		Very rare
<i>Q. falcata</i>	Spanish Oak	1763		
<i>Q. palustris</i>	Pin Oak	1721-1730		Uncommon
<i>Q. imbricaria</i>	Shingle Oak	1786	John Fraser	Infrequent
<i>Q. lyrata</i>	Overcup Oak	1786	John Fraser	Rare
<i>Q. bicolor</i>	Swamp White Oak	1800		Rare
<i>Q. ilicifolia</i>	Bear Oak	1800	Messrs Fraser	
<i>Q. prinus</i>	Chestnut Oak	1721-1730		
<i>Q. stellata</i>	Post Oak	1800		
<i>Q. velutina</i>	Black Oak	1800		Infrequent
<i>Q. macrocarpa</i>	Burr oak	1811		Rare
<i>Q. laevis</i>		1823		
<i>Q. prinoides</i>	Chinquapin Oak	1828		

* From *Trees of Great Britain and Northern Europe* (Mitchell 1974)

In the early- to mid-19th century, plant collectors, at the behest of horticultural societies, explored western North and South America. Several oaks were found in western North America and introduced into cultivation (see Table 3).

- *Quercus crassipes* and *Q. glabrescens* were introduced from Mexico in 1839 by Hartweg. K.T. Hartweg (1812-1871) was a native of Karlsruhe in Germany. He collected in Mexico for the Royal Horticultural Society, where he introduced *Pinus montezumae* and *P. ayacahuite*. In 1846-47 he went on a plant expedition to California. There he collected *Q. agrifolia*, a native of California and Mexico, and introduced it in 1849 for the Horticultural Society. It is very rare in cultivation.
- *Q. sadleriana* was discovered in 1851-1852 by Jeffrey. John Jeffrey, a native of Fifeshire, was sent by a Scottish organisation called the Oregon Association, which had an interest in developing commercial links with western North America, to collect *Pinus jeffreyi*.
- *Quercus lobata* and *Q. wislizeni* from California were collected in 1874 by H.N. Bolander and introduced to R.B.G. Kew.
- *Q. chrysolepis* was introduced by Sargent in 1877. Charles Sprague Sargent was born in 1841. He was Director of the newly formed Arnold Arboretum from 1872 until his death in 1927. He collected in North America and Japan. He sent E.H. Wilson to China to collect for the Arnold Arboretum. Under his directorship many genera, including oak, were distributed to gardens worldwide.
- *Q. crassifolia* is native to central Mexico. An American botanist, G.B. Hinton, sent seed to Caerhays in Cornwall in 1939.

Table 3. Introduction of Oak from Western North America

Genus	Common Name	Date of Introduction	Collector	Occurrence *

<i>Q. crassipes</i>		1839	Hartweg	
<i>Q. glabrescens</i>		1839		
<i>Q. agrifolia</i>	Encina	1849	Hartweg	Rare
<i>Q. sadleriana</i>	Deer Oak	1851	Jeffrey	
<i>Q. lobata</i>	Valley Oak	1874	Bolander	
<i>Q. wislizeni</i>		1874	Bolander	
<i>Q. chrysolepis</i>	Maul Oak	1877	Sargent	
<i>Q. crassifolia</i>		1939	Hinton	

* From *Trees of Great Britain and Northern Europe* (Mitchell 1974)

Introduction of Asiatic Oak

From the early 19th century oak were introduced from Asia (see Table 4).

