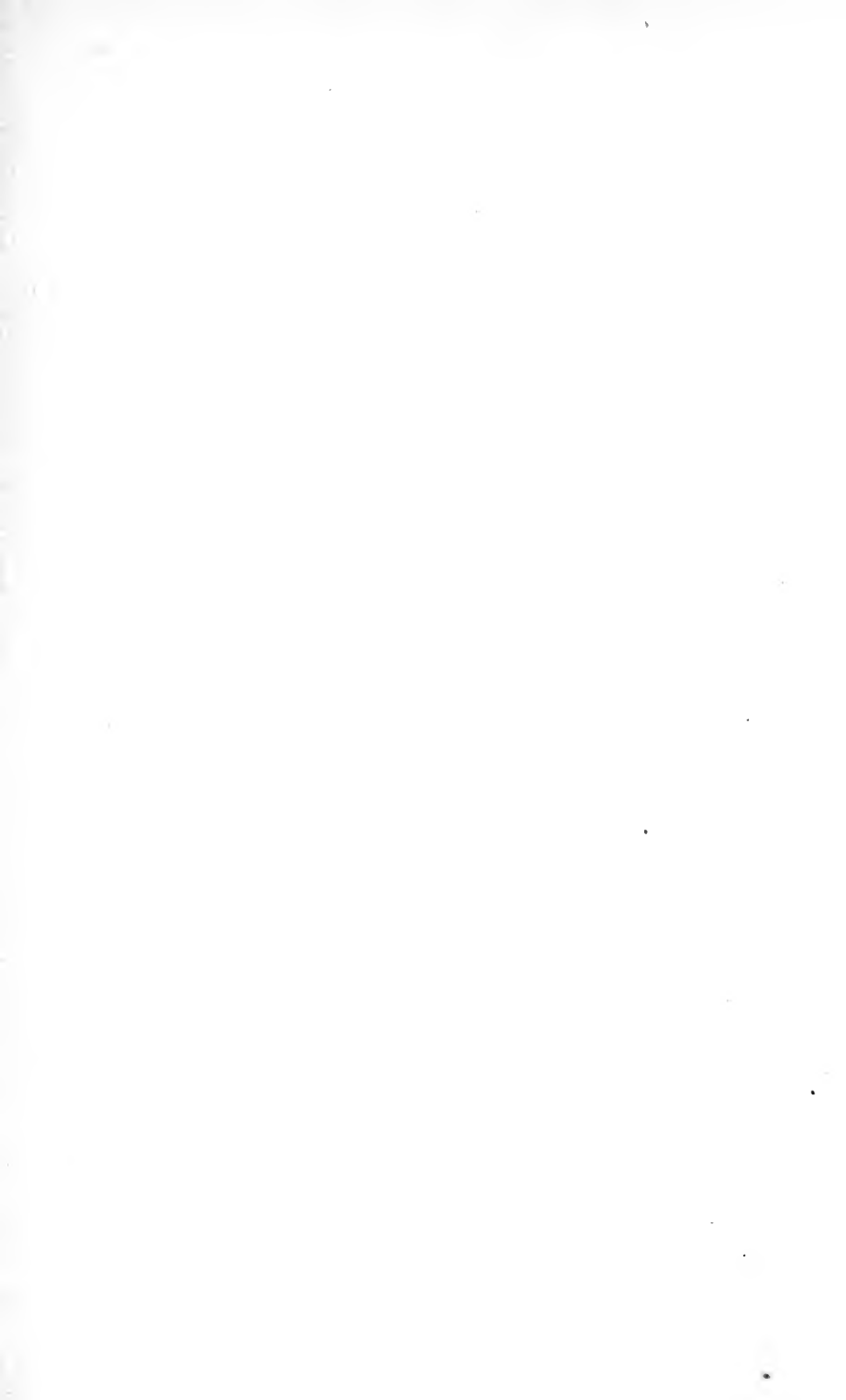


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LONDON TREES



UNIV. OF
CALIFORNIA



Mulberry Gathering, Finsbury Circus

LONDON TREES

Being an account of the Trees that
succeed in London, with a descrip-
tive account of each species and
notes on their comparative
value and cultivation.

With guide to where
the finest London
Trees may be
seen

BY A. D. WEBSTER

*Author of 'Practical Forestry,'
'Forester's Diary,' &c.*

ILLUSTRATED

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PREFACE

THE reasons for writing this book are :

(1) No book of a similar kind has been published.

(2) Many enquiries regarding the history and management of London trees suggest that such a work will be useful ; and

(3) The author's experience of tree life in London, which has extended over a period of twenty-five years, will, it is hoped, be helpful to others who are similarly interested.

This book has no pretensions to contain a complete list of trees growing in London, but rather is a brief account of such kinds as the author has thought worthy of note during the quarter of a century with which he has been connected with some of the Royal parks and gardens of the Metropolis.

To Mr. F. W. Parker, of the Parks Department, London County Council, I am indebted for valuable information and some of the photos.



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LONDON TREES

TREES do well in London, and that in spite of the chemical impurities of the atmosphere, and generally unfavourable condition of the soil in which they are planted. Though the so-called London Plane predominates, yet several other trees are equally suitable for planting, as may be inferred from the age and large size to which they have attained in many parts of the Metropolis.

London might well be called 'The City of Plane Trees,' for, unfortunate though it may be from the point of view of sameness, it has been carefully computed that fully sixty per cent. of the arboreal vegetation in the Metropolis consists of this tree. The Elm, Lime, Poplar, Acacia, Ailanthus, and some others are all more or less common, but the London Plane has ousted almost every other tree from the field; indeed, during the past five-and-twenty years it has been planted to the exclusion of almost every other species. That in the London area it succeeds as well as, if not better than, the majority of trees must be admitted, but the almost monotonous repetition in our streets, squares, and public gardens of this particular Plane is to be deplored and has been the cause of much unfavourable comment during recent years. Though the number of trees that succeed in a satisfactory way in London is strictly limited, yet, on the other hand, it is surprising what a variety of the less common kinds are to be found in various parts of the Metropolis, and as many of these are full-grown specimens the inference to be drawn is obvious. The Cork Oak, Liquidambar, and Black Walnut have all attained to goodly proportions at Lambeth, the *Pterocarya* in Hyde

Park, the Paulownia and Golden Catalpa in Regent's Park, the Honey Locust at Greenwich, the Maidenhair tree at Chelsea and by Commercial Road ; while the magnificent Hickories in Waterlow Park, the Tulip and Judas Tree at Golder's Green, the Kœlreuteria at Chelsea, one of the largest in the country, or the Arbutus and Nettle Tree in Waterlow and Springfield Parks are all interesting and uncommon trees that have succeeded well in different parts of the Metropolis. The Catalpas at Gray's Inn, Lambeth Palace, and in Manchester Square are other examples of how well certain trees thrive in the centre of London.

Whether from an ornamental or a sanitary point of view, the value of London trees can hardly be over-estimated. Of late years in particular their utility in these ways has been more fully recognised and appreciated, while as memorials of the past quite a number of trees in the Metropolis are now carefully tended and preserved. The numerous requests for advice as to the preservation of old and interesting trees, and attention to others in the matter of soiling and pruning, as well as enquiries through the press as to the identity of rare specimens, convince us that the interest taken by Londoners in their trees and shrubs is very considerable and has been greatly on the increase during recent years. On the part of some there is, unfortunately, a decided aversion to any interference with trees either in the way of thinning or pruning, for while some advocate the timely removal of overcrowded specimens and the lopping of dangerous and ungainly branches, there are others who will have none of it.

Blackfriars Road provides an example of this kind, where an heroic but expensive action to preserve a

couple of wretched Plane trees in the cramped forecourt of a house near the Clock Tower was taken a few years ago. These trees, which were much appreciated by a neighbour, were about to be lopped when, in order to preserve them, he actually bought the lease of the house so that the preservation of the trees could be enforced. The removal of a young Plane tree at a cost of £20 from a garden in Portland Place to a site at Hampstead in order to keep faith with the dying wish of the planter is an almost parallel case.

That in a few instances, however, opposition to tree-planting in London has been offered will be in the minds of all, as for years the necessity for such along the Thames Embankment was addressed to official ears in vain; indeed, it was only when the call became too loud to be disregarded that practical steps for carrying out this most important of London's tree-planting schemes were set on foot. Even Loudon, who had done so much to further our knowledge of trees and planting, met with stern opposition on the part of the District Surveyor when he planted a Sumach by the pathside of his newly built house at Porchester Terrace, Bayswater. Even his neighbours declared that it would be unpleasant to pass under its drip in showery weather, and so poor Loudon was forced to grub out his Sumach.

But times have changed, and the value of judiciously arranged trees and shrubs in our streets and squares is now fully recognised and can hardly be over-estimated. It is a well-known fact, however, that in certain confined districts of the Metropolis, tree and shrub culture, at least in a satisfactory way, is almost out of the question, as the fumes given off by many of our city manufactories act most perniciously on

vegetation of every description. Such is the case in some parts of the East End, particularly by the Tower and Mint, in the Lambeth pottery district, and in narrow, confined, and dusty streets generally. In the graveyard at St. Giles-in-the-Fields, where some good smoke-resisting trees have been planted, on remarking to the gardener in charge how wretched they looked, we promptly received the following reply: 'Well! with Crosse & Blackwell's at one end and Nixey's Black Lead Works at the other, it's a wonder there's a living plant left'—a remark that truthfully applies to many other places in the London area.

The management of London trees is not on the whole very satisfactory, especially in the matter of thinning and pruning, the latter operation in particular leaving much to be desired. Owners and those in charge of trees in many parts of the Metropolis have a decided aversion to cutting away such as are interfering with the development of better specimens, the result being that, pressing too closely on one another and thus excluding a sufficiency of light and air, the trees become lop-sided, branchless for the greater part of their height, and unhealthy, while their natural beauty and individual characteristics are entirely lost sight of. In connection with this it is well to bear in mind that it is the extent and quantity of foliage that render town trees of the greatest value, whether for ornament or from an hygienic point of view. Close order of growth is all right when the production of clean timber is aimed at, but when, as is the case in London, a well-furnished tree of natural appearance is desired, then by all means allow plenty of room for root and branch development. In many of our public squares and gardens the trees are too

thick, and instances could be pointed out where the removal of one-fourth of the existing trees would be of infinite benefit to the remaining specimens, for it will be generally admitted that tall, lanky, branchless poles with a tuft of foliage on top are quite at variance with the idealistic requirements of town trees.

Pruning or lopping, too, is in many cases carried out in a barbarous and unscientific way, as the hundreds of mop-headed Planes and Limes all over London but too plainly point out; indeed, the management of such trees is a disgrace to our city, and in the eyes of visitors tends to lower the art of forestry as practised in this country.

The Plane and Lime trees are the most cruelly treated of London trees, for the annual lopping to which many of these are subjected, especially in narrow streets, and which they bravely try to rectify, strikes every lover of the natural with regret and shame that such beautiful and noble forest trees should be so tortured and disfigured. The usual explanation is that they are the only trees that will succeed in a satisfactory way in the London area, and in order to keep them in bounds an annual lopping is imperative. But this is hardly correct, for by planting at the first such moderate-sized trees as the beautiful flowering Thorns, Catalpa, the dwarf Acacias, the Almond, Cherries, Mulberry or Mountain Ash—in fact, any of the *Pyrus* family—all this lopping and restraining of noble growth would be avoided. There are, however, cases in which pruning is justifiable and where the abuse of the system should furnish no argument against its legitimate use, such as in the case of diseased trees and in the removal of weighty branches from Elms and Poplars, which frequently snap across

in still, warm weather and endanger the lives of visitors to our public parks and gardens.

Where plenty of space is available, as in our parks and open spaces, or by the Thames Embankment, by all means plant the Plane and other trees of noble growth, but where the streets are narrow and the gardens small the dwarf-growing trees are to be recommended. Many examples of large-growing trees planted within a few yards of shops and houses could be pointed out, such as along Shaftesbury Avenue, Gray's Inn and Charing Cross Roads, at Cricklewood and Stratford, the inevitable result being that already heavy pruning and beheading have become a necessity, the natural beauty of the trees has been destroyed, and, worse still, a repetition of the lopping at stated periods must be engaged in.

For ten or a dozen years after being planted these trees are everything that can be desired, but when the boundary limit has been attained, the windows darkened, the pedestrians on the footpath annoyed, then comes the retribution, and the pruning-knife and saw are brought into request, and the sapling tree elbowed in and beheaded, with the usual result that ugly, contorted, mop-headed excrescences are formed, and the tree of beauty becomes a hideous mass of malformation.

Amongst trees that have been found to succeed well in London, deciduous are preferable to evergreen kinds; in fact, coniferous species, with perhaps one or two exceptions, should be severely left alone in the planting of our streets and squares. Though they may survive in the open, native species or those that have for long become naturalised, such as the Oak, Sweet Chestnut, Beech, and Birch, are not suitable for the smoke-infested parts of the City, foreign species,

ALTERED CONDITIONS OF TREE GROWTH 7

including the Plane, Acacia, Sumach, and others, being better adapted for withstanding the deleterious effects of an impure and heated atmosphere. It is also a curious fact that varieties have succeeded, in several cases at least, better than the species, and we have good examples of such in *Platanus orientalis acerifolia* (the maple-leaved or London Plane), *Fraxinus excelsior pendula* (the Weeping Ash), *Populus fastigiata* (Upright Poplar), Cut-leaved varieties of *Pyrus*, Broad-leaved Hollies, Weeping Elm, Variegated-leaved Sycamore, and several dwarf forms of Acacia and double-flowering varieties of the Cherry and Scarlet Thorn.

Judging from the age and size of existing trees, it is evident that a century and more ago several species, including the Lebanon Cedar, Beech, Oak, and Scotch Pine, flourished in the London area; but they are now gradually dying out or have been ousted to the more favourable conditions of the suburban districts. At one time the noblest Cedars of Lebanon grew in the Chelsea district, Elms at Lambeth, and Oak, which was used for boat-building, in Regent's Park; but these are gradually disappearing, until now of the Cedar hardly a healthy tree remains in London, while the old Elms in Hyde Park and the grounds at Lambeth Palace are sadly diseased and broken about, and hardly a specimen of the British Oak can now be found in Regent's Park, where two centuries ago it was abundant.

The native Scotch Pine in considerable numbers attained to a large size on Hampstead Heath, but few of the original specimens now exist, and those that remain are gradually dying and becoming infested with fungus and insect pests. The trees in Golder's Green Park are, however, in a flourishing and healthy condition, and many are of exceptional size, especially the

Beech, Elm, and Sycamore, which have no rivals in or around London. This is entirely due to the elevated situation of the ground, clear atmosphere, and excellent soil.

Aged and historic trees, or such as are grown in confined positions or near prominent buildings, have received a considerable amount of attention from the press and public, as evidence of which we need only refer to Bacon's Catalpa at Gray's Inn, the Mulberry planted by Charles Dickens, the Wallace Plane, Dr. Johnson's Elm, Shakespeare's Oak on Primrose Hill, Keats's tree at Hampstead, or the fine row of Catalpas by the Houses of Parliament and the healthy specimens of the same kind at St. Paul's.

In the following account of trees that succeed in the London district care has been taken to include only such as have from long experience and on account of their age and size been found most suitable for general planting. Several trees that succeed well in American towns have of late been tried by special request in London, and amongst such some have so far given promise of being able to withstand the effects of the chemically impure atmosphere of the great Metropolis. These are principally of small growth, such as species of *Pyrus* and *Prunus*.

It has been found somewhat difficult to define the exact bounds of London and which trees may rightly be included in the metropolitan area, but generally in the following pages the limits of the County of London have been adhered to, and for this reason trees growing outside the boundary, such as at Kew, Chiswick, Hampton Court, Bushy Park, or Richmond, where the air is comparatively pure, have not been included. The limit is, with few exceptions, an eight miles radius from Charing Cross.

TREES FAVOURING CERTAIN LOCALITIES 9

As might be expected, trees thrive better in the more open, airy, and high-lying districts than in the close and confined spaces, and a few kinds that positively refuse to live in the heart of the City do fairly well in the suburbs, while still farther away, where the atmosphere is comparatively pure, they may thrive in quite a satisfactory manner.

It is to be regretted that evergreen trees, with the exception of the Holly, Arbutus, Holm or Evergreen Oak, and a few others, do not succeed better in smoky localities ; but if the atmospheric conditions have been found to be unfavourable to such, then they should not be planted, and the aspect of deciduous trees in winter is infinitely preferable to that of unhealthy evergreen species.

With reference to tree growth in London it is interesting to note how each of the various localities favours some particular species. For the size and beauty of its Almond trees south-western Suburbia has long been noted ; while in the northern districts the double scarlet and common Thorn predominate, as do the Lime at Holloway and the Bird Cherry at Harlington and Hounslow. The squares are monotonous with the Plane, and the Pear can be seen nowhere in such numbers nor of such a size as in the old gardens at Abbey Wood, while along Edgware Road the Acacia would appear to be the favourite, as are the common and pink-flowering Horse Chestnuts by the Finchley Road and at Golder's Green. In other districts the fastigate Poplar is predominant, and in certain north-western suburbs the white and grey Poplars are conspicuous everywhere.

It is generally supposed that the annual shedding of the bark and smoothness of leaf surface will account

for why the Plane thrives so well in London. This is, however, scarcely borne out by facts, as some other trees which do not shed their bark and are characterised by their rough foliage thrive equally well, amongst which are the Ailanthus, Poplars of several kinds, the Acacia, Mulberry, and others. The bark of the Acacia remains intact for many years, and being rough and deeply furrowed collects dust and other atmospheric impurities in large quantities, so much so, that seedlings of other trees frequently spring from amongst the debris in nooks and crannies of the stem. We question whether the leaf of any hardy tree is rougher than that of the Mulberry.

The Ailanthus thrives equally well with the Plane ; indeed in certain confined East End districts, as by the Church of St. Magnus the Martyr, at Billingsgate, it has ousted the Plane, though both are growing under exactly similar conditions and within a few yards of each other. The power of certain trees to withstand the chemical impurities of a town atmosphere is owing largely to a hardy and robust constitution, but the quality of the soil in which they are growing has its effect ; and it is a well-known fact that the Plane is not the best tree for planting in either Sheffield or Manchester, where soil and other conditions are different from those of London.

Many of the London streets and squares have been named after trees that grew in their close environment. Few, perhaps, know that the Seven Sisters Road was named after a group of seven Elm trees that stood till quite recently in this eastern border of London. Then we have Lime Street and Linden Avenue in abundance, Thornhill and Thorn-town, Acacia Road in St. John's Wood, Beech Street in

Barbican, Walnut-tree Walk in Lambeth, and Mulberry Walk in Chelsea. No fewer than nine thoroughfares in London are named after the Elm tree, notably at Well Walk, Hampstead, Elm-tree Road in St. John's Wood, and Nine Elms at Vauxhall. Quite half a dozen places are named in compliment to the Willow; and the quantity of trees of that name that grow in the marshy grounds of the East End was the origin of Poplar. Pine Road at Cricklewood and Pine Street at Clerkenwell perpetuate the name of our native Scotch Pine. Then there are Cherry-tree Alley and Hazelmere Road at Kilburn to perpetuate orchards that have long passed away.

Gospel Oak stood to the north of Mansfield Road, the spot being now covered with shops. In Middlesex were five boundary 'trees'—three 'Gospel' and two 'Burnt' Oaks. Of the former, one descendant exists at Hanwell by the Boston Road Station, another at Frays Farm, one mile north of Uxbridge on the Harefield Road. The remaining three trees survive only in name—viz. at Hampstead, Edgware, and Harrow Weald.

Pope Gregory gave to the missionary priests going into England directions to utilise the sacred places of the pagans for the service of the true God. These spots were again used in the reign of Queen Elizabeth by the clergy in thanksgiving services in the open once a year. Hence now called Gospel or Holy trees.

Seven Sisters was so called on account of a circle of seven Elm trees which grew on Page Green, said to have been planted by seven sisters before parting to follow their different roads in life. These trees must have been, according to records, over 300 years old when they were removed in 1852, and seven new trees

planted by the seven daughters of Mr. McRae of Tottenham.

In order to facilitate reference the trees in the following list are arranged alphabetically, while the illustrations are all of London-grown trees.

In the following account of London trees it is not claimed that the list is by any means a complete one, there being, no doubt, many other rare and interesting specimens in private gardens and grounds to which access is difficult. As far as the public parks, squares, and open spaces are concerned the list of trees which are of interest either from the point of rarity or size may be looked on as fairly exhaustive.

Acacia

(*Robinia Pseud-acacia*)

THE Robinia or False Acacia is at once one of the most ornamental and useful of London trees, where it succeeds well and attains to large proportions.

Better than almost any other tree, it is able to withstand long-continued drought and heat, and after an unusually hot summer, when most other trees look seared and sickly, the Acacia stands out fresh and green, and seems little the worse for the trying ordeal through which it has passed. For planting on poor, light soils, even that of a gravelly nature, the Acacia is peculiarly suited, while all over London it is to be found growing freely even in the most crowded districts and where the impurities of the atmosphere tell hardly on vegetation generally. Then as an ornamental tree it has, perhaps, no rival;

the beautiful pea-green pinnate foliage and long racemes of white or pinky tinted and slightly fragrant flowers, which are produced in the greatest abundance, render it one of the most beautiful of town trees.

The Acacia has been so generally planted in the Metropolis that few of our squares, parks, or open spaces are wanting in specimens. There are unusually fine trees in Russell Square, in St. James's and Hyde Parks, and on Hampstead Heath and Golder's Green, though the oldest are undoubtedly those in Ravenscourt Park, one of the largest there being 80 feet high. The Russell Square Acacias, which are supposed to have been planted about 1720, are now on the decline, the trunks being diseased and the upper branches dead and dying. They present rather a miserable appearance, and would hardly from size of stems—4 feet in diameter—be considered as two centuries old. Around Westminster, at Hampstead, and in most of the East End parks and open spaces, the Acacia may be seen in a flourishing condition. Though a comparatively short-lived tree, the growth in a young state is rapid, and suckers 4 feet in length are frequently sent out by specimens that have been cut over or beheaded.

But in every part of London the Acacia may be found of large size and in a thriving condition unless where its natural beauty has been interfered with by the ruthless hand of the pruner. For such there is no excuse, as the different varieties of Robinia are equal to providing the most capricious planter with subjects of almost every size and form, from the globose and fastigate to the pendulous, without resorting to mutilation. Pruning the Acacia is not

to be generally recommended, as unless carefully performed, disease and insect attacks are the result.

The Acacia was introduced to this country in 1640, and in 1823 William Cobbett created a sensation with regard to the tree, the timber of which, under the name of the Locust, he declared to be 'absolutely indestructible by the powers of the earth, air and water.' He caused large numbers to be planted, and prophesied that the time was not far distant 'when the Locust Tree would be more common than the Oak.' Needless to say, the prophecy has not been fulfilled.

Several varieties of the Acacia are cultivated throughout London, one of the most useful for villa gardens and small grounds being *A. Pseud-acacia inermis*, which rarely exceeds 16 feet in height, with a bushy top of the richest pea-green foliage. The pyramidal form (*fastigiata*), which is as upright as a Lombardy Poplar, and has all the charms of the species as regards verdure, is well suited for planting in London.

A. Pseud-acacia Decaisneana is another valuable variety for the London garden.

Although of rapid growth and attaining to a fair size the Acacia is not a long-lived tree in this country, the branch tips dying back and the stems showing signs of incipient decay at a comparatively early date. Growing under favourable conditions the Acacia will attain to a height of 70 or 80 feet, with a deeply fluted trunk and rough, furrowed, dark-grey bark. With age the formidable spines of youth give way on the branches, while decayed wood and an unhealthy condition are general.

The winter aspect of aged trees of the Acacia is by no means pleasing, dead and dying twigs and a diseased condition of the stem being usually present when fifty

years and upwards have been attained. The bark, too, usually presents a rugged, dirty appearance.

Whether as an ornamental flowering tree or for thriving in every part of the Metropolis, the Acacia is one of the most valuable subjects. Home-grown timber is of good quality, being strong, heavy, and durable. It is of a pleasing greenish-yellow colour, with brown veins, hard, compact, and susceptible of a smooth, bright polish. Heart wood is formed when the tree is quite young. The tough wood is peculiarly suitable for making the wooden nails or pegs that are used in ship-building, while for fence-posts it is one of the most lasting of home-grown timbers.

Seeds are produced freely by the Acacia, and should be collected when ripe, and after becoming quite dry stored in an equal quantity of sand till spring. The young plants appear quickly and grow rapidly, requiring thinning out during the second year. Plenty of room will be required, as in a young state the Acacia will frequently shoot up a couple of feet in a season.

In light soils the Acacia will throw up shoots from the base of the stem, and these may be taken advantage of for the raising of young stock.

Grafting is resorted to in the case of the smaller growing kinds, such as *inermis* and some others.

Ailanthus or Tree of Heaven

(*Ailanthus glandulosa*)

THIS tree flourishes in many of our London streets and squares, and next to the Plane and Poplar is perhaps the most commonly cultivated species. Even in the worst smoke-infested parts, as in the

Lambeth Borough Recreation Grounds and many East End districts, the *Ailanthus* flourishes in a way that is quite surprising, and remains green and healthy during prolonged heat and drought.

The long, pinnate, deep-green leaves, like those of the Ash greatly exaggerated, and often 2 feet in length, render the *Ailanthus* one of the most striking, distinct, and ornamental of trees, while for town planting it has no rival, as dust, foul air, or drought seem to have but little effect upon the handsome foliage, which is retained long after that of many other trees has become scorched by heat and drought. Further, it thrives on the poorest of soil, even amongst that which is largely composed of stones, bricks, and refuse builder's materials, and on the other hand will attain to stately dimensions in the heavy and plastic London clay, having a robust constitution and leathery texture which appear quite indifferent to vicissitudes of soil and climate.

Some of the largest specimens are in Bloomsbury Square, one of the best being 70 feet high, with a well-rounded bole that girths 6 feet at a yard from the ground. Other fine trees may be seen in Lincoln's Inn Fields and in the grounds of the Temple and in the public gardens at Poplar.

Growing within a stone's throw of the Royal Mint are half a dozen trees of the *Ailanthus* which average 50 feet in height, with massive stems from 5 to 6 feet in circumference at a yard from the ground. It is well known that the chemical impurities given off at the gold-refining works at the Mint are amongst the most deadly to tree and shrub life of any in the Metropolis. That the *Ailanthus* is even better suited than the Plane for the most smoky parts of London

is quite evident from the way the tree succeeds in many parts of the East End, and in the confined and dirty precincts of the Church of St. Magnus the Martyr it has quite ousted the Plane from the field. In the City, as at Finsbury Circus and other parts, the Ailanthus grows with the greatest freedom.

The Ailanthus is readily distinguished from any other tree, especially when leafless, by the stout, thick growths and comparative absence of branchlets, as well as by the dark-grey colour of the comparatively smooth bark. Few trees possess such elegant foliage and graceful habit as the Ailanthus, which with its towering growth would seem to justify its popular name 'Tree of Heaven.'

The small, greenish-white flowers are not very conspicuous, but when followed by innumerable keys somewhat similar to those of an Ash, though smaller and of a bright reddish-brown colour, the effect is distinct and decidedly ornamental. When cut back annually, as is done in Regent's Park, the Ailanthus shoots freely and produces leaves of enormous proportions, which impart to the plant a decidedly tropical appearance. During a long experience of London trees we have never known the Ailanthus to suffer from disease or insect attacks.

Complaints have been made that the Ailanthus is a shy rooter, and in consequence is apt to be blown over during stormy weather. This is, however, only the case when root-offshoots are planted directly after being removed from the stool, and is rarely so when by nursery management the young trees have produced bushy, fibrous roots.

For town planting the Ailanthus is peculiarly suited, but the qualities that will above all others

recommend it to the planter are its perfect health and freshness under the most trying conditions of both soil and climate, as also immunity from disease and insect attacks. The timber of home-grown trees resembles that of the Ash, but, owing to more rapid growth, the annual rings are much wider apart. It is hard, heavy, and takes a smooth, glossy polish. For fencing posts it has been used with good results, while for tree-nails it has, perhaps, no equal. Additional interest is owing to the leaves of the Ailanthus being the food of the silk-producing insect both on the Continent and in Algeria. An experiment was made to introduce the Ailanthus silkworm, which feeds on the leaves of this tree, into England, but the scheme had no better success than that of James I with the Mulberry.

When the seeds are obtainable the Ailanthus may readily be propagated in that way, but the quickest and usual method is from root-cuttings.

Alder

(*Alnus glutinosa*)

THOUGH not generally planted in London as an ornamental tree, yet single specimens of the Alder may be found of fair proportions in most of the public parks and gardens. It is, however, a distinctly valuable tree, whether viewed from a purely landscape effect or from a commercial standpoint.

It delights in moist situations, and for that reason is most commonly found growing by the lake or pond side and in large numbers along the banks of the Thames, particularly in the upper reaches. In places

where few other trees could survive the Alder grows vigorously, and in damp, low-lying ground produces valuable timber. Under favourable conditions the Alder will attain to a height of 50 feet, with a trunk fully 2 feet in diameter, and some specimens in the south-east district of London have even exceeded these dimensions. The Alder is by no means a long-lived tree, and in old specimens the top branches are often dead or dying.

A. glutinosa laciniata and the variety *imperialis* are highly ornamental trees of medium growth, with beautifully divided leaves and valuable as smoke-resisters. For planting by the water margin they are particularly useful.

The Hoary Alder (*A. incana*) and the Heart-leaved Alder (*A. cordifolia*) are good town trees, examples of which may be seen in the private grounds by the lake-side in Regent's Park, as also in the central parks and on Clapham Common.

From a commercial point of view the Alder is valuable, the timber, which permanently retains a flesh-coloured tint, being largely used in the making of clog soles and in turnery for household articles generally.

Unlike most other timbers there is no heart wood in that of the Alder, and though lasting but a short time when exposed to the weather it is extremely durable under water, and for that reason has been used for piling and as temporary water pipes. For pattern boards and rake and broom handles the wood is also extensively employed, owing to its lightness and the readiness with which it may be worked.

Seeds are freely produced, and young trees are readily raised in quantity. The ripe catkins may be collected in October and November, according to when

the scales are about to open, and as the seed is small must be carefully dealt with. They should be stored in a dry room and turned from time to time, sowing usually taking place during dry weather in March, the seeds being very lightly covered with fine soil. The seedlings grow rapidly, and are ready for planting out during the third year.

Almond

(*Amygdalus communis amara*)

TO Londoners this small-growing tree is perhaps better known than most others on account of the conspicuous flowers which are produced in such abundance during the early spring season. Whether by a suburban roadside or in the heart of the crowded city the Almond is equally at home, and may safely be described as the loveliest and most welcome of early spring-flowering trees. The Almond is so commonly planted and has attained to such large dimensions in most of the parks, open spaces, and private gardens, that recording particular specimens will be quite unnecessary, it being sufficient to say that the growth of the tree all over London points out that it is one of the best subjects for withstanding the deleterious effects of a town atmosphere. The flowers, which vary a good deal in depth of colouring, are comparatively small for the family, pale pink, and produced before the leaves, usually about the end of March or beginning of April. The Almond requires a rich, loamy soil and is propagated from seed, which ripens freely in the London area, or by grafting.

It attains to a height of 30 feet in some of the parks

and gardens, with a clean stem that is often 15 inches in diameter, and being of rather upright growth is suitable for planting in confined spaces, where taller growing trees would be out of place. The amber-coloured timber with irregular longitudinal markings of a lighter shade is one of the most distinct and beautiful of any that is grown in this country.

Good seed is freely produced by the Almond, and when deprived of the outer fleshy covering by keeping in moist sand for a year the 'stones' may be planted in light, rich earth or placed singly in pots. In two years they should be transplanted in lines, and when four or five years old, when they are usually 5 or 6 feet high, they may be placed in the permanent position.

Arbutus or Strawberry Tree

(*Arbutus Unedo*)

THOUGH only a few specimens of the Strawberry Tree are to be found in the Metropolis, yet for planting in the more open and airy districts it is to be recommended. By far the finest Arbutus in London is that in Waterlow Park, the bushy, thickly foliated head having a diameter of fully 30 feet. Near the ground-level it divides into five large stems, each about a foot in diameter, while the foliage is of the healthiest description, quite equaling in that respect the trees we have seen in its native wilds at Killarney.

Near Hanover Gate, in Regent's Park, there is growing an old and weather-beaten tree that in all probability dates from the laying-out of the grounds a century ago. Both flowers and fruit are freely pro-

duced and, owing to the bright colour of the latter and general resemblance to the cultivated strawberry, they are much sought after by passers-by, who in order to obtain specimens have broken the branches and otherwise sadly injured the tree. In the grounds of Fulham Palace is growing a large specimen that looks quite as fresh and healthy as any in the open country, while by the Victoria side of the central parks it is also to be seen.

In Springfield Park there is a well-grown example of the *Arbutus*, as also at Greenwich and in the central parks, where several other less common species and varieties are cultivated. The thick, leathery, deep-green leaves are well adapted for withstanding smoke and fumes, and being smooth of surface are readily cleansed by every shower of rain. As early as 1749 two trees of the *Arbutus* were cultivated by John Tradescant in his garden at Chelsea along with our native *Rhamnus catharticus*, which latter was 20 feet high and nearly a foot in diameter of stem.

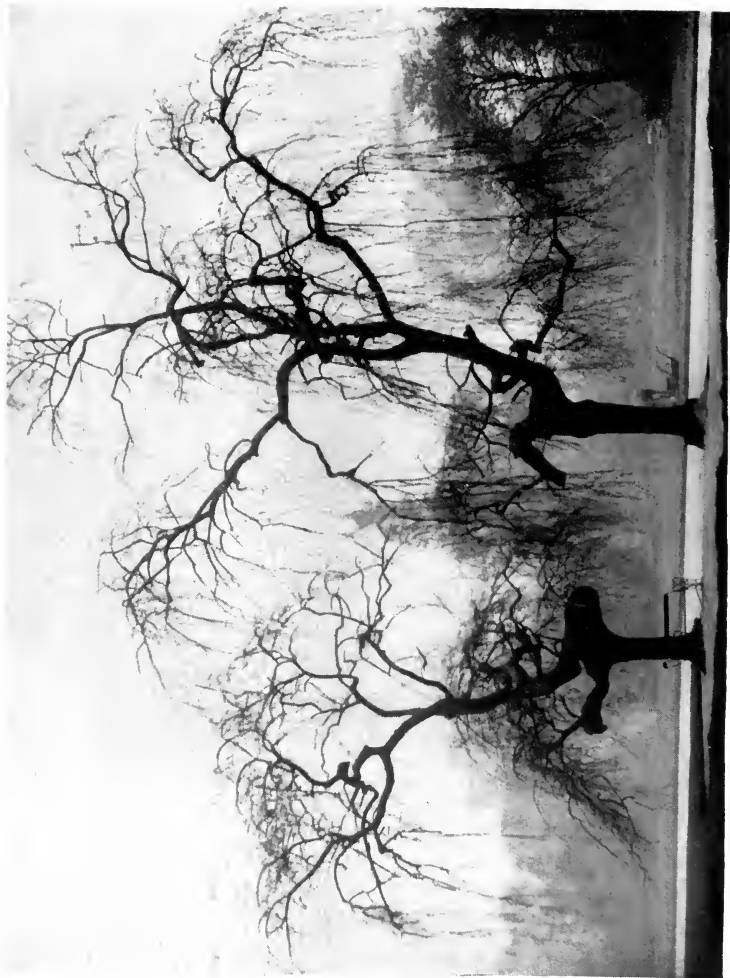
Near Parson's Green a Mr. Ranch reared the largest *Arbutus* trees ever grown in England, several of which were 50 feet high, and was also a successful cultivator of variegated Hollies. The same gentleman planted the Elm trees in Birdcage Walk, St. James's Park, the plants of which were reared in his nursery at Parson's Green.

