## THE

## ROYAL MILITARY

## COLLEGE OF SCIENCE



BECKETT HALL TREES

## The Trees of Beckett Hall Gardens

The trees are identified in this catalogue and on the map by a letter A, B, $C$ or $D$ and a number. The letter refers to the area in which the tree is to be found.

$$
\begin{aligned}
& \text { A - North West of Beckett Hall } \\
& \text { B - Worth East of Beckett Hall } \\
& \text { C - South West of Beckett Hall } \\
& \text { D - South East of Beckett Hall }
\end{aligned}
$$



In each of these four areas the trees are numbered consecutively starting from Beckett and working outwards. Thus low numbers are near to the house, higher numbers will be further away. In some cases, several trees of the same type grouped together are given the same number.

The sequence in which the names are given is as follows: the common name is given first followed by the botanical family to which it belongs, then the Latin scientific name. Alternative common or scientific names are given in brackets. A hybrid cross is shown $X$. The number in brackets after the conmon name is the number of trees in a group. Dates of introduction of the species into this country (intro) and planting dates are given where known.

Scientific names are changed from time to time and those used here generally follow references 1 and 2. A few trees, felled in 1972/73 are still listed.

Grateful acknowledgement is made of the earlier work on identification and location of the trees by General Sir John Eldridge and Colonel Andrew Sewell. Mr A Laurie and the Civil Engineering Drawing Office kindly assisted with the final tracings.

## References

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## Beckett House and Gardens*

In 1086 the Domesday Book recorded the Manor of Becote in the hundred of Shrivenham. In the reign of Edward III the family of Becket acquired the Manor of Fowersmill the mill itself being near the outfall of the lake into Bower Brook. The lower lake was the original millpond.

In 1633 the manor was bought by Sir Henry Marten and his son established the almshouses in 1642. During the Civil War, Beckett was partly destroyed by fire and by 1716 had passed to John Shute, a barrister. He became heir to the Barrington family and adopted their name becoming the first Viscount Barrington, In a period of affluence around 1780 the roads were realigned. The original main road forded the stream at the China bridge, passed in front of the existing house and then continued north down Beckett drive to Oxford \{a milestone can still be seen) and east across the golf course to Longcot.

There has been a house on the site from well before the Norman Conquest. The previous building stood to the north of the present one, the drive from the church leading to its front entrance. The present house was built between 1831 and 1834, under the direction of William Atkinson, architect to the Board of Ordnance. The new barracks at Woolwich may also be his work. The conservatory on the S.W. corner has since been removed.

The China House or fishing lodge was built about 1690 and is thus the oldest complete building' on the site. The ice-house near the Park Avenue-Medlar Road junction and the upper lakes date from 1750-1780. The ornamental trees, lawns and dog graves are contemporary with or later than the new house.

The estate was purchased by the War Office in 1936, The Military College of Science moved to Shrivenham in 1946 and from then until 1971 Beckett House was an Officers Mess. It now houses the Library,

## SECTION A - NORTH WEST

A 1 English Yew (2), Taxaceae, Taxus baccata. One of our three native conifers and alone in keeping its Celtic name iubhar or yw. Associated with immortality in pagan and Christian cults. Clefts from straight grown trunks were used for bows because of the natural springiness. A long-lived tree with a slow growth rate which averages about 30 years per inch of radius. Specimens are known with a girth of 34 feet which are 1000 to 2000 years old.

A 2 Box, Buxaceae, Buxus sempervirens, Native, particularly of chalk downs. Slow in growth and usually found as a shrub though full-grown trees can be established e.g. at Box Hill in Surrey.

A 3 Common Laurel (several), Rosaceae, Prunus laurocerasus. Intro from eastern Europe and Asia Minor. This is not the "laurel" of the Romans but an evergreen species of cherry. Found only as a bush,

A 4 Beech, Fagaceae, Fagus sylvatica. Native and found particularly in limestone areas. The smooth slaty-grey bark, buttresses on the stems of older specimens together with the oval leaves are characteristic. Seed production is variable from year to year and only occasionally is there a "beech mast" with prolific setting of seed. Beech regenerates from seed only and numbers are now declining, Three particularly magnificent specimens stand beyond the China Bridge near Park Avenue.

A 5 Flowering Currant (5)» Grossulariaceae, Ribes sanguineum. A native of north America.

A 6 Hawthorn (3), Rosaceae, Crataegus monogyna Stricta. (May, Quick). A fastigiate form of the native species,

## A 7 Common Laurel See A3-

A 8 Common Laurel See A3.
A 9 Portugal Laurel, Rosaceae, Prunus lusitanica. A native of the Canary Islands and south-west Spain and Portugal. Intro before 1648.

## A10 Common Laurel See A3<

All Portugal Laurel See A9.
A12 Holly, Aquifoliaceae, Ilex equifolium. \{Common Holly). Native. Trees are individually male or female. There are appreciable variations in leaf colour and formation. Holly, together with ivy and box, has long been associated with religious festivals, possibly due to the evergreen leaves and longlived berries which symbolised eternity. The first associations with Christmas date from 1400 to 1500.

A13 Horse Chestnut, Hippocastanaceae, Aesculus hippocastanum. Intro about 1550 from Asia Minor, Botanically quite distinct from the sweet chestnut except for the similarity of the seeds (conkers). The sticky buds and the horse-shoe shaped leaf scars are characteristic. Known in North America as the Buckeye,

Al4 Holly See A12.
Al5 Portugal Laurel See A9.