- *Quercus lamellosa* was introduced in 1802 by Buchanan Hamilton, Director of the Calcutta Botanic Garden. It is native from the Himalayas to China. It was later introduced by George Forrest (1873- 1932), who made six plant-hunting expeditions to China and Burma.
- *Q. glauca* has a broad distribution from Nepal to Japan. Originally introduced in 1804 from Nepal, it was later introduced from Japan in 1861 by Richard Oldham. Richard Oldham (1837-1864) was a gardener at R.B.G. Kew in 1859 and collected in eastern China in 1861 and in the Khasia Hills, India in 1861-1862. He died in China in 1864 (Desmond 1994). *Q. glauca* was later collected by E.H. Wilson (1876-1930). Wilson collected in Japan and China for the nursery company Veitch, and later for the Arnold Arboretum, Boston, United States.
- *Q. dentata* was introduced in 1830, probably by the Swedish botanist von Siebold. It is native to Japan and northeast Asia and is infrequent in cultivation.
- *Q. myrsinifolia* was introduced by Robert Fortune in 1854. It is native to southern China, Laos, and Japan. Robert Fortune (1812 - 1880) was a native of Berwickshire. From 1843-1846 he visited China, collecting plants for the Horticultural Society. He made further expeditions on behalf of the East India Company, collecting tea plants. It is rare in cultivation.
- *Q. phillyraeoides* was introduced in 1861 by Richard Oldham. It is native to China and Japan.
- *Q. variabilis*, another Fortune introduction of 1861, is native to China, Japan, and Korea. It is rare in cultivation.
- *Q. acutissima* was introduced in 1862 by Richard Oldham. It is native to China, Japan, and the Himalayas. It is rare in cultivation
- *Q. serrata* was introduced in the years 1861-1864 by Richard Oldham.
- *Q. acuta* was introduced from Japan in 1878 by Maries. C. Maries (c 1851-1902) collected on behalf of Messrs. Veitch, the nurserymen. It is rare in cultivation.
- *Q. glandulifera* was introduced in 1893 by Sargent. It is native to China, Korea, and Japan. Trees from Japanese seed are in cultivation in the oak collection in R.B.G. Kew.

- *Q. mongolica* var. *grosserrata* is native to Japan. It was introduced into cultivation by Sargent in 1893.
- *Q. baronii* was discovered by the Italian collector Giral di in 1895. Giuseppe Giral di (1848–1901) was an Italian missionary in China (Stearn 1994). It is native to western China and was later introduced by the Dutch-born F.N. Meyer (1875–1918) who collected on behalf of the United States Department of Agriculture (USDA) and by E.H. Wilson.
- *Q. engleriana* was introduced by E.H. Wilson in 1900. It is native to Hubei and Sichuan in China.
- *Q. aliena* was introduced to R.B.G. Kew in 1908. It is native to Japan, Korea, and China.

Table 4. Introduction of Asiatic Oak

Genus	Common Name	Date of Introduction	Collector	Occurrence *
<i>Q. lamellosa</i>		1802	Buchanan Hamilton	
<i>Q. glauca</i>		1804		
<i>Q. dentata</i>	Daimio Oak	1830	Siebold	Infrequent
<i>Q. myrsinifolia</i>		1854	Fortune	Rare
<i>Q. phillyraeoides</i>		1861	Oldham	
<i>Q. variabilis</i>		1861	Fortune	Rare
<i>Q. acutissima</i>		1862	Oldham	Rare
<i>Q. acuta</i>		c 1878		Rare
<i>Q. glandulifera</i>		1893	Sargent	
<i>Q. mongolica</i> var. <i>grosserrata</i>		1893	Sargent	
<i>Q. baronii</i>		1895	Giral di	
<i>Q. engleriana</i>		1900	Wilson	
<i>Q. aliena</i>		1908		

* From *Trees of Great Britain and Northern Europe* (Mitchell 1974)

Some general points can be made about the introduction of oak species into Britain and Ireland. The pattern of introduction over 400 years echoes the main trends in the introduction of exotic species. In general, species were introduced more or less in sequence from temperate regions as follows: Europe; eastern North America; western Asia; Japan and Himalayas; western North America and finally, China and Japan. While Charles Sprague Sargent introduced some oak species, the well-known collectors E.H. Wilson and George Forrest collected few oaks. In comparison with genera such as *Rhododendron*, little seed of known wild origin was introduced. However, in recent years Allen Coombes of the Sir Harold Hillier Gardens and Arboretum, Winchester, and Martin Gardner of the Royal Botanic Garden, Edinburgh, among others, have been introducing species from the wild.

The Distribution of Oak Species and Development of Cultivars and Hybrids

Nurserymen selected cultivars of oak and also raised some hybrids. Nurseries played a significant role in the distribution of oak. Conrad Loddiges, a German, started a nursery business in Hackney in 1771 which continued until the mid 19th century. Loudon (1835) commented that oak was first grafted by such nurseryman as Loddiges 70–80 years ago, but by the 1830's, oaks were grown from seed. *Quercus stellata* was introduced to the trade by Messrs Loddiges in 1819 and *Q. tauzin*, in 1822. According to Loudon (1835), Leyton Nursery near

Stratford, Essex had a great variety of American oak in 1836.