A. Andrachne does well in the central parks, one in particular which has suffered severely from storms being still a goodly specimen on which the beautiful cinnamon-tinted bark is a prominent feature.

The Strawberry Tree is included on account of its ornamental appearance both in flower and fruit, and also because in not too confined situations it succeeds



Arbutus in Battersea Park



Weeping Ash in Royal Botanic Gardens

well in London. The timber, which is often up to 18 inches in diameter, is valuable for making fancy household articles.

Propagation by seed is recommended, though grafting is sometimes resorted to by nurserymen. Young plants grow slowly, though they root freely and produce nice bushy specimens.

Ash

(*Fraxinus excelsior*)

THOUGH a valuable town tree the Ash is not largely planted in London, and when seen usually occupies the more open and airy parts, being rarely met with in narrow and confined streets or where chemical and other impurities are present in the air. This may be accounted for by the fact that the Ash is not regarded as one of our most ornamental trees, while when compared with others the foliage is late in appearing and early to fall, and, moreover, it has been wrongly represented as unsuitable for town culture. That this is a mistake will, however, be admitted by everyone who has seen the giant specimen in Cavendish Square, which is in perfect health and has attained to a height of fully 70 feet, with a well-rounded bole that girths 9 feet 2 inches, while the far-spreading branches cover a space 90 feet in diameter. As far as we know this is the largest Ash tree in central London, though many in the flower garden at Regent's Park and on the banks of the Regent's Canal nearly approach it in size.

There are also many healthy, well-developed Ash trees throughout the Metropolis, such as in the central

parcs and gardens, where the age and size to which they have attained testify to their suitability for both urban and suburban planting. Specimens 90 feet high with trunks 3 to 4 feet in diameter may be seen in Hyde Park, while in the Hampstead district they attain to a large size and great age.

As an ornamental tree of imposing effect, and for the sake of contrast and variety, the Ash is justly recognised, the pinnate leaves being of a soft, light-green colour in early summer, while the big dark-coloured buds are strangely conspicuous during the winter season.

The Ash when unfavourably situated is apt to become stag-headed and the prey of the goat moth; indeed, rarely is an unhealthy tree of this kind felled that the timber is not tenanted by the caterpillar of this formidable insect.

The *Weeping Ash* (*F. excelsior pendula*) thrives well in London, where it has been extensively planted from an early date, as the many fine old specimens bear testimony. For town planting it is preferable to the parent tree, and is rarely found in an unhealthy condition, even in the most confined positions and where constantly subjected to foul air, dust, and heat. There are large specimens of the Weeping Ash at Kensington, Lambeth, and Bloomsbury, and over the East End generally. One of particular interest is growing near Liverpool Street Station, which is in a remarkably healthy condition considering the confined space it occupies, being surrounded on all sides by tall buildings and in one of the smokiest of the London areas.

There are several good specimens of the Weeping Ash in Finsbury Circus, where they appear to thrive

remarkably well and are carefully tended. Some of these cover a spread of 24 feet in diameter. There are also several good Weeping Ash trees in the Royal Botanic Gardens, the stem of one of the largest being 9 feet in circumference at a yard from the ground.

Few of the old churchyards are without a specimen of the Weeping Ash ; indeed, in London this tree would appear to take the place of the Yew in the country graveyards. As an arbour tree it has no equal, the branches at first spreading horizontally but gradually drooping gracefully towards the ground, and when planted singly with plenty of space for development it forms a neat and interesting object.

The Weeping Ash from its peculiar manner of growth is much used for covering or rather forming arbours, and when supported the branches can be made to extend horizontally to a great distance. One in the grounds of the Zoological Society has been trained along supports for a distance of 90 feet.

The *Walnut-leaved Ash* (*F. excelsior juglandifolia*) is a capital town tree, and may be seen in several of the parks and gardens. There is a line of large trees of this kind by the waterworks on Primrose Hill, the average height of which is 50 feet and with stems up to 6 feet in circumference. It is of strong constitution and rapid growth, and succeeds well on quite a variety of soils, including stiffish clay.

The *Manna* or *Flowering Ash* (*F. Ornus*) succeeds well in the less smoky parts of London, where it is considered one of the most ornamental of hardy trees. Being of small and compact growth, for it rarely exceeds 50 feet in height, the Flowering Ash is valuable for planting in positions where larger-

growing trees would be out of place. The foliage is not unlike that of the common Ash, while the conspicuous panicles of light, feathery, white, petaliferous flowers render this tree one of the most distinct and beautiful for ornamental purposes. They are sweet-scented and borne in great profusion at the end of May. For light, gravelly loam it is a choice subject, but thrives best and is of most vigorous growth where the soil is moderately moist.

There are good specimens of the Flowering Ash in the central parks, in the grounds of the Royal Botanic Society, and in Greenwich Park. Those in the Botanic Society's gardens are of almost unusual size, one of the largest being 55 feet high, with a branch spread of 42 feet and a stem girth of 7 feet 8 inches at a yard from the ground. They are in perfect health and flowers are produced freely. Though not to be recommended for the more crowded parts of London, the Manna Ash is well suited for cultivation in the suburban and more open grounds.

The timber of the common Ash is valuable, and particularly so since the war, the demand for aeroplane making having well-nigh exhausted our best home supplies. In the suburban parts of the Metropolis very good Ash timber has been produced, which was readily disposed of at quite remunerative prices. The valuable qualities of the timber of the Ash consist in its great toughness and elasticity.

The Ash is readily propagated from seed, and the varieties, including the Weeping and Manna or Flowering, by grafting and budding on plants of the same species. About the beginning of November is the usual time for collecting the winged seeds or bunches of 'keys,' though if left on the tree quantities will



Manna Ash at St. John's Lodge



Beech at Grove House, Regent's Park

remain till the following spring. The seeds should be carefully dried, mixed with sand, and stored in an airy, dry loft, sowing taking place about the first week in April, though in some nurseries the seeds are not sown for twelve months after being collected.

Bay Tree

(*Laurus nobilis*)

MANY persons are under the impression that the Sweet Bay Tree is peculiarly suited for smoky localities, the idea being fostered by the large pot and tub specimens that are to be seen at many of the hotels and other public buildings throughout the Metropolis. Although the Bay has few equals as a standard pot or tub specimen, the foliage being neat and sweetly scented and the general appearance highly decorative, yet that it has distinct advantages in the way of doing battle with an impure atmosphere is not borne out by facts. It may and does succeed for a time, and, being a general favourite, is replaced when showing signs of distress, thus giving the casual observer the impression that it has special advantages for using in close, confined, and smoky parts of our towns and cities. Where expense of renewal is a matter of little moment, and a decidedly ornamental specimen shrub is required, by all means plant the Sweet Bay. Its cultural requirements are simple, but the soil in which it is growing as a pot or tub plant must be kept uniformly damp. It is, comparatively speaking, an expensive shrub. In suburban districts good examples of the Bay Tree may be seen, as at Waterlow Park and Golder's Green.

Beech

(*Fagus sylvatica*)

JUDGING from the existing specimens of the Beech that are to be found in the centre of London, there can be little doubt that a century and more ago this tree succeeded better in the Metropolis than is the case with more recently planted specimens. Beech trees of giant proportions, some of which are 90 feet high and with a stem diameter of fully 4 feet, are still to be found, though many of these are gradually dying out, probably owing to the increase of chemical impurities that are now present in the atmosphere as compared with a century ago. At Grove House and Hanover Lodge, both in Regent's Park, are by far the finest Beech trees that are to be found in central London, though, unfortunately, of late years some of the largest specimens have been killed by chemical and other fumes that are given off from the electric shafts and chimneys of the surrounding district. Farther out, in the comparatively pure air of Golder's Green Park, there are many magnificent specimens of the Beech, but those in Regent's Park are the finest in central London.

There is a noble specimen growing on the lawn of Grove House which was, in all probability, planted previous to the laying-out of the park, a hundred and twenty years ago. This well-developed, healthy tree is 80 feet in height, the branches which sweep the greensward covering a space of 75 feet in diameter, while the majestic stem girths $10\frac{1}{2}$ feet at a yard from ground-level. Another Beech in the same grounds growing on the sloping bank of the Regent's Canal has a ponderous trunk and far-spreading head of foliage.

Both trees are in good health, this largely owing to the care and attention that have been bestowed on them by the tenant of these well-arranged and nicely planted grounds. At Hanover Lodge the Beech has attained to a large size, the trees having been planted just over a century ago, when the canal was made.

The Beech in London suffers greatly from insect and fungus attacks, this owing, no doubt, to its generally enfeebled health, caused by the unfavourable atmospheric surroundings. The Beech Coccus (*Cryptococcus fagi*) and several species of Stereum attack the trees, and these if not attended to will quickly affect the health of even the strongest growing specimens. Several large trees growing along the banks of the Regent's Canal and in other parts of London have been killed of late years owing to persistent attacks of both these pests. The Beech is a tree of noble growth, and is greatly admired for its stately crown and wealth of the softest and greenest of foliage in early spring, which changes with the season to a much darker tint, and finally dies off a beautiful russety-brown.

The Purple Beech (*F. sylvatica purpurea*) would appear to thrive equally well with the species, as the beautiful trees at Lambeth Palace, Waterlow, Greenwich and other parks afford examples ; while the giant specimens of the Fern-leaved Beech (*F. sylvatica asplenifolia*) in the grounds at Lambeth Palace and other parts of London also point out that this desirable variety is suitable for planting in the chemically impure atmosphere of our towns and cities.

For economic planting the Beech is a valuable tree, particularly when growing on a calcareous for-

mation. For general use it produces one of our most valuable timbers, which enters largely into chair-making, framing for furniture, as also for rifle stocks, saddle trees for heavy harness, wheel felloes, wedges, wooden bowls, and toys. For hedge purposes where shelter is required nothing equals the Beech.

The Beech is usually propagated from seeds, which may be collected as they fall from the trees during October and November, and stored amongst dry sand till wanted for sowing in spring. About 3700 seeds or 'mast' go to the pound weight. Soil of a light, friable nature should be chosen for the seed-bed, and thin sowing is recommended. The Purple or Copper-coloured Beech, the Cut-leaved and other varieties, are usually grafted on a stock of the common tree.

Birch

(*Betula alba*)

THOUGH unsuitable for cultivation in narrow and confined streets, yet the Birch succeeds in a fairly satisfactory way when planted in the more open and airy parts of the Metropolis. Growing in the grounds of Fulham Palace, as also at Chelsea, the Birch is thriving well, and several trees may be seen by the lake-side in Finsbury Park, with the typical silvery bark and the healthiest of foliage. By the bandstand in Hyde Park there is a healthy group of Birch trees.

In Springfield Park it looks healthy and happy, as also in Lincoln's Inn Fields and throughout the central parks generally. Other good specimens are growing by the North gate in Regent's Park, at Hampstead,

and in several of the East End gardens, particularly Stepney churchyard, though in the latter this tree wears a different aspect from what it does under less trying conditions of site and atmosphere. Nowhere, however, does the Birch thrive so well as in Golder's Green Park, where many specimens have quite as healthy an appearance as those in the open country. Where the soil is light or inclined to gravel, and the position exposed and open, the Birch is most at home, and these are the conditions under which it succeeds best in London.

For ornamental planting the Birch is one of our most valuable trees, the silvery-white bark, slender form, and comparative smallness of its leaves rendering it quite distinct from every other species. Some of the varieties, particularly the Weeping (*B. alba pendula*), have attained to a fair size, and look healthy enough in the more open of the parks and gardens.

The Paper Birch (*Broussonetia papyrifera*) has thriven well in several of the London parks and in the Chelsea Botanic Gardens, the rate of growth in special instances being ahead of that of the common Birch. In Greenwich Park the growth on gravelly soil, as also in the North of London on heavy loam, has been rapid; but older trees in the central parks point out from their size and healthy condition that the Paper Birch is to be recommended for planting in the more open parts of the Metropolis. The doubly-serrated, ovate leaves are hairy beneath, the flowers of a dull greenish-white, and the fruit, which ripens in October, is of a distinct shade of brown. For ornamental purposes the Paper Birch is to be recommended, the white bark offering a striking contrast to the dark-green leaves, while it is easy of cultivation, and being

of rapid growth produces a quicker effect than the common species.

Rarely does the Birch attain to a timber size in London, though in some of the suburban districts numbers of the tree have been disposed of for the value of the wood. It is used for a variety of purposes, such as cheap furniture, for turnery purposes generally, and largely in the making of clog soles. The maker of brooms uses large quantities of Birch branches or 'spray,' as they are usually termed.

The Birch is cultivated from seed, which should be gathered before falling from the tree, and sown immediately it is collected, the power of germination not being retained after the first year. The covering over the seeds should be very light, and when the soil is rough no covering at all, simply sowing on the surface and firming down with the back of a spade. In the case of the varieties they are propagated by grafting.

Buckeye

(*Pavia macrostachya*)

THIS is very distinct, and possesses features which are shared by no other hardy tree or shrub in cultivation. Rarely exceeding 16 feet in height, and with a spread of often as much as 20 feet, this shrub forms a perfect hemisphere of foliage, which, when tipped with the pretty fragrant flowers, renders it one of the most effective and handsome of hardy trees. The foliage is large, and resembles that of the common Horse Chestnut, while the pure-white flowers, with their long projecting stamens and red-tipped anthers, are pretty and imposing when at their best in July.



Birch at Belair, Dulwich



Catalpa in Manchester Square

It succeeds well in rich, dampish loam, and as a shrub for standing alone in any conspicuous position or in smoky situations it has, indeed, few equals.

Catalpa or Indian Bean

(*Catalpa bignonioides*)

THIS is one of the best trees for planting in smoky localities, while for ornamental effect it has few equals, the large, bronzy leaves and spikes of white and yellow flowers, which are tinted with violet and purple, rendering it one of the most distinct of North American trees.

There are many fine specimens of the Catalpa in London, where it grows from 30 to 50 feet in height and seems to suffer little from smoke, dust, and heat. It grows with vigour in many crowded centres, as in the Middle Temple Gardens, by the Houses of Parliament, in Manchester Square, and at Chiswick and Camden Town.

Perhaps the largest, certainly the most remarkable, Catalpa in London is that known as Bacon's Catalpa, near the centre of Gray's Inn Gardens.

On the opposite side of the gardens is a seedling from Bacon's tree which has far surpassed the parent both in size and beauty of appearance. This noble specimen has a branch spread of 60 feet in diameter. From the main trunk, which is about 2 feet across, three great limbs have been sent out, and altogether the tree is in a healthy, thriving condition.

By Marylebone Road, almost opposite the house in which Charles Dickens lived, there is a splendid example of the Catalpa which is of large size,

bushy and well furnished, and in perfect health. The stem at 3 feet and 5 feet from the ground measures 7 feet 7 inches and 5 feet 2 inches in circumference, while the branch spread is 47 feet in diameter. At the Houses of Parliament there is a row of these trees, six in number, which are in a healthy, promising condition and have been carefully attended to in the matter of pruning and stem-repairing where necessary. Though of low growth, about 30 feet, the spread of branches is considerable, and although planted at a uniform distance of 36 feet apart the branch tips almost meet. Manchester Square can boast of one of the finest Catalpas in central London, the trunk being 7 feet 9 inches in girth at a yard up, and 7 feet 7 inches at 5 feet, while the far-spreading branches cover a space 20 yards in diameter. Though the stem is somewhat diseased and wisely supported, yet the tree is in good health and produces flowers freely, specimens of which have been sent for many years to Queen Alexandra. In the grounds of the Baptist College, Regent's Park, are two Catalpas of comparatively large size and evidently of about the same age. The largest girths 5 feet 5 inches at a yard up and has been carefully surrounded by brickwork in order that the soil which was added when the lawn was levelled might not prove injurious. They are of the usual flat-headed, wide-spreading description that is so characteristic of this tree. A Catalpa in the grounds at Fulham Palace has a branch spread of 48 feet, the stem girthing 5 feet 9 inches at a yard up.

Probably the largest Catalpa tree in the City is that growing in the garden at Finsbury Circus. It is fully 30 feet in height, with a clean well-built stem that girths 4 feet 8 inches at a yard from the ground.

Most Catalpa trees are of low stature, with short, heavily branched stems, but the one in question differs in having a straight, clean trunk that rises to a height of 20 feet.

The original Gray's Inn Catalpa, which is said to have been planted by Bacon, is usually regarded as the largest and oldest tree of its kind in London, and by some writers has been described as the finest specimen in this country. Though there is no wish to pull this historic tree from its proud position, yet recent research as to the history of the Catalpa and numerous measurements of existing specimens that have been taken by way of comparison suggest that the Gray's Inn tree is neither the largest nor the oldest in London. That Bacon when appointed Master of the Walks at Gray's Inn in 1597 planted this Catalpa is also open to doubt, the introduction of the tree not taking place till 1726, or fully a century and a quarter later. There are two Catalpas of about equal size growing in the gardens at Gray's Inn, to one of which is attached a tablet with the following inscription: 'Catalpa tree said to have been planted by Francis Bacon, when Master of the Walks, *Anno Domini* 1598.' Owing to its recumbent mode of growth it is difficult to give exact measurements of this tree. The main stem, which is 18 inches in diameter, rests on the ground and is partly buried in the soil for about 9 feet in length, after which an upward position is taken, the girth at this point being 5 feet. As near as can be ascertained the trunk girths 7 feet at ground-level. The branches extend in a somewhat horizontal direction, and being of considerable length and weighty are supported by a number of stout props, one of the branches which is buried in the soil being probably rooted. The

total height of the tree is about 28 feet and the branch spread 45 feet. The other Catalpa is growing on the opposite side of the garden, and is said to be a seedling from Bacon's tree. The branch spread of this specimen extends to 60 feet, while the stem at ground level and at 3 feet girths 6 feet 9 inches and 5 feet 10 inches respectively. It is about 40 feet high and in splendid health, but like the parent tree the heavy branches, four in number, take a somewhat recumbent and horizontal style of growth and are propped for support. Both trees are growing on a mound, or more probably the soil has at some time been banked up around the leaning stems.

By way of comparison with the above the following measurements of other Catalpa trees in the London area are interesting :

Holland House. The largest Catalpa girths 12 feet 1 inch at 2 feet, and 8 feet 10 inches at 5 feet from the ground ; another is 7 feet 2 inches at 3 feet, the branch spread 51 feet.

Manchester Square. Catalpa girths 7 feet 7 inches at 3 feet, the spread of branches extending to 54 feet.

Highbury Hill. Catalpa 7 feet 1 inch in girth at 3 feet ; branch spread, 42 feet.

Fulham Palace. Catalpa 5 feet 9 inches at 3 feet ; branch spread, 48 feet.

Dulwich Picture Gallery. Height, 40 feet ; branch spread, 60 feet ; girth of stem at 3 feet and 5 feet, 10 feet 6 inches and 9 feet 5 inches.

From the above it will be seen that the Holland House Catalpa is fully twice as big, and those at Manchester Square and Highbury Hill nearly half as large again, as the Gray's Inn tree. Now, as to the date of planting the Gray's Inn tree. References

to the history and introduction of the Catalpa point out that the tree was first described by Catesby in 1731 and again by the same botanist in his 'Trees of North America' in 1767. The Catalpa is described and figured in the *Botanical Magazine*, 1808, where it says, 'the plant has been long an inhabitant of our gardens, being introduced by the same botanist (Catesby) about the year 1728. It bears the smoke of large towns better than most trees; the largest specimen we have ever seen grows in the garden belonging to the Society of Gray's Inn.' There is no reference to the Catalpa by any of the various writers on trees—Gerard, Parkinson, Johnson, or Evelyn—all of whose works were published after Bacon's death, and it is hardly likely that so remarkable a tree could have escaped the notice of all these botanists, especially at a time when particular interest was being taken in the introduction of new plants. Miller, in his 'Dictionary of Gardening,' 1737, says the Catalpa was brought from the Bahama Islands by Mr. Catesby a few years since. It has been suggested that Raleigh, who visited Gray's Inn during Bacon's time, may have brought seed of the Catalpa from Virginia, but such a proposition is hardly tenable in face of the fact that the tree was only discovered a century later by the banks of the Mississippi.

It will be evident from the above measurements that the so-called Bacon's Catalpa is not the largest tree of its kind in this country, and as size denotes age, neither can it be considered as the oldest nor to have been planted by Bacon.

The *Golden Catalpa* (*C. bignonioides aurea*) is a capital town tree and retains its distinctive feature throughout the season. There are good examples

of it in the central and other parks, as also in Portman Square and other parts of London. For ornamental planting it is one of the choicest subjects, the neat, compact outline and decided golden tint of the ample foliage rendering it distinct from every other medium-sized tree.

Catalpa Kæmpferi also thrives well in London, one of the largest and oldest being in the Chelsea Physic Garden. This tree has a branch spread of 36 feet, the stem being 15 inches in diameter.

Regarding the value of home-grown timber of the *Catalpa*, we are able to speak with confidence, having used the wood for various purposes, both in and out of doors, for the past thirty years. Fence posts of this age show no sign of decay, while for railway ties the timber of the *Catalpa* will far outlive that of the oak. The timber is of average weight, works well under the tools of the carpenter, and the home-grown wood possesses distinct and beautiful graining.

As a town tree of ornamental appearance the *Catalpa* is valuable, but not to any appreciable extent for the quantity of timber it produces.

The *Catalpa* is propagated from layers or foreign seed. Being somewhat tender in a young state, seedling plants require protection until placed in their permanent positions.

Cedar of Lebanon

(*Cedrus Libani*)

JUDGING from the size and age to which the Lebanon Cedar has attained in London, the cultivation of this tree a century and more ago was

evidently more successfully carried out than is the case to-day. This was, no doubt, owing to the purer atmosphere of the Metropolis at that time. Gradually, though slowly, the Lebanon Cedar is being ousted from the more crowded parts of the Metropolis, as the world-famed specimens at Chelsea, Fulham, and Lambeth bear testimony. Age may have something to do with the dying condition of these trees, but when it is remembered that equally old specimens in this country, say at Holwood Park, twelve miles from London, are in a healthy condition, the probabilities are that atmospheric impurities have much to do with the present condition of the City trees. Further corroboration attaches to the fact that young trees of the Lebanon Cedar do not now succeed in a satisfactory way in the London area, though further out, as at Kew and Richmond, their growth is more reliable, though not what could be desired. The date of introduction of the Lebanon Cedar is uncertain, yet it is known that the tree in Bretby Park, Derbyshire, was planted in 1676, and those in Chelsea were growing in 1684, when John Evelyn was 'surprised to see young trees flourishing at Chelsea without protection.' Being in a decayed state, two of these were cut down in 1771, and the last of the four original specimens was felled in 1904. Miller in 1757 says of these trees: 'The four trees which as I have been credibly informed were planted there in the year 1683, and at that time were not above 3 feet high; two of which trees are at this time upwards of eleven feet and a half in girth at two feet above ground and thereby afford a goodly shade in the hottest season of the year.' There is, however, another claimant to be the oldest Cedar in London,

for in the history of Enfield it is stated that the oldest Cedar in England is undoubtedly that still flourishing in the Palace garden of Enfield, which was planted by Dr. Uvedale between 1662 and 1670.

There are still many old and remarkable specimens of the Lebanon Cedar to be found on the outskirts of London, such as two at Mill Hill, planted by Peter Collinson, with immense stems which girth 20 feet and 16 feet 4 inches respectively at a yard from the ground. The larger tree, which is growing on the lawn near the public road, was Collinson's favourite, and near it his house stood. Unfortunately, the beauty of this tree has been considerably marred by the breaking away of a large branch during a storm in 1916. In the grounds of Fulham Palace there is a Lebanon Cedar of large size which is in a fairly healthy condition when the atmospheric conditions of Chelsea are taken into account.

But everywhere in the London area the Cedar of Lebanon shows signs of distress, and the fact that the tree is now rarely planted unless in the outer suburban districts, and there only in a very limited number, shows that the present generation of planters have become alive to the fact that for the Metropolis as a whole this tree cannot be recommended.

Putting aside the value of the Lebanon Cedar for ornamental purposes, its economic value is not very great, though the production of a very large quantity of useful timber must be recognised. The timber grown in London is of good quality, and being of great width is suitable for many important purposes. The utility of the wood has been principally in a decorative way, for which its beautiful pale pink colour and sweet fragrance render it suitable. Speci-



Lebanon Cedar, Clissold Park



Horse Chestnut

mens of the timber of one of the original Chelsea trees, which I had the opportunity of examining in 1918, were of excellent quality.

In a private park on the South side of London there once were several goodly specimens of the Lebanon Cedar. But an evil day came when the grounds were handed over to the surveyor and builder, both of whom said that the Cedars were very precious, and would make numbers of cedar pencils, and so realise a large amount of money. The trees were felled and sawn into logs, and a merchant asked to view them with the idea of purchase. The dealer came, but he did not buy. On the contrary, he said : ' Foolish man, you have destroyed these beautiful trees, and now they are of no use except to burn. These are not the Cedar trees of which pencils are made, and the wood is good for nothing else. These trees were worth a hundred guineas each for park embellishment as they stood, and now they are hardly worth carting away.'

On his arrival at Cadogan Pier, at the River Pageant in 1919, His Majesty the King was presented by Mr. Reginald Blunt, the Chelsea historian, with a small box made from the last of the four famous Cedar trees planted in 1683 in the Apothecaries' Physic Garden, Chelsea. The box contained two Chelsea tokens, with a view of the Royal Hospital, and one of the rare bronze passes issued by order of King George II in 1737, for permission to use the King's private road at Chelsea. This road is the King's Road of to-day.

The cones of this Cedar, which are borne in plenty on old trees, should be collected in early spring, and the seeds removed and sown in April. The

young plants quickly appear, and being of strong growth soon form stout, bushy specimens. Self-sown seedlings have occasionally been found near old trees.

Cherry

(*Cerasus Avium*)

EXPERIMENTS that have been conducted by the Metropolitan Public Gardens Association point out that 'amongst flowering trees most adaptable for our streets and climate, several members of the Cherry family are to be recommended.'

The *Gean* or *Wild Cherry* (*C. Avium*) thrives well in various parts of London, where it flowers and fruits freely. A favourite, medium-sized tree, and one that lends itself readily to cultivation. As an ornamental tree it is valuable either during summer, when laden with its pure-white flowers, or again in autumn, when myriads of the jet-black, shining fruit hang in clusters from its branches. The double-flowering form has attained to quite tree size in Battersea Park.

The *Bird Cherry* (*C. Padus*) has long been known as a valuable small-growing tree for planting in smoky localities, and specimens in various parts of London prove how well suited it is for doing battle with the impurities of the atmosphere. As an ornamental tree, with its axillary racemes of pure-white flowers and the neatest of doubly serrated leaves, the Bird Cherry or Hagberry is one of the most cherished of spring-flowering subjects. There are many places in the Metropolis where the Bird Cherry may be seen in a flourishing condition, as in the central parks, by the Tower of

London, and in Poplar and East End gardens. It rarely exceeds 20 feet in height, though specimens in the Hampstead district have even exceeded that figure, with a proportionately thick stem and spread of branches.

Amongst the Cherries *C. Watereri* and *C. J. H. Veitch* are recommended for planting in either urban or suburban districts. They are both charming bushes or low-growing trees that are specially recommended for planting even in smoky and dusty parts of the Metropolis. They succeed all over London.

The *Perfumed Cherry* (*C. Mahaleb*) is a distinct and highly ornamental tree that attains to a height of 25 feet, and is valuable as growing freely in smoky localities and in the poorest of soils, if only they be dry. It flowers freely, and the wood when of fair size is greatly appreciated by the cabinet-maker on account of its agreeable fragrance and warm-brown colour.

Principally as an ornamental tree of small, neat growth, and as succeeding well in smoky localities, the Cherry is valued. The timber when procurable is used for fancy cabinet-making and for turnery purposes generally. Cherry-wood pipes and cigarette-holders are in demand on account of the pleasant flavour they impart to the tobacco.

The various species of Cherry are readily propagated by means of seed, which is, in the case of the Wild and Bird, obtainable in fair quantity. Several of the varieties are grafted. The fruit when ripe should be mixed with sand, and frequently turned until required for sowing during the following spring.

Chestnut, Horse

(*Æsculus Hippocastanum*)

THOUGH suited for planting in the more open and airy parts of the Metropolis, yet in very smoky and confined districts the Horse Chestnut cannot be said to succeed in a satisfactory way. There is a well-developed and much admired avenue of the Horse Chestnut in Regent's Park, and who has not heard of the famous avenue of these trees in Bushy Park, which during the flowering period is one of the sights of London? The Horse Chestnut was introduced into this country in the reign of Queen Elizabeth by Tradescant, who cultivated it along with many other plants in his famous garden at Lambeth. As an ornamental tree it has few equals, the exquisite symmetry and beauty of both foliage and flower rendering it peculiarly suitable for landscape effect. It is a tree of quick growth, but as it soon reaches maturity it as soon decays, and the annual growth is remarkable in being produced in about three weeks after the buds have opened; and as soon as the flowers have fallen, the buds for the following year begin to swell.

The timber, though of little value for constructive purposes, is, on account of its lightness, largely used in the making of packing-cases, for moulders' patterns, castings, turnery purposes, and for the making of brush backs and cutting boards. The seeds are collected for feeding deer.

The Horse Chestnut is raised from seed, while the pink-flowering variety is grafted on stocks of the species. About mid-October the chestnuts are ripe,

and should be collected and sown at once, as they quickly lose their germinative power. They want plenty of room, at least four inches being allowed between seeds when planted in the nursery border.

Chestnut, Sweet or Spanish

(*Castanea vesca*)

THERE are many fine specimens of the Sweet Chestnut in the London parks, notably in Kensington Gardens and on the light, gravelly soil at Greenwich and other outlying districts; but though it succeeds well in the less smoky parts it is not to be recommended for planting in very confined streets and where heat and chemical impurities of the atmosphere are the order of the day. Certainly in some of the City squares and churchyards the Sweet Chestnut is found struggling bravely with the adverse conditions with which it is surrounded, but in such cases it rarely develops into what could be described as either a large or a handsome tree.

In the park at Greenwich it has attained to huge dimensions, some of the many specimens which were planted two centuries ago being noble trees with trunks that vary from 12 feet to over 20 feet in circumference. There are some large, well-developed trees in the central parks, better still at Brondesbury and Hampstead, where the soil and atmospheric conditions are more conducive to rapid and healthy growth. The Spanish Chestnut is an introduced tree, and though the exact date of introduction is not known, there is every probability that it was brought to this country by the Romans. When it

has arrived at full maturity, the Spanish Chestnut is a noble tree, the beautifully serrated, dark-green leaves and abundance of creamy-white flowers imparting a pleasing aspect to the tree that is quite its own. It succeeds best in a deep sandy or gravelly soil, and will not thrive when planted on clay or that of a stiff, tenacious character like that which is found in most parts of the London area.

For timber purposes the Sweet Chestnut is a valuable tree, but, unlike the Oak, does not increase in value with age, and is about in its prime at from 70 to 100 years old. After that period the timber usually becomes affected by 'shake,' and afterwards gradually decreases in value for general constructive purposes. The wood is light brown in colour, clean and close-grained, the medullary rays being scarcely visible. It is susceptible of a nice polish and easily worked. At one period of the history of our country Chestnut timber stood in high esteem, and was in many cases preferred to that of the Oak, being largely employed in the roofing and flooring of buildings, and that under certain conditions Chestnut timber can survive that of the Oak is well known.

The Sweet Chestnut is propagated from seed, either home grown or obtained from Continental sources, and treated in a manner similar to that recommended for the Oak. Home-grown seed is rarely good, though in many parts of Kent and in Greenwich Park quantities of healthy seedlings have been raised from chestnuts collected from these sources. At Holwood Park, twelve miles from London, large quantities of excellent chestnuts are annually collected.

Cornelian Cherry

(*Cornus Mas*)

THOUGH by no means common in our parks and gardens, the Cornelian Cherry is well suited for town planting, and has attained to fully 20 feet in height, with a proportionate branch spread, in several parts of the Metropolis. Both in Hyde and Regent's Parks it has done well, and by the lake-side in the latter place specimens 25 feet in height may be seen. It is one of the earliest and most beautiful of flowering trees, the bright yellow clusters of bloom being produced by the end of February, and long before the leaves make an appearance. For ornamental planting, either singly or in clumps, the Cornelian Cherry is one of the most distinct and choice for both urban and suburban districts.

It is readily propagated from seed or cuttings, and thrives best in a good yellow loamy soil. The timber, though rarely over a foot in diameter, is remarkable for its density and beauty of graining, while it takes a silky polish and approaches that of boxwood in general texture. It is of a desirable yellow colour, hard, heavy, and close-grained. For shuttles and small wares generally it is much prized.

Cotoneaster frigida

IT may seem out of place to include a Cotoneaster amongst a list of trees. But such is not the case, as in some of the Royal parks *Cotoneaster frigida* has attained to a height of 30 feet, and is there-

fore well ahead of the 20-foot range which differentiates a shrub and a tree. In Kensington Gardens, as also in the flower garden at Regent's Park, on the stiff London clay, this Cotoneaster is fully 25 feet high, the stem over 12 inches in diameter, and the branch spread 30 feet. There are many good examples in Battersea Park.

This is rapid growth for a tree-shrub that was introduced only so late as 1824. From an ornamental point of view it is well known, and owing to its succeeding in smoky localities has been largely planted in almost every part of London. The large bunches of brick-coloured fruit are plentifully produced, but owing to their being favourites of thrushes and black-birds are not allowed to remain long on the tree, especially during severe winters.

