

# The Arboretum at Kew

Kew's Arboretum stretches over the majority of its 121 leafy hectares (300 acres). It holds a comprehensive collection of hardy trees, many of which are arranged in groups according to genera – meaning that trees that are related to each other are placed together for comparison and ease of research.

In the north of the gardens the tree collections include those of the original 1759 botanic garden – these are mainly amenity plantings, and most are not grouped in genera. The rest of the Arboretum includes the areas around the Lake, Bamboo Garden and Rhododendron Dell, Berberis Dell, Pagoda and Temperate House. A dedicated team of arboricultural and horticultural staff look after these areas. Collections continue to be updated and improved through new collecting in the wild and exchange schemes with other institutions.

## Historical development of the Arboretum

Detailed historical records of Kew show that in the 16th century, the River Thames was much wider with inlets extending into thick oak woodland. By the 18th century, however, little woodland remained on the estates of Richmond and Kew which were later linked to form the present gardens.

George II and his wife, Caroline, lived on the Richmond estate from 1721 and employed Charles Bridgeman to landscape the grounds. None of his work remains although several elderly Sweet Chestnuts (*Castanea*

*sativa*) close to the Lake date from this period. They are believed to have either been part of the boundaries to the ornamental fields that Bridgeman designed, or of plantings that edged the estate along what was Love Lane. An elderly English Oak (*Quercus robur*) near the head of the Lake may also date from this time.

The adjoining Kew estate was leased in 1731 by George II's son, Frederick, Prince of Wales. Frederick was a patron of the arts and a keen gardener, who began the development of the grounds. After his death in 1751, his wife, Augusta, continued the work and in 1759, aided by the advice of Lord Bute, founded a 3.6 hectare (9 acre) botanic garden. Trees dating from this period that still exist in the grounds include the *Ginkgo biloba*, *Robinia pseudoacacia* and *Styphnolobium japonicum* growing near to the Princess of Wales Conservatory. Others specimens of this time may include the large *Platanus orientalis* by the Orangery. By 1768 Sir John Hill listed 488 hardy trees and shrubs growing in the gardens.

With the death of Augusta in 1772, her son George III became owner of both the Kew and Richmond estates and in 1802 he joined them together by closing the public lane that divided them. Sir Joseph Banks

became a close friend of the King and in an unofficial capacity of horticultural advisor to Kew he sent plant collectors around the world to collect a formidable array of plants in order that Kew should have a comprehensive and unrivalled collection from as many countries as possible.

However it was not until the 1840s, after the deaths of George III and Banks, that the Arboretum began to expand. In 1840, a Parliamentary Committee report recommended that Kew Gardens be put under direct governmental control. William Hooker became its first Director in 1841 and worked ceaselessly to restore and expand the Arboretum. Land that had previously remained part of the Royal Pleasure Grounds was eventually given to Hooker to create an Arboretum worthy of the botanic garden of a proud nation. William Nesfield was brought in to landscape the grounds and organise the Arboretum into genera. He laid out vistas and avenues that centred on the newly constructed Palm House. In 1870, William Hooker's son Joseph, the second Director at Kew, initiated the Pinetum in the south of the gardens, replacing both the collections in the original botanic garden and a second Pinetum laid out by his father next to the Palm House. It was under Joseph that the Arboretum took its present-day shape.



*Platanus orientalis*

Many tree avenues were planted in the late 19th century including the Hawthorn Avenue (1868), Acacia Avenue (1872), Holly Walk (1874) and the Sweet Chestnut Avenue (1880).

In 1898 the Queen's Cottage Grounds were presented to Kew by Queen Victoria with the express wish they should remain in a natural state; they are now managed as a conservation area.

## The 20th century

In the early 20th century, there was a period of decline. Because high levels of atmospheric pollution were badly affecting growth at Kew, the major pine collections were transferred to Bedgebury in Kent, which had been selected as the site for a new national Pinetum. By the mid-1950s the Arboretum was in poor condition, with many plants doubtfully named and of low quality.

Since the 1970s the situation has improved dramatically; there is now greater emphasis on gathering material of known origin, preferably directly collected from the wild. Kew staff have taken part in many

collecting expeditions overseas, including Korea (1982 and 1989), China (most years between 1985 and 2003), Turkey (1989), Taiwan, the Russian Far East and Japan, adding much interesting new material and greatly increasing the scientific value of the Arboretum. Better curation techniques have improved the quality of the collections and reduced maintenance requirements. A skilled arboricultural unit has ensured that all the trees remain in good condition with pioneering plant health techniques alongside an extensive tree management database.

Wakehurst Place, an estate of about 187 hectares (468 acres), was leased from the National Trust in 1965 in order to provide much needed space and more suitable conditions for species which prove difficult to cultivate at Kew, such as *Betula* and *Nothofagus*.

The severe storms of October 1987 and January 1990 had a major impact on the Arboretum at Kew. Nearly 500 trees were lost in total, primarily mature broad-leaved deciduous trees

from the areas developed under William Hooker. Losses in 1987 included the 200-year-old Turkey Oak (*Quercus cerris*) near the Palm House Pond and a Walnut (*Juglans regia*) planted by the Queen in 1959 near Kew Palace. Many botanical rarities including *Ehretia thyrsoiflora* and *Ulmus villosa* were also lost.

## New initiatives

Since the early 1990s new planting and the renovation of collections has begun in earnest. The Magnolia collection and Azalea collection have been expanded whilst the main vistas including the Broad Walk, Pagoda Vista and Syon Vista have benefited greatly from replanting work. The major shrub collections are all now undergoing rejuvenation. The enthusiasm of the Arboretum team remains one of its greatest assets.

Kew also now has a presence on the management board of the Castle Howard Arboretum Trust to advise on collections of *Picea*, *Abies*, *Acer*, *Alnus* and *Betula*.



Sweet Chestnut (*Castanea sativa*)



Roble Beech (*Nothofagus obliqua*)



Maidenhair Tree (*Ginkgo biloba*)