Oak Cultivars

Many cultivars of *Quercus robur* in particular have been selected by nurserymen and introduced into the trade; three are mentioned here.

1. *Q. robur* f. *fastigiata* was found in a forest near Frankfurt-am-Main and propagated by grafting from 1783. It is now widely used in present-day landscape schemes.
2. *Q. 'Fennessii'* is an Irish cultivar. It came from seed grown by a nurseryman John Fennessy and his son of Waterford about 1820. In 1836 the parent tree was 15ft high (5m). (Loudon 1838) The name was later corrupted to 'Trinessii'. Some young specimens have been planted in Kilmacurragh, Co. Wicklow, and the National Botanic Gardens, Dublin and John F. Kennedy Arboretum, Co. Wexford.
3. *Q. coccinea* 'Splendens' was selected by the Knaphill nursery at the end of 19th century. It was given an Award of Garden Merit in 1927.

Oak Hybrids

With the ever-expanding range of oaks in cultivation from the 18th century onwards, nurserymen began to raise seedlings, some of which gave rise to valuable hybrids. *Q. lucombeana*, a seedling of *Q. cerris* x *Q. suber*, was raised about 1763 by William Lucombe. William Lucombe (c. 1696–1794) of Exeter was described as an ingenious gardener. He later founded a nursery named Lucombe, Pince and Co. Old trees at Carclew, the garden of Sir Charles Lemon in Cornwall, and one at Kilmacurragh, in Co. Wicklow, Ireland are said to be original. *Q. lucombeana*. It is now called *Q. x hispanica* and the particular hybrid, *Q. 'Lucombeana'*.

About this time another nurseryman, Spencer Turner of the Leyton nursery mentioned above, raised two forms of hybrid oak derived from *Quercus ilex* and *Q. robur*. One was known as *Q. x turneri*, recently named *Q. 'Spencer Turner'* by Wiltshire and Coombes (2001), and the second, known as *Q. x turneri* 'Pseudoturneri'.

Oak Collections

In the 18th century an interest in the cultivation of introduced species developed among the horticultural fraternity and has continued since. Many plant enthusiasts acquired the newly introduced plants from nurseries and contacts in trade.

John Foster of Oriel Temple, Collon, Co. Louth, one of those who established the Botanic Gardens in Glasnevin, wrote to John Ellis, the London agent of the Linen Board, requesting him to purchase seed from his American contacts of 'such forest trees and shrubs as will thrive here, particularly various species of Oak, Pines, Firs (*sic*) and cedars' (Nelson and Mc Cracken 1987). *Quercus palustris* was planted at Collon in 1788. Loudon (1838) records this tree, as well as '*Q. aegilops*, *Q. lucombeana*, *Q. fastigiata*, and *Q. exoniensis*'.

Hobhouse (1992) describes planting of North American species. At Thorndon Hall, Essex, in a planting undertaken by Lord Petre in 1740–1742, more than 60,000 trees were planted, including 10,000 'Americans', among them 230 Carolina oak. In 1756, *Q. phellos* was growing well at Painshill, the garden of Charles Hamilton. Loudon (1838) noted American oaks, cork trees (*Quercus*

suber) and 'Ilices' (*Q. ilex*) there. In 1995 a venerable old specimen of *Q. suber* was photographed in Painshill by the author (see Figure 1).

Charles Lennox, the 2nd Duke of Richmond, had 30 different kinds of oak and 400 different American trees and shrubs at Goodwood, Sussex, in 1750 (Jacques 1983). From 1789 American and other exotic oak were planted in the 'Forest Lawn' at Fonthill for William Beckford in his picturesque landscape (Jacques 1983). From 1804–1817, William Spencer, Marquis of Blandford, spent a lot of money on his estate at Whiteknights, but was later forced to sell (Jacques, 1983). *Quercus cerris* from this date remain in what are now the grounds of the University of Reading. A specimen of *Q. x turneri* dating from this time is extant (Wiltshire and Coombes 2001). A specimen of *Q. robur* f. *fastigiata* was planted about 1800. Elwes and Henry mention the oak collection formed by the Earl of Ducie at Tortworth and give many examples of these trees in their work, 'The Trees of Great Britain and Ireland'.