A valuable trait of this Cotoneaster is that it will succeed in stiff, unkindly soil, indeed is one of the best for planting on the London clay. Some experiments carried out lately with the timber would seem to prove that such will be valuable, it being dense, close-grained, and difficult to split, and for these reasons it has been used in the making of golf clubs.

C. nummularia also thrives well in London, where, in Kensington Gardens and at Chelsea, trees 30 feet in height are to be seen. It appears well suited for withstanding smoke and dust.

Seeds are produced in quantity, and seedlings are readily raised. The seeds should be collected as soon as ripe and stored for the winter in sand. Early collecting is necessary, as birds are particularly fond of the berries.



Cotoneaster frigida in Regent's Park



Deciduous Cypress and Acacia at Dulwich

Deciduous Cypress

(*Taxodium distichum*)

TWO of the largest trees of this kind in central London are growing near the Broad Walk entrance to the grounds of the Zoological Society, though others of equal height are to be seen at Chelsea, Battersea, and in the central parks. The Zoo trees, which are in a healthy condition, are about 55 feet high, the largest stem girth at a yard up being 5 feet 9 inches.

But in many other districts, both urban and suburban, the Deciduous Cypress grows freely, and shows by the size to which it has attained that this coniferous tree is peculiarly suitable for town planting. It is a beautiful tree of fairly rapid growth, the distinct pea-green tint of the foliage, which dies off a bright reddish-brown in autumn, being much admired. By the pond or lake side it does best, a plentiful supply of moisture at the roots being necessary for the development of the tree. Although a thorough water-loving tree, the Deciduous Cypress by no means refuses to grow in rather dry situations, under which condition, however, the rate of growth is much slower.

In the outskirts of London, as at Syon House, this Cypress has attained to a height of over 100 feet, the stem girth being 15 feet. Curious root protuberances or 'knees' are formed by this tree when growing in damp situations, and in the specimen by the lake at Syon House these growths, which present a remarkably singular appearance, are of all sizes, from mere knobs to 30 inches in height.

In most of the parks and several of the private and other gardens in London, the Deciduous Cypress shows by its growth and size that it is suitable for town planting.

One at Dulwich College, 80 feet high, 8 feet girth of stem at 3 feet, produced a number of cones in 1918.

Eastern Arborvitæ

(*Thuja orientalis*)

AMONGST coniferous trees we have found this species more generally represented in London than any other, and though in the more smoky parts it can hardly be classed as ornamental, yet in less confined sites, as at St. John's Wood and in most of the public parks, trees of 30 feet in height and upwards are to be seen. By the Commercial Road and in other parts of the East End, as also at Chelsea and Fulham, fair sized specimens are growing, which point out that amongst coniferous trees this species is probably the most reliable for contending with the smoke and dust of the Metropolis. There are several well-developed specimens in the grounds at St. Katharine's, Regent's Park, though the largest we have measured is growing by Acacia Road, St. John's Wood. This tree is 35 feet high, the stem girthing 5 feet at a yard up, and the branch spread 36 feet. This, the Chinese Arborvitæ which rarely exceeds 30 feet in height, is usually of columnar habit, and readily distinguished from the American Arborvitæ by its dense, tufted habit and brighter green foliage. As before said, it is one of the most reliable conifers for planting in London, and the fact that many speci-

mens there have attained to the height the tree reaches in its native habitat proves that it is well suited for town planting in this country.

Elder

(*Sambucus nigra*)

NO other native shrub or small-growing tree has been turned to so great a variety of useful purposes as the Common Elder. For planting in smoky localities, particularly the environs of chemical works, and in the most exposed upland or seaside situations, it has no equal ; while for using beneath the shade and drip of taller growing species, even evergreens, its value is justly recognised. The leaves, bark, and fruit have at all times been utilised, while the wood, which is white, close-grained, and very compact, is valuable in many ways, and when of fair size, say six inches in diameter, is much sought after for printing blocks and the inlaying of furniture. It can readily be tinted in imitation of box or ebony, the former of which it much resembles in texture and colour. In the making of skewers, knife handles, and small ornamental boxes the timber has been turned to good account, while the soft pith with which the young shoots are filled, from its extreme lightness, is used in making the balls that are employed in electrical experiments. Though pith is abundant in young wood, it entirely disappears from that of the older growth.

In spite of its many and varied uses, the Elder is held in no great esteem by country folk, its disagreeable, fœtid smell and usurping nature having been

responsible for its extermination from many of our hedges and woodlands ; for should a seedling of the Elder get into a thorn hedge, it will quickly kill out the adjoining plants. For all that, when laden with its big panicles of cream-coloured flowers at mid-summer, or its abundantly produced purplish-black berries in autumn, the Elder must ever rank as a distinctly ornamental tree. The Golden and Cut-leaved Elders are particularly worthy of notice, and the Scarlet-fruited (*S. racemosa*) when laden with its brilliant scarlet fruit presents a splendid appearance.

As a nurse tree the Elder has few equals, and in places where the strong west wind blows for several months, and where the gorse and juniper look flattened by the long-continued blasts, the Elder will grow and thrive. On the wind-swept islands along the northern Scottish coast the Elder is one of the most valuable shrubs ; while on the dreary sandy wastes of Lancashire, where the wind blows with hurricane force and wrecks are by no means uncommon, the Elder stands nobly out, and growing in pure sand sends out its stoutest branches into the very teeth of the gale.

No shrub grows so quickly when it is young or so slowly when it is old as the Elder. It makes a good plant for filling up gaps in live fences that pass under trees, and for boundary fences where little else would grow, preserving as it does the continuity of the hedge right up to the trunks of large trees. At Newcastle-on-Tyne the Elder is largely grown on account of its thriving in the neighbourhood of chemical works, the tree being almost impervious to the action of fumes that are generally so injurious to vegetation.

Elm

(*Ulmus campestris*)

BOTH the English and Scotch Elms as well as several varieties thrive in London, and though, for reasons which will be explained hereafter, they cannot be generally recommended, are yet valuable additions to such trees as have been found suitable for withstanding smoke and dust. The Elm has several drawbacks for town planting, which in recent years in particular have to some extent restricted its use, especially in our public parks and thickly populated districts. It is a dangerous tree, owing to the brittleness of the timber, heavy branches snapping across during stormy weather, or even in the still summer day, without the slightest warning, and often to the danger of those who may be present beneath their shade. Several such cases have occurred of late, and in two instances at least with fatal results. The reasons for this sudden snapping of Elm branches may be disease or injury in the wood, disposition and weight of branch, the extra weight of foliage during the growing season, or the extra brittleness of the timber caused by the flow of sap. In some parks and gardens—the Royal parks in particular—an annual examination of the Elms and other suspected trees is made, and all heavy and diseased branches either wholly removed or cut back to such an extent that their safety is ensured. But even with the most minute and careful examination it by no means follows that accidents will not occur, for the simple reason that it is often impossible to detect flaws and diseases

which are not revealed outside the bark. This is especially the case with the branches of old Elm trees, the diseased centres of which often defy the most careful examination of the practical woodman. Planting Elm avenues was at one time generally adopted, as at Windsor and Hampton Court, but owing to the diseased and dangerous condition of many of the trees they are now almost things of the past.

Probably the largest and oldest Elm trees in London are some of those near the Marble Arch in Hyde Park. These hollow, tottering specimens are of immense size, and have been carefully preserved by attention to the hollow stems and surrounding them with suitable fencing. Though old and diseased, their span of life is by no means exhausted.

At the northern end of the flower-garden in Regent's Park are two of the largest and best developed Elm trees in London. They are of about equal height and branch spread, the larger being 80 feet high, the branches, which sweep the greensward, extending to 84 feet, while the stem girth is 12 feet 1 inch at a yard from the ground.

The *Common, English* or *Small-leaved Elm* (*U. campestris*) was introduced by the Romans, and is readily distinguished from our native Scotch or Wych Elm (*U. montana*) by the much smaller, doubly-serrated, leaves, which are hard to the touch and usually unequal at the base. Another point of distinction is that, in order to make up for the small production of seed, suckers are freely sent up from the roots. The English Elm is of more upright growth than the Scotch, and the branches less weighty, while it is slower to develop in equally poor soils. It is commonly met with in all the London parks, but usually,

when aged, in a diseased condition and freely attacked by both insects and fungi.

Judging from the size to which this tree attained in the past, it is evident by the large specimens at Hyde Park, Lambeth Palace, Bermondsey, and other parts of London, the English Elm is now less suitable for culture in districts where smoke and chemical fumes have increased of late years.

The *Cornish Elm* (*U. campestris cornubiensis*) succeeds well in London, as the numerous large healthy trees that are to be found, especially in the more open parts, demonstrate. For town planting it has several recommendations, such as narrow branch spread and usually neat, well-furnished appearance.

Some of the largest specimens are growing in the Royal parks, many being 80 feet high, with a stem girth at a yard up of 8 feet.

The *Mountain, Scotch, or Wych Elm* (*U. montana*) is a native species that is readily distinguished from the English by the larger and rougher leaves, which are also longer, pointed, and more deeply serrated. Unlike that tree, too, it does not produce root suckers, but bears seed in abundance. The Scotch Elm is of spreading growth, with heavy, diverging limbs, and rarely attains to so great a height or produces so clean a stem as the English tree. For town planting it is a dangerous tree on account of the heavy branches, brittle timber, and liability to disease. There are many so-called varieties of the Elm, a few being constant and worthy of distinction, but many not so. The great difference in form assumed by the leaf of the Elm has induced some authors to suppose that the varieties are numerous, but the intermediate distinctions between any two of the most strongly marked

forms are so many that it is impossible to draw a line of separation.

The *Weeping Elm* (*U. montana pendula*) is a graceful variety that is commonly distributed over the London area, where, like the species, it grows with great freedom. There is a large specimen in the grounds of the Royal Botanic Society in Regent's Park, while in the central parks and in many of the squares and gardens trees of large size are to be seen. Well-developed specimens of the Weeping Elm are also to be found in Lincoln's Inn Fields, at Bloomsbury and Russell Squares, Lambeth, Chelsea, and throughout the East End generally.

The *Huntingdon Elm* (*U. glabra vegeta*) is also to be recommended for smoky localities, and is commonly to be seen throughout metropolitan gardens and parks.

Probably Elm wood is used for a greater number of purposes than that of any other tree, and is especially valuable when immersed in water or kept constantly under ground. It was almost the only wood used for the pipes of the water companies previous to the introduction of iron. Quite recently we had the privilege of examining a number of wooden water-pipes that had been removed from a London street where they had been in use for one hundred and forty years. These trunks were about 6 feet in length, varied from 8 to 18 inches in diameter, and were bored lengthwise with holes that varied from 7 to 10 inches in diameter. The pipes showed not the least indication of decay: indeed, seemed harder, firmer, and of a darker colour than that of fresh-felled timber. It is also consumed in great quantities by the wheelwright and cabinet-maker, but although tolerably

close-grained and working with considerable freedom, it is very liable to warp.

For carts, wheelbarrows, pumps, packing-cases, and as a substitute for ash in the making of agricultural implements Elm wood is largely employed, while for the cheaper class of coffins it is extensively in use.

Guernsey or *Jersey Elm* (*U. stricta Wheatleyi*).—For planting in confined spaces this is, perhaps, the best form of Elm, while its neat habit and foliage are additional recommendations. Advantage has been taken of these traits of character, and the tree has been planted frequently in several parts of the Metropolis. For withstanding smoke and a close, heated atmosphere it is particularly valuable.

The *East Anglian* or *Lock Elm* (*U. minor*) is well represented in parts of the East End, where in some of the squares and gardens it is fairly common. Like the former, it is a capital town tree, with a closely and finely branching habit and particularly small leaves that cast only a moderate shade. We have met with this distinct tree in several parts of London, where, even in very smoky parts, it succeeds in a very satisfactory way.

There are several methods of propagating the various kinds of Elms, the English being produced from root suckers, while the Mountain or Scotch bear seed in abundance. The seeds are generally ripe and should be collected from the end of May till the middle of June, according to the season. Sweeping the seeds from the ground or roadway beneath the trees is the simplest way of procuring the requisite quantity, or they may be gathered by hand from the trees, or when they are nearly ripe by spreading mats on the ground and

causing the trees to be gently shaken. But, however collected, the seeds should be sown immediately, as they will not keep long. The seed bed may be composed of light sandy soil, and the covering to the seeds should never exceed a quarter of an inch in depth. Seedlings come away freely, and are ready for transplanting in lines the following season. In the case of the English Elm a stock of young plants is usually got up by detaching and transplanting the root-suckers which are formed in abundance, while the Weeping varieties are grafted.

Fig

(*Ficus Carica*)

A NUMBER of old and large Fig trees are to be seen in London, including the historic specimens at Lambeth Palace, the far-reaching tree at High Street, Poplar, those in St. Paul's Churchyard, and the soot-begrimed standard tree at St. Giles-in-the-Fields. Even in the densely populated East End, as at Stepney and the Commercial Road, the Fig tree looks healthy and has attained to goodly proportions, which points out how well suited this tree is for town planting. The first Fig trees planted in this country are said to have been brought from Italy in 1548 by Cardinal Pole, and planted by him at Lambeth. When measured, two hundred years afterwards, these trees were 50 feet high, the circumference of the stems being $31\frac{1}{2}$ inches and 25 inches respectively. In 1813, being much injured by frost, they were cut down, but sent out shoots freely. Loudon mentions that when he visited the grounds in 1836, owing to the



Elm in Flower Garden, Regent's Park



Glastonbury Thorn, Clissold Park

structural repairs to the palace in 1829 both trees had been rooted out, the only remains being some young plants in the kitchen garden, which had been raised from cuttings of the original trees.

There are now five trees growing by the buttresses of the library, the largest of which when measured in 1917 was 30 feet in height, the stem girth 33 inches. One of these was, unfortunately, blown partially over a short time since, and the stem split in consequence.

In Stepney Churchyard, now converted into a park, by the archway at Stepney Station, by Jamaica Street—all in the East End of London—the Fig flourishes. In the Rectory garden at All Saints', Poplar, a healthy Fig tree, some 20 feet in height, may be seen from the street. By the lake-side in St. James's Park are many healthy, far-spreading Fig trees, while as a wall covering—as by the National Gallery and many other public buildings—the deep-green, stout leaves of the Fig have been found to be the most useful and lasting of foliage for smoky situations. Probably the tallest of London Fig trees is that in Whitefriars, by Powell's glass works, which has attained to a height of fully 40 feet, the spread of branches being proportionate.

Hawthorn

(*Crataegus Oxyacantha*)

THERE are few parts of London, even in the most smoke-infested districts, where the Common Hawthorn and varieties are not to be found in a more or less satisfactory condition. By the Commercial Road

and other East End streets, as also in the heart of the City and at Chelsea and Lambeth, both the Common Hawthorn and Paul's Crimson variety, as also the Cockspur and Tansy-leaved, succeed well and gladden the visitor with their wealth of flowers and bright-green foliage. In most of the squares there are good examples of the Thorn. As an ornamental tree of medium growth the Thorn, Hawthorn, or Whitethorn, for it is known by all these names, is widely appreciated, and there are few grounds of any pretensions where specimens are not to be found. The flowers are produced in May, and this circumstance accounts for its popular name of 'May' or 'May blossom.' Though of slow growth, the tree lives to a great age, and when favourably situated comparatively large stems are produced. By the banks of the Regent's Canal are many large specimens, though the palm of victory as to height and bulk of stem rests with a gigantic specimen that is growing near the Blackheath entrance to Greenwich Park, in what is known as the Ranger's Grounds. It is 50 feet high, and the stem girths fully 7 feet at a yard from ground level. Several varieties thrive well in London, one of the most popular being Paul's Crimson. The Glastonbury Thorn also is well represented.

The *Cockspur Thorn* (*C. Crus-galli*) is one of the best Thorns for town planting, and large specimens may be seen in many of the public parks and gardens. There is a noble specimen in the grounds of the Toxophilite Society, Regent's Park, also in the central parks, at Chelsea, and in some of the crowded quarters of the East End, where it flowers and fruits freely.

In the typical tree the leaves are bluntly ovate, of a bright green, and the general contour low and

spreading. There are many forms, all well adapted for planting in London, where in some of the squares and gardens, even in very smoky localities, they thrive and flower freely.

The *Tansy-leaved Thorn* (*C. tanacetifolia*) is also well suited for planting in London, where in the central parks and in some of the squares large specimens are to be seen. It is a desirable, late-flowering species, which from the hoary character of its deeply indented leaves is readily recognisable from every other. Compared with the Common Hawthorn, it is a stiffer growing tree and the individual blooms larger, pure white and freely produced. There are good examples of this Thorn in Battersea Park, where most of the species and varieties have received special attention.

The timber of the Thorn, which is cream coloured, is tough, close, and wavy-grained, hard and durable. It makes excellent firewood, the lasting properties surpassing those of most other native timbers. For quick hedges the Thorn has no equal.

The *Oriental Thorn* (*C. orientalis*) occurs here and there in the London parks, the deeply cut, downy leaves, corymbs of white flowers in June, and large orange-red fruit making it a distinctly ornamental small-growing tree.

The various varieties are propagated by budding or grafting, the species by seed, which is produced in abundance. When collected, the haws should be mixed with an equal bulk of sand or light soil in order to rot the pulp and separate it from the stones. Seed-sowing may take place in the early spring, and after the young plants have been twice lifted and replanted are at the age of three or four years fit for hedging or planting in their permanent positions.

Hazel

(*Corylus Avellana*)

THOUGH usually seen as a hedge or coppice shrub, yet the Hazel, when allowed room for development, as when used as a standard, will attain to a height of fully 20 feet. As an ornamental subject the Common Hazel is rarely planted, and it is the Purple-leaved variety (*C. Avellana atro-purpurea*) to which reference is directed as being not only suitable for cultivation anywhere in London, but having priority of right over almost every other shrub with coloured foliage on account of its robust growth and brightest of purple leafage. For shrubbery planting it is invaluable, offering as it does such a striking contrast to the generally cultivated kinds. The leaves are larger than those of the species, and of a rich purplish or deep copper tint, and being of good substance remain in perfect condition till late in the autumn. In order to induce robust shoots and large leaves, it has been found advisable to cut over the plant, say, every third year. In Regent's Park, by the northern shrubberies, there are quite a number of the Purple-leaved Hazel, which on account of their rich colour attract general attention. Even in the East End of London, both the species and the valuable variety succeed well, and after a hot summer betray but little evidence of the fierce struggle they must constantly engage in against a heated and impure atmosphere.

The *Constantinople Hazel* (*C. Colurna*), which is of much taller growth than our native tree, is also found thriving well in the London area, particularly in

suburban districts, as at Kew and Syon. It is of quite tree growth, with rough bark, horizontally arranged branches, and long catkins which appear before the leaves. The peculiar fringed calyx, which almost encloses the nut, is characteristic of this species. When laden with catkins it is a beautiful and interesting tree.

Apart from the production of fruit, for which the Hazel is well known, the long pliant shoots have a special value in the making of crates, hurdles, hoops, and other commodities where flexibility and toughness are points of consideration. For garden purposes also the Hazel is one of our most valuable small-growing trees, the shoots and branches being largely used in the making of pea and bean stakes, as also tying material.

Layering is the quickest way of getting up a stock of the Hazel, though the nuts, when sown in a light, free soil, come away rapidly and soon produce plants that are suitable for underplanting. The variety *atropurpurea* is readily raised from suckers, and is as free in growth as the parent plant.

Holly

(*Ilex Aquifolium*)

WE have always fought shy of recommending the Holly for planting in the more smoky parts of London, though in the suburbs it succeeds in quite a satisfactory manner, soil, of course, receiving the necessary attention. But even in the most populous and smoky parts of the Metropolis the Holly is occasionally found in a thriving condition, as in the Poplar

Borough Recreation Ground, by the East India Dock Road, and at Fulham and Lambeth ; while in Russell Square there is a specimen of almost giant proportions. By the dozen may the Holly be counted in the Poplar Recreation Ground, two specimens by the main entrance gate being 14 feet high, with well-furnished stems of closely packed branches which extend to 12 feet in diameter and look the picture of health. It is remarkable how many varieties of the Holly succeed in the East End gardens, and how bright the foliage appears. A conspicuous evergreen by the very cramped garden of a house in Stainsby Road, off the Commercial Road East, is a 30 feet high specimen of the Common Holly, the stem of which is fully 15 inches in diameter. In the central parks the Holly, though wanting in the freshness of foliage of country-grown specimens, may be said to succeed, and, though dirty of appearance, sometimes reaches tree height. Near the Marble Arch in Hyde Park the Minorca Holly has succeeded well and attained to goodly proportions.

But probably in no other part of London can so many Hollies of large size and so healthy condition be seen as in Battersea Park, where specimens up to 30 feet in height are common. In Lincoln's Inn Fields there are also many grand specimen Hollies. Unless in the cleaner and more open parts of London the Holly is, however, not to be recommended for general planting.

For hedging the Holly is one of our most useful trees, while the timber is of considerable utility in the making of mathematical instruments and sells readily. Birdlime is made from the bark.

The Holly can be propagated in several ways—

by seed, from cuttings, or by grafting or budding. For the Common Holly, seed-sowing is to be recommended, the berries being mixed with an equal bulk of light soil or sand in order to rot the pulp and separate it from the seed. Turning the heap of berries should be attended to regularly, so as to avoid heating and aid the rotting process. Usually the seeds are not sown for eighteen months after being collected. The Holly is of slow growth in a young state and may be allowed to stand for four years in the nursery lines after transplanting from the seed bed.

Honey Locust

(*Gleditschia triacanthos*)

EQUALLY valuable with the False Acacia for town planting is the Honey Locust, a tree that unfortunately is little known outside the public nursery and botanic garden. It is a tree of large growth, London grown specimens being over 60 feet in height, and for city planting has this valuable trait, that the leaves are retained in a perfectly fresh and green condition till late in the autumn. Even in poor soil and heated, dusty parts of the East End this desirable tree is one of the most valuable for planting. Near St. Mary's Church, in Greenwich Park, there is a noble tree of this kind which, although not very favourably situated, has attained to over 60 feet in height, with a stem which girths $5\frac{1}{2}$ feet at a yard up. It also grows freely and has attained to a fair size in Waterlow and Battersea Parks.

In the central parks this tree has done well, while both at Hampstead and St. John's Wood, as also

Chelsea and in the East End, very good specimens are to be found growing. As an ornamental tree of medium size the Honey Locust is well worthy of the attention of town planters, the pinnate and bipinnate foliage being particularly elegant, while the flowers, though individually small, are borne in such quantities of fascicled racemes as to attract notice. The stem and branches are armed with formidable prickles, though there is a form in which the spines are wanting. The best specimens we have seen are growing in rather light soil on a gravelly bottom. It is usually propagated from root cuttings.

Hop Hornbeam

(*Ostrya carpinifolia*)

SOUTH Europe, 1724. A much-branched, rough-headed tree, with cordate-ovate, acuminate leaves. Both this and *O. virginica*, by reason of the resemblance between their female catkins and those of the Hop, and between their leaves and those of the Hornbeam, have acquired the very descriptive name of Hop Hornbeam. This is a large-growing tree, specimens in various parts of the country ranging in height from 50 to 60 feet. There are good specimens in several of the London parks and private gardens.

Hornbeam

(*Carpinus Betulus*)

FOR the more confined and smoky parts of London the Common Hornbeam is not to be recommended, though many specimens, as in Regent's

and the central parks, have reached the height of 50 feet and attained an age of fully one hundred years. The numerous trees of this kind on the banks of the Regent's Canal, which were planted on the slopes when this waterway was cut out over a century ago, have attained to a fair size, some of the stems being fully 6 feet in girth, while the healthy, plentifully produced leaves would lead one to believe that this tree is quite at home in the northern district of the Metropolis. The Hornbeam is often confused with the Beech, but not only is it of smaller growth and of more trim appearance, but the leaves are rougher, more deeply serrated, and with the venations more pronounced, while the bark is dark and smooth and the stem usually deeply fluted. The hop-like catkins of the female flowers are quite unlike those of the Beech and render recognition an easy matter.

Apart from the value of the tree in the formation of hedges on exposed high-lying ground and where the soil is of a stiff nature, the timber of the Hornbeam is of considerable utility. It is remarkably close-grained and even of texture, and for making skittles and shoemakers' lasts and saw-mill rollers and cogs for gearing it has perhaps no equal.

Seeds are freely produced, in England at least, and should be collected and sown in October. As, however, the seeds usually remain dormant for twelve months after becoming ripe, it is advisable to mix them with sand and not sow till the following April. The seedlings are quite proof against frost.

Judas Tree

(*Cercis Siliquastrum*)

THAT the comparatively rare and strikingly distinct Judas Tree is suitable for culture in every part of the Metropolis is proved by the size and age to which specimens have attained in the grounds at Fulham Palace, in Battersea and Waterlow Parks, Golder's Green, and several parts of the City and East End. By far the largest tree that I have seen is growing in the grounds attached to the Picture Gallery, Dulwich ; it is 40 feet high, the stem girthing 7 feet 11 inches at a yard from the ground. This magnificent specimen has a tall, clean trunk, well preserved and in perfect health. Another fine tree is at Charlton House, Blackheath, the residence of Sir Spencer Maryon-Wilson ; the tree has a branch spread of 30 feet, the trunk girthing 4 feet 9 inches at a yard from the ground-level. Though semi-procumbent—for it was partially blown over many years ago—and the heavy branches bound together, yet this giant specimen of its kind is in perfect health and produces flowers in great abundance. Attaining in favourable conditions to a height of 30 feet, the Judas Tree in old age is often a weirdly picturesque object, the thick, usually crooked branches shooting out in all directions, and somewhat resembling those of the Catalpa and Mulberry, though in other cases it forms a comparatively broad, round, and flattish head ; but its general outline can rarely be said to be either regular or ornamental. Both in shape and colour the leaves are unlike those of any other tree that I can call to mind, being of a peculiar pale



Hop Hornbeam in Battersea Park



Judas Tree at Wimbledon

bluish-green tint above and pea-green beneath, and distinctly heart or kidney shaped. They assume rich scarlet tints in autumn. The purplish-pink flowers appear before the leaves; they are clustered in small bunches on the twigs and branches and even spring from the trunk itself, sometimes downwards to near ground-level. So thickly are the flowers produced that in many instances the branches seem wreathed with the conspicuous pinky buds at the end of March and continue attractive until the tree is in full leafage in May.

Patches of flowers 3 or 4 inches across often appear on the old bare branches and stem, and give the impression of having been nailed in position.

The Judas Tree was cultivated in this country as early as 1596, at which date a good illustration of it is given by Gerard, who, with reference to the popular name, remarks: 'It may be called Judas Tree, for it is thought to be that on which Judas hanged himself and not on the elder as it is vulgarly said.' There is a white-flowered form and one named *carnea*, with beautiful deep-pink flowers. For ornamental effect in spring the Judas Tree ranks as one of the most attractive kinds, owing to the beautiful and unique appearance that it presents when both old and young wood of branch and stem is thickly studded with the purplish-pink flowers before the leaves appear. The Judas Tree likes a rich soil, and, judging from old trees at Holwood, one of Lord Derby's Kentish estates, it thrives well beneath the shade and drip of other trees.

June Berry

(*Amelanchier canadensis*)

CANADA, 1746. Unquestionably this is one of the most beautiful and showy of early-flowering trees. During the month of April the profusion of snow-white flowers with which even young specimens are mantled renders the plant conspicuous for a long way off, while in autumn the golden yellow of the dying-off foliage is quite remarkable. Being perfectly hardy, of free growth, and with no particular desire for certain classes of soils, the June Berry should be widely planted for ornamental effect. In this country it attains to a height of 40 feet, and bears globose crimson fruit. It succeeds well in many of our parks and gardens, even in a heated, smoky atmosphere.

Kentucky Coffee Tree

(*Gymnocladus canadensis*)

CANADA, 1748. When in full leafage this is a distinct and beautiful tree, the foliage hanging in well-rounded masses, and presenting a pretty effect by reason of the loose and tufted appearance of the finely-divided leaves. Leaves often 3 feet long, bipinnate, and composed of numerous bluish-green leaflets. Flowers white, borne in loose spikes at the beginning of summer, and succeeded by flat, somewhat curved, brown pods. It prefers a rich, strong soil or alluvial deposit, and is a good town tree.

Koelreuteria paniculata

FOR planting anywhere in London this small-growing Chinese tree is to be recommended. At Chelsea, in the old Botanic Garden, there are good specimens, and others in the central parks, as also at Finchley, Bermondsey, and in some East End districts. There are many large trees in Victoria Park, and in East Finchley Cemetery we have found it flowering freely.

The Chelsea trees are of full size, the branch spread extending to 30 feet, while the largest stem girths 4 feet 10 inches at a yard from the ground. Though generally of irregular growth, the beautiful pinnate foliage and large panicles of yellowish flowers, which are borne towards the end of summer and stand well above the leaves, render this tree one of particular interest and a valuable one in ornamental gardening, especially when so placed that it towers above the surrounding vegetation. The French employ the *Koelreuteria* extensively and with excellent effect. For a dry, warm soil and that of a chalky description this tree is well suited, and being quite impervious to smoke and soot is to be confidently recommended for town planting. The rich yellow of the decaying foliage and the curious inflated capsules are additional attractions in autumn.

The *Koelreuteria* is readily propagated by cuttings of either root or branch, but the first mentioned is that usually resorted to, as the cuttings grow very freely and soon produce stout, bushy specimens.

Laburnum

BOOTH the English (*L. vulgare*) and Scotch (*L. alpinum*) Laburnums thrive well in every part of London, some of the largest trees being in the most smoky and dusty parts of the City and East End. Almost every square and garden contains its specimens of the Laburnum, and as many of these are of large size and considerable age the inference to be drawn is that for town planting they are most valuable trees. From 25 to 30 feet is the normal height to which the Laburnum attains even when planted under very favourable conditions in the country, and stems more than a foot in diameter are the exception, yet specimens of greater stature and with larger stems are to be found in not a few of the London gardens. One of the best we have come across is in Russell Square, the stem of which is fully 18 inches in diameter, while other equally fine trees are growing in Carlton Gardens and in the central parks. Many specimens in Battersea Park are fully 40 feet in height, while at Golder's Hill unusually fine trees are to be seen. As ornamental trees of small growth both species must rank high, for the long pendulous racemes of bright yellow flowers are, when at their best in May, surpassed in neither quantity nor beauty by those of any other hardy tree. The Scotch Laburnum is of larger growth than the English, but flowers later in the season, and the individual racemes though longer are usually less plentifully produced. It is well to bear in mind that in the production of flowers some forms are far more prolific than others, and in raising seedlings it is advisable to do so from the most ornamental trees.

Laburnum timber is one of the most beautiful and valuable of home-grown woods, being of a rich dark-brown colour, with lighter veining towards the centre. The contrast between the young wood, which is usually bright yellow, and the black and brown of the heart wood is most pronounced. Though rarely obtained of large size, Laburnum timber is of considerable value, being much in demand for fancy turnery and as a substitute for ebony. Bowls made of the wood are recommended on account of their quality being uniform throughout. Pulleys and blocks made of this timber are of almost everlasting wear, while pegs, wedges, and household articles of an ornamental kind are all preferred of Laburnum timber.

Seeds are borne in abundance, and may be sown immediately after being collected, or kept till the following April. The seedlings come away quickly and grow rapidly.

Lime

(*Tilia europæa*)

BEFORE the Plane came into general use for town planting the Lime was the favourite London tree. Now, however, it is rarely planted unless in suburban districts, and the avenues and pleached hedges of a century ago are now things of the past. The Lime is, however, a useful tree for street and park planting, while it transplants readily; indeed, it has a singular advantage over most others in that respect, and bears pruning and pollarding with impunity. Those who only know the Lime as an avenue or street tree, where it is cropped and stunted, can form but

little idea of its luxuriance of growth and beauty of outline when given room for development, as may be seen in some instances in the central parks or in the Bank of England. The Lime has been so freely planted over the Metropolis that specimens are to be met with of fair size in most of the parks and gardens, those in suburban districts taking the lead in both size and healthy appearance, the street-planted being usually much distorted in the way of heavy annual pruning, so that the true character of the tree is quite lost sight of. A century and more ago many avenues of the Lime were planted in and around London, while pleached hedges or screens of the tree were a common sight. As a town tree it is to be recommended, the hardy constitution rendering it proof against smoke and dust, while the fibrous roots cause it to be readily transplanted even when of large size. Then it can bear an inordinate amount of pruning, in fact in this respect it has no equal amongst commonly cultivated trees. The Lime is rarely planted for its economic value, but usually as an ornamental tree in parks, open spaces, and streets, the latter position, however, being now mainly filled by trees that have been found more suitable for withstanding the impurities of a town atmosphere.

Apart from its value as a town tree the timber of the Lime has been turned to good account by the cabinet-maker, turner, carver, and toy-maker. The beautiful carvings executed by Grinling Gibbons for many churches and palaces in England were of Lime wood. It is yellowish-white in colour, soft, close-grained, and cuts clean and easily under the graver's tools, and for this reason, as also its unshaded colour, has been largely used for ornamental

carvings. The sounding-boards of pianos are made with Lime wood, as also shoemakers' lasts and cutting-boards.

The *White* or *Silver-leaved Lime* (*T. alba* or *argentea*) is a much handsomer and more desirable species than the European tree. The silvery under surface of the leaves, which is conspicuous a long way off when ruffled by the wind, and noble growth in every situation where it has been planted combine to render this Lime a most valuable species for ornamental planting, while that it is an excellent town tree the numerous healthy specimens throughout the Metropolis will bear ample testimony. It scores over the Common Lime in that the foliage remains in perfection long after that of the other has fallen from the tree. Though not common, there are handsome specimens of the Silver-leaved Lime in most of the outlying districts, while in the central parks it has been freely planted and is now of goodly size.

The *Fern-leaved Lime* (*T. platyphyllos laciniata*) is a small-growing tree with irregularly cut or lacinate leaves, which are of a greyish-green colour. In Kensington Gardens it is 25 feet in height, the diameter of branch spread equalling the height. It has no decorative charm, and can only be recommended for variety.

The *Small-leaved Lime* (*T. parvifolia*) may be seen in several London gardens, where it is certainly one of the most distinct and desirable of small or medium-sized trees. The large bracts and profusion of flowers, which are at their best long after those of the Common Lime have withered away, as also the small, neat foliage, render it one of the most charming of town trees. It is not common, the best specimens

we have seen being in Kensington Gardens and Hyde Park.

The Lime is usually propagated from layers, this being a much quicker method than by seed-sowing, though the latter is to be generally recommended as producing cleaner and less twiggy plants. The seed is collected about the end of October, and either sown at once or stored till the following spring. Continental seed is usually obtained, that produced in most parts of this country being of poor germinative quality; but, as before said, layering is generally adopted by the nurseryman who has a large demand for the tree.