## A17 Portugal Laurel See A9.

Al8 Lawson Cypress, Cupressaceae, Chamaecyparis lawsoniana. Intro 1854 from
Oregon and northern California. Known in America as the Port Orford cedar or the western white cedar. Widely planted in gardens. Planted about 1968,

A19 Malus, Rosaceae, species uncertain. (Flowering Crab). There are numerous cultivated varieties derived by crossings from the native crab apple and various species imported from 1850 onwards.

A20 Cedar of Lebanon, Pinaceae, Cedrus libani. Intro about 1660 from Syria. The planting of this, and many of the larger ornamentals in Beckett gardens dates from about 1834 when the present house was completed. However, ring counti on some trees which have been felled date them to before $\mathbf{1 8 0 0}$.

A21 English Elm (3), Ulmaceae, Ulmus procera. A magnificent parkland and hedgerow tree native to England. Authorities differ whether the seed is almost or entirely infertile. Propogation is normally by suckers or transplanting so the spread is associated with man. The species is reputed to originate from a single tree in the Severn vale,

A22 English Elm See A21.
A23 Holly See Al2.
A24)
)
A25)
) English Elm See A21.
A26)
)
A27)
A28 English Yew (27) See Al. These were planted as an avenue lining the drive to the original house at Beckett. They are shown on a map dated 1761.

A29 Large Leaved Lime. Tiliaceae, Tilia platyphyllos (grandiflora). Native. This has less tendency to produce sucker growth and swollen burrs on the trunk than the common lime (see B6). An identifying characteristic is the white hairs in the angles of the veins on the underside of the leaf.

Felled in 1973 together with a number of others in Beckett glade. Ring counts were not precise due to decay but suggest planting around 1850.

A30)
) Ash, Oleaceae, Fraxinus excelsior. One of the most widespread of our native
A31) trees. A magnificent tree giving valuable timber. The black winter buds,
) oppositely places, pinnately compound leaves and pale grey bark are charactA32) eristic. Worshipped by northern folk and was the holy tree of the Norseman.

A33 Black Italian Poplar, Salicaceae, Populus serotina. A hybrid between P. deltoides and the native P. nigra. A vigorous timber tree.

A34 English Elm See A21.
A35 Holly. (3) See A12.
A36 Portugal Laurel (2) See A9.

A3T Hornbeam, Corylaceae, Carpinus betulus. Native. Planted in 1968.
A38 Common Laurel (4) See A3.
A39

A4O Sumach, Anacardiaceae, Rhus typhina, Intro from eastern U.S.A. (Stag's Horn Sumach),

A41 Cotoneaster, Rosaceae, Cotoneaster salicifolius.
A 42 Apple., Rosaceae, afruiting variety of the Malus species.
A43 Mock Orange, Hydrangeaceae, Philadelphus virginalis group,

## A44 Common Laurel (2) See A3.

A45 Lawson Cypress (several) See A18.
A46 Cherry, Rosaceae, Prunus of unknown cultivated variety.
A47 Flowering Crab, Rosaceae, Malus of unknown cultivated variety.
A48 Maple, Aceraceae, Acer platanoides of unknown cultivated variety. The winged seeds are typical of the Norway maple but the leaf shape and colour differ from the common forms,

A49 Prunus, Rosaceae, Prunus cerasifera Atropurpurea (Pissardii). (Purpleleaf plum),

A50 Prunus See A49.
A51 Sarawa Cypress (several), Cupressaceae, Chamaecyparis pisifera var plumosa. An ornamental shrub from Japan. Planted 1962/63.

A52 Weeping Cherry, Rosaceae, Prunus of Japanese origin.
A53 Lawson Cypress (several) See A18.
A54 Beech (3), Fagaceae, Fagus sylvatica. See A4. Planted about 1950.
A55 Berberis stenophylla, Berberidaceae.
A56 Lonicera nitida, Caprifoliaceae. (Shrubby honeysuckle).
A57 Common Lsurel See A3.
A58 Viburnum Fragrans, Caprifoliaceae. A deciduous, winter flowering variety, very sweetly scented.

A59 Ash See A30.
A60 Common Laurel See A3.
A61 Ash See A30.
A62 Beech See A4.

A63 Scots Pine, Pinaceae, Pinus sylvestris. The native pine which once covered much of northern Europe. The bluish needles are in pairs, the cones are small and dull and the upper bark is golden on mature specimens.

A64)
) Black Italian Poplar See A33.
A65)

A66)
) Horse Chestnut Bee A13, A67)

A68 Black Italian Poplar See A33.

A69

A70 Beech See A4.
AT1 Ash See A30.
AT2 Scots Pine See A63.
A73)
) English Yew See Al.
A.74)

AT5 Hawthorn, Rosaceae, Crataegus species. Native. (May, Quick). There are two native species; $C$, monogyna has a solitary seed while C, oxyacanthoides has a two seeded fruit. This is the single Beeded species. Thorn attains a great age, more than 400 annual rings having been recorded. It's hardiness and resistance to cattle often result in it being the first species to establish in the natural regeneration to forest after grazing or cultivation.

A76) Oak, Fagaceae, Quercus robur. (Q pedunculata). The pedunculate oak is
) the commoner of the two native species. It has long stalked acorna and
ATT) short stalked leaves.
A78 Horse Chestnut See A13.
AT9 Ash See A30.
A80)
) Oak See AT6.
A81)
A82)
)
A83) Beech See A4.
A84)
A85 Horse Chestnut See A13.

## SECTION B - NORTH EAST

B 1 Cedar of Lebanon, Pinaceae, Cedrus libani, Intro about 1660 from Syria. The planting of this, and many of the larger ornamentals in Beckett gardens dates from about 1834 when the present house was completed. However, ring counts on some trees which have been felled date them to before 1800. The horizontal spreading foliage is characteristic. The felling of vast forests of this species circa 2400 BC for temple and boat building created the deserts of the Lebanon.