Oak Collections in Botanic Gardens

Collections of oak also developed in Botanic Gardens. The most complete collection, according to Elwes and Henry (1906), was at R.B.G. Kew. A comprehensive collection was planted at the Botanic Gardens, Glasnevin. The National Botanic Gardens, Glasnevin, Dublin was established by the Royal Dublin Society in 1795 on a site of 27 acres (11.25 ha), later extended to 50 acres (20.8ha). Maps from 1800 and 1818 illustrate an Arboretum at Fruticetum. From 1800 an oak class was planted and remains to the present time. In 1809 Walter Wade, Professor of Botany at the Gardens, wrote *Quercus or oaks from the French of Michaux*, with notes and an appendix. He lists twenty one species or sub species of American oak as present, and a further ten Mediterranean species in the collection in the Botanic Gardens. Many of the species listed by Wade were later sunk (???) by botanists. The sources for the collection included nurseries such as Messrs. J. Veitch of London, Simon Louis Freres of Metz, France, Baumaschulen Zoschen b Merseburg, Germany, Vicary Gibbs of Aldenham, and the nursery company Späth. Plants were also received from other Botanic Gardens such as R.B.G. Kew, the Arnold Arboretum, Jardin des Plantes, Paris, and in recent years from the Morton Arboretum, United States, R.B.G. Edinburgh, and the Sir Harold Hillier Gardens and Arboretum. There was also some plant exchange among Irish garden owners. For example, Sir John Ross of Bladensburg, who had an important collection at Rostrevor, Co. Down, donated *Quercus agrifolia* to Glasnevin in 1906 and to Mount Usher, Co. Wicklow in 1908. Records from Birr Castle, Co. Offaly, indicate that in the 1930's the Earl of Rosse received oak from Glasnevin.

'Estate Embellishment'

Quercus ilex and *Q. suber*, according to Evelyn in his *Sylva*, could be used for general use (Hobhouse 1992). History has shown that this was true for *Q. ilex*, but not for *Q. suber*. Evergreen oak was widely planted. Two and a half hogshead (600 litres) of acorns of evergreen oak were sent from Minorca to Stowe, Buckinghamshire, in 1723 (Hobhouse 1992). In 1718 Thomas Ball F.R.S. planted *Q. ilex* in large quantities at Mamhead near Exeter, south Devon according to Hadfield (1979), probably the first to do so. Wade (1809) quotes a Mr. Bradley: "Robert Balle Esq. raised some thousands of these trees from acorns

at Mamhead in Devonshire (*sic*) some of which in 30 years have grown to a considerable size and that within the compass of six years many millions of them have been raised in England from acorns brought from Italy and Virginia (*sic*) as well as great numbers of cork trees. The latter were killed by frost; but what is become of the millions of *Ilexes*? " An answer is given presently.

Q. cerris was common in the south of England by the latter half of the 18th century. The largest trees were at Mamhead Park near Exeter, where three specimens measuring 100 ft, 90 ft, and 80 ft. were mentioned by Elwes and Henry (1906). Oak was part of the palette of trees used by a major designer of the English Landscape Style, Lancelot Capability Brown. In the years 1768–1774, Brown planted 'large ilex and cork trees' for Lord Clive at Claremont, Esher. Brown also planted *Quercus ilex*, along with beech, sweet chestnut, and Scots pine at Cadland on the Solent shore near Southampton for his banker Robert Drummond (Hedley and Rance 1987).

ShelterBelts

There were great numbers of *Quercus ilex* at Tregothnan, Cornwall, shading a drive by the shore of the harbour. *Q. ilex* was described by Arnold Foster (2000) as a mainstay of shelter planting in Devon and Cornwall where it will withstand wind and salt spray. It is also used as a hedge.

Avenues and woodland

A grove of *Q. ilex* at Holkham Hall was, according to Elwes and Henry (1906), pre-eminent in numbers and size. This species was used extensively at St. Annes in Dublin, the estate of Benjamin Lee Guinness, later Lord Ardilaun. From 1870 the estate was planted with many evergreen oaks. *Pinus nigra*, Austrian, pine and *Pinus radiata*. Monterey pine was used to create a formal mile line entrance avenue. It was also used to line walks within the park and shelter belts on the periphery of the property. Today St. Annes is a large public park.