Liquidambar

(*Liquidambar styraciflua*)

THIS beautiful but uncommon tree is rarely seen in London, though several specimens in the grounds of the Royal Botanic Society in Regent's Park, also at Chelsea and Battersea, prove that it is peculiarly suited for town planting. It is a strikingly beautiful tree owing to the brilliant hue of the decaying foliage, varying as it does from an intense deep red or crimson to the brightest of orange. The leaves are of good substance, of a deep shining green, 6 to 8 inches across when well grown, and deeply divided into five or seven lobes, which are notched on the edges and have a pleasant aromatic odour when crushed. A peculiarity of the tree is the corky ridges on the branches. Both at Syon and Kew the Liquidambar has attained to goodly proportions, as also in the central parks.



Lime Tree in Court at Bank of England



Cucumber Tree

Magnolia

TWO species of Magnolia, the Cucumber Tree (*M. acuminata*) and *M. grandiflora*, thrive well in London, where many specimens 40 feet in height and upwards are to be seen. There are good examples of the Cucumber Tree in the Royal Botanic Gardens at Regent's Park, while as a wall specimen the other may be found in not a few of the town gardens.

The Cucumber Tree is a large and handsome species, up to 50 feet high, and when allowed plenty of room produces a large bushy head. The leaves are 6 inches long, ovate and pointed, and of a refreshing shade of green. Flowers greenish-yellow, sweetly scented, and usually produced in abundance all over the tree, these being succeeded by small roughish fruit not unlike a depauperate cucumber, which usually fall off before becoming ripe. *M. grandiflora* is a well-known and valued evergreen species, with very large glossy leaves that are often fully 6 inches across. It is usually seen as a wall covering, and the slight protection thus afforded is almost a necessity, in so far at least as the development of the flowers is concerned.

Maidenhair Tree

(*Ginkgo biloba*)

ANY tree that will thrive in the impure atmosphere of the Commercial Road or Chelsea can with confidence be recommended for planting in other parts of London.

There are two nice specimens of the *Ginkgo* in the beautifully kept grounds of the Chelsea Physic Garden, and others in St. Paul's Churchyard and at Fulham; while the example that has for years survived in a cramped position by the Commercial Road in the East End, where foul air and dust are the order of the day, points out how well adapted this tree is for doing battle with the impure atmosphere of even the worst parts of the Metropolis.

Another Maidenhair Tree of goodly proportions may be seen in Waterlow Park, near the refreshment kiosk. It is 50 feet in height, the trunk girthing 3 feet 9 inches at a yard up, the branch spread, which is usually confined in young trees, being about 18 feet.

The ample, delicate green leaves, cut up like those of a Maidenhair fern, even late in the season betray but little evidence of the fierce struggle that must constantly go on between vegetation and the usual impurities of a town atmosphere. That the thick, leathery leaves and strong constitution of this tree play an important part in keeping it healthy under such conditions will be admitted.

It delights to grow in free, loamy soil and an open situation, but is extremely slow of development, and twenty-year-old specimens rarely exceed 10 or 12 feet in height. Coniferous trees as a whole fare badly in the smoke and dust of the London garden, but this is one of the exceptions to the rule.

Mulberry

(*Morus nigra*)

MULBERRY gardens were formed both at St. James's Park and Greenwich Park in 1609 by order of James I, but the single remaining tree on each of these sites, though in one case labelled as having been planted at the instigation of that monarch, is evidently of no great antiquity, and, judging by comparison, can hardly be considered as either the largest or oldest of those at present growing within the Metropolitan area. With the exception of the trees at Charlton, those in Clissold and Ruskin Parks, and the grand old specimen in front of Mildmay Conference Hall, it is unlikely that many of the Mulberries which were planted at the command of that monarch are now in existence in London.

By careful comparison of size with that of existing specimens whose ages are known, and taking into consideration the general condition of the tree and the quality of the soil in which it is growing, it is quite possible to arrive at a fairly accurate estimate of the age. Tradition and a label attached point to one of the old shattered trees at Charlton Park, Blackheath, the residence of Sir Spencer Maryon-Wilson, as the first Mulberry brought to England, and certainly when the above points of comparison are taken into account there would appear to be substantial grounds for the statement. The largest tree, which has suffered much from storms, having lost the upper part of the stem in consequence, is still of giant proportions, the trunk girthing 8 feet 7 inches at 3 feet from the ground-level, the greatest height being

20 feet, and the diameter of branch spread 24 feet. Though the trunk is old and shattered, the globose head of foliage is perfectly healthy, and fruit is produced in abundance; and as the tree is reputed to be three centuries old, there is no reason why it should not survive for another hundred years at least. The Mildmay Mulberry, though smaller in girth of stem, is, however, the largest both in height and branch spread, and is in a wonderfully healthy state of preservation, which is, no doubt, largely owing to the position it occupies, as also to soil conditions and immunity from accident or disease, for there is not a dead or dying branch to be seen, while the trunk is perfect in every respect. This tree is 35 feet in height, the stem 6 feet 4 inches in girth a yard above the ground-level, while the diameter of branch spread is probably unique for a Mulberry, being no less than 60 feet. There are good specimens of the Mulberry in Ruskin and Vauxhall Parks, the stem girths being respectively 6 feet 7 inches and 6 feet 5 inches. Two others of still larger size, but difficult to measure owing to their recumbent mode of growth, are growing in Clissold Park and Waterlow Park, the stem girths being approximately 7 feet.

In 1609 James I passed his famous edict for introducing the culture of the silkworm into this country, and, judging from the expenses of his household, not only planted Mulberries largely himself, but supplied trees to others at the low price of two farthings each. It is well known that the rearing of silkworms and spinning of silk was an industry in several parts of London, notably about Spitalfields, around Arbour Square, by the Commercial Road, and at Maida Vale, at all of which places remains of



Mulberry at Mildway Park

Mulberry trees are still to be found growing. Even at the present time lessons on silk-spinning are given in the pretty little Arbour Square Gardens by a retired naval officer to the numerous children who congregate during play hours in this little-known East End retreat. Two healthy specimens of the Mulberry may be seen in these gardens, and several of much larger size were uprooted when a building close at hand was erected. In a builder's yard near by is another giant tree of the same kind. Old gardens in the Maida Vale district contain some large specimens of the Mulberry.

In Dean's Yard, Westminster, in the grounds of No. 36, there is a Mulberry of goodly dimensions, though growing in a rather dark and cramped position. The stem, which is leaning somewhat and supported by an iron post, girths 37 inches at a yard from ground-level, while the branches have a spread of 30 feet in diameter. This tree may be seen from Great Smith Street ; in fact, some of the branches had to be removed in order that the 'bus traffic there should not be interfered with. In the grounds of Chelsea Botanic Garden there are two very fine specimens of the Mulberry.

Some of the largest and healthiest Mulberry trees in the City are those in Finsbury Circus, the stems of which are unusually clean, one of the largest girthing 39 inches at a yard up, the branch spread extending to 27 feet. Three are still remaining, one of the largest having been removed a few years ago.

The Ruskin Park Mulberry tree is 40 feet high, with a stem 6 feet 7 inches in girth at 3 feet.

Vauxhall Park, 30 feet high, 6 feet 5 inches at 2 feet.

Waterlow Park, recumbent, spread 27 feet, stem $2\frac{1}{2}$ feet in diameter.

Clissold Park, recumbent, propped and diseased, stem 2 feet in diameter.

At Charterhouse, in the City, there is quite a number of Mulberry trees, but none remarkable for size. They are evidently the same age, the largest when measured last summer being 25 feet high, with a girth of stem of 3 feet 5 inches at a yard from the ground, and a branch spread 21 feet in diameter. The trees growing in what is known as the Preacher's Court are of about equal height, 22 feet, and were raised from cuttings taken from Milton's Mulberry at Cambridge eighty years ago. In the grounds of the Royal Botanic Society there is a Mulberry tree of goodly proportions that has borne heavy crops of fruit during recent years. It has a wide-spreading head of healthy foliage measuring 36 feet, the trunk being 3 feet 9 inches in circumference. An accident seven years ago greatly marred the appearance of the old Mulberry tree standing in the grounds of the Victoria Park Hospital, one of the few such trees remaining in East London. The tree, according to local tradition, stood at the entrance to the Palace of Bishop Bonner, who was wont to sit under it and plan the holocausts of heretical Protestants. It is 30 feet high and 30 feet in branch spread, while the stem girths 4 feet 8 inches at a yard from the ground. One of the main branches having rotted through at the elbow, broke from the trunk; but with a little attention in the matter of propping and cementing this tree should last for years.

Southwark once had a sapling from the Shakespeare's Mulberry tree at Stratford-on-Avon presented

to the Council. One foggy November night the precious tree was planted in the forecourt of the Town Hall in Wandsworth Road. Unhappily, the small boys used to delight to uproot the baby Mulberry, which now, it is believed, has been planted surreptitiously in a place of safety.

The Mulberry is readily recognised by its entire, deeply dentated, and rough dark-green leaves. In winter, even at a distance, the tree may be recognised by its unusually twiggy branches and dark, dirty bark.

Mulberry timber is of a rich colour, smooth and clean, and with a beautiful grain. When obtainable it is valuable as cabinet wood, and is frequently turned into fancy household articles. It is little apt to crack or warp, and its lasting properties are well known. The fruit of the Mulberry is greatly prized, and sells readily in the London market.

The Mulberry is cultivated from seeds, good supplies of which are produced in this country. Similar treatment to those of the Yew is required, in that, in order to rid the seeds of the outer coating, rotting in sand or light soil is practised. Cuttings also take, and grafting is resorted to. In a young state the plants are slow of growth; indeed, at no period can the Mulberry be counted as of anything approaching to rapid development.

Nettle Tree or Hackberry

(*Celtis occidentalis*)

GOODLY specimens of this rare tree in various parts of London prove that it is adapted for planting in smoky localities. Even in Battersea Park,

which is by no means free from smoke and dust, the Nettle Tree thrives apace, one of the trees being nearly 30 feet in height, with a like spread of branches, the stem girthing 3 feet at a yard from the ground. Other well-grown, healthy specimens are to be found in the central parks, as also in several suburban districts, where its healthy foliage proves that it is well suited for town planting. In general appearance the *Celtis* resembles the Elm, to which family it belongs, but it differs from that tree in producing blackish-purple fruit, each about the size of a pea. The small, greenish flowers on slender stalks are inconspicuous, while the foliage greatly resembles that of the small-leaved Elm, being cordate-ovate in shape and serrated, and on account of this resemblance the *Celtis* is apt to be overlooked when growing in company with other trees.

C. australis, the European Nettle Tree, is well represented in the London area, where several healthy flowering and fruiting specimens are to be found. In East Finchley Cemetery it has attained to a height of 35 feet, the branch spread being nearly as great, while flowers are produced abundantly in early spring, and are succeeded by a plentiful supply of fruit. For planting squares and public walks the European Nettle Tree has been extensively used in both France and Italy, being of neat appearance and well suited for town planting. The leaves of this species are ovate-lanceolate and slightly serrated, those of the Caucasian species being ovate and deeply notched. The fruit of both is sweet and edible, and the timber of the European tree is greatly valued for many purposes on account of its suppleness and non-liability to break when bent.

Oak

(*Quercus Robur*)

THOUGH the British Oak is not to be recommended for general planting in smoky towns, yet several other members of the family succeed in London and have attained to a large size in not a few of the parks and open spaces.

Of the British Oak there are some trees of fair age and proportions, but in several places where two centuries ago trees fit for ship-building were procured in considerable numbers hardly a specimen is now to be found. Regent's Park and St. John's Wood were at one time famous for the number and size of their Oak trees, no less than 976 trees having been reserved for the Navy from the former—then Marylebone Park Fields—in the reign of Charles II. Now only one meagre-sized tree is to be seen. At Cam House there are two remarkable Oak trees, the largest girthing 10 feet at a yard from the ground, both being in perfect health. Gospel Oak, Parliament Oak, and Honor Oak have all disappeared. What is known as the Shakespeare Oak (*Q. Cerris*) on Primrose Hill was planted in 1864 to commemorate the tercentenary of the great writer.

The *Turkey Oak* (*Q. Cerris*), which was brought to this country in 1735, has attained to large proportions in most parts of the Metropolis, and from the age and size of some of these trees it is evident that this Oak is to be reckoned amongst the species that are able to do battle with the impurities of a town atmosphere. Of the Turkey Oak there are many trees 80 feet and upwards in height in the central and other

parks, while at Chelsea, Poplar, and Lambeth it has also grown well and established its reputation for town planting. For the more smoky and confined areas it is not, however, to be recommended, though even in the East End its struggle for existence indicates that its constitution is particularly robust. By far the largest Turkey Oak in London is in Ruskin Park. This is a huge and well-developed specimen, the stem of which girths $12\frac{1}{4}$ feet at a yard high, the far-spreading branches covering a space fully 100 feet in diameter. It is in perfect health.

Hybrid forms between the Turkey and Evergreen Oak would appear to be well suited for town planting, especially in London, where they succeed admirably in almost every position.

The *Fulham Oak* (*Q. Cerris Fulhamensis*) and the *Lucombe Oak* (*Q. Lucombeana*) are both excellent trees for planting in London, where many specimens of 70 feet in height and upwards are to be seen. Except in habit, the Fulham Oak can scarcely be detected from the Lucombe variety, the leaves being identical in shape, form, and texture. Both trees are remarkable for the thick, corky bark and semi-evergreen foliage; the Fulham tree is branching and round-headed, while the Lucombe is conical and spiry-topped. The Lucombe Oak was raised by a Mr. Lucombe, nurseryman, of Exeter, about 1762; and the original of the Fulham tree, which is supposed to be a hybrid between the Turkey Oak and the Cork tree, grew in the Fulham nursery. Both are excellent town trees and have attained to large dimensions in many parts of London. At St. Katharine's, Regent's Park, a specimen of the Fulham Oak is 80 feet high, with a stem girthing $7\frac{1}{2}$ feet. In the grounds at

Fulham Palace there is also a full-sized tree of this variety.

The *Holly-leaved* or *Evergreen Oak* (*Q. Ilex*).— Though only attaining to small dimensions in the heart of London, yet in suburban districts many handsome specimens of the Evergreen Oak are to be found. In the grounds of the Royal Botanic Society and other parts of Regent's Park the Evergreen Oak looks healthy and happy, some of the trees being quite a century old and of large dimensions. The largest and best furnished trees, however, that we have seen are those in the grounds at Fulham Palace, some of which are 60 feet high and with a corresponding spread of branches, the foliage being of the healthiest description. Even in the chemically impure atmosphere of Lambeth fairly good specimens of this tree are to be seen. In Chelsea Physic Garden the Evergreen Oak has thriven well, the largest tree being 40 feet high, with a corresponding spread of branches.

Turner's Evergreen Oak (*Q. Turneri*), which also thrives in London, is supposed to be of hybrid origin between the British and Evergreen Oak.

The *Cork Oak* (*Q. Suber*) can hardly be recommended for planting in London, though the giant specimen which was recently uprooted at Fulham Palace, the existing tree in the Royal Botanic Garden, Regent's Park, and that at Dulwich, show to what a size the Cork Oak attained in some of the most crowded parts of the Metropolis. The Fulham tree was 12 feet 9 inches in circumference of stem. Growing in the Chelsea Physic Garden there is a small but quite healthy tree of the Cork Oak which measures 20 feet in height, the branch spread extending to 15 feet, thus showing that even in the smokiest part of London this inter-

esting tree can survive and attain to large dimensions.

The timber of the British Oak is justly appreciated for its quality and lasting properties. That of the Turkish is also worthy of attention, and long resists exposure to drought and damp. The acorns are valuable as food for deer and pigs.

The Common and Turkey Oaks are propagated from acorns, which are produced plentifully, while some of the varieties are got up by grafting or budding. Usually the acorns are ripe about the beginning of November, when they should be collected, and either sown at once or kept till the following spring. Being apt to lose in germinative capacity, the acorns should be carefully stored in order to prevent heating, which can best be ensured by keeping them in a dry, cool loft, where they should be regularly turned and kept free from damp until wanted for sowing. In the seed beds the acorns should be planted at a distance apart of six inches and buried to a depth of fully two inches. The young plants appear in May, and should be kept clear of weeds, and after the first year transplanted into lines in the nursery border.

Osage Orange or Bowood

(*Maclura aurantiaca*)

IN several London parks and gardens this interesting tree, which was introduced in 1818, thrives well and has attained goodly proportions. In Battersea Park may be seen a healthy, well-grown tree of this kind which has attained to fully 20 feet in height, the stem girthing 22 inches at a yard up.



Cork Oak at Belair, Dulwich



Paulownia imperialis in Regent's Park

A healthy young tree is growing in the flower garden at Regent's Park, where, though the soil is stiff and unkindly, it has developed its greenish-yellow flowers in great abundance.

It is a tree of wide-spreading growth with deciduous leafage, and armed with spines along the branches. The bright, shining green leaves are ovate, pointed, and 3 inches long, the rather inconspicuous flowers being green tinged with yellow and succeeded by small yellow fruit not unlike that of the Seville orange.

Pagoda Tree

(*Sophora japonica*)

CHINA and Japan, 1763. A large deciduous tree, with elegant pinnate foliage and clusters of greenish-white flowers produced in September. Leaves dark-green, and composed of about eleven leaflets. *S. japonica pendula* is one of the most constant weeping trees, and valuable for planting in certain well-chosen spots on the lawn or in the park, and specially valuable for resisting the impurities of a town atmosphere. There are good specimens in the central and other parks.

Paulownia imperialis

SO few trees of the Paulownia have been planted in London that its suitability or otherwise for cultivation cannot be definitely stated, though some specimens in Regent's Park have attained to a large size and flower freely. The largest is growing on a mound in the flower garden and has a well-developed stem that girths 5 feet 10 inches at a yard from

the ground, the branches having a spread of fully 36 feet. In the grounds of the Royal Botanic Society there is also a tree of about similar age to that in Regent's Park, but it is not of so large a size nor in so healthy a condition. The leaves of the Paulownia, which are ovate-cordate in shape and often 10 inches long, are covered with a greyish woolly tomentum, while the sweetly scented Foxglove-like flowers are of a purplish-violet colour and distinctly and freely spotted with darker markings.

Though perfectly hardy in other respects, it is unfortunate that the season at which the Paulownia flowers is so early that unless the conditions are unusually favourable the flower buds get injured by frost. For its ample foliage, however, even should flowers never be produced, the Paulownia is well worthy of cultivation, and when a tree is cut over, shoots 6 feet long and 2 inches in diameter are frequently perfected in a season.

In Continental towns the Paulownia is widely grown, and along the Paris boulevards it is recognised as one of the most valuable and ornamental of hardy trees.

At Wimbledon and Roehampton, as also at Putney and Hampstead, there are healthy specimens of the Paulownia, but we are not aware that it is to be found in the more densely populated or smoky parts of London.

The timber of the Paulownia is the lightest of home-grown woods (one cubic foot of which weighs 22 lb., as against 65 lb. of the oak), and a valuable trait is that it neither warps, splits, nor shrinks. It is yellowish-white in colour, and so compact that the graining is hardly visible. For veneering purposes it

is largely used by the Japanese, also in wardrobe making on account of its resistance to damp. All the older trees appear to have been grafted; but young trees are usually reared in our public nurseries from foreign seed, for much of the home-saved seed is not fertile.

Persimmon or Virginian Date Plum

(*Diospyros virginiana*)

JUDGING by the healthy appearance and size to which it has attained in Kensington Gardens and other parts of London, this is a valuable species for town planting. The Kensington specimen referred to is 30 feet in height, with a branch spread of 27 feet, the stem being fully 10 inches in diameter. It is usually seen as a shrub or small-growing tree with coriaceous leaves and greenish-yellow flowers, while the fruit, which is edible, is yellow in colour and about an inch in diameter. It is fairly common in collections of trees throughout London, but the specimen in Kensington Gardens is the largest we have seen. To be recommended for sheltered situations and where the soil is of good quality.

Pine

(*Pinus sylvestris*)

FEW of the Pine family succeed well in London, though in suburban districts and on high-lying grounds, such as at Hampstead and Golder's Green, fair specimens of the Scotch and Austrian (*P. austriaca*) Pines may be seen. In the more

confined and smoky parts neither tree succeeds in a satisfactory way, though representatives of both species, usually in a more or less unhealthy condition, and attacked by the pine beetle and wood wasp, are to be met with in several of the parks and open spaces. Some of the trees in Golder's Green Park are about 70 feet high, with well-formed trunks 6 feet and upwards in girth and healthy heads of foliage, while Constable's trees and others over Hampstead Heath are also in a fairly satisfactory condition. Constable's clump numbers 36 trees, the largest of which has a stem girth of 9 feet 10 inches at a yard from ground-level and an approximate height of 65 feet. Bostall Wood, which is just outside our boundary, contains, however, by far the largest number of Scotch firs in the London district, and may best be described as a dense pine plantation. Stray specimens of the Austrian, Corsican, and Weymouth Pines are met with over the Metropolis, but in only a few situations can they be said to be either ornamental or in a healthy condition.

Plane

(*Platanus orientalis acerifolia*)

THE Maple-leaved or London Plane stands first in the list of select trees for planting in towns, where it grows vigorously and is well adapted for withstanding smoke and other impurities of the atmosphere. In London, at least, it succeeds better than any other tree, and a visit to almost any of the parks, public squares, or the Thames Embankment will substantiate the statement. The fact of its succeeding so well has,

perhaps, its unfortunate side in the almost monotonous frequency with which it has been planted of late years, to the exclusion of almost every other species.

There being a diversity of opinion as to which Plane it is that succeeds so well throughout London, it may be stated that, on a careful examination of a large number of specimens, the variety *P. orientalis acerifolia* was found not only more commonly distributed, but likewise better suited for town planting than the typical *P. orientalis*. From the species this valuable variety is readily distinguished by its less deeply divided leaves, and from the American Plane (*P. occidentalis*), with which it is not infrequently confounded, by the many fruit 'balls' which are attached to each peduncle, the fruit of *P. occidentalis* being for the greater part produced singly. The typical Eastern Plane is now less common than the variety throughout the London area, while the Western trees are few in number. But not only because it succeeds so well as a town tree is the Oriental Plane much sought after, for the large size to which it grows, coupled with the handsome, finely-cut leaves and conspicuous fruit, as also easy habit of growth, render it one of the most ornamental of trees. Other good qualities are that it succeeds extremely well in soil of very opposite descriptions and is little prone to disease or injury, while it is rarely uprooted or damaged during stormy weather. The beautiful marbled stem of grey and yellow, caused by the shedding of the bark in large, irregular patches, which was very pronounced and much commented on during the summer of 1897, renders the Plane one of the most picturesque and distinct of our woodland trees. In Portman and

Manchester Squares specimens have attained to a size rarely exceeded by the trees when growing under more favourable atmospheric conditions. In the grounds of the latter are five Plane trees, each being fully 100 feet in height and with a corresponding thickness of stem and branch spread.

Other examples of almost equally rapid growth and development are the beautiful trees in Bedford, Russell, and Gordon Squares, also in Lincoln's Inn Fields, many being fully 80 feet in height, with in some instances a branch spread of 70 or 80 feet and a stem girth of from 6 to 8 feet at a yard from ground-level. No doubt in all these cases the healthy condition and giant proportions to which they have attained are mainly due to the care with which the trees were planted and to good management in providing suitable soil and ample room for the development of root and branch. But in many other of the London squares, where the atmosphere is by no means pure, the Plane tree may be seen in all its glory of leaf and branch. It is, however, not only in the squares and gardens of the great Metropolis that the Plane thrives in a satisfactory manner, but even where the tree is hemmed in by tall buildings and without room for perfect branch development. There are many examples of this, as at Cheapside, in the Tower of London, at Ludgate Hill, and in not a few of the old and disused churchyards in the City and East End, where the heated, dusty, and otherwise impure atmosphere is almost stifling.

But apart from thriving in crowded thoroughfares the Plane is by no means particular as to soil, and will even flourish in that of a stiff clayey description, as the many beautiful specimens in

Regent's Park and at Primrose Hill exemplify. In good yellow loam or alluvial deposit, such as along the banks of the Thames, the largest trees are, however, to be found.

The largest Plane tree that we have measured in the London area is the handsome specimen in the grounds at Fulham Palace, which girths 18 feet 8 inches at a yard from the ground and has a proportionately wide spread of branches. It is not known with certainty when the Plane was introduced, though in 1722 Fairchild wrote in praise of these trees at the Church of St. Dunstan-in-the-East, which were then 40 feet high. In 1837 a Western Plane was recorded as being 115 feet high in the Chelsea Physic Garden, and from all records there can be little doubt that the Eastern species was the latest importation.

FAMOUS LONDON PLANE TREES

The Wallace Tree, growing near the main entrance to Gray's Inn Gardens, is one of the largest and best developed Plane trees in London. It was planted about a century and a half ago, is fully 70 feet high, and has a branch spread of 25 yards. The peculiarly gnarled trunk—unusual for a Plane tree—is 12 feet in circumference at a yard from the ground-level, and is clear of branches for three parts of its height. This tree is in perfect health. It is questionable whether any other grounds of equal area in London contain so many large Plane trees as may be seen in the Gray's Inn Gardens.

The Wood Street Plane Tree.—This famous tree, which stands at the left-hand entrance to Wood Street from Cheapside, marks the site of St. Peter in Chepe,

a church which was destroyed by the Great Fire (1666). The terms of the lease of the houses at the west end corner are said to forbid the erection of another story or the removal of the tree. This tree, which is growing in a very confined position, is in a healthy condition, as is evident by the young growths which have been sent out since it was pollarded some years ago. It is gratifying to know that this pruning was, unlike much of such work in London, carried out in a practical and sensible fashion, and has interfered but little with the original appearance of the tree. The well-rounded stem rises for 30 feet without a branch, the total height of the tree being 65 feet, the stem girthing, at 3 feet from the ground, 8 feet 7 inches. The branches cover a spread of 48 feet in diameter and extend to Cheapside. This tree is growing in a confined space of about 14 yards and is in perfect health. As late as 1845 rooks built their nests in it.

The Plane Tree in Stationers' Hall Court.—This is a magnificent specimen, though growing in a very cramped and confined position, the branches on all sides nearly touching the surrounding buildings. The tree is in excellent health, with a large, well-formed stem; but, unfortunately, owing to 'snag-pruning,' the outline has been rendered somewhat unsightly. This Plane tree, which grows in the courtyard of Stationers' Hall, Ludgate Hill, is much prized by the residents around. It is 70 feet high, with a stem which girths, at 3 feet and 5 feet, 8 feet 3 inches and 7 feet 10 inches respectively.

The Dean's Court Plane Trees.—Though growing in a very confined and dusty position, these two Plane trees have attained to a height of fully 60 feet, and are healthy and well developed. The larger has



Wood Street Plane Tree



Plane Tree at Stationers' Hall

a girth of 6 feet 8 inches at 3 feet, and 6 feet 5 inches at 5 feet from ground-level. The stems are clean and branchless for 30 feet. Both trees have been pollarded, and the branch-tips reach to the adjoining buildings.

St. Dunstan's Plane Tree.—The largest Plane tree in London, in the East End at least, is that growing in the ancient and sadly confined churchyard of St. Dunstan's-in-the-East. Here, hemmed in by tall buildings, and in the thickest atmosphere of Billingsgate Fish Market, this magnificent tree has attained to a height of 80 feet, the huge trunk (50 feet in length of which contains fully 200 cubic feet of wood) girthing, at 3 feet and 5 feet, 9 feet 1 inch and 8 feet 11 inches respectively. It is clear of branches for a great height, and of beautiful cylindrical shape, with only a slight taper throughout, the girth at 25 feet being nearly as great as at a yard from the ground.

But the great size is, perhaps, not the most interesting fact concerning this tree, as we find that in 1772 Fairchild wrote in praise of the Planes in the churchyard of St. Dunstan's-in-the-East, which were then 40 feet high. The branch spread is 75 feet, extending from the church on one side to St. Dunstan's House on the other. The exact date of introduction of the Eastern Plane to this country is not known, though it is recorded as having taken place in the sixteenth century. Assuming that the St. Dunstan's tree was twenty years planted when 40 feet high—a fair average when situation and quality of soil are taken into account—as recorded by Fairchild, the date of introduction would be about 1752.

The Harrington House Plane Tree.—Of this tree it is recorded that the late Earl of Harrington, whose

name will always be associated with the tiny fruit and vegetable shop at the corner of Craig's Court, refused a princely sum for a few yards of the garden which would have involved the sacrifice of this stately specimen. When Northumberland House was still standing and the Embankment unthought of, this Plane tree was flourishing in its cramped and crowded position in the tiny garden attached to Harrington House. When the garden was taken over for the use of the Royal Flying Corps the tree was carefully preserved, and is not at all likely to suffer by the rather too pressing attention of the hoarding. It is a majestic tree, with a well-rounded trunk that girths 9 feet 4 inches at a yard from the ground, and has a nice clean stem for about 30 feet, the total height of the trunk being close on 70 feet.

Both in St. James's and Regent's Parks there are many large and well-developed Plane trees ; indeed, such are so commonly distributed over London that it is almost invidious to single out particular specimens.

But by far the largest Plane trees around London are those at Ranelagh and Hurlingham, one opposite the club room in the grounds of the former being the largest tree of its kind in Britain. It is a magnificent specimen, with a well-rounded ponderous stem that girths 24 feet 2 inches at a yard from the ground, the branches having a spread of 90 feet. When measured in 1915 this tree was 111 feet in height and 21 feet in girth at 5 feet.

Those by the water-side at Hurlingham are also of huge dimensions ; indeed, it is questionable whether in any other part of London there are so many fine trees of the Plane as at Ranelagh and Hurlingham.

Some time ago Lord Walsingham attributed a serious attack of bronchial catarrh and pneumonia in a member of his family to the minute spicules of the fruit of the Plane tree found in the air of an avenue near Cannes. His further observations tended to confirm his view that coughs, colds, inflamed eyes and throat troubles are most prevalent where these trees abound. Lord Walsingham's warning seems supported by Dr. Henry of Cambridge, who has found these irritant spicules swarming in the air near Plane trees at Kew and in Berkeley Square. So far back as 1873 Dr. Durvell drew the attention of the authorities in Alsace to the pernicious character of the Plane tree.

It has long been suspected that the Plane tree causes throat and lung troubles, and the notes by Dr. Walsingham, Dr. Henry, and others still further heighten the suspicion. Several instances have come under my own notice of throat troubles being attributed to the presence of the Plane tree; and a notable case in which one of the occupants of an official residence at a well-known public building in the West Central district of London had to leave her abode owing, it was thought, to the presence of a large Plane tree near the house, has been substantiated, and the evil done away with by the removal of the tree. When the lady occupied the residence she was troubled with throat irritation, which immediately ceased on her going into the country. The medical adviser suggested that the removal of a large Plane tree which grew close to the house might be beneficial, particularly as many spicules from the seed and leaves were caught on gelatine plates that had been placed on the bedroom windows. With the removal of the

tree, which stood fully 70 feet high, and within a few feet of the building, the health of the patient was restored, and there has been no recurrence of the evil. Other occupants of the house were in no way inconvenienced.

Several workmen engaged in pruning Plane trees in Regent's Park in 1920 had to be treated by a medical officer for throat affection.

Though home-grown timber is rarely obtained in sufficient quantity to become a market commodity, yet it is of considerable importance commercially, and quite equal in quality to that imported from abroad. For coach building it is largely employed, also for turnery work, in the making of pianofortes, and for bridges, the toughness and strength of the wood causing the pins to be securely held in position. The wood is yellowish-white, firm, even of texture, and comparatively light, the specific gravity when seasoned being 0.58. It is valuable as firewood, burning clearly and emitting a great heat. The chief value of the Plane in this country is for planting in smoky localities.

The *Western Plane* (*P. occidentalis*), though much less common than the Eastern species, is to be found in considerable numbers throughout London, and to say that it has not reached the flowering stage in this country is not supported by facts.

Fruiting specimens from trees at Westminster were forwarded last summer to the authorities at Kew, who sent them to Dr. Henry for examination. Near the entrance to the house on Blackheath of Messrs. Johnson and Phillips there is a well-developed specimen from which seedling trees were raised in Greenwich Park five and twenty years ago. The

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tree labelled in the Royal Botanic Gardens as the Western Plane is an error, and the same confusion exists in other parts of London.

The single fruit and decidedly three-cleft and deeply indented, glabrous leaves are points of distinction in the Western species.

The usual and quickest way of raising young Planes is from layers or cuttings. In our public nurseries cuttings, which root as freely as a Willow or Poplar, are inserted in a light, free, loamy soil in September, and are ready for transplanting after the second year. Layering is also resorted to, which consists in bending the lower branches downwards till they come in contact with the ground, where they are kept in position by stout wooden pegs until roots are formed. The branch is then severed from the trunk, and the rooted portion planted in the nursery border. Previous to layering, the soil is loosened and made free by the addition of sand and road grit. The Plane produces seed in abundance, which, if wanted for sowing, should be collected as it falls from the trees in October and November. It may be sown at once in a light, free soil or stored till required for planting in spring.

Poplar

(*Populus*)

MOST of the Poplars thrive well in London, but with the exception of the White, Grey, and Fastigate, which are useful for hedge or screen purposes, they are not to be recommended for general planting. They produce heavy, ungainly branches that, owing to the brittle nature of the wood, are apt

to get torn away from the trunk in stormy weather, while even during the hot and still summer day they frequently snap across without warning.

Three species are common in London, the *Black* (*P. nigra*), the *Aspen* or *Trembling Poplar* (*P. tremula*), and the *Necklace-bearing* (*P. monilifera*). Other species, particularly the *White*, *Grey*, and *Balsam* Poplars (*P. alba*, *P. canescens*, and *P. balsamifera*), may occasionally be seen, but they are not common, though thriving fairly well in heated and dusty parts of the Metropolis. Of the Black Poplar, which was probably introduced by the Romans, many specimens from 80 to 100 feet high are to be found, as by the lake in St. James's Park, in Lincoln's Inn Fields, and throughout the East End generally, especially the districts in and around Poplar. In the churchyard of St. Botolph, Aldersgate, as also at St. Giles-in-the-Fields, both confined, smoky positions, goodly specimens of the Poplar may be seen. Perhaps the best known of London Poplars, on account of size and prominent situation, is the old and gnarled specimen that is growing in the confined grounds of St. Andrew's Church, Holborn. In passing along Holborn Viaduct this Poplar is a conspicuous object, not only on account of its giant proportions, but for its curiously shaped trunk, which forms a complete arch or bend, and is supported by a stout prop about 9 feet high at a distance of 12 feet from the original root. The stem girths 7 feet at a yard from the ground, and the top, which divides into four massive limbs, has a spread of 60 feet. In Carlton Gardens are several large Poplars, but they are much broken about and sadly out of place.