B 2 Deodar, Pinaceae, Cedrus deodara. Intro 1831 from the Himalayas. Characterised by the hanging branches and longer needles.

B 3 Deodar See B2.
B4 Cedar of Lebanon See Bl.
B 5 Holm Oak, Fagaceae, Quercus ilex. (Holly oak, evergreen oak), A native of the Mediterranean now widely distributed throughout western Europe.

B 6 Lime, Tiliaceae, Tilia europaea. (Syn Tilia vulgaris). This is the common
lime also known as Linden or Basswood. It is a hybrid derived from the native $T$ Cordata $x$ platyphyllos probably around 1700 to 1 T50. There is a strong tendency to produce sucker growth.

B 7 Wellingtonia, Taxodiaceae, Sequoia Wellingtonia (syn Sequoia gigantea, S Washingtonia). Intro 1853 from Sierra Nevada. A 4000 year old relic of Tertiary geologic times. The "Big Tree" of California where it attains 320 feet. In this country it has reached 160 feet in height. Found widely in country house gardens now overtopping its surroundings. Anglo-American rivalry is evident in the alternative names.

B 8 Atlas Cedar, Pinaceae, Cedrus atlantica. Intro 1845 from W Asia and Morocco, Planted about 1910. The more upright growth distinguishes this from the other Cedars.

B 9 Cyprian Cedar, Pinaceae, Cedrus libani brevifolia. A native of Cyprus this is a smaller leaved and slower growing form of the lebanon cedar rarely found in this country.

B10 Laburnum, Leguminosae, Laburnum anagyroides. The common "Golden-chain". Intro from Europe.

Bll Enclish Yew (6), Taxaceae, Taxus baccata. One of our three native conifers and alone in keeping its Celtic name iulhar or yw. Associated with immortality in pagan and Christian cults. Clefts from straight grown trunks were used for bows because of the natural springiness. A long-lived tree with a slow growth rate which averages about 30 years per inch of radius. Specimens are known with a girth of 34 feet which are 1000 to 2000 years old.

B12 Walnut, Jutlandaceae, Juglans regia. Intro about 1590. A native of southeastern Europe (Caucasus) and much of Asia as far east as Burma. The quality of nuts is uncertain on trees raised from seed. This is the "royal nut of Jove spread widely over Europe by the Romans.

B13 Hornbeam, Corylaceae, Carpinus betulus. Native. Planted in 1962/63.
B14 Scots Pine, Pinaceae, Pinus sylvestris. The native pine which once covered much of northern Europe. The bluish needles are in pairs, the cones are small and dull and the upper bark is golden on mature specimens.

B15 Lodge Pole Pine, Pinaceae, Pinus contorta latifolia. Intro 1858 from Alaska is only shallowly fissured.

Bl6) Rowan, Rosaceae, Sorbus aucuparia. (Mountain Ash). Native. Has been
) associated with spiritual power against witches, disease and shipwreck and B17) the name derives fron Norse for mystic signs or writing.

B18 Austrian Pines (5), Pinaceae, Pinus nigra austriaca. Intro 1759 from south eastern Europe. The long needles in pairs, the sombre bark and the prickle on the cone segments are characteristic.

B19 English Yew See Bll.
B20 Shrubbery Cultivated varieties of trees and shrubs including the following:-
a. Forsythia.
b. Cotoneaster frigidus. limalayas.
c. Acer palmatum atropurpureum. Japan
d. Euonymus europeae. Spindle tree.
e. Magnolia soulanceana.
f. Laburnum vossii.
g. Syringa vulgaris. Lilac.
h. Prunus in variety. Cherry.
i. Malus in variety. Flowering crab,
j. Crataegus. Red May or Thorn.
k. Prunus cerasifera pissardii, Purple plum.

1. Acer palmatun reticulatum. Japan.
m. Chaenomeles Japonica. Flowering quince.
n. Deutzia.
o. Ribes. Flowering currant.
p. Philadelphus. Mock orange.
q. Prunus laurocerasus. Laurel.
r. Rhododendron.

B21-26 Spare.
B27 Holm Oak See B5.
B28 English Yew See B11.
B29 Locust (2), Leguminosae, Robinia pseudoacacia. (False acacia, white Bean). Intro 1600-1700 from eastern U.S.A. Strongly advocated as a timber tree by Cobbett in his "Rural Rides" whilst visiting Coleshill.

B30 Portugal Laurel (2), Rosaceae, Prunus Lusitanica. A native of the Canary Islands and south-west Spain and Portugal. Intro before 1648.

B31 Sorbus discolor. Rosaceae. A Chinese species giving brilliant autumn colour.
B32 Laburnum See B10.
B33 Portugal Laurel See B30.
B34 Oak, Fagaceae, Quercus robur. (Q pedunculata). The pedunculate oak is the commoner of the two native species. It has long stalked acorns and short stalked

## leaves.

B35 English Yew (5) See B11,

## Zuri

B36 Locust (4) See B29.
B37, 38 Spare.
B39 Red Oak, Fagaceae, Quercus rubra. (Q borealis maxima), Intro from central and north-eastern U.S.A. Planted 29th February 1860 as the "son" of the Great Oak at Badminton. This in turn is reputed to be a "son" of the Boscobel oak where King Charles II hid after the battle of Worcester in $\mathbf{1 6 5 1 .}$. In fact the Boscobel oak is the common species $\Omega$ robur and any oak large enough to offer concealment could not have come from America so the story appears to have little foundation in fact.