In 1903 Lord Ardilaun donated 600 6 ft (3 m) tall evergreen oak trees to the Phoenix Park in Dublin. (John Mc Cullen pers.comm 2003). One hundred years later, they are a magnificent sight in the forming blocks of woodland and shelter belts in the Park.

At Buscot Park, Farringdon, Gloucestershire, *Quercus robur* 'Fastigiata' is used to create one of the many fine formal avenues in the park.

Planting of Introduced Oak for Timber

The Society of Arts encouraged the planting of oak, which was required by the Navy for the construction of ships. Details of species, numbers, and areas were recorded and the Society awarded medals to landowners (Jacques, 1983). In Ireland an Act of 1698 stated that tenants with leases of over 31 years from 1703 were to plant ten 4-year-old trees annually. Under an Act of 1765 it was necessary to register trees planted with a Justice of the Peace. A ledger remains for Londonderry with names of tenants, dates of registration, and numbers of trees and species given. Oak was the most widely planted species in county Londonderry, with 500 plants each of what were considered minor hardwoods, Lucombe, turkey and holm oak, *Q. x hispanica*, *Q. cerris* and *Q. ilex*, respectively. For those with an interest in place names, word 'Derry' is derived from the Gaelic word 'dair' oak wood.

From Ireland to England

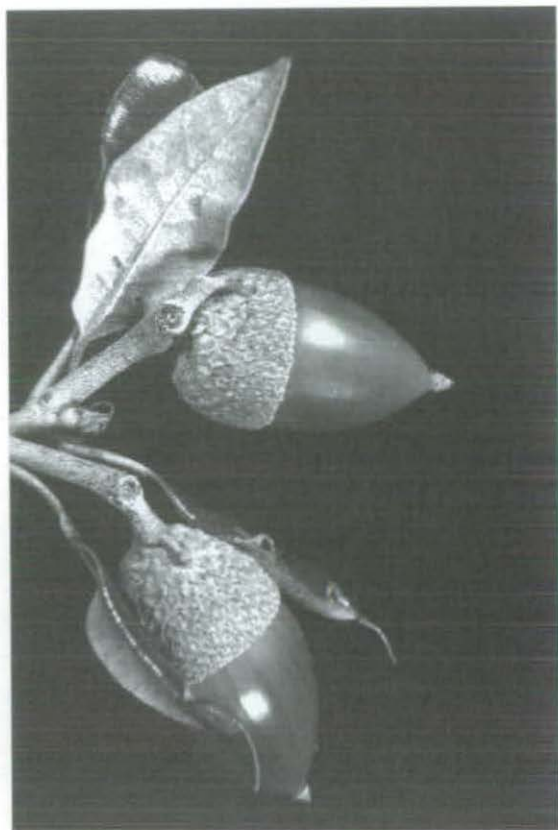
Over the years there has been speculation, which Nelson (1993) considers unfounded, that Irish oak was used in the construction of the roof of Westminster Hall, the Chapel of Kings College, Cambridge, and Salisbury Cathedral. A news item in the *Church Times* in March 2003 sheds new light on the use of Irish oak in the construction of at least one of these buildings. In 1222, the warden of the nearby Clarendon Forest, had a disagreement with the chief carpenter Godarus over the supply of 40 trees for use in the construction of the roof of Salisbury Cathedral. William of Dublin then supplied timber from medieval oak forests south of Dublin (Anon, 2003).

Conclusions

Through the work of plant collectors, many oak species have been introduced into Britain and Ireland. Nurserymen propagated these introductions, selected cultivars, and raised oak hybrids. They, in turn, were grown by plant enthusiasts in their estates and by botanists in botanic gardens. One species in particular, *Quercus ilex*, became an important tree in the development of avenues and shelter belts. One can speculate why many introduced species grow well in these islands; climate, soil, and cultivation techniques all play a part. These introduced species have become 'honoured guests' among 'distinguished natives'.

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Q. ilex

photo © Guy Sternberg

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