Generally the Aspen, which is a truly indigenous species, is a tall, straight-stemmed tree, with usually

horizontally arranged or somewhat drooping branches and rather large, glossy green leaves, which are slightly paler on the under side. 'Trembling like an Aspen leaf' has passed into a proverbial comparison, and the peculiar tremulous motion of the foliage, which is more or less present in all the Poplars, but especially noticeable in the Aspen, is caused by the length and slender footstalk, which is flattened vertically, thus giving to the leaf such freedom of motion that the least agitation of the air causes it to quiver. In the Black Poplar the leaves, which are produced in May, are of a pale green and the footstalk is yellowish in colour.

By the banks of the Regent's Canal the Black Poplar has attained to large dimensions, some of the trees containing fully 200 cubic feet of timber.

The *White Poplar* or *Abele Tree* (*P. alba*), which has long been cultivated in Britain, is readily recognised by the white under surface of the leaves, this being caused by a thick coating of downy or cottony substance; while the *Grey Poplar* (*P. canescens*) has less deeply indented leaves, which are more sparingly covered with white or grey down on the under surface. Both trees thrive well in London, some of the largest and most ornamental specimens being those in the City of London Cemetery, the largest of which is 80 feet in height, with a well-rounded stem which girths 9 feet 7 inches at a yard from ground-level. In the Hampstead district both the White and Grey Poplars have attained to large dimensions, and in Mill Lane the latter species is used as a street tree. For avenue planting both species are to be recommended on account of their compact growth and ornamental appearance, and for crowded thoroughfares as being

little apt to break across in either still or stormy weather. The Balsam Poplar (*P. balsamifera*) is also a good town tree, but the sticky, resinous exudation from the buds and leaves catches and retains the dust. The foliage is deliciously fragrant, but the tree is apt to become diseased and to be attacked by both insects and fungi. It is not common throughout London, though good specimens may be seen in Soho and by the Commercial Road in the East End.

The *Fastigate Poplar* (*P. nigra pyramidalis* or *P. fastigiata*) is one of the most useful of London trees, where it succeeds admirably and quickly forms a most effective screen or shelter fence. It is raised in large numbers in most of the public nurseries in and around the Metropolis. Probably the largest trees of this kind are growing in Waterlow Park, where many have attained to huge proportions. Though thriving best in rich, damp soil, the Poplars are by no means fastidious, and may be found of large size in that of a gravelly nature as well as on stiff clay. On Primrose Hill, where a number of avenues were planted in 1886, the Black Poplar, although on deep, stiff clay, has increased rapidly in size, the average height of the trees when measured in 1918 being 73 feet, while some of the stems contain 52 cubic feet of timber. The Poplar avenues are now a distinct though not artistic feature of the hill.

In many instances that have come to our notice Poplars have been planted and done well amongst building refuse, where it was supposed that no other tree would succeed. Certainly they are the most accommodating of London trees.

The timber of the Poplar, particularly that of the Black and Grey, is much used in the making of



Lombardy Poplars at Golder's Green



Pterocarya, City of London Cemetery

railway wagons, carts for conveying stones, turnery, brakes, floor planking, and largely for packing-cases and boxes. Comparatively speaking, Poplar is not a valuable timber, though since the war the price has in some instances been doubled. As a London tree the Poplar is of value as being able to succeed in the poorest of soil and in the most confined and smoky situations.

The Poplars are propagated chiefly by cuttings or, as in the case of the Aspen, White and Grey species, from suckers which are usually produced in abundance. In an open, free soil the cuttings root freely, and are ready for planting out when two or three years old, according to the height of plants required.

The Poplars thrive best in a light, dampish loam, but being hardy and accommodating they are often found of large size on soils of very opposite descriptions.

Prunus

SEVERAL species of *Prunus* are amongst the most cherished and beautiful of London trees. The Purple Plum (*P. Pissardi*) is a remarkable and handsome small-growing tree in which the leaves are of a vinous purple colour, which it retains the whole season through, while it is of vigorous growth and well suited for town planting. Even in the most crowded and smoky parts of London the Purple-leaved Plum grows freely, and is valued alike for its beautiful leafage and the colour of the bark, which is at all times shining dark red, indeed frequently a deep blood-red. It is a much-branched tree with ascending

twigs, the leaves, which are never dull, varying in intensity of colouring with the season, while the pure white flowers open early in March. The Purple-leaved Plum is included in the list of trees that, from experiments conducted, is recommended by the Metropolitan Public Gardens Association for planting in London. There are good examples of the Purple Plum in the central parks, as also at Kensington, Chelsea, Fulham, and in Waterlow and Victoria Parks. By the Thames Embankment it likewise does well, and at Poplar and in some of the East End gardens.

P. mollis, or more correctly *P. Americana mollis*, has only recently been tried by special request in the London area, and several thriving trees may be seen within a stone's throw of the Royal Mint, where the fumes given off by gold refining are probably the worst in the Metropolis for tree and shrub life generally. It grows about 20 feet high, with serrated leaves and whitish flowers, the most remarkable effect being produced by the mottled appearance of the bark, which is due to small scale-like growths.

Pterocarya fraxinifolia

THIS is a comparatively rare tree, one of the largest specimens in London growing by the path side between the Victoria and Alexandra Gates in Hyde Park. In point of size this may be considered a full-grown tree, as in its native country the *Pterocarya* rarely exceeds 40 or 50 feet in height. The Hyde Park tree is in perfect health and well developed, the branch spread being 51 feet in diameter, while the trunk girths 4 feet 4 inches at a yard from the ground. The

Pterocarya bears a great resemblance to the *Ailanthus*, the leaves being very large and composed of from 16 to 19 leaflets. They are individually oblong in shape and the margin slightly denticulated, the upper surface of a glossy, dark-green colour, the under surface paler. The pendent flowers render the tree distinct from every other, they being from 12 to 14 inches in length, of a yellowish-green colour, and hanging downwards almost at right angles to the branches. Flowers were produced abundantly on the Hyde Park tree in 1918. The *Pterocarya* is a native of dampish ground by the foot of the Caucasus, the first plants being introduced to France in 1782 from the shores of the Caspian Sea. It is readily propagated from layers. When planted in good rich soil it is a tree of rapid growth, a specimen at Claremont, in Surrey, having in sixty-five years attained to a height of 50 feet, the stem girthing 11 feet at 2 feet from ground level. There is a good specimen of the *Pterocarya* growing in the City of London Cemetery which is 70 feet in height, with a branch spread of 51 feet, the trunk girthing 9 feet 9 inches at two feet from the ground. This is a splendid tree and in perfect health, which produced flowers abundantly during the summer of 1918. Suckers are freely produced from the roots, and dozens of such can be seen beneath its shade.

Pyrus

THE members of the *Pyrus* family are peculiarly suited for town planting, and quite a large number may be found thriving satisfactorily in many parts

of London, even in very smoky and confined districts.

The *White Beam* tree (*P. Aria*) is a reliable, small-growing, and very ornamental subject, with large, pinnately-divided leaves that are thickly covered with a dense, silvery down on the under sides, which give the tree a bright and unusual appearance when ruffled by the wind. The loose clusters of white flowers are succeeded by red or scarlet fruit.

It is a common tree in the London parks and squares, where it succeeds in a most satisfactory way, even in confined spaces. Some of the oldest and largest trees of the *White Beam* are those in the gardens of the Royal Botanic Society, Regent's Park, the best of which is 35 feet high, the branches covering a spread of 48 feet in diameter, with a stem girth of 5 feet. Standing alone these are magnificent specimens, the height and branch spread being quite exceptional. But probably the largest *Beam* tree in London is that in Golder's Hill Park, the huge stem of which rises to 55 feet in height, with a girth at 3 feet of 6 feet 3 inches.

Though found naturally on chalk soils, yet the *White Beam* tree has attained to a large size on the London clay, as the many beautiful specimens on Primrose Hill and throughout the parks generally will bear testimony. In several of the confined East End gardens it also attains to a fair size and looks healthy.

Mountain Ash (*P. Aucuparia*).—This, the best-known member of the family, is well represented in some of the suburban gardens and parks, where it produces flowers and fruit in fair abundance. Its airy lightness and fresh-green, pinnate, fern-like leaves, as also dense clusters of creamy-white flowers which

are succeeded by the brilliant, orange-scarlet fruit, have made the Mountain Ash or Rowan tree a general favourite with cultivators of hardy ornamental species. The Mountain Ash is specially recommended by the Metropolitan Public Gardens Association for town planting. Both the common and yellow-fruited varieties do well in the park near Buckingham Palace, where they have reached a height of 25 feet.

P. Torminalis, a native tree of small growth, may be seen in a thriving condition in many of the London parks and gardens. It makes quite an ornamental tree, on account of its broad, curiously shaped leaves, which are from 3 to 4 inches long, a little less in width, bright green above and slightly woolly on the under sides; they are on long footstalks and cut into many acute angles. Clusters of white flowers and bunches of brown fruit are usually very liberally produced. Years ago it was found wild in the London suburbs, as at Hampstead, Caen Wood, and Chingford, and specimens of goodly size are still to be seen in the latter place. It grows to a height of 30 or 40 feet, with a large trunk spreading widely at the top and forming a compact head.

The *Willow-leaved Pyrus* (*P. salicifolia*) does well in not a few of the London squares and gardens, as by the side of Tottenham Court Road, in the Whitfield Gardens, and in other heated and smoky localities. Two very fine trees in which the beautiful silvery, willow-like foliage is well shown off attract attention near the entrance to Regent's Park at Park Square West; but the greatest number and largest specimens are those in Victoria Park, where this species succeeds admirably and is much admired.

The *Quince* (*P. (Cydonia) japonica*) grows and

flowers freely in many London gardens, and seems suitable for planting even where the atmosphere is by no means pure. There are good examples of the tree in the Royal Botanic Gardens, Regent's Park, the Shakespeare Garden at Golder's Green, and many other parts of London. The Regent's Park specimen has attained to a large size, the stem girthing 4 feet at a yard up, while the well-rounded head has a spread 25 feet in diameter. It flowers and produces fruit in abundance. The Quince is a hardy, deciduous tree, 18 to 20 feet high, with usually crooked branches forming a bushy, spreading head, thickly clothed with roundish-ovate pale-green leaves. It is a capital town tree, and was introduced before 1573, as at that date we learn from Gerard that it was often planted in hedges and fences.

The Quince is readily propagated by means of layers or cuttings, the two modes usually adopted in this country. Cuttings of well-ripened wood of the current year put in light soil during August soon strike root. Layers put down about the same time root freely, and may soon be severed from the stem.

The *True Service Tree* (*P. Sorbus* or *domestica*) in foliage and general appearance approaches very nearly to the Mountain Ash, but grows to a larger size and bears much larger fruit. From the Mountain Ash it is readily recognised in winter by the buds, which are smooth and green instead of being of a dark grey colour and slightly downy. The leaves are downy both on the upper and under surfaces, and the fruit, which is apple or pear shaped and of a dull greenish-brown colour, about four times the size of that of the Mountain Ash.

The *Pear* (*P. communis*).—Some of the largest and healthiest Pear trees in the Metropolis are to be seen

in the gardens by Abbey Road and other streets of St. John's Wood. Quite a large number have attained to 40 feet in height, one huge tree being 65 feet high, with a trunk 7 feet in circumference at a yard up, and a branch spread of 60 feet. But in many other parts of London the Pear has attained to large proportions, as in the grounds of Scudamore Lodge in Regent's Park, where growing on the lawn it has reached a height of 45 feet, the clean, well-rounded stem girthing 4 feet 6 inches at a yard from the ground; while another in the grounds of Hanover Lodge is 57 feet in height, with a stem girth of 4 feet 11 inches at a yard up. For ornamental effect the Pear is highly valued, the pure-white flowers being produced in such abundance that in early spring the tree is literally a sheet of white, while the fruit, though small and rarely eaten uncooked, is valuable for culinary purposes. It is one of the hardiest of the family, and when given an open situation and loamy soil grows freely even in the most smoky parts of London, where for lawn purposes it is one of the neatest and most effective of small-growing trees.

Apart from the production of fruit the timber of the Wild Pear is valuable for several most important purposes. It is a hard, heavy wood of great strength and solidity, and is in use for similar purposes to that of the Apple, also for walking-sticks when dyed to resemble ebony.

The *Apple* (*P. Malus*).—The cultivated Apple does well in many parts of London, and, as at Fulham, Lambeth, Golder's Hill, and in other places, produces fruit in abundance. As an ornamental tree of small growth the Apple is neglected, probably on account of a mistaken idea that it is unsuitable for planting in smoky localities. Like most other members

of the *Pyrus* family the Apple is, however, peculiarly suitable for town planting, as many specimens in the confined districts of Poplar, Bermondsey, and other parts of London point out.

In early spring travellers by Commercial Road in the East End are surprised at the wealth of flowers produced by the Apple as cultivated, principally for economic purposes, in some of the gardens in that smokiest and most heated of London streets, while in Waterlow Park the Apple and other fruit trees thrive amazingly and are quite a feature of the grounds in early spring.

In the garden of the Royal Botanic Society of London the Apple thrives well and fruits freely, as is also the case in several of the central parks and private grounds.

For purely ornamental planting and the value of fruit obtained the Apple in variety has been found suitable for cultivation in the more open parts of the Metropolis. The timber is valuable where great strength and tenacity are points of importance, and for this reason it is one of the best woods for the making of machinery cogs, mallet heads, and golf sticks. It makes excellent firewood.

The Apple is readily propagated from seed, though the best fruiting kinds are usually grafted. Cuttings also take freely.

P. Malus floribunda is one of the most beautiful of the family and well suited for cultivation in the less confined parts of the Metropolis. In April and May this small-growing tree is literally hidden beneath a wealth of the brightest crimson buds which, as they become developed, assume a soft and delicate rosy-white tint. It is a most profuse bloomer, of moderate habit of growth, with long, pendulous shoots and glossy



White Beam Tree, Royal Botanic Gardens



Sea Buckthorn, Regent's Park

bark. So striking is this tree when in flower to those who are unacquainted with it, that one hears the involuntary exclamation, 'What tree is that?' It is to be confidently recommended as one of the best of its family for town planting, and specimens in some of the parks have attained to the maximum height, with well-formed trunks up to 18 inches in diameter. It roots freely from cuttings.

Turning from the ornamental to the utilitarian view of these trees, we find that both wood and fruit serve a variety of useful purposes. The timber of all the species is more or less valuable, being hard, smooth of grain, and susceptible of taking an exquisite polish. Cogs for wheels, handles to cutlery, wooden spoons, and small turnery articles, as well as musical instruments, have all been made from the wood of the *Pyrus*, and where iron has not superseded wood in millwork for various parts of machinery framing.

The ripe fruit, which is freely produced by most of the species, is collected and mixed with about double its bulk of sand or light, rather dry earth. Seed-sowing usually takes place the following April or May. As the young plants grow rapidly, they should be transplanted the second year into breaks, where the individual plants are given ample space for root and branch development.

Sea Buckthorn

(*Hippophae rhamnoides*)

THOUGH usually found as a seaside shrub the Sea Buckthorn (*Hippophae rhamnoides*) is by no means exclusively so, as many specimens in almost every part of London point out. It thrives and flowers

freely at Chelsea and in not a few of the East End gardens. The Willow-leaved (*H. salicifolia*), which is of tree size, has attained to giant proportions and succeeds well in the by no means pure atmosphere of Regent's Park, where some of the specimens in the flower garden are 40 feet high, with well-formed stems that girth 4 feet and upwards at a yard from the ground. These are unusually fine trees, the next largest being at Cambridge, which is 47 feet in height. It is more graceful though with less silvery foliage than *H. rhamnoides*, and equally suitable for smoky localities.

Spindle Tree

(*Euonymus europæus*)

THE Spindle Tree is a native shrub or small-growing tree that is found in copses and hedges in several parts of England and southern Scotland. For its ornamental qualities the *Euonymus* is well known, owing to the seed-covering splitting open and revealing the orange-red arils to view during the early winter period. The leaves, too, turn crimson in autumn and greatly add to the ornamental appearance of the shrub. The four-sided shoots render young specimens of the Spindle Tree ready of recognition, while the bark is uniformly green and quite smooth, the leaves being ovate-oblong, with finely serrated margins, and the flowers small and of a greenish-white colour. The whole plant has an unpleasant odour when bruised. It succeeds well in every part of London.

At one time the timber of our native Spindle Tree was much in demand for the making of spindles

and distaffs and in the manufacture of skewers, tooth-picks, shoe-pegs, and knitting-needles. It was also considered to be one of the most valuable timbers for the making of certain parts of musical instruments, while charcoal prepared from the young wood was much in demand by artists. Home-grown timber is remarkably hard, tough, and long of fibre, fine and smooth of grain, and finishes off with a satiny polish under the tools of a carpenter. It is so hard and long-grained that it can be cut as fine as a needle, and will bend almost double without breaking. It is of a uniform yellowish-white colour, with darker longitudinal markings, and takes a high polish. Various American woods, particularly that of the Paper Birch, are now almost exclusively used for the purposes to which the timber of the Spindle Tree was applied.

Sumach

(*Rhus*)

THE *Stag's Horn Sumach* (*Rhus typhina*) is one of the most distinct, beautiful, and useful of London trees. Rarely exceeding 25 feet in height, but wide-spreading in proportion, the large, handsome, dark-green, pinnate leaves, which somewhat resemble those of the *Ailanthus*, and dense spikes of rich scarlet or crimson velvety fruits are very effective. Although by no means pretty, the dense clusters of greenish-yellow flowers are sure to attract attention. The popular name is no doubt owing to the fact of the young shoots being densely clothed with a velvety pubescence, in texture and general appearance like

that found on the horns of a young stag. It is an excellent small-growing tree for town planting, and may be seen in many of the parks and gardens.

The *Venetian Sumach* (*R. Cotinus*) also succeeds well in the most smoky parts of the Metropolis, and is highly ornamental when in flower or fruit, the feathery inflorescence rendering it of quaint and curious appearance.

Both species are to be found thriving satisfactorily in most of the parks, and even in the more confined spaces and where the atmosphere is tainted with impurities they grow robust and strong. By the Outer Circle Road at Charlbert Street in Regent's Park there is a noble clump of these trees, which impart quite a tropical appearance to the shrubbery in which they are growing. But the Sumach is to be met with in most of the parks and squares of the Metropolis, as in St. Paul's Churchyard, plentifully in the central parks, and in many of the dusty, confined East End gardens. On account of its singular appearance, the Sumach always attracts attention.

R. Osbeckii is also a good town tree, and may be seen in a thriving condition in several of the parks, where in 1918 it flowered freely.

The Sumachs are readily propagated from root-offsets, which spring up freely around the parent stem, especially when this is growing in a free and open or cultivated soil. In a young state the Sumach and *Ailanthus* are readily confused, being much alike in foliage, but the latter is of far larger size and more rapid growth, and never throws out suckers from the roots.

Sycamore

(*Acer Pseudo-platanus*)

THE Sycamore or Great Maple is one of our most accommodating trees, succeeding alike by the exposed seaside or when planted in the very heart of our towns and cities. Being of a hardy, robust constitution, it can withstand chemical impurities of the atmosphere, and so has been found one of the best trees for planting in the smoke and dust of the great Metropolis. There are many good examples of the Sycamore at Chelsea and Fulham, as also in the Regent's and the central parks, while even in the East End, as in the Tower of London and by Bow and Poplar, healthy specimens are to be seen. It is not a native tree, but was introduced during the fifteenth century; but climatic conditions have been so favourable that the tree reproduces its kind in large numbers from self-sown seed. The Sycamore is a tree of rapid growth and lives to a great age, being little subject to insect attacks or to get uprooted or broken about by the wind.

The *Norway Maple* (*A. platanooides*) is of rapid growth, quite hardy, and may be seen of large size in many suburban parts of the Metropolis. It has large, five-lobed leaves and is one of the most ornamental of medium-sized trees. There are good examples of it in the central and other parks.

The *Red or Scarlet Maple* (*A. rubrum*) also succeeds well in smoky localities. It is a low-growing tree and very ornamental in both leaf and flower.

The *Box-Elder or Ash-leaved Maple* (*A. Negundo*, known as *Negundo fraxinifolium*) is one of the best

of town trees, where it grows freely and shows little signs of distress, even when planted in the most smoky localities. The well-known and beautiful variegated variety (*A. Negundo variegatum*) has silvery and green leaves, and though it grows freely in towns the foliage gets disfigured by persistent smoke and dust.

The *Silver-leaved Maple* (*A. dasycarpum*) is one of the most valuable for planting in London, where it has attained to a large size, some of the trees in Regent's Park being 70 feet high, the stems girthing 8 feet 10 inches at a yard from the ground. It is one of the finest of deciduous trees, being in early spring covered with reddish flowers, while its handsome leaves, green above and silvery-white beneath, turn to a rich golden-yellow in the autumn season. There are good specimens in Battersea Park, as also at Poplar and in some of the East End gardens. A peculiarity of this tree is that shoots in quantity are usually sent out all over the stem, even to ground-level.

The uses of Sycamore wood are numerous and varied, and though essentially a fancy timber, it is of great utility, entering largely as it does into the work of turnery and furniture making; backs of brushes, bobbins, rollers for wringing and washing machines, printing blocks, and beetling beams in calico works are all made of Sycamore wood. Parts of musical instruments, pianos and violins in particular, as also bread platters, milk pails, and dairy utensils generally, are made of the wood.

Seedlings are frequently lifted from where they have appeared naturally, and after being transplanted to the nursery ground make rapid progress, and in three years are fit to be planted in their permanent quarters. As soon as the seeds ripen, which is usually

about the first week in October, they should be collected and sown immediately, as the germinative properties are much impaired after the first year and are entirely wanting at a later period.

With the various kinds of Maple, seed-sowing, layering, grafting and budding are all resorted to. Most of the vigorous-growing kinds are budded, and those of more slender habit, such as the Japanese varieties, are grafted on allied species. Layering, when it can be carried out, is a more expeditious and certain way of increasing any particular variety; but as that cannot be done in dealing with large trees, the preferable way is to take cuttings of the current year's growth, which root freely in light, open soil.

Tamarisk

(*Tamarix gallica*)

IT may seem out of place to describe the Tamarisk in a list of trees, but under exceptionally favourable circumstances it attains to quite 20 feet in height, with a well-formed trunk that often reaches to 2 feet in diameter. Such specimens may be seen by the lake-side in Battersea Park, where a height of over 20 feet has been reached, the tree-like stems girthing 2 feet 5 inches at a yard from the ground. In the central and Regent's Parks the Tamarisk has likewise thriven well, though the dimensions of the best do not equal the Battersea specimens. It is well known as a good subject for the seaside, but evidently from its behaviour in London would appear to be by no means averse to a smoky locality. For ornamental planting it is to be recommended, the long, slender branches of bluish-

green foliage and spikes of pretty rose-pink flowers, which continue for five or six weeks, rendering the Tamarisk one of the most graceful and charming of small-growing trees. It is readily propagated from cuttings.

Walnut

(*Juglans regia* and *J. nigra*)

THOUGH comparatively few specimens of the Walnut are to be found in London, yet the healthy appearance and large size to which both species have attained in the very heart of the Metropolis show that they are suitable for town planting.

The Common Walnut may be seen of unusually large size at Maida Vale, where some of the trees are 70 feet in height, with stems of corresponding dimensions. There are many Walnuts in the central parks, where they fruit freely.

Of the Black Walnut the largest tree we have seen is that growing in the grounds of the Physic Garden at Chelsea. This magnificent specimen has a branch spread of 60 feet, the trunk, which rises to 18 feet without a branch, girthing 5 feet 9 inches at a yard from the ground.

In the grounds at Fulham Palace the Walnut is also well represented, and seems quite healthy where subjected to smoke and chemical fumes, while in Greenwich Park well-developed specimens may also be seen. Fruit is freely produced on some of the trees, and seedlings have been raised in quantity.

Walnut timber is scarce and valuable, being greatly in request for gun and rifle stocks, choice furniture

and inlaying, and many trunks grown in London have been converted into cabinets and tables by their owners.

Willow

(*Salix*)

THE *White* or *Huntingdon Willow* (*Salix alba*) attains to large proportions in many parts of the Metropolis and may therefore be considered as a good town tree. Even in the East End, where almost stifled by smoke and dust, the Willow succeeds, as also in Red Lion Square, Paddington Cemetery, and in other confined parts of the City. By the lake-side in Regent's Park, as also in the grounds of the Royal Botanic Society, may be seen specimens that are quite as large as any growing under more favourable conditions in the country. The largest, which is growing by the pond-side in the latter place, is 80 feet high and the stem girths 10 feet 10 inches at 5 feet up, while the branch spread is 75 feet.

This is the finest and most picturesque of the Willows, and when given room for development attains to large dimensions, forming an elegant and imposing tree that is peculiarly suited for planting by the water margin. The lance-shaped leaves have a silvery appearance when ruffled by the breeze, owing to the white under sides.

The *Crack Willow* (*S. fragilis*) also does well in certain parts of London, but it is neither so ornamental nor desirable for very smoky localities as is the White Willow. Paddington Cemetery can boast of a good specimen of the Crack Willow, the branch spread being 45 feet and the stem girth at a yard up 7 feet

7 inches. Another and still larger tree of the kind is growing by the lake-side near York Bridge in Regent's Park.

The *Weeping Willow* (*S. babylonica*).—In most of the parks and open spaces may be found specimens of the Weeping Willow, which for planting by the water margin has few equals from an ornamental point of view.

By the lake-side in St. James's Park the Weeping Willow has attained to a large size, the soil and other conditions being evidently favourable to its growth. The date of introduction of the Weeping Willow is uncertain, some giving the credit to Mr. Vernden, an English merchant at Aleppo, who as recently as 1730 sent it to his residence at Twickenham Park, where it is on record it was seen growing by Peter Collinson in 1748. From another account Pope gets the credit of having planted the first Weeping Willow ever seen in this country. Certainly in the garden of 'Pope's Villa' at Twickenham, the retreat in which the poet passed the latter years of his life, a noble Weeping Willow was growing late in the eighteenth century. The subsequent owner of the villa, according to an account in the 'St. James's Chronicle' of 1801, finding it inconvenient to show the tree to numerous visitors, had it cut down. 'Being with Lady Suffolk at the time that she received a package of plants from Turkey, Pope noticed that one of the withes with which it was bound was still green. He planted it in his garden, where it struck root readily, and as it developed its graceful growth became his favourite tree.' The date of its introduction given in the 'Hortus Kewensis' is 1692.

Be the date of its introduction what it may, the Weeping or Babylonian Willow forms an element of

beauty that no other tree could supply. By the Thames side there are numbers of the Weeping Willow, some specimens being of unusual height and branch spread.

The *Goat Willow* (*S. Caprea*) has been planted in various parts of London, but it is only suitable for the more open and airy positions. There are good specimens by the lake-side in Regent's Park. This is often called the Round-leaved, Sallow, or 'Palm' Willow, the last from the fact that the bright yellow catkins are collected on Palm Sunday.

The *White* or *Huntingdon Willow* (*S. alba*).—There are several gigantic specimens of the White Willow by the lake-side in St. James's Park, some of which have a wide branch spread and girth 15 feet around the stem.

Willow timber, particularly that of the White or Huntingdon and the variety *cærulea*, is elastic, tough, and durable, and from its non-liability to split or splinter is much used for cricket bats, lining for stone-carts, and during and since the war largely for artificial limbs and crutches.

Timber of good quality has been produced all over the London area, and individual trees have realised from £10 to £20 each when suitable for converting into the best class of cricket bats. Willows for basket-making are successfully cultivated in the London area, the best and most profitable kinds being of French and Dutch origin.

The Willows are readily propagated from cuttings, which may be either grown for a year in the nursery border or placed direct in their permanent quarters. The cuttings may be of any length up to 8 or 9 feet, but those of 12 inches are to be recommended.

Unfortunately, of late years the Willow has suffered greatly from attacks of a mite insect (*Eriophyes tri-radiatus*), and this is particularly so in and around London, where the attacks were first recorded by the writer in 1909. The attacked portion produces an abnormal quantity of shoots, from which the name 'Witch's broom on the Willow' has been given. Pruning off the affected shoots, which is by no means an easy task, as hundreds are produced on each tree, is the only way of dealing with the evil. With the exception of the Goat Willow all others have fallen victims to this insidious pest.

Yellow Wood

(*Cladrastis (Virgilia) lutea*)

ON light, warm soils this small-growing tree succeeds perfectly well in London, where more than one healthy, full-sized specimen may be seen. At Fulham Palace there is a well-grown tree with a stem girthing 3 feet 3 inches at a yard up and a branch spread of 24 feet. It produces drooping panicles of its pure-white flowers in abundance during July and August. The autumn foliage is very effective, the leaves, which are pinnate and finely cut, assuming a brilliant golden tint before falling off. It requires a dry, warm soil and sheltered situation, conditions that cause the wood to become ripened and flowers to be abundantly produced.

This tree may be seen in several of the London parks and gardens, but it is not well known and but rarely offered for sale in nursery lists.

Yew

(*Taxus baccata*)

THOUGH the Yew rarely puts on its best form when planted in too confined or smoky districts, yet specimens in various parts of London have attained to a fair size and survived for a long period of years.

One of the largest and best furnished trees is growing in the Physic Garden at Chelsea, and looks little the worse for the smoke and dust to which it has been subjected for fifty years at least. This particular tree is 30 feet high, the branch spread extending to 24 feet, and a stem girth of 5 feet 2 inches at a yard from the ground. It is thickly foliaged and betokens a healthy condition in spite of its near proximity to the poisonous fumes given off from the neighbouring electric works. In the grounds of Chelsea Hospital there are many thriving Yew trees, and adjoining the Bishop's Park at Fulham may be seen in the old churchyard quite a number of the Irish or Upright Yew, which also seems bravely to withstand the impurities of the town atmosphere. Good specimens of the Yew are also to be found in Hyde and Regent's Parks, and even in the Poplar district this evergreen tree appears to thrive; but by far the largest and healthiest specimens are to be found in the suburban districts, such as at Hampstead, Golder's Green, and in Waterlow Park.

The Yew is a native tree of small growth, with a short, thick, and deeply fluted stem and a wide-spreading head of branches. It is remarkable for its great powers of endurance and as being proof against

both drought and damp, while it will survive in the poorest of soil and is little subject to either disease or insect attack. Yew timber is of excellent quality, and the country saying that a post of Yew will outlive a post of iron is well known.

It is readily propagated from seed, which is usually produced abundantly wherever the tree will thrive. The berries when collected in autumn should be either mixed with fine sand or washed in water to remove the glutinous outer covering. Sowing may take place in early spring. The Yew is remarkable for its slow growth, five-year-old plants that have been cultivated in the most favourable surroundings rarely averaging more than a foot in height, and at the age of ten years nursery-grown plants are no more than a yard high.

Zelkova

(*Zelkova acuminata*)

TWO at least of the three known species of Zelkova are not only highly ornamental trees but suitable for cultivation in London, where, as in the central and Battersea Parks, well developed specimens are to be found. There are some noble trees of the Caucasian Zelkova (*Z. crenata* and *Z. acuminata*) at Kew and Syon House, the former being about 70 feet in height, with a trunk circumference of 10 feet. The Caucasian Zelkova, which was introduced in 1870, is a handsome, large-growing tree, somewhat after the style of the Elm, with oblong, deeply crenated leaves and small, inconspicuous flowers. In the Japanese Zelkova, which was introduced in

1760, we have a valuable tree, whether for ornamental effect or the quality of timber produced. The wood is exceedingly hard and capable of a smooth polish, and in Japan is largely employed for the finer and more expensive furniture, as also in ship and house decoration.

Park Trees

THE parks and open spaces of London, which extend to fully 6000 acres, contain a large and thoroughly representative collection of trees and shrubs, many being rare and little-known species. Foreign trees, as a rule, succeed better than native kinds, as, for instance, the Plane, Catalpa, Ailanthus, Acacia, and many others, though a few of the home species, such as the Ash, Birch, and Elm, succeed. Richard Jefferies said 'Go round the entire circumference of Greater London and find the list ceaselessly repeated. There are Acacias, Sumachs, Cedars, Araucarias, Laurels, Planes, beds of Rhododendrons, and so on. If again search were made in these enclosures for English trees, it would be found that none have been introduced.'

With a wide and intimate knowledge of London and its trees we might add that the main reason why native trees are not more cultivated is the fact that in most instances they have been found to be unsuitable for the chemically impure atmosphere and pent-up soil of the Metropolis. The British Oak will not succeed in the heart of London, while the Turkey variety will, and even some of the North American kinds will longer survive the London smoke than our native tree.

Though apt to become cankered and stag-headed, the common Ash does fairly well, and though blackened by soot and dust, the silvery-barked native Birch has arrived at a goodly size in some of the more open situations. Our native Elm thrives apace in very smoky and confined positions, though in that respect it cannot compare with the Plane or Acacia. In these cases comparisons of how different trees succeed in the Metropolis have always been taken from the same district or, in other words, the trees compared are growing under similar conditions as to soil and situation.

By far the largest and most representative collection of park trees in London is to be found in the central group which includes Hyde, Green, and St. James's Parks, and Kensington Gardens. To the casual observer the variety of trees to be found in London may appear small, but such is by no means the case; indeed, the number of distinct species as recorded in these pages proves that the list is a comparatively long one. It is only after a careful examination of the trees in our streets, squares, and open spaces by an interested person that the number of different kinds can be realised, for unless noted by those who are acquainted with the peculiarities in form and foliage of various trees, many of the less common kinds are apt to be overlooked. Few Londoners know that in Hyde Park and Kensington Gardens alone upwards of two hundred and twenty distinct trees are cultivated, that Battersea Park contains a host of rare species, that the largest Ash tree flourishes in Cavendish Square, a number of healthy Catalpas by the Clock Tower at Westminster, the yellow-flowered Horse Chestnut in Marylebone Road, the Judas Tree at Fulham, the



Willow, White or Huntington



Yew at Chelsea

Golden Catalpa in Portman Square, the Cork Oak in the grounds of the Botanic Society, or the Mulberry in Finsbury Square. Of the commoner trees, such as the Plane, Ash, Elm, and Acacia, there are some magnificent specimens both in Hyde Park and Kensington Gardens, while the gigantic Poplars and Willows by the lake-side in St. James's Park have few equals even in the open country. The Ailanthus, as might be expected, grows vigorously in all the central parks; the Manna Ash has, in not a few cases, attained to a large size and flowers freely; while the various species of Acacia, Acer or Maple, Prunus, and Pyrus show distinctly by their growth and the age to which they have attained how suitable they are for cultivation in both urban and suburban districts. Of Thorns about forty species and varieties are represented, the Ilex or Holly thirty kinds, and the Pavias or Buckeye some half a dozen of the most distinct. The rarer trees would include the Amelanchier, Arbutus or Strawberry Tree, Catalpa, Gleditschia, Laburnums various, Liquidambar, Tulip Tree, the best Magnolias, and the Venetian Sumach.