340 Beech, Fagaceae, Fagus sylvatica, Native and found particularly in limestone areas. The smooth slaty-grey bark, buttresses on the stems of older speciments together with the oval leaves are chargcteristic. Seed production is variable from year to year and only occasionally is there a "beech mast" with prolific setting of seed. Beech regenerates from seed only and numbers are now declining. Three particularly magnificent specimens stand beyond the China Bridge near Park Avenue.

This specimen, planted about 1950, is recovering fron an attack of canker which is responsible for the deep indentations in the trunk,

B41 Purple Beech, Fagaceae, Fagus sylvatica var purpurea. (Copper Beech). There are many varieties of coloured beech ranging from copper to purple and precise origin is uncertain. The earliest record of the dark leaved variety is 1660 near Zurich and it has spread from there. Seeds produce both green and purple seedlings. Planted 1962/63.

B42 Purple Beech See B4L.
B43 Beech, Fagaceae, Fagus sylvatica. See B40. Planted about 1960.
B44 Walnut See B12. Planted 1950,
B45 Atlas Cedar See B8.
B46 Oak See 1334 , The leaning growth is due to the proximity of a Beech felled in 1971.

B47 Deodar See B2.
B48, 49 Spare.
B50 Box, Buxaceae, Buxus sempervirens. Native, particularly of chalk downs. Slow in growth and usually found as a shrub though full-grown trees can be established e.e, at Box Hill in Surrey.

B51 English Yew See Bll.
B52 Common Laurel, Rosaceae, Prunus laurocerasus. Intro from eastern Europe and Asia Minor. This is not the "laurel" of the Romans but an evergreen species of cherry. Found only as a bush.

B53 Goat Willow (3), Salicaceae, Salix caprea. (Common Sallow, Palm Willow, Pussy Willow). Native. The catkins are very conspicuous in early spring, males and females being borne on different trees. This is the "palm" of Palm Sunday.

B54 Yellow Buckeye, Hippocastanaceae, Aesculus glabra. (Yellow Chestnut). This is an American species of horse-chestnut having yellow flowers and striking autumn colour.

B55 Lime See $B 6$. This is fine specimen of the common lime.
B56 Viburnum rhytidophyllum (several), Caprifoliacese. An evergreen shrub from China with deeply veined leaves, $\mathcal{E l o s} s y$ above and densely tomentose beneath. Planted 1962/63.

B57 Entish Elm, Ulmaceae, Ulmus procera. Planted 1950. See also B76.

B58 English Elm See B76.

B59 Spare.

B60 Small Leaved Lime, Tiliaceae, Tilia cordata. (T parvifolia). Native. The leaves are similar in shape to the common lime (See B6) but are rather smaller. There is less tendency to produce sucker growths and swollen burrs on the trunk,

B61 Huntingdon Elm, Ulmaceae, Ulmus vegeta, (U carpinifolia x Clabra). This variety is a hybrid, more resistant to Dutch elm disease, reputed to have been found as a seedling in Huntingdon in 1750. There is however some confusion over the naming and origins of hybrid elms, Flanted 1962/63.

B62 Indian Horse Chestnut, Hippocastanaceae, Aesculus indica. A native of $N$. America. Planted 1962/63.

B63)
B64) Lime See B6. )

B65)
B66 Walnut See 1312. This specimen is over 200 years old and is now in decline. An elm which had seeded in the top of the stem was removed in 1961 . A nearby walnut of similar age was felled in 1962. Buried beneath this was a coin-like token of the type used by contractors for payment, Felled 1972.

B67 Walnut See B12. Planted 1950.
B68, 69 Spare.
B70 Cupressus Macrocarpa (4), Cupressaceae. (Monterey Cypress), A fast growing conifer which is not fully hardy and whose popularity has now declined in favour of the Leyland Cypress (see D44). See also details of a mature specimen on Beckett lawn at D3.

B71 Goat Willow (several) See B53.
B72 English Elm See B76. Young trees regenerating from sucker growths.
B73 Lawson Cypress (several), Cupressaceae, Chamaecyparis lawsoniana. Intro 1854 from Oregon and northern California. Known in America as the Port Orford cedar or the western white cedar, Widely planted in gardens. Planted $\mathbf{2 9 6 5}$.

B74 Sarawa Cypress (several), Cupressaceae, Chamaecyparis pisifera var plumosa, An ornamental shrub from Japan, Planted 1962/63.

B75 Beech (10) See fiUo. These have been planted over the period 1950 to 1965.
876) English Elm, Ulmaceae, Ulmus procera. A magnificent parkland and hedgerow tree native to England. Authorities differ whether the seed is almost or
B7T) entirely infertile, Propogation is normally by suckers or transplanting so the spread is associated with man. The species is reputed to originate from a single tree in the Severn vale. Planted about 1840.

B78 Lime (4) See B6.
B79 Walnut See B12. Planted 1962/63.
B80 An unidentifiea shrubby variety of Holm Oak (see B5). Planted about 1950,
B81 Lime (4) See B6.
B82 Purple Beech See B41. Planted about 1950.
B83 Golden Deodar, Pinaceae, Cedrus deodara var aurea. A golden form of the Himalayan deodar. See B2. Planted 1962/63.

B84 Silver Maple, Aceraceae, Acer saccharinum. (A dasycarpum, A eriocarpum). A native of North America, The doubly toothed, deeply indented palmate leaves and the rough bark are characteristic, In common with other Acer the leaves are in opposite pairs. Planted 1961.

B85 Norway Maple, Aceraceae, Acer platanoides var Schwedleri. Planted 1971/72 as a replacement for the previous avenue of Poplars.

B86 Oak See B34. Planted by Maj Gen B C Davey CB, CBE, Commandant, on Coronation Day 1953.

B87 Incense Cedar, Cupressaceae, Libocedrus decurrens. A columnar evergreen native of California. Planted 1962/63.