Even the Fig does well, and has attained to a large size at several points by the lake-side in St. James's Park. Of Elms and Limes many species and varieties thrive apace, while specimens of no mean size of the Ginkgo or Maidenhair Tree and the curious Kentucky Coffee Tree may be seen growing freely. The native Birch seems quite at home on the gravelly soil in Hyde Park, where several trees have attained to a good height and are well furnished with far-spreading branches.

Growing in the Hyde Park Gardens which skirt the Bayswater Road many trees of interest are to be seen. The Acacia has grown to a large size, the

Ailanthus and Birch are 50 feet high, while some exceptionally large Laburnums, Hollies, and Thorns are thriving well in these gardens. The magnificent Planes, Elms, Chestnuts, Pyrus and Thorns, as seen in the Park from the Bayswater Road, show to what a size these trees will attain in the centre of London.

Those who are interested in the growth of the rarer kinds of trees should pay a visit to Kensington Gardens, entering by the Broad Walk and turning sharply to the right by the path which runs parallel with Kensington Road. Alongside this pathway is a selection of rare trees, many of which are amongst the largest of their kind in London.

Here are to be seen such uncommon trees as the Cork Oak, 50 feet high, Tulip Tree about the same height and in excellent health, Weeping and Cut-leaved Beech, Persimmon, the best in London, 25 feet high, branch spread 30 feet, and a stem girth of 3 feet 4 inches at a yard from the ground. Other interesting trees are the Marsh and Fastigate Oak, two of the Tree Cotoneasters, *C. frigida* and *C. nummularia*, both over 30 feet in height. The Pavias are uncommonly fine, so are the many kinds of Thorns and *Pyrus lobata*, Almonds, and Laburnums. Both the Evergreen and Turkey Oak are of large size, and the Birches are amongst the largest and healthiest in London. A Weeping Beech near the Albert Memorial has a branch spread 16 yards in diameter, and another has a gigantic Wistaria clambering amongst its branches, the stem of which girths 3 feet 2 inches at a yard up.

Throughout the Gardens the Elms, Limes, Horse and Spanish Chestnuts have few rivals in any other part of London.

Hyde Park.—Between the Victoria and Alexandra

Gates are many rare and uncommon trees. The Glastonbury Thorn is the finest in London—a much handsomer tree than that at Clissold Park—being upright of growth and symmetrical of shape. It is 30 feet high, and the stem girths 3 feet 4 inches at a yard from the ground, with a branch spread of 27 feet. The Turkey Oaks are exceptionally fine, many being of normal size and perfectly healthy, other species being the large-leaved Red Oak (*Quercus rubra*), a handsome and distinct American tree. Of the Flowering or Manna Ash there are many large trees, which show by their age and size how well suited this particular species is for town planting. There are healthy specimens of the Deciduous Cypress and Maidenhair Tree or Ginkgo, and a perfect tree of our native Maple (*Acer campestre*). Several species of *Pyrus* do well, and have attained to a large size, while the Evergreen Oak and an unusually large *Euonymus* are conspicuous by the path-side. Of weeping trees there are good examples of the Elm and Beech, also cut-leaved forms of the latter. The *Ailanthus* has attained to a large size, and is particularly attractive on account of its pinnate, deep-green foliage. By the Serpentine the Weeping Willow is conspicuous, while Hollies, both the common and variegated, thrive remarkably well, and have attained in some cases to quite tree-like dimensions. The Deciduous Cypress is 70 feet high, with a clean, straight trunk, and both the Birch and Thorns look healthy and happy.

Regent's Park.—Though the collection of uncommon trees is small for a Royal park, the grounds can boast of by far the largest and healthiest specimens of the Paulownia, Sea Buckthorn, Tree Cotoneaster, and Stag's Horn Sumachs that can be found anywhere in

the London area. The Paulownia, which has a spread of 36 feet and a stem girth of 5 feet 10 inches at 3 feet up, is growing on a mound in the flower garden, the Buckthorn and Cotoneaster not far away in the same grounds, while a clump of the Sumach attracts the attention of visitors when passing along the northern side of the park. In the flower garden are two remarkably fine specimens of the Elm, the branches of which sweep the greensward for a space of 84 feet, the largest stem girthing 12 feet at a yard from the ground. These are by far the best furnished and most picturesque Elm trees in London. By the lake-side the Cornelian Cherry has attained to quite tree size and flowers profusely, several huge specimens of the Weeping Willow ornamenting the water margin not far off. *Pyrus* of several kinds, but particularly the White Beam tree and the beautiful Willow-leaved variety, occur in some plenty in various parts of the park, especially by the Broad Walk and Outer Circle Road.

By the canal side are many huge Beeches, Elms, Ash, and Poplar, also large specimens of the Hornbeam, while on Primrose Hill, by the waterworks, is a row, some two dozen in number, of the beautiful and distinct Walnut-leaved Ash, which is a capital town tree and thrives amazingly even on stiff, unkindly soils. In the private gardens attached to the park, particularly in front of Chester and Cumberland Terraces, are many uncommon trees, such as the smaller-growing Maples, Laburnums of large size, Acacia, Ailanthus, and quite a number of unusually large trees of the *Pyrus* family, which succeed so well in every part of the Metropolis. Weeping Elms and Ash of quite unusual dimensions may also be seen in these terrace gardens, and the same may be said of the

Purple Plum, Hornbeam, Birch of good size, Purple Beech, and brighter flowering Thorns, including the Cockspur and Tansy-leaved.

It was beneath a tree in Regent's Park, near York Gate, that Elizabeth Barrett, after gazing long at the leaves and sky, consented to marry Robert Browning. Mrs. Baillie-Saunders, in her charming book, 'The Great Folk of Old Marylebone,' says: 'She drove, accompanied by her sister, to Regent's Park, alighted, and walked on the grass and leaned against a tree, and looked long at the leaves and sky thinking. Then she went home and wrote off "Yes"—a slight figure in a black robe, and under the black "Granny" bonnet a little face like a white rose and eyes like a spaniel's, with a smile of a seraph in them and a mist of womanly tears.'

Park Square Gardens are also of interest for the varied collection of well-grown Elms, Ash, Thorns and other trees that the grounds contain. The Catalpa has attained to a large size by the entrance gate at Park Square West, and the Weeping Ash and Elm afford good shade in these well-kept gardens. Planes of large size, the Ailanthus, White Beam tree, Copper-coloured Beech, Purple-leaved Plum, Birch, Sumach, and Laburnums are all well represented.

The Royal Botanic Garden in Regent's Park was a century ago a well-known tree nursery, to which fact may be attributed the varied collection of old and uncommon specimens for which these grounds are celebrated. London can boast of no finer specimen of the Manna Ash, Weeping Elm, Silver Maple, White Beam tree, Quince or Medlar than is to be seen in these ideal grounds; while the rare Liquidambar, Ptelea, Mulberry, Cork Oak, and a varied collection of

Thorns thrive well and have attained to a large size in this part of London.

The White Beam tree thrives luxuriantly here, one of the largest being 70 feet in height, with a well-shaped bole that girths 5 feet 8 inches at a yard up. *Paulownia imperialis* is represented by a fairly good tree, while the Orleans Pear tree (*Pyrus salviafolia*) has probably no equal in the London district. Of commoner trees the Ailanthus, *Acer dasycarpum*, *Pavia rubra*, and golden variegated Sycamore have all grown into nice specimens. The Tulip Tree, some 35 feet high, with a stem girth of 4 feet 3 inches at a yard up, has a very healthy appearance, as have also two nice specimens of Magnolia.

A large, far-spreading tree of the comparatively rare Honey Locust (*Gleditsia triacanthos*) is growing in front of the Secretary's office. The diameter of branch spread is 60 feet, and the well-rounded stem girths 4 feet 5 inches at a yard from ground-level. It produces flowers freely, and the curious trifid thorns, though not abundant on this particular specimen, are yet sufficiently numerous to attract notice, and with the Acacia-like leaves render the tree easy of recognition.

One of the largest, certainly the best developed Ash trees in London, is growing in these gardens. There is also a fine specimen of the Cork Oak, the rough bark of which shows well the uses to which it can be applied. It is as wide as high, about 30 feet, and the stem girths 3 feet 1 inch at a yard from the ground. The plentifully produced, dark-green foliage indicates perfect health.

The Zoological Society's Garden contains a few interesting trees, such as several good specimens of

the Deciduous Cypress, one of which is amongst the largest in London. Various species of *Pyrus*, *Cratægus*, and *Acer* are likewise doing well, and the Weeping Willows by the pond-side are attractive. The Weeping Ash by the pelicans' enclosure, which has been trained on trellis work for a distance of 35 yards, is one of the finest in London. The *Catalpa* may be seen in good form, as also in several parts of the garden, while a line of Mulberry trees show by their growth that the stiffish soil of the parks suits them well.

Greenwich Park contains by far the finest Spanish Chestnut trees that are to be found in the Metropolitan area, some of these having ponderous trunks that girth up to 20 feet in circumference. One of the largest specimens of *Gleditschia triacanthos*, which is 50 feet high, and 3 feet 11 inches in girth at a yard up, may also be seen near St. Mary's entrance to the park, while by far the largest tree of the Common Thorn that can be seen in London is growing in the grounds by the Ranger's Lodge. It is 60 feet high, and 5 feet 9 inches in stem girth at a yard up. A group of *Pavias* is also interesting, as is the unusually large Purple-leaved Beech, Walnut, Mulberry, *Ailanthus* and various species of *Pyrus*. The old, weather-beaten Oak on the hillside below the Royal Observatory has been dead for many years, but the decayed, hollow stem is successfully supported by Ivy.

In 1900 quite a number of rare and interesting trees were planted in the park, particularly in what is known as the Wilderness by the pond. Many of these have thriven well, the gravelly subsoil being suitable for their growth. These include several of the best *Pyrus*, *Fagus*, *Fraxinus*, *Betula* and *Quercus*. The Paper Birch thrives well, as do the Dogwoods,

Magnolias, and various of the less common varieties of Elm. In the grounds of the Ranger's Lodge, now attached to the park, the Lebanon Cedar, Purple Beech, and Walnut are well represented. The Tulip Tree is 70 feet high and 6 feet 9 inches in girth at a yard up. The Amelanchier or June Berry, Chestnut-leaved Oak, the Yellow-flowered Horse Chestnut (*Pavia*), and the Medlar have all attained to a goodly size on the warm, gravelly subsoil of which the park is mostly composed. Amongst the less common trees are healthy specimens of *Davidia involucrata*, *Populus lasiocarpa*, with immense leaves, Maidenhair Trees (several near the Greenwich entrance gate), and the Entire-leaved Ash, of which there are several good examples in perfect health. The White Beam tree, as might be expected, flourishes well at Greenwich, and one of the largest is 4 feet 10 inches in stem girth at a yard from the ground. Growing in the Circus garden, just outside Greenwich Park, are several large Ailanthus, the largest of which has a stout, well-rounded stem that girths 6 feet 9 inches at a yard above ground-level. A fine Manna Ash may also be seen in these grounds.

Battersea Park.—To those who are interested in tree growth this park affords many surprises, for wander where one will over its extensive well-kept grounds, rare and interesting specimens are constantly cropping up even in the most unexpected positions. Chelsea atmosphere is not considered ideal for the growth of trees and shrubs, but Battersea Park is another example of how these survive better in large, open spaces, even though the air is foul and dusty, than in the close and confined areas. Some of the rarer trees at Battersea would include the Osage Orange (*Maclura aurantiaca*), 20 feet high, the stem girthing 1 foot

10 inches at a yard up, and the Nettle Tree or Hackberry (*Celtis occidentalis*), 25 feet high, with a branch spread of 30 feet and a stem girth of 3 feet. *Zelkova acuminata* has attained to 40 feet in height, with a spread of 30 feet, the stem being 15 inches in diameter. Other rare and interesting species are the Arbutus, with a branch spread of 30 feet, several nice specimens of the Judas Tree, *Cotoneaster frigida* in abundance, while the somewhat rare and beautiful Willow-leaved Pyrus (*P. salicifolia*) enlivens the shrubberies at many points with its masses of silvery-grey foliage. Of *Alnus cordifolia*, which is an excellent town tree for dampish situations, there are many well-grown specimens 50 feet and upwards in height, especially such as are used for standards and have been given room for branch development. Hollies thrive particularly well, many symmetrical specimens being over 20 feet in height, while in Thorns the collection is rich, the beautiful Tansy-leaved species (*Cratægus tanacetifolia*) being well represented. In no other London park has the Tamarisk attained to such huge proportions as at Battersea, where some of the specimens girth 2 feet 5 inches at a yard up and exceed 20 feet in height. One clump by the lake-side contains half a dozen such trees. The Laburnums are exceptionally fine, many being of quite tree size, while the Yew, which is rarely seen in good condition in the Metropolis, looks healthy and happy at Battersea.

There are many gigantic Poplars, well-grown specimens of several of the rarer Ash trees, including the distinct and beautiful Golden variety, *Acer dasycarpum*, in abundance, some 60 feet high, and a couple of fair specimens of the Deciduous Cypress. Weeping trees are well represented, those of the Grey Poplar

by the lake-side being particularly effective, while the Weeping Elms all over the grounds lend character and variety, as also the shapely and well-grown specimens of the drooping Ash.

Victoria Park is well furnished with trees, the avenue by the canal being a shady walk alongside which there is a varied collection of healthy, well-developed specimens. Considering that the grounds which formed this park were at one time principally brick fields and market gardens, and that its situation is in the crowded districts of the East End, tree growth must be considered very satisfactory, the Weeping Ash, Elms, and Willows being all well grown, while various kinds of Thorns, the White Beam tree, and Laburnum show by their healthy growth that they are quite at home in this part of London.

Amongst the rarer trees are many examples of the *Gleditschia triacanthos*, *Cratægus tanacetifolia*, and other uncommon Thorns, Weeping Elms very fine by the lake-side, Manna Ash, Ailanthus, Mulberry, and Judas Tree.

Probably the finest specimens in London, certainly the largest number of the Willow-leaved *Pyrus* are to be found in this park, some of the individual trees being 40 to 50 feet in height, with clean stems that girth up to 4 feet in circumference at a yard from the ground. These are unusually fine specimens, the silvery-white foliage being conspicuous for a long way off. Hollies thrive better here than in most of the London parks, the size to which they have attained and wealth of bright-green foliage betokening perfect health, thanks in a great measure to the gravelly soil. The plantation of Ailanthus and Holly is interesting and novel.

There is a good-sized *Ailanthus* some 60 feet in height, a healthy young *Tulip Tree*, and numbers of the largest *Laburnums* that we have seen, some specimens being nearly 40 feet high, and with proportionate stems. The leaning and propped *Catalpa* should last for many years. Of *Oaks*, there are several uncommon species, an immense *Horse Chestnut*, many big *Poplars*, both *White* and *Black*, while the *Plane*, as usual, is well represented.

Finsbury Park can boast of a beautiful avenue of *Poplars*, which have grown rapidly since the ground of some fifteen acres was opened to the public in 1869. Other trees that do well are the *Elm* and *Purple-leaved Beech*, the *Ilex* or *Evergreen Oak*, *Willows*, *Ailanthus*, and *Birch*.

Finsbury may well be called the park of *Poplars*, this being the predominant tree, not only for avenue purposes, but scattered all over the grounds. Certainly the *Black Poplar* thrives well, and we noticed some large trees of the *White* species as also of the *Lombardy* by the hill top. The *Birch* is more at home than in any other of the parks, those by the pond-side having quite a natural appearance owing to their white bark and thriving condition, and as growing down to the very edge of the water. The *Weeping Laburnum* is unusual, and the *Thorns*, *Arbutus*, and *Willow* all appear to thrive.

By *Camden Road* and around *Holloway* and *Finsbury* the *Lime* and *Horse Chestnut* thrive remarkably well, better, we would say, than in almost any other part of *London*.

Clissold Park.—The grounds, which extend to 53 acres, were at one time attached to a private residence, which will probably account for the large size

of some of the trees and general well-furnished appearance of the park. Queen Elizabeth's Walk at one of the entrances is bordered by a row of well-grown Elm trees. The Deciduous Cypress thrives well here and has attained to large proportions, as have also the Evergreen Oaks, numerous varieties of Thorns, the Laburnums, and a varied collection of Pyrus and Prunus. Cedar of Lebanon has thriven well, and some of the specimens have a wide sweep of branches and well-developed trunks.

Two Mulberry trees have attained to rather unusual proportions; the largest, the stem of which is recumbent and propped and partly diseased, girths 7 feet at a yard from the ground. The other, standing at a short distance away, is a far finer and healthier tree, that has attained to a height of fully 30 feet, with a well-built trunk a foot in diameter.

The Pin or Swamp Oak (*Quercus palustris*), some 60 feet high, with a dark, smooth-barked trunk, seems to grow as freely on the bowling-green as in the marshes of its native country. The pride of the park is evidently the gigantic Willows by the river-side, with remarkably clean, well-formed trunks, some of which are over 10 feet in girth at a yard from ground-level. Thorns thrive unusually well, and the Glastonbury (*Cratægus præcox*) is the largest in London, as is also the immense specimen of the common species, which is carefully guarded by a fence, towards the centre of the park. This Thorn forms a perfect hemisphere of branches, 54 feet in diameter, the immense trunk, which divides into three near ground-level, being 2 feet in diameter. The Glastonbury is in perfect health, and though the straggling stem, which is about a foot in diameter, has been propped

for safety, the whole condition of this rare and interesting Thorn is favourable. The extreme height is about 18 feet. The Deciduous Cypress has attained to a goodly size near the bandstand, while the beautiful Cut-leaved or Imperial Alder by the water-side shows how well suited this tree is for damp situations. The Golden Catalpa near one of the entrance gates is very conspicuous and rivets the attention of visitors, while the White Poplars by the river-side rise to 80 feet in height, the best stem being 3 feet 8 inches in circuit at a yard up and the branch spread 22 yards. The Acacia looks as well and happy as any in London while some species of Oak are of unusual size and vigorous growth.

Waterlow Park.—As might be expected from the height at which it is situated, trees and shrubs thrive well in the comparatively pure air of this beautifully situated and well-kept park. Though only 29 acres in extent, the variety of trees is quite remarkable, as is also their healthy appearance and the size to which they have attained. Limes and Chestnuts have thriven well, so have the Elm, Beech, Poplar, and Willow, but the least common of all are the Hickories, which, with perhaps one exception, are the largest, healthiest, and handsomest in the Metropolis. They exceed 60 feet in height, and one of the best stems girths 9 feet at a yard up.

Other interesting trees are the Ginkgo or Maiden-hair, 50 feet high, with a branch spread of 19 feet, the stem girthing 3 feet 9 inches at a yard from the ground, and the Arbutus or Strawberry, the healthiest and best-furnished tree in London, with a branch spread of 30 feet. There are five large stems each about a foot in diameter. The old Mulberry tree,

which is semi-recumbent, is in a healthy state, the curiously irregular stem being about $2\frac{1}{2}$ feet in diameter and the branch spread 27 feet. Another rare and interesting tree is *Magnolia acuminata*, 50 feet high, the stem girthing 4 feet 8 inches and with a branch spread of 12 yards. The Paper Birch (*Broussonetia papyrifera*) also thrives well, as do the Sea Buckthorn, Tulip Tree, Bay Tree, and *Gleditschia triacanthos*.

Probably no finer Lombardy Poplars than those in this park could be seen in the Metropolis, and this may also be said of the Horse Chestnut, Willow, Pyrus, and Thorns. There is an aged Cedar tree; Evergreen Oak and many coniferous trees do well.

The site of the park and district of Highgate was in ancient times part of an extensive forest that encircled the northern side of the Metropolis, much of which has disappeared. Highgate Wood and Bishop's Wood are portions of this forest.

Springfield Park.—Most trees thrive well in the air of Upper Clapton, and this park has the advantage of being originally the private grounds of Springfield House, which will account for the age and size of some of the trees. Of the less common trees there is a goodly specimen of an ancient Mulberry, which with patching and protecting should last a number of years. Most of our finest trees—the Elm, Oak, Beech, Birch, and Sycamore—thrive on the higher sloping grounds, while a well-grown Purple Beech is quite an ornament to the lower ground. That uncommon London tree, the Arbutus, is well represented, and Hollies, Thorns, and Acacia are all thriving splendidly.

Ravenscourt Park contains a representative collection of trees, many of which are old and past their

best. Here the Plane has attained to a large size, some of the trees of this kind being upwards of 70 feet high. The Acacias too are of unusual dimensions, but show signs of giving way, as also do the Lebanon Cedars, these trees being of considerable age and suffering from atmospheric conditions.

Both the Lime and Horse Chestnut are growing freely, and a comparatively large Catalpa shows how well this tree is suited for withstanding the smoke and dust of that part of the Metropolis.

Golder's Hill Park contains some of the largest and healthiest of London trees. The Oaks are magnificent, which also applies to almost every other of our commonly cultivated forest trees, such as the Ash, Beech, Chestnut, both Horse and Spanish, and Sycamore. Even coniferous trees thrive well on the high-lying district, the Scotch Pine looking fresh and happy after nearly a century. Fruit trees in the spring months are quite a feature of this beautiful park, and the Quince is of large size. The Tulip Tree (*Liriodendron tulipifera*) is the largest in London, being 70 feet high and with a huge bole that girths 10 feet 3 inches at a yard from the ground, while the branch spread is 48 feet. It is in good health and flowers freely. Nowhere have we seen a larger specimen of the White Beam (*Pyrus Aria*) than that in these grounds, the stem of which girths 6 feet 3 inches at a yard up. *Pyrus Malus floribunda* also thrives well, and two goodly specimens occupy prominent positions on the lawn. Another rare and interesting tree is *Ptelea trifoliata*; while a specimen of the Judas Tree (*Cercis Siliquastrum*) is fully 20 feet high and flowers freely, which may also be said of the Quince and Pink-flowered and Cockspur Thorns, the latter 6 feet in circumference

of stem. A Maidenhair (*Ginkgo biloba*) is about 40 feet high.

The Common and Silver-leaved Lime have attained to fine proportions, while the Common and Weeping Birch look healthy and clean, the latter being an uncommon trait with this tree in the London district.

The Lombardy Poplars tower above every other tree, and it is questionable whether in any other part of the Metropolis can finer Beech, Elm, or Horse Chestnut, both pink and white flowered, be found.

Walnuts also do well, as is shown by the avenue of these trees, which average 35 feet in height.

Southwark Park.—There are few trees of special importance in this valuable open space, the Plane and Poplar, particularly the former, being planted to the seclusion of most other kinds. That the smoky, dusty, and chemically impure atmosphere tells hardly on vegetation of every description is well known, and for this reason even the too freely used Plane and Poplar are precious and doubly valuable. Both succeed amazingly in this confined South-Eastern district of the great Metropolis. The Ailanthus also grows rapidly, and looks the picture of health, while recently planted Lime trees show that for a time, at least, they can battle successfully with the impurest of London atmospheres. The White Beam tree and other species of *Pyrus* likewise do well, as do also the Cockspur and Paul's Crimson Thorns. A few young specimens of the Catalpa in good condition were noticed, as also the Sumach, Judas Tree and Laburnums.

Deptford Park.—Considering the atmospheric conditions, the few trees in Deptford Park or playground



Tulip Tree at Golder's Green



Turner's Firs on Hampstead Heath

are thriving in quite a satisfactory way. The grounds, owing to being only planted around the margin, have a somewhat bare appearance even during the summer months. On either side of the main entrance gate is a fair-sized Catalpa, while the Plane, Ash, and Ailanthus are all more or less at home in this thickly populated district. The Almond has attained to the height of 20 feet, and there are some fair specimens of the Cockspur and Common Thorns, Pyrus of sorts, and the Elder.

Paddington Recreation Ground can boast of no remarkable trees, the lines of Planes being most pronounced, while there are a few Lime trees and a line of Pink-flowered Thorn along one side.

Avondale Park.—The Weeping Willow and Japanese Lilac are the main features of this park, there being many full-sized specimens of each, this Lilac especially being a somewhat rare shrub or small-growing tree throughout the Metropolis. There are several nice young specimens of the Catalpa, healthy and thriving, while the Ailanthus and Fig also succeed well. Planes are not wanting, one side of the grounds having a line of these commonest of London trees.

Kennington Park.—The predominant tree here is the Ailanthus, which occurs not only in lines but as single specimens, and from its bright, healthy look and rapidity of growth appears to be particularly suitable for the soil and district. It flowered very freely during the present year. There are many hybrid Oaks, the variety *Fulhamensis* occurring in most parts of the grounds, one side of a square containing about twenty-five of these trees, which average 30 feet in height. The Silver Maple, Eastern Thuya, and Sea Buckthorn are all thriving well, while the Golden

Catalpa, though small, quite lights up the place in which it is growing. The Hollies, both green and variegated, are particularly fine, many of the well-developed specimens being from 25 to 30 feet in height, perfect in outline and in the rudest of health. Our native *Pyrus* (*P. torminalis*) is 30 feet high. This is a well-kept, well-furnished, and very interesting park.

Vauxhall Park.—These grounds, which are associated with the blind Postmaster-General, contain some trees of interest, particularly an old, though well-furnished specimen of the Mulberry, the irregular shaped stem of which girths 6 feet 5 inches at 2 feet from the ground. It has a good spreading head, the main stem, which is 30 feet high, having divided into two trunks at about a height of 4 feet. There are some nicely grown, mop-headed *Acacias*, which, as is usual everywhere throughout the Metropolis, have foliage of the brightest and most attractive shade of green, the *Ailanthus*, Weeping Ash, some well-grown *Planes* and *Poplars*, and a line of *Elms*. Four small trees, each about 25 feet in height and bushy in proportion, will here attract the observant visitor, for they are almost unique in their way, being *Cratægus Crus-galli* grafted on a stock of the Wild Cherry. They have quite an interesting appearance, and being slightly drooping in habit are as ornamental as they are uncommon.

Millbank Garden.—Conspicuous in this neatly kept, long, narrow garden are some five and twenty of that best of small-growing town trees *Acacia inermis*, or the mop-headed variety. They are of uniform height and backed up by a line of *Planes*.

Ruskin Park.—There are many trees of interest

and beauty in this high-lying park, which to a great extent is free from the impure atmosphere to which many of the metropolitan gardens and grounds are subjected. The varieties of *Acer Negundo* thrive here amazingly, and add quite a touch of colour to the more sombre-tinted foliage of trees and shrubs. The silver-leaved variety is particularly free and attractive. There are quite a number of ancient Mulberry trees, one of the largest being 40 feet in height, with a stem girthing 6 feet 7 inches at a yard from the ground. Of the Catalpas, both green and golden, there are good specimens, while *Paulownia imperialis* looks extremely happy and flowers freely. The Strawberry Tree is well represented by a tree 30 feet in height, with a branch spread of 21 feet, the largest stem being fully a foot in diameter. Two old Cedar of Lebanon trees have seen their best and are fast decaying, and of other coniferous species the Eastern Thuya thrives well and has attained to unusual dimensions. The Walnut is represented by several large, healthy trees, and a big silvery-leaved Huntingdon Willow is a conspicuous feature of the grounds. By far the largest of London's Turkey Oaks is growing here, the well-formed stem of which girths 12 feet 3 inches at a yard from the ground, while the branch spread extends to 100 feet in diameter. It is a noble specimen and well preserved. The Evergreen Oak also thrives well, and several Birch trees are amongst the finest in London. Some young trees of the Purple-leaved Sycamore are particularly handsome, and the Copper-leaved Beech stands prominently out. The Common Elm is of unusual size, and there are good avenues of the Horse Chestnut, which tree appears to thrive well on the stiff soil of which the grounds are

mainly composed. The Bay tree is fully 20 feet high, and there are many specimens of the Weeping Willow. Other interesting and rare trees are *Rhus Osbeckii* and a young, clean-stemmed specimen of the Judas Tree, both of which flower freely. By far the largest Wistaria in London is in this park.

Camberwell Green.—There are some uncommon trees growing in this crowded thoroughfare, including a giant specimen of the Paulownia, with a branch spread of 48 feet, the main stem being 18 inches in diameter. The John Innes Turkey Oak, planted in 1861, is thriving well, as are also the pleached Lime trees which surround a part of the grounds. Mop-headed Acacias are well represented, and the Holly and Almond have attained to goodly proportions, and are the picture of health. There is a nice young tree of the American Fountain Willow, and a rare Thorn has become well developed on the greensward in a pyramidal shape, the extreme height being only 10 feet, while the branch spread is 27 feet in diameter and almost a perfect circle.

Bethnal Green Gardens.—The large, healthy Hollies, both Common and Minorca, are the pride of these gardens; no finer line of these trees exists in London than that extending along the side of Cambridge Road. Standards of the same kind are also of large size, and have an imposing appearance where allowed plenty of room on the greensward. There is a nice Catalpa about 25 feet high, the lower branches having a spread of 30 feet in diameter. *Cotoneaster frigida* thrives well, as does the still rarer *C. nummularia*, which is unique in its way, being 30 feet high, the stem 12 inches in diameter, and the branch spread 27 feet.

The Laburnums near the main entrance gates are very fine, while some specimens of the Weeping Ash, healthy foliaged Ailanthus, several mop-headed Acacias, and *Prunus Pissardi*, as also goodly Thorns and Almonds, are all thriving splendidly in the by no means pure atmosphere of this part of the East End. A fair-sized Mulberry in good health and bearing fruit freely may be seen in one corner of these gardens. It is about 20 feet high, with a branch spread of 24 feet and a knotty stem about 15 inches in diameter at a yard up.

Meath Gardens.—Poplars of various kinds are the main feature of these gardens, while the Ailanthus is well represented and Hollies thrive luxuriantly. The Sumach is a good town shrub or small-growing tree that is here to be seen to perfection.

Trees in Squares

AS far as tree growth is concerned there is much of a sameness in the London squares, the Plane predominating to the exclusion of almost every other species. That this tree is well suited for resisting smoke and dust and also highly ornamental cannot be denied, but as several others are equally suitable for town planting the almost monotonous repetition of the Plane is by no means a necessity. The Ailanthus succeeds quite as well, better indeed in the most confined and smoky districts, while the Acacia, Ash, both Common and Weeping, and various kinds of *Pyrus* and Thorn are all not only highly ornamental, but well suited for planting in every part of London. Owing to its tall, usually branchless stem, the Plane imparts a bare, unfurnished appearance to many of

these gardens, especially when used alone or with few other lower growing kinds as underwood. For small areas, such as some of the squares, the Plane, being of gigantic growth and one of our noblest forest trees, seems rather out of place. In comparing Berkeley and Hanover Squares, where nothing but Plane trees have been planted, with, say, Bedford, Russell, or Gordon Squares, with their neatly kept turf and well-grown specimens of the Weeping Ash, Thorns of various kinds, the beautiful Cut-leaved Pyrus, Ailanthus, Laburnum, and Holly, which latter adds quite a cheery and furnished aspect to the grounds during winter, the difference is very pronounced. In *Russell Square*, where the Plane is largely planted, the Holly is 20 feet high, while the beautiful flowering Laburnums have attained to a large size, some of the stems being 18 inches in diameter. Two large Acacia trees, with a quantity of dead wood and rough diseased stems, are evidently amongst the oldest of their kind in London. This square, which is one of the largest in London, was laid out in 1810 by Repton, the famous landscape gardener.

The Planes in *Berkeley Square*, some two dozen in number, though of giant proportions, can hardly be classed as ornamental owing to the curiously buttressed or bottle-shaped trunks ; and in St. James's Square only a few Ailanthus, Thorns, and two solitary Elms relieve the monotony caused by the Planes, which in this instance are rather poor and weedy. The nineteen Plane trees in *Trafalgar Square* are other examples of the too free use of a single species. The Holly hedge and big Ash tree in *Cavendish Square* are quite features of the garden. While *Soho Square*, from its smoky and dusty surroundings, would hardly be

considered an ideal place for tree growth, yet the badly cared for Planes and Poplars and fairly satisfactory Hollies thrive as well as could be expected. The usual line of Planes surrounds *Torrington Square*, but in this case the alternating Laburnums offer variety.

In *Finsbury Circus* the trees are of fair size, especially the Ailanthus and the Weeping Ash. Mulberries also do well, and a large Catalpa proves how well suited this tree is for confined and smoky districts.

Trinity Square, by the Tower of London, is surrounded by a row of Poplar trees and a few Planes, none being of particular interest on account of either age or size. Thorns also thrive well when their dusty, smoky surroundings are taken into account, as do also a few Limes and a Horse Chestnut. The Tower Gardens contain some interesting trees, such as the Ailanthus, Common and Weeping Ash, Laburnums, and various kinds of Pyrus, all of which succeed satisfactorily. Of the Ailanthus there are several handsome specimens averaging 60 feet in height, with well-rounded trunks that girth from 5 to 6 feet at a yard up. *Cratægus pyracantha* also thrives well, as do the Plane and Sycamore. Within the Tower are some old Elm trees that have been preserved by bracing and filling holes in the diseased trunks. The Planes in front of the King's House are in a thriving condition, as are also the younger specimens by the river-side.

Cadogan Place Garden, which was also laid out by Repton, is of considerable interest from an arboricultural point of view on account of the varied collection of well-grown trees with which it is provided. There are nice examples of the Weeping Ash, Ailanthus, Laburnum, Holly, Catalpa, Thorns

of various kinds, and a group of Mulberries, which occasionally bear fruit in abundance. Elms of various kinds are, however, the predominant trees, with the Plane, Acacia, Sycamore, Horse Chestnut and Poplar. Among the less common trees are the Cut-leaved Ash, Field Maple, and a healthy clump of Common Ash.

Carlton House Terrace.—A well-furnished garden, where Thorn, Holly, Acacia, Poplar, and Cherry alternate with the Plane trees. The most remarkable tree is a large Laburnum, the stem of which girths 3 feet 9 inches.

Carlton Gardens, close by, contain two fair-sized Catalpa trees, a Holly 20 feet high, as well as an Acacia and fine gigantic Poplar trees.

Portman Square.—Mainly large, well-developed Plane trees, a Golden Catalpa, Mulberry, and an American Thorn about 40 feet high. An upright growing Plane tree at the western corner is considered a rarity and was named by Earl Ducie *Platanus cuneifolia-orientalis*.

Manchester Square.—Big Catalpa, the largest in London; Limes and Planes predominate. Lord Suffield on several occasions presented flowers of the Catalpa to Queen Alexandra.

St. James's Square.—Mainly Planes, with a few Ailanthus, Elms, and Lime. Two very fine specimens of an American Thorn, the stems being a foot in diameter, and with wide-spreading heads.

Cavendish Square.—The largest Ash tree in London is growing here, the stem of which girths 9 feet 2 inches at a yard up, while the diameter of branch spread is 90 feet. It is quite healthy and growing rapidly. The Planes are of large size and have been allowed ample room for branch development. A

Wych Elm has suffered from attacks of the goat moth and had to be severely pruned in consequence.

Bedford Square.—The Plane trees here are remarkable for both height and stem girth, some of the largest being fully 7 feet in diameter. In several instances the stems are curiously buttressed, or what might be described as ‘carrot-shaped,’ the basal portion being out of all proportion to the dimensions further up, a peculiarity that is shared by some of the Planes in other squares and gardens. Having plenty of room, they have become perfectly developed, and are well set off by the nicely kept and beautifully green sward on which they stand. The Ailanthus here looks green and happy, though none are of great age, and the Weeping Elms contrast well with the more upright species.

Hanover Square.—Large Planes, with a plot of grass in centre. Two half-dead Thorns and a small Chestnut alone relieve the Plane tree monotony. As usual the garden is surrounded with Lilacs.

Bloomsbury Square.—The most remarkable trees here are the Planes, Elms, and Poplars, all being of large size. The Ailanthus also does well, and the Figs, of which there are several, look healthy and are well developed. A goodly specimen of the Weeping Ash grows near the centre of the garden, the branch spread being wide and affording excellent shade. Limes also do well and look particularly refreshing in the spring, and some small specimens of the Weeping Elm give contrast to the planting.

Red Lion Square.—The curious old propped Elm tree and large Ash and specimen of Willow are about the principal trees of note, though the big Planes, beheaded Poplars, Limes, and Ailanthus all thrive

successfully in this dusty, heated square. Both the Holly and Laburnum, as also Thorns and the Weeping Ash, are represented by fairly healthy specimens.

Grosvenor Square.—Large Planes and Elms mixed about equal in numbers, also a few Ailanthus, Birches, Laburnum, and Holly. There is a clump of healthy Lime trees, as also Thorns and Almonds. Better furnished than most of the squares.

Mornington Crescent can boast of several good examples of the Weeping Ash; the Birch thrives well and so does the Poplar.

Leicester Square.—The trees in this pleasantly situated garden are healthy young Planes, which are relieved by four Weeping Elms, one at each corner of the square, and four Poplars. A couple of poor Thorns and a small Catalpa complete the number.

Kensington Square.—The principal trees of interest in this square are two large, well-furnished specimens of the Weeping Ash, as also a number of Hollies and Almonds, all of which are thriving in quite a satisfactory way. The Willow, a somewhat rare tree in our squares, is also represented, as are the Canadian and Black Poplar, Limes growing luxuriantly, Thorns of various kinds, the Plane tree and Sumach.

Lincoln's Inn Fields, which were opened to the public in 1895, contain a very representative collection of such trees as have been found suitable for cultivation in London. The Planes and Poplars are of gigantic proportions, and afford a pleasing shade to the numerous visitors to these well-kept and interesting gardens. Here the Weeping Elm thrives and looks the picture of health, while the Birches of goodly size puzzle one to account for how a native of the hills and open spaces can survive in the heated and impure

atmosphere of the great Metropolis. Many other trees and quite a long list of shrubs thrive marvellously in these historic grounds.

The Plane trees which surround the bandstand in oval form are of unusual size and curiously buttressed, a peculiarity that has been noticed in several of those by Park Lane and in some of the squares. Evidently, from the number and size to which they have attained, the Cockspur and other Thorns are quite at home on the soil of this field, while the Hollies are particularly large and healthy for the centre of London. There are many good examples of the Ailanthus, young trees of the Catalpa, huge old Poplars, a big Ash tree, lots of Limes, and a few fairly healthy Birch trees. The Weeping Elms are characteristic of these grounds, where they thrive amazingly. In the adjoining *New Square* Ailanthus are the principal trees, though a few big Planes and several Thorns, including the Cockspur, are well cared for. The Fig on the adjoining wall is a good specimen, about 30 feet high, which evidently sprang from an older stool that had been cut over years ago. In the grounds of the *Hall and Library* there is perhaps the nicest-shaped and best-furnished Birch tree in London, the branch spread being 33 feet, while the healthy and plentifully produced leafage shows that this mountain tree can survive and thrive even in the heart of the Metropolis. A healthy, well-furnished Thorn, several Ailanthus, and some Planes and Limes complete the collection.

Embankment Gardens.—The Embankment Gardens, which lie between Westminster and Blackfriars Bridges, contain nothing unusual in the way of trees. Planes and Poplars thrive well, as also a few Sycamores and various species of Thorns. Amongst the less common

kinds are the Ailanthus, a few small Catalpas, and a number of Weeping Elms, which give a distinctive feature to some of these grounds. Some large Fig trees may be seen in the rather confined front garden of the City of London School. The Planes along the Embankment are thriving well, in spite of root and branch interference.

Endsleigh Gardens.—Some of the most promising trees in this square are *Cotoneaster frigida*, Pyrus of sorts, Laburnums, Weeping Ash, and Thorns. Amongst the larger growing species are good examples of the Ash, Poplar, Lime (which thrives well so near Euston Station), and Ailanthus. The trees are somewhat crowded and require attention in the matter of pruning and thinning.

Argyle Square, W.C., contains some fine Horse Chestnuts, but is principally remarkable for the size and healthy appearance of both the Common and Weeping Ash. The Planes are good, while the Lime, Elm, and Ailanthus all appear to thrive well in this rather confined and heated square.

Euston Square.—From its nearness to the great railway terminus, with its smoky, dusty, and heated atmosphere, one would hardly consider that tree life would be in so satisfactory a condition as is the case in the gardens of Euston Square. Here the variety of trees is considerable, those most worthy of record being the Acacia, Weeping Elm and Ash, Holly, Laburnum, Birch, Beech, and several good forms of Thorn and Pyrus.

Farther away in the East End are many small squares and gardens, the trees in which are remarkable when the usual condition of the atmosphere is taken into account. The Ailanthus, Mulberry, Fig, large

Hollies, White Beam tree, and the Weeping Ash are all more or less common, and prove by their growth that they are fairly well suited for the heated and impure atmosphere of that part of London. The Plane and Ailanthus are, however, most commonly cultivated.

But it is in the East End, particularly the region of the Docks and that part lying between Commercial Road and the river, where the streets are narrow and confined, dusty, smoky, and heated, that one wonders most at how even a few picked trees can for long survive the effects of the impure atmosphere. To visit any of the squares on a hot July day, when the air is still and choked with impurities, gives one some idea of what the Poplars and Planes have to contend with in this part of the great city.

Wellclose Square.—Here there is quite a forest of Lime trees about 50 feet high, and several big crooked Ash trees, one a magnificent specimen that has been allowed room for branch development. The Black Poplar has also attained to goodly proportions, while the Canadian species seems equally at home, though it is apt to die out early. Sycamore thrives well.

Arbour Square.—Amongst the most remarkable trees in this East End garden are two ninety-years-old specimens of the Mulberry, the larger being about 30 feet in height, 32 feet in spread of branches, and 3 feet 2 inches in girth of stem at 3 feet from the ground. A large-leaved Catalpa is fully 30 feet high, the branch spread 33 feet in diameter, while the beautiful specimens of the Minorca Holly show that the gravelly soil suits their wants. There is a nice Weeping Ash and several standard, or should we say pollarded, Ailanthus, the annual cutting back of which causes the development of leafage to be greatly in excess of those

where pruning had not been resorted to. Mulberry trees are to be found in quantity in this district, where at one time silk spinning was engaged in, the leaves of these trees being used as food for the caterpillars. Figs do uncommonly well here and in the district around.

York Square, adjoining the above, contains some unusually large Hollies and Sumach; while *Albert Square*, with its Limes and Hollies, Planes and Laburnums, is a cherished spot in this thickly populated district.

Finsbury Square.—The trees here are of no particular interest, though the Weeping Elm and Ash and goodly specimen of the Cockspur Thorn by the drinking fountain are worthy of note. The Sycamore thrives well around the margin, and there are also fair specimens of the Lime, Plane, Poplar, and Ailanthus.

Princes Square.—The church here has been converted into a storehouse, and the graveyard is now a place for cleaning and sorting potato sacks. There are some big Poplars and small-leaved Elms of quite a respectable size, while the Thorn hedge with which the garden has been surrounded is now patchy and neglected; but enough is still left to show that with care this might have been the best Thorn hedge in the East End of London.

Royal Mint Square can boast of ten small Planes, somewhat weedy, growing amongst heaps of 'burs' and refuse building material. It is, however, an oasis in this thickly populated district and a boon to the children of the neighbourhood.

Royal Crescent.—This useful open space is surrounded by a thick screen of moderate-sized Lime trees. There are several well-grown Planes and healthy Ash trees, as also big Acacias and the Horse Chestnut.

A large Crab tree is conspicuous near the centre of the garden, as also some good Pyrus and Laburnum.

Norland Square contains some big Ailanthus and Acacias, as well as several healthy, well-developed specimens of the Turkey Oak, which latter, after all, is not a bad town tree. The Horse Chestnut and Sycamore are also good, and the pollard White Willows show by the size of stem that in their hey-day they were good specimens.

Ladbroke Square.—Here the trees are growing much too close, and in consequence many good and rare specimens are being fast killed out. Almost all kinds of trees do well, to wit, the Poplar, of which there are some gigantic specimens, Lime, Elm, Ash, Oak, and Ailanthus. The Silver-leaved Maple (*Acer dasycarpum*) also thrives to perfection; while the giant stems of the very old Laburnums by the fence-side show how well suited this beautiful small-growing tree is for town planting. Thorns, Walnut, and Pyrus of several kinds all succeed well, and some of the Elms have attained to huge proportions. The Golden Elder shows up well during the spring and summer months.

Lowndes Square.—One end of this enclosure contains very tall Planes, the other consisting of Elm, Sycamore, Lime, and several old Acacias.

Newington Green Gardens.—This is an oval surrounded by a double row of the inevitable Plane tree, many of which are forked like Willows that have been beheaded. With the exception of a solitary Acacia, a couple of Limes, and a few 'drawn up' Laburnums, the Plane holds sway. Excepting the dead Plane tree in Gray's Inn Gardens, the one in Newington Green is the only other that we have seen in London. The

old gardener attributes the death to 'something in the soil, as a Holly beside it has also died.'

Tower of London.—With two exceptions, the trees in the grounds of the Tower of London are of no great antiquity, the avenue of Planes, which is perhaps the main feature, having been planted at the instigation of Queen Victoria in 1841. The two old Elm trees by the wall on the river-side are, however, much older than any of the Planes, though, judging by comparison, neither is probably older than two hundred and twenty years. One of these trees is partially hollow-stemmed, while the heavier branches are diseased. Both stem and branches were attended to in the matter of filling hollows and bracing together such limbs as were considered likely to get broken from the trunk in stormy weather.

The Plane trees in the square opposite to the King's House are a mixed lot, and have been planted at various times, the Limes, too, being for the most part of recent date. By far the largest is growing in front of and near to the entrance door of that historic building, another by the Royal Chapel being of nearly like proportions. The Planes by the river-side are thriving well and afford a pleasant shade to that private roadway. Altogether, the Tower trees are in a satisfactory condition, and a far-spreading Vine and a Fig tree occupy prominent places on the wall of the moat near the river-side. At the main entrance gate there are quite a number of sixty to eighty-years-old Plane trees. Probably the oldest of the Tower trees is a Fig which is growing on the wall facing the Thames and is, in all probability, a couple of centuries old, as the height and thickness of stem—2 feet 7 inches—would lead one to believe. It is 38 feet in height and

covers 15 yards in length of the building. The Vines close by the above are evidently of considerable age and bear fruit in abundance, which ripens in hot seasons.

Tavistock Square.—Here the trees are suffering from over-crowding. Differing from other London squares, the paths are lined by avenues of trees, that around the margin being of Limes, which were planted at a distance of 6 feet from each other and are kept trimmed to a height of about ten feet. The cross paths are also lined with various kinds of trees, including the Almond, Purple Plum, and in some cases a mixture of several species, such as the upright Poplar, Ailanthus, Acacia, Elms, dwarf Catalpa, and Thorns. Next the roadway is a line of big Plane trees; inwards Elms, Acacia, Lime, and other trees have been indiscriminately planted, and so thickly that some have been killed outright and others are dying. This may well be called a square of avenues—a poor and badly carried out idea.

The Island Garden, Poplar.—By the breezy banks of the Thames the Plane tree thrives apace. Two nice Birch trees remind one of the open country, and the goodly specimens of Holly are as bright and green as in any part of the Metropolis.

Cartwright Gardens, W.C.—An avenue of Lime trees, unpruned, runs through the length of these grounds, while here and there around the margin are big Planes and Elms. The Fig tree is a conspicuous feature, and appears to do well, as does also the Ailanthus.

Woburn Square.—Here there are some well-developed trees, including Planes, principally around the margin, with Sycamore, Thorns of good size, Ailanthus, Elm, Horse Chestnut (rather poor), Elder, and Common Ash.

Torrington Square.—The trees here are principally

Elms, with Planes along one side, the other being mainly composed of Elm, Sycamore, Thorn, Ailanthus and Lime. The Thorn trees are particularly fine and healthy, some being 30 to 40 feet high, with stout, well-developed stems and wide heads of branches. The Weeping Ash in the centre of the grounds is quite a feature. Near by, at Byng Place, by the Catholic Apostolic Church, is a row of healthy, far-spreading Fig trees, which are used as standards and have quite a distinct appearance.

Duke Street Garden.—This is an innovation upon the general run of gardens, in that the Plane trees are planted in tubs and have succeeded well for about sixteen years, though the premature seed-bearing points out that their lifetime will be short. Raised about 10 feet above the level of the street, this rooftop garden, in which are sixteen Planes and an equal number of clipped Privets, is unique in its way, and shows what can be done by dint of perseverance under the most adverse conditions. The trees are about 14 feet high, and annually receive a beheading and trimming to keep growth in bounds, the tubs being circular and about 6 feet in diameter.

Whitfield Gardens.—These gardens, the entrance to which is from Tottenham Court Road, contain some well-grown trees that, considering the confined situation and dusty locality, are healthy and vigorous. The Thorns are particularly good, especially the large-leaved variety that is growing by the gate leading to Whitfield Street, the common species also thriving nicely. There is a good Silver-leaved Lime and a Plane tree, as also a Wild Cherry, several Laburnums, and a Birch that, taking into account the locality, are all in a healthy and thriving condition.

These are some of the principal places in London where tree growth is encouraged, but there are many others of smaller size, so that the list is by no means exhausted, and, as often happens, it is in the confined areas, where the atmosphere is heated and impure, that one is most elated with the occurrence of uncommon trees or those of a particularly healthy appearance. Special attention has been directed to the squares and churchyards throughout the East End and other places where the air is most impure, as it is there that the difficult problems of successful tree growth have to be contended with. To describe all the squares and other open spaces and their trees would be endless repetition, though care has been taken that typical examples of all the Metropolitan areas have been represented. The majority are planted with the Plane, Poplar, Lime, and Ailanthus, the boundary being often shut in for privacy by hedges of the Lilac, Thorn, and Laburnum. As we recede from the heart of the City, the cultivation of trees becomes more simple until at, say, Hampstead, Golder's Green, St. John's Wood, Maida Vale, Bayswater, Highbury, and Kensington almost any hardy species will thrive in quite a satisfactory way. Even in and around Ladbroke Gardens, at Notting Hill Gate, quite a host of trees succeed admirably, and wherever the ground is high-lying the air is comparatively purer and vegetation succeeds better than in the low-lying and confined areas.

Trees in Private Gardens

HIDDEN away in unexpected corners throughout London are not a few rare and interesting trees, the reasons for planting such in their confined and

out-of-the-way places being difficult to explain. In all probability the owner or tenant of the garden plot had an interest in trees, and so the seedling plant or 'slip' that he borrowed from some kind friend got inserted in its rather unusual quarters. In the case of the larger private gardens one can more readily account for the planting of a variety of the less common trees, as in all likelihood the gardener in charge of such, or the nurseryman who laid out and planted the grounds, had a knowledge of the kinds that were most likely to succeed in the London district. Nearly opposite to the house occupied for a time by Charles Dickens, in Marylebone, may be seen tucked away in a tiny front garden a huge specimen of the Catalpa, the far-spreading branches of which look as if they would push over the boundary wall in order to get room for development; while in a very cramped position at the back of the same house is an unusually fine tree of the rare yellow-flowered Pavia or Horse Chestnut. Growing in a small 'penned in' front garden in Campden Hill Road, W., and within reach of the passing public, are 20-foot-high specimens, in the best of health, of the Maidenhair and Tulip Trees. Surpassed in neither size nor height by any example in the country of our native Spindle Tree, is the 30-foot-high tree that occupies a recess by a motor garage at the back of Albany Street. The Mulberry that hangs over the wall in Great Smith Street, Westminster, is another example of an uncommon tree being planted in a confined space; but probably in many cases the planter had not taken into account the size to which his cherished seedling or sapling would attain in the heart of London. Proudly a lady pointed out to me the other day in her tiny patch

of ground at Piccadilly a Peach tree in full bearing that she had raised from a 'stone' brought from Cannes ; while not far distant is growing a seedling from a famous Oak tree at the Dukeries. The man who chose *Kæltreuteria paniculata* and the Zelkova from a nursery list to plant in his garden, 9 feet by 6, at Hampstead probably knew as much of botany as the old lady in Holloway who planted a cutting upside down in order to produce a weeping tree. The fair-sized Maidenhair Tree that stands in front of a girls' school in the Commercial Road, where there is only a patch of ground a couple of yards in width between the wall and street, is another puzzle to account for, as are the Hazels at the Asiatic Home and big Holly and Fig tree in a continuation of the same road. But many of such examples are to be noted in both urban and suburban districts of the great Metropolis. The Bird Cherry is frequently found growing in old and disused grounds, probably from self-sown seed, and in quite a number of small gardens the Mountain Ash or Rowan and its near ally the White Beam tree are growing freely. Amongst the larger gardens and grounds, where a variety of less common trees may be seen, are Holland Park, Ham House, Holly Lodge, Lambeth and Fulham Palaces, and in the Chelsea Physic Garden.

Buckingham Palace Garden contains a rare collection of interesting trees, some of which have been planted by Royalty and other distinguished persons. The two Planes planted 72 years ago by the late Prince Consort show well the rate of growth of this tree in London. Of particular interest is one of the Mulberry trees said to have been introduced by James I. The Catalpas are very good and the Arbutus are

healthier than most others in London. *A. Andrachne*, though it has suffered from storms, is a good specimen in which the beautiful cinnamon-tinted bark is well shown off. Several species of *Pyrus* and *Cratægus* have attained to a large size, also the Evergreen Oak, Manna or Flowering Ash, and Horse Chestnut.

Lambeth Palace grounds contain some very old and decrepit Elm trees and a number of young fast-growing *Ailanthus*. The trio of *Catalpas* are goodly sized specimens, the largest with its far-spreading branches being a good example of its kind, the stem girthing 5 feet 7 inches at three feet up. In the stems are several flaws and diseased holes that require filling and other attention. Most attractive, however, in these grounds are the historic Fig trees, or rather off-shoots from the parent plants, which were supposed to have been planted by Cardinal Pole during his sojourn as Archbishop at Lambeth. There are now five trees, which average 30 feet in height, one of the largest stems girthing 2 feet 9 inches near ground-level.

Fulham Palace.—The grounds at Fulham Palace are rich in rare and curious trees, some of which are probably the finest in London. Fortunately, from an arboricultural point of view, amongst the Bishops of London several—Compton, Grindal, Porteus, Howley, and Blomfield—were well-known gardeners of their day. The Elm avenue was planted at the instigation of Compton, also the Honey Locust; the famous Cedars, now trees of the past, by Porteus; Blomfield planted the *Ailanthus*, which is now one of the largest in London, girthing as it does $10\frac{1}{2}$ feet at a yard from the ground. John Evelyn, who published the 'Sylva,' often paid a visit to Fulham, and some of

his notes written in 1681 regarding these grounds and their plants are interesting. Some of the less common trees are the Virgilia, Catalpa, Fulham Oak, Strawberry and Judas Trees, Flowering Ash, Honey Locust, Deciduous Cypress, and by far the biggest Plane in London, the stem of which at a yard up girthed 18 feet 8 inches when measured by the writer in 1918.

Chelsea Physic Garden.—This garden, which dates from 1673, contains a rare collection of trees, including large specimens of the *Kœlreuteria paniculata*, Mulberry, *Catalpa bignonioides* and *C. Kæmpferi*, Black Walnut, Walnut-leaved Sumach, Maidenhair Tree (two specimens), and one of the largest Yew trees in London. Other uncommon species are *Styrax officinale*, the Persimmon and Pomegranate. The Black Walnut is a noble tree, the branches having a spread of 60 feet, the well-rounded trunk, which rises 18 feet without a branch, girthing 5 feet 9 inches at a yard from ground-level. The *Kœlreuteria* has a branch spread of 30 feet and a stem girth at 3 feet of 4 feet 10 inches. *Catalpa Kæmpferi* has a branch spread of 36 feet, the stem being 15 inches in diameter.

Gray's Inn Gardens.—The history of the trees in these famous gardens dates from a very early period, as amongst the records of the Society in 1583 is a list of the Elms, which are referred to as follows: 'In the grene Courte xl Elms and 111 Walnut trees.' The fact that in all ninety-one Elms and an Ash were growing in these grounds proves that even at that early date the list of trees was considerable. Bacon took over the management of the garden in 1597, and in the accounts of that year £7 15s. 4d. was paid to him 'for planting of trees in the walkes.' In the following year authority was granted to 'supply more

young Elme trees in the places of such as are decayed, at the discretion of Mr. Bacon and Mr. Wilbraham, so that the charges thereof do not exceed the sum of seventy pounds.'

Mr. Bacon kept just within bounds, for on April 29, 1600, £60 6s. 8d. was paid 'for money disbursed about garnishing of the walkes.'

It is generally recorded that Bacon planted the famous Catalpa which occupies an almost central position in these gardens, and the tree is well known as 'Bacon's Catalpa.' References to the history and introduction of the Catalpa, however, seem to point out that the tree was first described in 1731 by Catesby, and again by the same writer in his 'Trees of North America' in 1770. The Catalpa is described and figured in the *Botanical Magazine*, 1808, where it says 'the plant has been long an inhabitant of our gardens, being introduced by the same botanist (Catesby) about the year 1728. It bears the smoke of large towns better than most trees; the largest specimen we have ever seen grows in the garden belonging to the Society of Gray's Inn.'

There are other trees of large size, some of historic interest, in the grounds of Gray's Inn. The Planes are amongst the finest in London, the largest being known as the 'Wallace' tree, though others are of equal height, but not approaching this one in girth of stem. The curiously buttressed stem of the Wallace tree girths 12 feet at a yard from the ground, and having been allowed ample room for development the branch spread extends to 75 feet. Two of the Plane trees died in 1918.

The original or Bacon's Catalpa is a half-prostrate tree, the main stem for about 9 feet in length being



Bacon's Catalpa at Gray's Inn



Thorn at Grove House

partially embedded in the soil and girthing 5 feet at the point where it takes an upright inclination. The branches grow in a somewhat horizontal direction, and are of considerable length, the widest spread being 45 feet; they are supported by fifteen props. One branch is buried in the soil and has probably rooted. The total height is about 28 feet, and several of the branch tips are dead or dying. As near as can be ascertained the stem is about 7 feet in girth at ground-level. On the opposite side of the garden is a seedling said to have been raised from Bacon's tree, the branch spread extending to 60 feet, while the stem at ground-level and 3 feet girths 6 feet 9 inches and 5 feet 10 inches respectively. It is in splendid health and 40 feet high, but like the parent the heavy branches, four in number, take a somewhat recumbent and horizontal method of growth, and are propped for support.

Both trees are growing on a mound, or more probably the soil has at some time been banked up around the stems and procumbent branches.

Two cuttings taken from Bacon's tree were reared and planted in the Terrace by Mr. Henry Griffith, one of the Benchers. When measured in 1918 the largest was 12 feet in height, 12 feet in spread of branches, and 10 inches in circumference of stem at ground-level.

Holland House.—Included in the extensive collection of trees at Holland House are many rare and interesting species. By far the largest Catalpa in London, twice as big as the famous Bacon's Catalpa in Gray's Inn Gardens, is growing near the front entrance to Holland House. This magnificent tree, though well preserved in the matter of supporting,

is showing signs of age and decay, the top portion being stag-headed, though otherwise the amply produced foliage is perfectly healthy. The gigantic trunk girths, at 2 feet and 5 feet, 12 feet 1 inch and 8 feet 10 inches respectively. In all probability this tree was introduced and planted by Peter Collinson, who, it is well known, assisted Lord Holland in laying out and planting these beautiful London grounds, and was constantly receiving plants and seeds from America. Another Catalpa has a girth of 7 feet 2 inches at a yard up and a branch spread of 50 feet, and there are many others of smaller size and several of the Golden variety.

Growing near the large Catalpa is an unusually fine specimen of the Weeping Ash, and at a short distance away some half a dozen trees of the silvery-leaved *Pyrus salicifolia*. Another very rare *Pyrus* is labelled Michauxi, of which there are two good trees on the lawn near the house. Many specimens of Ailanthus are scattered over the grounds, one of the largest girthing 7 feet 11 inches at a yard up, with a branch spread of 51 feet. The beautiful pea-green foliage of the somewhat rare Deciduous Cypress catches the eye in several parts of these grounds; the stems are of large size, one of the biggest being 70 feet in height, with a trunk measurement of 7 feet 5 inches at a yard from ground-level. Another is 60 feet high, with the usual narrow branch spread, which in this instance does nowhere exceed 14 feet. *Magnolia tripetala*, the Umbrella Magnolia, is a goodly sized, healthy tree, with leaves that often reach to 16 inches in length. The Lebanon Cedars which were planted by Charles James Fox have recently all succumbed to either accident or disease, the largest now standing being

covered by a healthy growth of Ivy. There are several Evergreen Oaks as well as a selection of rarer and more beautiful trees. These include the Liquidambar, Kentucky Coffee tree, Golden-leaved Elm, *Platanus acerifolia Suttneri*, 35 feet high, Amelanchier, several kinds of Acacia, and quite an interesting collection of Oaks. The Purple-leaved Beech and several Walnuts are goodly specimens of their kind.

Cam House has charming grounds and two remarkable Oak trees, the larger girthing 10 feet at a yard from the ground, and quite healthy. The Duke of Argyll wrote about these Oaks that they 'would have done no discredit to any ancient chase in England.' There is a good specimen of the Manna Ash, the stem girthing 6 feet 3 inches at a yard up, and one of the biggest Acacias in London. The Laburnum has attained to a goodly size, and overhanging the front entrance a promising *Cotoneaster frigida* shows how well adapted this small-growing tree is for planting in smoky localities. *Holly Lodge* adjoining has a good specimen of the Mulberry, some well-grown Elms, and a comparatively large tree *Cotoneaster*. The Common Yew, which is not a good subject for planting in the Metropolis, looks healthy and happy.

Dulwich Picture Gallery.—Some of the trees here were planted at an early date and have attained to large dimensions. The Deciduous Cypress is one of the best in this country, being 80 feet high and 8 feet in girth of stem at a yard from the ground, the bole being remarkably clean and tapering very gradually, the estimated cubic contents being 60 feet. It is in perfect health, and is one of the few trees in this country that have produced cones, these being plentiful when I visited the place in 1918. The Catalpa, too,

is particularly fine, the huge trunk girthing 10 feet 6 inches and 9 feet 3 inches at 3 feet and 5 feet respectively, the branches covering a spread of 60 feet. It is said to be 180 years old. It has been well cared for, a big, heavy branch being propped in order to prevent its falling away from the main stem. Nowhere in London can a larger Judas Tree be seen than in these grounds, it being 40 feet in height, the well-formed trunk girthing 7 feet 11 inches at a yard from ground-level. There are also two very fine Mulberry trees and a huge specimen of the False Acacia, as well as *Celtis occidentalis* and *Zelkova crenata*. *Ptelea trifoliata* has also attained to a large size in these grounds.

Sir Alma Tadema's Garden.—There are many beautiful trees in the grounds attached to the house in Grove End Road that was for many years the residence of this distinguished artist. The Evergreen Oak predominates, as at the entrance gate about a dozen overhang the marble fountain, while on the lawn is a perfectly developed specimen with a wide spread of healthy branches and a stem about 18 inches through.

Hollies, both green and variegated, grow wonderfully well, several shapely, healthy trees being fully 25 feet in height, and perfect cones of shining foliage. There is a nice young Mulberry tree, a big double-flowered Peach, and a Magnolia of fair dimensions.

A very fine Huntingdon Willow grows by the top of the grounds, the far-spreading branches having a decidedly weeping habit. It is a beautiful garden, with the most artistic pergolas and well-kept grounds and trees that have been laid out entirely regardless of expense.

St. Katharine's, Regent's Park.—There are several rare and interesting trees in these grounds, chief of which is a giant specimen of the Fulham Oak, with a trunk girth of $7\frac{1}{2}$ feet at a yard up and a total height of 80 feet. The bark is remarkably thick and cork-like. The Scarlet Oak and Tulip Tree are well represented in specimens some 40 feet in height ; while the Eastern Thuya cannot be seen in better condition in any part of the Metropolis than at St. Katharine's, several specimens being 40 feet high, bushy and healthy.

There is a well-rounded tree of the Manna Ash, which flowers and produces fruit freely. The Evergreen Hawthorn and also the Large-fruited are thriving well, the latter being a rare and interesting London tree. But most trees seem to thrive in the heavy soil of this garden, the Cornish Elm being 70 feet high, the Common Birch 40 feet—good for a London garden—and the Evergreen Oak, Turkey Oak, several species of Pyrus, and Common Holly.

Mildmay Park Conference Hall Gardens.—Here is one of the largest and by far the healthiest and farthest spreading of London Mulberry trees. It is of giant proportions, the stem girthing, at 3 feet and 5 feet from ground-level, 6 feet 4 inches and 6 feet 8 inches respectively, the branch spread being 60 feet and the height 30 feet.

Two other trees of the same kind are of smaller growth, the stem of the larger girthing 4 feet 10 inches at a yard up. There is a fine Pear tree here, the clean stem girthing 6 feet 3 inches at a yard from ground-level. The square is surrounded by a line of Planes, while some nice healthy White Poplars occupy a conspicuous spot near the street side of the gardens.

There is also a Weeping Ash, 36 feet spread of branches, a healthy young Ailanthus, and other commoner kinds.

Bank of England.—Few visitors to the Bank of England are aware that it contains a delightful old-world garden and one of the largest Lime trees in the Metropolis. This tree, though of no unusual height, is remarkable for the size of stem, and covers a large area of ground with its far-spreading limbs. It is fully 60 feet in height, the branch spread extending to 70 feet, while the huge trunk girths 6 feet $2\frac{1}{2}$ inches at a yard from the ground and 6 feet $1\frac{1}{2}$ inches at 5 feet up. This tree, though said to have been planted in 1790, and spoken of in 1855 as the largest of its kind in London, is, judging from present size and rate of growth of the Lime under normal conditions, probably fifty years older, though it is wanting from an engraving of the place dated 1790. It may be well to remember, however, that this Lime tree is growing on the site of an old City churchyard. But whatever its age, this tree is certainly one of the largest and healthiest of its kind in the Metropolis.

At the request of the writer, this Lime tree was pruned and fresh soil substituted for the worn out during the autumn of 1919.

Charlton Park.—The trees here are magnificent, especially the Spanish Chestnut and Lime. There is an avenue of fine old Elms on the east and another of Horse Chestnuts by the west drive to the house, while a pleasant walk overshadowed by Yew trees stretches across another part of the grounds. Growing on the lawn is an immense Horse Chestnut; the branches,

some of which have become rooted, cover a large area of ground. Amongst the less common trees are two giant specimens of the Mulberry, which tradition says were the first introduced to England, and judging from their size and general appearance, the statement may well be correct. The largest girths 8 feet 7 inches at a yard from the ground. By far the finest Judas Tree that has come to our notice is growing here. The stem girths 4 feet 9 inches at a yard from the ground, the branch spread being 30 feet in diameter. Although semi-procumbent, propped and wired, this tree is in perfect health and produces flowers in abundance. Another rare tree of unusual size is the *Liriodendron* or Tulip Tree, which was most probably planted at the instigation of Evelyn, whose liking for this species is well known. Though the top is dead, the lower half looks green and flourishing and was flowering freely. The ponderous stem girths 9 feet at a yard from the ground-level, but is, unfortunately, showing signs of decay. There are many other interesting and rare trees growing in this fifteenth-century park.

The Hill, Hampstead Heath, owned by Lord Leverhulme, contains some beautiful specimens of the Beech, Elm, and Spanish Chestnut. The Beech trees, which occupy prominent positions on the lawn, are of gigantic proportions, one that was felled recently being 5 feet in diameter of stem. Some of the remaining trees of the same kind are 12 feet and 10 feet in girth of stem at a yard from the ground. The stems of all the Beeches are remarkably clean and cylindrical, and the branch spread quite in proportion to the height. A solitary Scotch Pine also occupies a position beside one of the Beech trees, where evidently it was

planted about the same time as the largest of those on the Heath.

Mill Hill.—The rarer trees here were planted by Peter Collinson when he owned the property, and are of particular interest as their sizes were recorded by Loudon, who visited the place in 1835. The Pencil Cedar (*Juniperus virginiana*) is a magnificent specimen, 52 feet in height, the unusually large trunk girthing 7 feet at a yard from the ground. Thriving nicely in rather dampish ground is a wide-spreading Deciduous Cypress (*Taxodium distichum*), 45 feet high, the well-rounded bole girthing, at 3 feet and 5 feet, 8 feet and 7 feet 3 inches respectively. From Loudon's measurements the tree has increased greatly in girth since 1835. One of the finest specimens of the Pin or Swamp Oak (*Quercus palustris*) in the London area is that at Mill Hill, which is 55 feet high, the branch spread being 60 feet, and the stem girth, at 3 feet and 5 feet up, 7 feet 3 inches and 6 feet 4 inches. The old and gnarled Acacia stem girths 12 feet 4 inches at a yard from the ground, but dead branches are appearing towards the top. The Cedars of Lebanon are usually shown as the most interesting of the Mill Hill trees, the largest, which stood near Collinson's house, girthing, at 3 feet and 5 feet, 15 feet 6 inches and 15 feet, the spread of branches extending to 66 feet. This tree has been sadly damaged by the wind, some of the biggest branches having been torn away. It is, however, in good health, and should last for many years to perpetuate the memory of Collinson, who is known to have planted the tree. Two other Cedars are interesting as having been planted by the Duke of Richmond. They stand on each side of a path, 18 feet apart, the huge trunks girthing 14 feet 2 inches

and 12 feet 1 inch at 3 feet and 5 feet. In the Eastern Plane (*Platanus orientalis acerifolia*), which was measured by Loudon, the branch spread is unusual, reaching to a distance of 78 feet, while the trunk girths 10 feet 4 inches at a yard up. There is a good, though sadly storm-disfigured, tree of the Hemlock Spruce (*Tsuga canadensis*), the bole of which girths 6 feet 8½ inches at a yard from ground-level. Evidently the Evergreen Oak likes the soil here, for a giant trunk of the largest is 11 feet 5 inches at a yard up, the branch spread being 53 feet. The Tulip Tree is fairly good, having reached the height of 42 feet, the stem girth being 5 feet 11 inches at a yard up. An uncommon Thorn (*Cratægus heterophylla*) is of giant proportions, the stem, which divides into two, being 35 feet high, with a girth of 5½ feet at a yard up. The Portugal Laurels are the finest in this country, two specimens girthing respectively 7 feet and 6 feet at a yard from ground level. These were referred to by Loudon. The outer branches have evidently been pegged down, as the area of ground now covered by the offsets of the two trees is computed at half an acre.