B88 Golden Deodar See B83. Planted 1962/63.
B89 Oriental Spruce, Pinaceae, Picea orientalis. Native to the Caucasus, In common with other spruce, it bears its needles on little woody pegs which tear away from the stem when a needle is pulled off. Planted 1962/63.

B90 English Elm See B76. The top of this tree broke off in a summer storm about 1965. The stem was trimmed and is now forming a pollard.

Note In this vicinity there have been three major losses over the period 1955 to 1961. A CupressussMacrocarpa was the first to die back, possibly due to a severe winter. Then a Sequoia Wellingtonia similar to B7 died during a dry summer. Finally an elm suffered a fatal attach of Honey Fungus (Armillaria mellea). All three were removed in 1962,

B91 Pink Horse Chestnut, Hippocastanaceae, Aesculus carnea. (A hippocastanum x pavia). This is a cultivar derived from crossing of the White Horse Chestnut, native of the Balkans, with the American Red Buckeye. The origin is probably France about 1800.

## SECTION C - SOUTH WEST

C 1 Cotalpa, Bignoniaceae, Catalpa bignonioides. (Indian Bean Tree). Intro about 1650 from southern U.S.A. The pale green leaves are large and heartshaped while the white flowers given a hint of tropical luxuriance. "Catalpa" is an original Red Indian name. Planted 1960 ,

C 2 J apart es e C edar, T'axodiaceae, Cryptomeria Japonica. (Sugi) Intro 1842 from Japan. Cryptomeria form the oldest avenue in the world. This was planted about 1270 at Koya San, Japan, It is commonly planted as the entrance avenue to Shinto shrines. The fully open cones are unusual and look rather like flowers,

C 3 Pine, Pinaceae. The identification of this two-leaved pine is uncertain, It has been listed previously as a Cluster Pine, Pinus pinaster but this does not accord with the shape of the cones. It is possibly a Mountain Pine, Pinus mugo. This is very variable in habit but var uncinata gives the conical spreading crown. The shape of the cones and the prickle on the cone scales with the surrounding dark ring are typical, Alternatively the bark, branches, needles and buds suggest the Austrian Pine, Pinus nigra var austriaca. Both species are native to southern Europe.

C 4 Maidenhair Tree, Ginkgoaceae, Ginkgo biloba. Intro about 1750 from China where it is cultivated as a sacred tree. It is the only surviving species from a family represented by fossil specimens in the Triassic, Jurassic and Tertiary formations in the U.K. It has thus existed for some 170 million years and is sometimes described as a "fossil tree". The floral structure and mode of fertilisation are primitive, corresponding to a transition between ferns and trees. Planted in 1962/63.

C 5 Lawson Cypress (2), Cupressaceae, Chamaecyparis lawsoniana. Intro 1854 from Oregon and northern California. Known in America as the Port or ford cedar or the western white cedar. Widely planted in gardens.

C 6 Holly, Aquifoliaceae, Ilex aquifolium. (Common Holly). Native. Trees are individually male or female. There are appreciable variations in leaf colour and formation. Holly, together with ivy and box, has long been associated with religious festivals, possibly due to the evergreen leaves and long-lived berries which symbolised eternity. The first associations with Christmas date from 1400 to 1500,

C 7 Caucasian Fir, Pinaceae, Abies nordmanniana. Intro 1848 from the Caucasus. The needles extend in all directions and, in common with other firs, come away cleanly from the stem leaving a flat, circular scar. The long cones are characteristically upright.

Felled 1973 when a longitudinal split in the stem indicated danger of falling into the lake.

C 8 Catalpa See Cl. A mature specimen which is now beginning to decline.
C 9 Weeping Willow, Salicaceae, Salix babylonica. Native to China. There is dispute as to whether the biblical willows of the rivers of Babylon were this species or a species of Poplar which now grows there. Most authorities agree on the Chinese origins. Planted 1950.

Cl0 Metasequoia, Taxodiaceae, Metasequoia glyptostroboides. (Dawn Redwood). This is the sole survivor of what was thought to be an extinct genus which flourished in the Triassic period ( $150-170$ million years ago). It is thus a representative of the Mesozoic era. Metasequoia was discovered in 1944 in Szechuan, Central China
where it was known locally as "Shui-hsa.". The third expedition from the University of Nanking found more than a thousand of these living fossil trees in 1947. Seeds were brought to the U.K. in 2949 and some 50 saplings established at Kew. The then commandant, Maj-Gen John Eldridge, obtained two which were planted here in 1950. There is much interest in the growth rates of these early specimens.

Reference: R.H.S. Journal, July 1948.
Cll English Yew, Traxaceae, Taxus baccata. One of our three native confiers and alone in keeping its Celtic nambe iubhar or yw. Associated with immortality in pagan and Christian cults. Clefts from straight grown trunks were used for bows because of the natural springiness. A long-lived tree with a slow growth rate which averages about 30 years per inch of radius. Specimens are known with a girth of 34 feet which are 1000 to 2000 years old.

C12 Purple Beech, Fagaceae, Fagus sylvatica var purpurea. (Copper Beech). There are many varieties of coloured beech ranging from copper to purple and precise origin is uncertain. The earliest record of the dark leaved variety is 1660 near Zurich and it has spread from there. Seeds produce both green and purple seedlings.

C13 Metasequoia See C10.
C14 English Yew See Cll.
C15 Spindle Tree, Celastraceae, Euonymus europaeus. Native, particularly to the chalk downs. The spindles which give this tree its name were the smooth rods of the wood which were spun in one hand to draw the woollen thread from a hank of sheep's wool. Their use dates back to the Stone Age.

Cl6 Swamp Cypress, Taxodiaceae, Taxodium distichum. Intro from south eastern U.S.A. A deciduous conifer which forms knees (breathing roots) in swampland, The autumn colour is very striking and the twisted bark is characteristic. The foliage is produced in two kinds in a similar way to that of Metasequoia.

C17. Privet, Oleaceae, Ligistrum ovalifolium. This is a golden variety which has partially reverted to green. A cultivated variety of the native Ligistrum vulgare.

C18. Shrubbery In sequence, south to north:-
a. Berberis thunbergii var Atropurpurea nana, Berberidaceae.
b. Aucuba Japonica, Cornaceae.
c. Berveris darwinii, Berberidaceae.
d. Aucuba Japonica variegata, Cormaceae. Sometimes known as the spotted laurel.

C19-20 Spare.
C21 Alder. Betulaceae, Alnus glutinosa. Native. Usually found near water where the seeds are spread by flooding. The roots are useful for stabilising river banks. Self sown about 1960.

C22 Bay, Lauraceae, Laurus nobilis. (Sweet Bay), Native to the Mediterranean. This is the "laurel" of Greece and Rome associated with success or victory, The leaves are used for flavouring,

C23 Magnolia, Magnoliaceae, Magnolia grandiflora. (Bull Bay). A native of south-eastern U.S.A. A hardy evergreen variety producing large white flowers.

C24 Kerria Japonica, Rosaceae. (Bachelors Buttons).
C25 Cydonia Japonica, Rosaceae, Cheenomeles speciosa. An ornamental Japanese quince.

C26 Mahonia, Berberidaceae, Mahonia aquifolium.
C27 Box, Buxaceae, Buxus sempervirens. Native, particularly of chalk downs. Slow
in growth and usually found as a shrub though full-grown trees can be established e.g. at Box Hill in Surrey.

C28 English Yew (several) See Cll.
C29 Field Maple, Aceraceae, Acer campestre. (Hedge maple). Our only native maple. The autumn foliage is a characteristic yellow.

C30 Beech, Fagaceae, Fagus sylvatica. Native and found particularly in limestone areas, The smooth slaty-grey bark, buttresses on the stems of older specimens together with the oval leaves are characteristic. Seed production is variable from year to year and only occasionally is there a "beech mast" with prolific setting of seed. Beech regenerates from seed only and numbers are now declining, Three particularly magnificent specimens stand beyond the China Bridge near Park Avenue.

C31 Holly See C6.
C32 Beech (2) See C30.
C33 Beech (Plandation) See C30. Planted about 1950.
C34 Ash, Oleaceae, Fraxinus excelsior. One of the most widespread of our native trees. A magnificent tree giving valuable timber. The black winter buds, oppositely placed, pinnately compound leaves and pale grey bark are characteristic. Worshipped by northern folk and was the holy tree of the Norseman.

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C35 Holly See C6.
C36 Box See C27.
C38 Privet See C17.
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C39 English Yew See Cll.
C40 Portugal Laurel, Rosaceae, Prunus lusitanica. A native of the Canary Islands and south-west Spain and Portugal, Intro before 1648.

## C41 English Yew See Cll.

C42 Alder See C21.
C43 Goat Willow, Salicaceae, Salix caprea. (Common Sallow, Palm Willow, Pussy Willow). Native. The catkins are very conspicuous in early spring, males and females being borne on different trees. This is the "palm" of Palm Sunday.

C44 Sycamore, Aceraceae, Acer pseudoplatanus. (Great maple). Intro from central Europe around 1500. The palmate leaves in opposite pairs and the winged seeds are familiar. On mature trees the bark develops shallow plates which flake away. It seeds freely and is one of the more successful species for transplanting as "instant trees".

C45 Scots Pine, Pinaceae, Pinus sylvestriB. The native pine which once covered much of northern Europe. The bluish needles are in pairs, the cones are small and dull and the upper bark is golden on mature specimens.

C46 Weeping Willow See C9.
C47 Ash See C34.
C48 English Elm See B76.
C49 Goat Willow See C 43.
C50 Dogwood, Cornaceae, Cornus alba. Intro from the far east. The red twigs in winter are characteristic. "Dag" is an old name for a goad or a skewer for which the wood was used.

C51 Poplar, Salicaceae, Populus candicans. (Balm of Gilead, Cottonwood), One of the Balsam poplars native of North America. The sticky buds have a slight scent of balsam. Planted 1965.

C52 Holm Oak See B5.
C53 Weeping Ash, Oleaceae, Fraxinus excelsior var pendula. A weeping form of common ash. See c3L.

## SECTION D - SOUTH EAST

D 1 English Elm, Ulmaceae, Ulmus procera, A magnificent parkland and hedgerow tree native to England. Authorities differ whether the seed is almost or entirely infertile. Propogation is normally by suckers or transplanting so the spread is associated with man. The species is reputed to originate from a single tree in the Severn vale. This tree and D2 are shown as mature trees on a pictorial map dated 1761. These are two of the trees which lined the original main road. This forded the stream at the China Bridge and then went across the golf course to Longcot and north along Beckett drive to Watchfield. The Barrington family diverted the roads when the upper lake was established in 1780.

## D 2 English Elm See Dl.

D 3 Cupressus Macrocarpa, Cupressaceae. (Monterey Cypress). Intro 1838 from California. A fast growing conifer which is not fully hardy and whose popularity for suburban planting tas now declined in favour of the Ley land Cypress (see DL4) which is a derived hybrid. The $U$ formation of the lower branches is found only in mature specimens and is of particular interest. The name mecrocarpa means big-fruited.

D 4 Thuya, Cupressaceae, Thuya plicata. (T lobbii, T gigantea). (Western Arborvitae, Western red cedar), Intro 1833 from British Columbia and Oregon, Planted 1951.

D 5 Maidenhair Tree, Ginkgoaceae, Ginkgo biloba, Intro about 1750 from China where it is cultivated as a sacreu tree. It is the only surviving species from a family represented by fossil specimens in the Triassic, Jurassic and Tertiary formations in the U.K. It has thus existed for some 170 million years and is sometimes described as a "fossil tree". The floral structure and mode of fertilisation are primitive, corresponding to a. transition between ferns and trees. Planted in 1962/63.

D 6 Cedar of Lebanon, Pinaceae, Cedrus libani. Intro about 1660 from Syria. The planting of this, and many of the larger ornamentals in Beckett gardens dates from about 1834 when the present house was completed. However, ring counts on some trees which have been felled date them to before 1800. The horizontal spreading foliage is characteristic. The felling of vast forests of this species circa 2400 DC for temple and boat building created the deserts of the Lebanon.

D 7 Douglas Fir, Pinaceae, Pseudotsuga taxifolia (syn P menziesii, P douelasii). Intro 1828 from British Columbia. It is in the front rank of our timber producers so far as quantity and strength is concerned but it is not a good pioneer tree for first planting of exposed land. A specimen of 417 feet is the tallest tree ever recorded and in Britain it has outstripped all other species at 178 feet.

## D 8 Cedar of Lebanon See D6.

D 9 Wellingtonia, Taxodiaceae, Sequoia Wellingtonia (syn Sequoia gigantea, S Washingtonia). Intro 1853 from Sierra Nevada. A 4000 year old relic of Tertiary geologic times. The "Big Tree" of California where it attains 320 feet. In this country it has reached 160 feet in height. Found widely in country house gardens now overtopping its surroundings. Anglo-Americen rivalry is' evident in the alternative names. Planted 1962/63.

D10 Maple (Several), Aceraceae, Acer cappodocicum. A native of the Himalayas. The absence of teeth on the leaf lobes is characteristic. These are grafted on to sycamore rootstock.

D11 Lawson Cypress, Cupressaceae, Chamaecyparis lawsoniana. These are named varieties of the common Lawson Cypress (See D42). Six are of var colunaris glauca and three of var lutea (aurea). Planted 1965.

D12 Purple Norway Maple, Aceraceae, Acer platanoides Schwedleri. This tree commemorates the visit of H.R.H. the Duke of Edinburgh in November 1959. A red oak was originally sited between B4 and B8. This and several subsequent replacements were destroyed by vandalism. The site was changed but a further red oak failed to establish. This maple was planted in 1969.

D13 Monkey Puzzle, Araucariaceae, Araucaria auraucana. (Chile pine). A native of the high Andes. The name derives from the Araucano Indians who use the fleshy seeds for food. The common name arises from a wag's remark: "It would puzzle a monkey to climb that tree". Planted November 1952.

D14 Italian Stone Fine, Pinaceae, Pinus pinea (Umbrella pine). A two needled pine with characteristic shape of crown. Intro 1500-1600 from the Mediterranean, The large cones produce edible seeds though few escape attention by the squirrels.

D15 Californian Redwood, Taxodiaceae, Sequoia sempervirens. Intro 1816 from the coast of California where it has reached a height of 365 feet and specimens with 3,200 annual growth rings have been felled. The fibruous bark is soft and absorbent.

Dl6 Caucasian Fir, Pinaceae, Abies nordmanniana. Intro 1848 from the Caucasus. The needles extend in all directions and, in common with other firs, come away cleanly from the stem leaving a flat, circular scar. The long cones are characteristically upright.

D17 Weeping Ash, Oleaceae, Fraxinus excelsior var pendula. A weeping form of common ash. See C34.

D18 Irish Yew, Taxaceae, Taxus baccata var fastigiata. Intro 1780 from Fermenagh, Ireland. An erect branched columnar variety of the common yew.

D19 Laburnum, Leguminosae, Laburnum anagyroides. The common "Golden-chain". Intro from Europe.

D20 Himalayan Spruce, Pinaceae, Picea smithiana (syn P morinda). Intro 1818 from the western Himalayas. Drooping branches and prickly pointed leaves directed forward are characteristic. In common with other spruce the needles are borne on woody pegs which tear away from the stem with a heel.

D21 Purple Beeqh, Fagaceae, Fagus sylvatica var purpurea. (Copper Beech). There are many varieties of coloured beech ranging from copper to purple and precise origin is uncertain. The earliest record of the dark leaved variety is 1660 near Zurich and it has spread from there. Seeds produce both green and purple seedlings. Planted 1965.

D22 Box, Buxaceae, Buxus sempervirens. Native, particularly of chalk downs. Slow in growth and usually found as a shrub though full-grown trees can be established e.g. at Box Hill in Surrey.

D23 English Yew (2), Taxaceae, Taxus baccata. One of our three native conifers and alone in keeping its Celtic name iubhar or yw. Associated with immortality in pagan and Christian cults. Clefts from straight grown trunks were used for bows because of the natural springiness. A long-lived tree with a slow growth rate which averages about 30 years per inch of radius. Specimens are known with a girth of 34 feet which are 1000 to 2000 years old.

D24 Holly, Aquifoliaceae, Ilex aquifolium. (Common Holly). Native, Trees are individually male or female. There are appreciable variations in leaf colour and formation. Holly, together with ivy and box, has long been associated with religious festivals, possibly due to the evergreen leaves and long-lived berries which symbolised eternity, The first associations with Christmas date from 1400 to 1500 .

D25 Weeping Willow, Salicaceae, Salix babylonica. Native to China. There is dispute as to whether the biblical willows of the rivers of Babylon were this species or a species of Poplar which now grows there. Most authorities agree on the Chinese origins. Planted about 1960.

D26 Douglas Fir See DT. Planted 1951. The leading shoot was damaged by storm 1960.

D27 Oriental Plane, Platanaceue, Platanus orientalis. A native of Europe and Asia from France to the Himalayas. The first dated references are around 500 B.C. A large, stately tree with alternate palmate leaves and smooth bark which peels off in large, thin flakes. Known in America as Buttonwood or sometimes Sycamore. Planted 1950.

D28 Holm Oak See D30. The ster, decaying due to a water pocket, split in 1972. Only part of the tree now remains.

D29 Wellingtonia, Taxodiaceae, Sequoia Wellingtonia (syn Sequoia gigantea, S Washingtonia). Intro 1853 from Sierra Nevada. A 4000 year old relic of Tertiary geologic times. The "Big Tree" of California where it attains 320 feet. In this country it has reached 160 feet in height. Found widely in country house gardens now overtopping its surroundings. Anglo-American rivalry is evident in the alternative names.

D30 Holm Oak, Fagaceae, (Uuercus ilex. (Holly oak, evergreen oak). A native of the Mediterranean now widely distributed throughout western Europe.

## D31 Maple See D10.

D32 Portugal Laurel, Rosaceae, Prunus lusitanica. A native of the Canary Islands and south-west Spain and Portugal. Intro before 1648.

D33 English Yew (2) See Da3.
D34 Silver Maple, Aceraceae, Acer succharinum, (A dasycarpun, A eriocarpun). A native of North America, The doubly toothed, deeply indented palmate leaves and the rough bark are characteristic. In common with other Acer the leaves are in opposite juirs.

D35 Lawson Cypres: (3) See Dll. This is var columnaris glauca.
D36) Oadi, Fagaceae, Quercuis rotur. (Cepedunculata). The pedunculate oak is the commoner of the two native species. It has long stalked acorns and short D37) stalked leaves. These trees were planted to commemorate the coronation of ) Edward VII in 1902.
D33)
D39 Walnut, Juclandaceat, Juelans recia. Intro about 1590. A native of southeastern Europe (Caucasus) and much of Asia as far east as Eurma. The quality of nuts is uncertain on trees raised from seed. This is the "royal nut of Jove" spread widely over Europe by the Romans. Planted 1950.

D40 Beech See D52. Planted 1962.
j41 Lawson Cypress (6), Cupressacea, Chamaecyparis lawsoniana var columnaris or erecta. A named variety of the common form D42.

D42 Lawson Cypress (9), Cupressaceae, Chamaecyparis lawsoniana. Intro 1854 from Oregon and northern California. Known in America as the Port Orford cedar or the western white cedar. Widely planted in Eardens. Planted 1965.

D43 Japanese Cherry, Rosaceae, Prunus of uncertain origin. A fastigiete variety.
D44 Leyland Cypress (5), Cupressaceae, Cupressocyparis leylandii. A hybrid of Cupressus Macrocarpa (D3) and Chamaecyparis nootkatensis produced in 1888 in Wales and again in 1911. Cultivars differ slightly in habit depending upon their origin. ''he value of this hybrid has only recently been appreciated. It's rapid growth, dense foliage right to the ground and winter-hardiness are exceptional.

D45 Lawson Cypress See D11 and D42. This group contains 3 of the common variety, 9 of var columnaris and 2 of var lutea.

D46 Enclish Eln See DI. A pollard which has grown from the broken stem.
D47-49 Spare,
D50 English Yew' See D23.
D51 Italian Stone Pine See D14.
D52 Beech, Fagaceae, Fagus sylvatica. Native and found particularly in limestone areas. The smooth slaty-grey bark, buttresses on the stems of older specimens together with the oval leaves are characteristic. Seed production is variable from year to year and only occasionally is there a "beech mast" with prolific setting of seed. Beech regenerates from seed only and numbers are now declining. Three particularly magnificent specimens stand beyond the China Bridge near Park Avenue.

D53 Lawson Cypress, See D11. Var Erecta viridis. Planted 1950.
D54 Flowering Currant, Grossulariaceae, Ribes sanguineum. A native of north America.

D55 Swamp Cypress, Taxodiaceae, Taxodium distichum. Intro from south eastern U.S.A. A deciduous conifer which forms knees (breathing roots) in swampland. The autumn colour is very striking and the twisted bark is characteristic. The foliage is produced in two kinds in a similar way to that of Metasequoia.

D56 Lilac, Oleaceae, Syringa vulgaris. Common lilac.
D57 Weeping Willow See D25. Planted 1950.
D58 Tulip Tree, Magnoliaceae, Liriodendron tulipifera. Intro 1650 from north America, The leaves have a characteristic indentation at the tip. The flowers, in May, resemble tulips but are not prominent. This was planted in 1950 near an existing tulip tree which had to be felled.

D59 Wych Elm, Ulmaceae, Ulmus glabra. Native. This has larger leaves than the English elm with a wider, more pendulous crown, Propogation is by seed with no suckering. This specimen is however grafted on to English elm rootstock.

D60 Lawson Cypress See D42.
D61 Tree of Heaven, Simarubaceae, Ailanthu3 altissima. Intro from China in 1751. Similar to Ash but with larger leaves alternately set. The colour of the spring foliage is exceptional particularly in the evening sunlight.

D62 English Elm See D1.
D63 English Yew See D23,
D64 Cherry. (3), Rosaceae, Prunus avium. The native gean. The horizontal mark $\rightarrow$ ings on the bark of the trunk are characteristic.

D65 Beech See D52. When cut to form a hedge the leaves are retained through the winter,
$\operatorname{AMC}^{8,2 \mathrm{SHIC}}$