Carlyle's Garden.—There is little of interest in this garden at Chelsea except the Vine and Ivy that were planted by Carlyle, the Pear tree beneath which Mrs. Carlyle used to sit, and a goodly Ash tree some 50 feet in height, the stem girthing 3 feet 9 inches at a yard from the ground. Beneath this tree Carlyle did a great amount of work.

Tree in 'Times' Square.—The tree which Mr. John Walter, M.P., preserved with such care in the square of *The Times* Office, and which was a mystery to most people, was an old and well-developed specimen

of the North American *Ptelea trifoliata*, a tree of small growth that is nearly allied to our common Elm. Curiously enough, this tree fell the same day that Mr. Gladstone, the eminent tree-feller, resigned.

Dickens' Garden.—Attached to the house occupied for many years by Charles Dickens (No. 1 Devonshire Place), and from which came forth quite a dozen of his most popular works, is a beautiful garden with only a few trees that are worthy of note.

There is a gigantic Black Italian Poplar, some 75 feet in height, the well-formed trunk girthing 7 feet 4 inches at a yard from the ground. Along two sides of the lawn is a line of healthy, fast-growing Lime trees, while the Common Laburnums, Acacia, and Elder all succeed well in these pleasant and interesting grounds.

Devonshire House Garden.—Nowhere in Central London are there so many fine Ash and Elm trees as in this large and well-kept garden. Some of the Elms are of goodly proportions, two which abut on the lawn being 75 feet in height and quite useful timber trunks that girth 11 feet at a yard from the ground. The Ash trees are many, healthy and well-developed, the clean, well-rounded boles measuring $6\frac{1}{2}$ feet in circumference at 3 feet up. There is quite a plantation of mixed trees at the end of the grounds farthest from the house, consisting of Plane, Chestnut (Horse and Spanish), Lime, Black Italian Poplar, Elm, and Ash. Interspersed with these are Elders and Thorns, all forming rather a jungle that would be improved by careful thinning and pruning. As before said, the Ash are remarkably good specimens and point out how well adapted this tree is for planting in London, even the West End.

Regent's Park College.—There are several out-of-the-way and uncommon trees to be seen in these grounds, where the Deciduous Cypress has attained in half a dozen cases to a height of 60 feet, while the two old leaning Catalpas are amongst the best of their kind in London, the largest having a trunk-girth of 5 feet 5 inches at a yard up. They are both of the flat-headed, far-reaching type, and flower freely during most seasons. The Common Birch is 40 feet high, thickly foliated and healthy; the Manna Ash, a shapely, round-headed tree with a branch spread of 36 feet, has produced seed freely. Other interesting trees for the London area are the Scotch Pine, Eastern Thuya, and Indian Cedar, all healthy and long established. The group of Evergreen Oaks is particularly fine, some of the trees having a branch spread of 50 feet. Paviae thrive well, so do several interesting Thorns, and Hollies 25 feet in height are to be seen. On the front lawn is a Silver-leaved Lime of goodly proportions, and near by two badly-coloured Copper-leaved Beech trees, the purple being faint and tinted with green. Other good trees are the Liquidambar, 30 feet in height, Cornish Elms, 80 feet high, the Weeping Ash, and Purple-barked Willow. The Honey Locust thrives well, as do the Sumachs and cut-leaved Maples, especially the small-leaved kinds.

St. Dunstan's, Regent's Park.—There is a fairly representative collection of trees growing in these grounds, including a goodly specimen of the Mulberry on the front lawn, *Fatsia japonica*, many in flower, bright-foliaged Golden Elms, and several distinct species of Thorn. The Mulberry is a particularly handsome tree some 30 feet in height, the well-developed head of foliage having a spread of 39 feet,

while the stem girths 5 feet at a yard from the ground. It is in perfect health and bears fruit in quantity. The Common Yew, which is rarely seen in good condition in the smoke of London, is here healthy and fast-growing, with the greenest of foliage, some of the trees being 40 feet in height. Hollies also do well, the Hedgehog variety being one of the finest in the Metropolis.

There are many healthy, far-reaching Sumachs, which associate nicely in foliage tint with that of the Purple-leaved Hazel, which here revels in the sunshine. Almonds do well in the stiffish soil of these grounds, also Maples, of which there are several of the finest cut-leaved forms. A standard Magnolia flowers freely, while the Catalpa has formed a goodly specimen, as have also the Ailanthus and Gleditschia.

Grove House, Regent's Park.—Pleasantly situated on the northern bank of the Regent's Canal, the grounds of Grove House are by far the best planted and most artistically arranged of any in the neighbourhood. As well as the Beech trees already referred to, there are some good specimens of the Turkey Oak, Elm, Chestnut, and Sycamore, while the gnarled and wind-tossed Thorn on the lawn has few rivals in either age or size. Here, too, are some of the last dying-out specimens of London's coniferous trees, including the Austrian and Weymouth Pines and the Eastern Thuya, all of which did well at one time, but are now nearly ousted by the impure, smoke-laden atmosphere. The collection of rare trees and shrubs, combined with the charming views and vistas and well-kept grounds, all combine to render this one of the most desirable and charming places in the North-West part of the great Metropolis.

Tavistock Place.—The grounds now in occupation of the Passmore Edwards Institute contain some interesting trees. Here is a Mulberry that was planted by Charles Dickens when he lived in 19A Tavistock Place, the house at present being the offices of the Theosophical Society. This interesting tree is now 32 feet high, the branch spread being 27 feet. The stem girths 2 feet 7 inches at a yard from the ground, and is of irregular thickness, the girth at 6 feet, owing to stem protuberances, being greater than that recorded—a trait common to the Mulberry. Several years ago this tree was partially uprooted, but it was again placed in as erect a position as possible and supported by a stout prop. On the opposite side of these grounds, which were formed by throwing several gardens, including that attached to Dickens's house, into one, is a comparatively large Catalpa, the branches of which cover a diameter of 36 feet, the leaning stem girthing 4 feet 8 inches at a yard up. This tree is also propped, owing to three heavy branches having been sent out from the main trunk at a height of 6 feet from the ground. A big Weeping Ash and several majestic Plane trees also ornament these grounds.

The Old Nursery at Whitechapel.—That there was a nursery garden in Whitechapel as early as the eighteenth century we know from a sale catalogue with the following title-page: 'Catalogue of a Compleat Collection of Plants, Shrubs, and Fruit Trees; Consisting chiefly of valuable Exotics, beautiful Flowers, and a large number of Pines in full Fruit and succession; also Garden Chairs, Frames and Utensils, of Mr. William Bennett; Cornfactor and Biscuit Baker, Deceas'd; which (by Order of the Executrix) will

be sold by Auction, By Mr. Langford & Son, on Thursday the 27th of this Instant, March, 1766; at the Garden, in Whitechapel Fields, next the Half-way House, leading to Stepney.' The contents of the garden are catalogued in eighty-two lots, and amongst other shrubs were *Viburnum dentatum* and *Ledum palustre*, Cornish Bird Cherry and Hibiscus. In Rocque's map of London, 1746, the Fields are shown contiguous to the Mulberry Gardens. According to the map in Baldwin's 'New Complete Guide,' 1766, the Fields occupied a space on the south side of Whitechapel Road and Mile End, and extended east from the London Hospital nearly down to Ratcliff Highway.

Trees on Open Spaces

A PART from the parks and squares, there are some half a dozen open spaces where tree growth, though in no way remarkable, is worthy of record, and such places are rendered all the more valuable and rural from the fact that they are open at all times to the public, while the growth, in a few instances at least, is natural and unconfined. Such places are Hampstead Heath, London Fields, Hackney Marsh, Wormwood Scrubbs, Tooting, Wandsworth and Clapham Commons. There are also a few minor places such as Hackney Downs, Stoke Newington and Eel Brook Commons.

Hampstead Heath.—Amongst all the London parks and open spaces, by far the most rural and beautiful is Hampstead Heath. Including Parliament Hill, the area of the Heath is fully 500 acres of wild, undulating

country that is for ever preserved for the benefit of Londoners. Owing to its elevated position—443 feet above sea level—and comparatively pure air, trees thrive remarkably well over the whole area, and the original wild character has been retained by the unrestricted growth of bracken, gorse, and Birch.

Hampstead Heath is one of the few places in the London area where the native Scotch Pine is still to be found, and even there it is gradually dying out and becoming infested with the wood wasp and other injurious forest insects. There are some noble specimens of the Beech, as also Elm, Poplar, and Willow. The latter is quite a feature of some parts, as are also the patches of self-sown Birch. Some old Oak trees are pointed out as remnants of bygone days. The Elms towards the lower parts of the grounds are sometimes of gigantic proportions, while many Sycamores that have attained to large size may be seen on the way to Parliament Hill. In the private gardens are many trees of interest, the Acacia flourishing everywhere, while Thorns of many kinds, Pyrus, Laburnum, and Ailanthus are all well represented. Even the British Oak, which is not suitable for the smokier parts of the Metropolis, does well at Hampstead, and several specimens of large size and old age are dotted about the common, where also the Turkey Oak and red American Oak are represented in not a few of the gardens that are attached to private residences. *Acer dasycarpum*, the Silver Maple, occurs in some plenty, and the Purple Beech and Weeping Elm and Ash all succeed in the comparatively pure air of the Hampstead district.

The Rowan or Mountain Ash is, during the fruiting

period in particular, a prominent tree on almost every part of the Heath, where it succeeds admirably and produces its conspicuous fruit in abundance. Some of the largest stems of the Mountain Ash girth 4 feet 2 inches at a yard from the ground, and run up to 40 feet in height. Constable's Scotch Firs are still to be seen, though fully one-half of the three dozen trees are either dead or dying and sadly afflicted by attacks of the giant Sirex or wood wasp. The largest measures 9 feet 10 inches at a yard from the ground, another being 6 feet 10 inches, while others of 5 feet are not uncommon. They rise to a height of 65 feet, and are branchless for three parts of their height. Several clumps of young trees of the same kind have been planted and protected by fencing, but it is unlikely that these will attain to as goodly proportions as their predecessors. There are some fine old Beech trees in different parts of the Heath, one of which girths $13\frac{1}{2}$ feet at a yard up; another is 9 feet in diameter of its curiously buttressed stem. The fenced-in Beech tree on the high grounds above the Viaduct has died—a pity, as it was probably the largest of its kind on the Heath. Though carefully protected and holes and diseased portions filled in and otherwise attended, this giant Beech has succumbed to climatic conditions aided by fungus and insect attacks. The Beech Coccus is, unfortunately, rife all over the Heath. Willows of all kinds, but especially the White or Huntingdon and Weeping, thrive well on the dampish dips, some of the specimens we noticed having a wide spread of the healthiest leafage. There is a fine clump of Willows in the dell near the White Stone Pond and by the Viaduct. At Keats' House, Keats' Grove, is growing the Mulberry

tree under which the poet wrote the 'Ode to a Nightingale.' Birch is everywhere healthy and well-developed, and imparts quite a wild and rural appearance to many knolls and hollows of these beautiful grounds. Even the Alder is here quite at home, and one of the trunks measures 3 feet 8 inches in circumference, while the Holly revels in the light, gravelly soil of several parts of the Heath. Sycamore has been planted largely, and thrives surprisingly when soil conditions are considered, and there are some nice young trees of the Scarlet Oak, Ailanthus (by the Heath margin), Acacias, fresh and green, and many clumps of the Acer and different species of Poplar.

A flat-headed Lebanon Cedar is a conspicuous feature of the grounds of Jack Straw's Castle, and the many old and gnarled specimens of the Elm, some of considerable size, by Well Walk and Well Road, have for long been known to visitors to the Heath. Most of these have been pollarded and suffered in consequence, several being hollow-stemmed and long past their best.

The 'Gibbet Tree' stood not far distant, and was an Elm of goodly proportions which was used for the execution of murderers as early as 1673.

Parliament Hill Fields.—Though the higher ground is somewhat bare and uninteresting, yet all along the lower fringe, and particularly by the water-side, trees thrive remarkably well. The Weeping Willow is particularly noticeable and has attained in many instances to large dimensions, especially by the pond-side, where also the Kilmarnock Willow shows off to perfection. Other trees that thrive well are the False Acacia and the Pink-flowered *Robinia viscosa*, though only a few specimens of the latter have been

planted. In the shrubbery by the refreshment kiosk there is a limited collection of trees and shrubs, the most remarkable being the Golden-leaved Catalpa, Arbutus of small size, and a number of particularly fine Holly trees, some of which have attained to a height of 30 feet, with the brightest and healthiest of foliage. Though not of great size, there are many old Elms on the hill, evidently the remains of division fences when the ground was under cultivation. The Plane trees, though young for the greater part, are thriving nicely, as also quite a number of recently planted Oaks of various kinds, including *Quercus rubra* with its handsome leaves. Probably the most interesting, we will not say historic, of the older tree growths is a gnarled, half-dilapidated Oak tree that is fenced in on the lower side of the hill, and within a stone's throw of the refreshment kiosk. By some it is called the 'Parliament Oak,' but of the authenticity of the statement there is no corroboration. However, it is undoubtedly an ancient tree, only about one-half of which is still alive, the hollow stem being now about 2 feet 9 inches in diameter and 12 feet high. It is still growing, and produces a well-balanced head of healthy foliage.

Gospel Oak takes its name from an Oak tree that is shown in Park's 'Hampstead,' which was situated at the boundary line of Hampstead and St. Pancras parishes. The name serves as a reminder of the time when it was usual to read portions of the Gospels under the shade of certain trees (usually the Oak) in the parish perambulations.

In the British Museum there is a print dated 1653 of a remarkable hollow Elm tree that stood on Hampstead Heath. It had an entrance door cut out in the

bottom of the trunk, from which ascended a winding staircase to the top of the tree. At the top was an octagonal turret to enable visitors to see the views across the surrounding country. The following is attached :

1. The bottom above ground in compass is 28 foote.
 2. The breadth of the doore is 2 foote.
 3. The compass of the turret on the top is 34 foote.
 4. The doore in height to goe in is 6 foote 2 inches.
 8. The height to the turret is 33 foote.
 11. The lights into the tree is [are] 16.
 18. The steps to goe up is 42.
 19. The seat above the steps six may sitt on, and round about roome for foureteene more.
- All the way you goe up within the hollow tree.'

Tooting Common.—No finer Oaks and Elms are to be found in the County of London than those on Tooting Common. Both trees occur in large numbers, are mostly of gigantic proportions, and generally speaking are well preserved and healthy. An avenue of large Elms runs right across the common and divides it in two, one portion being known as Tooting Bec and the other as Tooting Graveney. Several of these trees girth 12 feet at a yard from the ground, others by the roadside being of still larger size, with clean, massive stems that contain up to 200 cubic feet of timber. The Oaks are quite as good, one that we taped having a girth of 13 feet at a yard from the ground.

Probably the oldest, certainly the largest, trees,

both Oak and Elm, are those by Streatham Corner, one near the entrance to Prentis Road, which tradition associates with Dr. Johnson, having a giant hollow stem, the interior of which is 7 feet in diameter. This historic tree, which is reputed to be at least a thousand years old, is carefully preserved by an iron railing, the hollow shell, which only rises to a height of 8 feet, being covered with Ivy. Near by are several other old and weather-beaten Oaks and Elms, which, judging from their present size, must in their hey-day have been noble specimens. Three Oaks in particular that are preserved by wooden fences are of immense size, though only the hollow, Ivy-covered trunks now remain to witness to their one-time greatness.

But scattered about all over this side of the common are Oaks of unusual size, and still in their prime, the natural undergrowth consisting of tangled masses of Thorn and Bramble. The various clumps of Fastigate Poplars have a telling effect in the open parts of the common, which is intersected in several directions by avenues of trees, one being composed of healthy young Horse Chestnuts about 30 feet in height. Fine examples of the Weeping Willow are features of the pond sides, where too trees of the Austrian Pine and Birch have a good effect. There are also clumps of Acacia, Lime, Elm, and upright Poplars, each kind being wisely kept together. Surrounded by a fence near one of the ponds are the fossilised remains of a tree trunk (salicified) from the Lower Purbeck bed, Portland, which was removed to its present position by the Balham Antiquarian and Natural History Society.

But altogether this beautiful common retains its original wild condition, the scattered clumps and

single specimens of Thorns and other natural undergrowth being carefully preserved and adding quite a charm to the extensive grounds.

Tooting in the time of the Conqueror possessed a wood, and doubtless some of the ancient wind-shattered Oaks are relics of its past grandeur.

Highbury Fields.—These are of small area, some 27 acres, and contain several clumps of old trees, chiefly the remnants of detached residences. The avenues are lined with healthy Planes, Chestnuts, and Limes; Elms also being abundantly distributed.

Clapham Common is a well-planted open space where many large trees of the kinds that do best in London are to be seen. The Plane, Elm, Lime, and Sycamore have attained to goodly proportions, and the Horse Chestnut and Ailanthus when in flower are distinctly ornamental. The Evergreen Oak thrives well, as does the White Beam tree; Paul's Crimson Thorn and various of the less common kinds, such as the Cockspur and Tansy-leaved, have a healthy, thriving appearance. Only a rapidly decaying stump remains of the tree that was planted by the eldest son of Captain Cook, the explorer.

Hackney Downs, which extend to 41 acres, contain few trees worthy of note, though quite a number of young Planes and Poplars have been planted of recent years. Two sides of the grounds are surrounded by an avenue of healthy Planes and Elms of about 40 feet in height, the third side by Poplars and Planes interspersed with a number of healthy Hollies. Clumps of trees, usually in twos, of such trees as the White and Grey Poplar, Elm, Plane, Lime, and Sycamore are dotted about the grounds, while a clump of nine Birch trees attracts attention near the entrance gates. The gardens of

houses around the Downs contain quite a representative collection of Acacias, Ailanthus, Honey Locust, and Variegated and Common Holly, the latter seeming to thrive well in this part of London. A standard Elm, the oldest and biggest in the park, occupies a railed-off site near the main entrance.

London Fields, Hackney, contain no trees of special merit, though the Black Poplar, Plane, Sycamore, and Ailanthus are all well represented, and there are some single specimens of the Thorn, Pyrus, and Laburnum. The Plane is, however, the predominating species, and very well it thrives in the by no means pure atmosphere of this part of the Metropolis. Generally the trees are arranged in lines and avenues, which intersect the grounds and offer a welcome summer shade in this densely populated district.

Eel Brook Common.—The trees here are few and poor, the outside having a line of Plane and Poplar, while irregularly scattered over the ground are Elm, Sycamore, a few Acacia, Silver-leaved Maple, and Lime. There are no old trees. Two corners have been fenced off and planted with some nice healthy Hollies, the Weeping Willow, Small-leaved Elm, Acacia, and a single specimen of the Willow-leaved Pyrus.

Street Trees

NOTHING very remarkable is to be found in the way of street trees in London, the everlasting Plane having been used almost to the exclusion of every other species; indeed, it has been estimated that fully sixty per cent. of the trees used for shade

and ornamentation consist of the Plane. True, the Lime, Poplar, Acacia, Horse Chestnut, and Ailanthus are all occasionally planted, but the Plane holds sway, and though it is peculiarly suitable for town planting the limit of its endurance for the ornamenting of our streets and squares has long been reached. Most of the trees towards the centre and West End are planted with the Plane, the other species referred to being found farther out, where also occur the Birch, Sycamore, dwarf Acacias, Pyrus of sorts, Bird Cherry, and Almond in limited numbers. The Birch thrives well and is highly graceful and ornamental as a street tree in several districts of Hampstead, especially to the north by Mill Hill, where also the Rowan or Mountain Ash may frequently be found, as well as several species and varieties of Thorn. Poplars, too, are now and then used as street trees, but with the exception of the upright growing and White and Grey species they are not to be recommended. Of Elms, the upright forms, particularly the Cornish and small-leaved kinds, are to be preferred, and are occasionally found in both urban and suburban districts. The Purple-leaved Sycamore is an excellent street tree and may be found in good form in some of the by-streets of Hampstead and other principally out-lying districts. Both the Sweet and Horse Chestnut occur as street trees, but not, the former at least, to any great extent, and one occasionally meets with the White Willow in the suburban districts. Frequently three varieties of the Acacia are found either by the street side or in gardens adjoining. These are *inermis*, a small-growing, mop-headed, but most useful form; *Bessoniana*, a capital and highly ornamental street tree; and *Decaisneana*, with rose-coloured flowers. Scarcer than

any of these, but more ornamental and equally adapted for street-side planting, is the *Acacia hispida* or Rose Acacia, with the softest and greenest of fern-like foliage and pendulous sprays of the brightest of rose-pink flowers. Where traffic is not too great all three kinds are to be found in conjunction with the Common Acacia or Locust Tree. We find at least three species of the Lime, including the very effective silvery-leaved *alba* or *argentea*, *euchlora*, with dark-green foliage of large size and valuable for avenues and streets, and the common species, which everyone knows as a good town tree. By the Pentonville Road are some majestic Thorns, as also the Common and Golden Elder. The Catalpa is not common as a street tree, though it is found in many private gardens adjoining, the chief drawback to both this and the Mulberry being that they branch low and are somewhat in the way of the traffic, though both are excellent town trees. *Acer Negundo* and its variegated variety are amongst the best of trees for planting in smoky localities, and they are occasionally, as at St. John's Wood and at Kensington, found by the street and square side. Other *Acers* that rarely are seen by the street are *A. campestre*, *A. platanoides* (the Norway Maple), and *A. dasycarpum* (the Silver-leaved Maple), which is the best of all, and one of the most ornamental and valuable of London trees. The Heart-leaved Alder (*Alnus cordifolia*) is rare as a street tree, though one of the best for town planting and occasionally seen in the East End. *Ailanthus glandulosa* gives quite a tropical appearance to the street or front garden in which it is planted, and is probably the most valuable town tree we possess, not even excluding the so-called London Plane.

Birches galore, some 50 feet high, dwarf Acacias,

and Mountain Ash are all to be seen in the rudest of health by Hillfield Road, Fortune Green, N.W.

Most of the species of *Pyrus* are amongst the best of street trees, where even in the most crowded districts they thrive well and produce flowers and fruit in abundance. Perhaps the best-known species is the White Beam tree (*P. Aria*), with lobed leaves that are thickly covered on the under sides with a close, flocculent down, the flowers small and white, and the fruit red or scarlet. The Mountain Ash or Rowan tree (*P. aucuparia*) is too well known to require description, and whether for the sake of the dense corymbs of small white flowers or large bunches of scarlet fruit it is always welcomed and admired. It makes a neat tree for the street side, and may frequently be found there and in the front gardens of not a few suburban districts. The True Service Tree (*P. Sorbus* or *domestica*) somewhat resembles the Mountain Ash, but the flowers are paniced and the berries fewer, larger, and pear-shaped. It is occasionally found as a street and garden tree, very often in company with the Wild Service Tree (*P. Torminalis*), which has ovate-cordate leaves and small white flowers. Both may be seen in good form in the Hampstead district.

A variety that is found in several parts of London was named *P. intermedia* by the Kew authorities. It is well suited for town planting. The Sumach (*Rhus typhina*) may sometimes be seen by the street side, but it is not well suited for growing alone, the stem usually being crooked and twisted, the leaves pinnate, from 2 to 3 feet long, and usually produced in clusters at the tree top; frequently seen as a garden shrub by the roadside, where it reproduces its kind freely by extensions of the root. Both the Common and Black

Walnut are in some districts planted as street trees, but they are not desirable, as the fruit offers a temptation to the passer-by and the trees are injured in consequence.

Several kinds of Thorn are used for street planting, but as they usually branch low are to be avoided unless as standards. The Bird Cherry is sometimes seen as a tree of small growth for confined streets, as is also the Gean or Wild Cherry, both of which are highly ornamental-flowering species of small growth. Some rare and interesting trees are occasionally to be found by the London streets, such as the Maidenhair or Ginkgo by Commercial Road, an Araucaria near Putney, the Kœlreuteria at Highgate, the Hornbeam by Edgware Road, the Alder (labelled) by the Inner Circle of Regent's Park, the Bitter Almond at Euston and Highgate, the yellow-flowering Pavia by Marylebone Road, White Beam tree at Madame Tussaud's, and the Purple Birch at several of the roads and streets of St. John's Wood.

At many places, such as by Jamaica Street, and throughout the north-eastern part of the Metropolis, the Fig has been extensively used by the street side, in small gardens and grounds, as also at High Street, Poplar, by the archway, in company with a Weeping Ash, at Stepney Station. Avenues composed of the Elm, Plane, Lime, and Poplar are not uncommon, less so those of Birch and Mountain Ash as at the Hampstead Garden City, the Birch alone as in Stepney Churchyard, Ailanthus as at Hampstead and Highgate, Horse Chestnut by Golder's Green, Turkey Oak in Hyde Park, and Acacia commonly.

Grove End Road, N.W.—Many different kinds of trees are to be found in the gardens which skirt

this road, and what strikes one most is their healthy condition and, in some cases, the large size to which they have attained. Acacias, both tall and dwarf, do remarkably well, as do the Walnut, various species of Pyrus, the Ailanthus, Ash, Elms of sorts, and the Catalpa and Mulberry, one of the latter being 40 feet high, with a stout, upright stem that girths just 5 feet at a yard from the ground. It is in excellent health, as are several others of smaller size.

Kensington Palace Road.—In the private gardens that adjoin this noble drive are many trees of particular interest, including some of the finest and healthiest Ailanthus that are to be found anywhere in London. The Pavias, too, are numerous and healthy, and during the flowering period add quite a charm to the place, as do the Acacias, which are of noble growth and thriving well, there being little of the dead wood which is usually present in old trees of this kind. Nowhere in the Metropolis is the Eastern Thuya greener or better furnished than in some of these gardens, where also the Yew and Holly are quite at home. There are good specimens of the Walnut, while the Plane, though of noble growth, is interfering with the health of other trees and in many places shutting out from view equally valuable and more decorative species.

British Museum Avenue.—When this avenue was laid out the preservation of several large Plane trees growing on the grounds was wisely considered and arranged for at considerable expense. Unfortunately, like many other instances that could be referred to in the Metropolitan area, heaping earth to a depth of several feet on the roots and close up to the stems was permitted, with the usual result that in a few years the trees began to show signs of distress. This was a

very aggravated case in which the stems of the trees were buried to a depth of about 6 feet. In order to mitigate the evil the soil was removed from around the two largest trees and an oval, saucer-shaped brick enclosure 12 feet by 9 feet built round each. This was, however, carried out too late in the day and after the trees had suffered considerably from the roots being deprived of air as well as injuries that the stems had received when forming the roadway. This is to be regretted, as these Planes are handsome specimens, some 60 feet high and with a branch spread of 30 feet.

Two smaller trees of the same kind from which the soil was not removed are also dying. The only partial remedy is to pollard all the trees.

Trees in Churchyards

OLD and interesting trees are to be found in many of the disused churchyards and burying-grounds of the Metropolis. As might be expected, the Weeping Ash and Elm predominate, though the Plane and other trees are freely used. In some of the older grounds, which are now shut in by tall buildings, the conditions under which trees survive are by no means favourable, though in the various cemeteries tree and shrub planting is extensively engaged in, and with results of quite a satisfactory kind.

St. Paul's Churchyard.—Here the most remarkable trees are the gigantic Planes, several of which have attained to large proportions. The Common Ash is well represented, and there are young trees of the Ailanthus and Sumach, as also several healthy Mulberry, Thorns, and Fig, the largest of the last

species being 20 feet in height. There are also a healthy young Ginkgo or Maidenhair Tree, a small Catalpa, White Beam tree several, and a standard Elder, stem pruned and staked, the only one we have ever seen.

St. Giles-in-the-Fields.—Few trees do well in this smoky, congested centre, the Poplar best of all. In spring and early summer the greenery of the Poplars and a few straggling specimens of the Plane is most refreshing, but towards autumn, especially when the season has been dry and hot, the whole place wears a worn and tired appearance. The Common Elder thrives well, and several fair-sized Fig trees are as healthy in this as any part of London. The fumes given off from the adjoining factories are hard on plant life generally.

St. Gabriel's, St. Katherine Coleman, and St. Olave's are very confined grounds in Fenchurch Street, where the Lime seems to thrive, some of these being over 50 feet high.

Paddington Cemetery.—In this closely atmosphered burial ground, now a place of recreation, there are few trees of interest. One exception is a goodly specimen of the Crack Willow, which has a branch spread of 45 feet, the stem girthing 7 feet 7 inches at a yard from the ground. It has certainly survived the heated and impure atmosphere of this confined space in a somewhat remarkable manner. The Black Poplar also thrives well, and the Common Thorn looks fairly happy.

St. Dunstan-in-the-East.—Surrounded with tall buildings and in the thickest atmosphere of the fish market, the churchyard of St. Dunstan-in-the-East contains at least two remarkable trees. One is an Ash, one of the finest in the by-lanes of London,

which rises to a height of 60 feet, with a branch spread of 50 feet. The trunk, which girths $6\frac{1}{2}$ feet at 3 feet up, is of good shape and would at once catch the eye of the purchaser of aeroplane Ash timber. The other is a ponderous Plane tree, 50 feet of the butt end of which contains fully 200 cubic feet of timber. At 3 feet and 5 feet the girths are 9 feet 1 inch and 8 feet 11 inches. The branch spread is 75 feet, extending from the church on one side to St. Dunstan's House on the other. It is rare, indeed, that two so fine specimens are found in the cramped grounds and stifled atmosphere of a disused London churchyard.

St. Pancras Churchyard can boast of some handsome Plane trees and quite a number of healthy, fast-growing Limes.

Bunhill Fields Burying Grounds.—The trees here are generally of stunted and irregular growth, particularly the straggling Poplars and Limes. Some of the Planes are of fair size, but the two between which John Bunyan is buried are amongst the most miserable and badly grown of any in London. The grounds are dark, damp, and uninviting.

Stepney Churchyard.—Constantly subjected to the sulphurous fumes from the adjoining gas works, tree growth in this East End district would hardly be considered satisfactory. And yet the opposite is the case, as can at once be seen by the healthy development of such trees as the Common and Golden Catalpa, Birch, and Heart-leaved Alder. The avenue of Birches is indeed a rare sight in London, and the twenty-five trees which compose this shady retreat look quite as healthy and happy in their grimy surroundings as one would expect to see in the open country. They average 25 feet in height and have a proportionate

branch spread. The Heart-leaved Alder (*Alnus cordifolia*) is an excellent town tree, and for ornamental effect surpasses the common species, the fruiting catkins being much larger, and the greenish-yellow male flowers, which develop in great profusion at the beginning of February, are longer and more showy. Other interesting trees are a healthy young Mulberry, 25 feet high, several good Ailanthus and far-spreading Sumachs, the Weeping Ash, and healthy young Limes and Planes.

St. Paul's Church Garden, Shadwell, is a most valuable open space in the crowded and heated area of the Docks, and some of the trees are quite remarkable in size and health when their surroundings are taken into account. The Elder thrives well, as might be expected, and there are quite respectable Planes, Limes, and Poplars, and as healthy Fig trees as could be desired.

St. George's-in-the-East.—The well-developed and numerous specimens of trees and nicely kept grounds make this river-side recreation ground doubly valuable. There are three nicely grown Mulberry trees, 30 feet high each, a healthy Catalpa 40 feet high and 18 inches in diameter, Weeping Ash and Elm, Figs, green and healthy, as also the Ailanthus, Sycamore, Copper Beech, and a round-headed Acacia with the brightest of pea-green foliage. Several standard Thorns demonstrate how well this tree is suited for smoky and confined localities.

St. Botolph Without (Aldersgate).—Better known as the 'Postman's Park,' this ancient burying ground contains few trees worthy of note, though they are all valuable for the pleasant shade they afford to those who frequent this part of the City.

The old Poplar in the centre of the grounds is a conspicuous feature, gnarled and rusty though it be, and others of the same kind afford a welcome shade in the hot summer weather. An Elm farther along, with a seat placed round its stem, is striving manfully with the confined situation, two other trees of the same kind being finer examples as far as height and regularity of proportions are concerned.

The Fig thrives well and fills up some of the bare spaces with its dark-green foliage, a contrast to the light, almost pea-green of the Sumach adjoining. The young Planes, though somewhat leggy, will make good trees, but the specimens of Ash, both Common and Weeping, are not attractive. Holly is thriving, and several shrubs of this kind form a pleasing undergrowth.

Marylebone Churchyard.—This ancient burying ground, hidden away behind rusty iron railings by the side of High Street, contains some trees of note, whether from an historical or ornamental point of view. A far-spreading Plane tree of robust growth hangs over the tomb of Charles Wesley, brother of John Wesley, while a Huntingdon Willow of goodly proportions, but sadly infested by the 'Witch's broom,' marks out the spot where lie the remains of Hoyle, the author of *The Game of Whist*.

There is a well-developed Ash tree near the centre of the ground, and several young Limes, Sycamore, and Elder. Between the last tree and an Elm by the street side is the flat tombstone on which the 'Idle Apprentice' is represented by Hogarth as playing dice while his comrade, the 'Industrious Apprentice at Church,' is supposed to be worshipping within. Rarely have we seen the Sumach increasing so freely from the root

as in these grounds, there being quite a forest of young trees by the inner wall. Some of the older specimens are 30 feet high and 22 inches in girth of stem. The Common Elder has attained to a large size in this dampish, sunless churchyard.

St. James's Church, Piccadilly.—The group of Plane trees are not remarkable for size, but are a good example of how this tree can succeed in dark, cramped positions, and where penned in by tall buildings. What strikes one most, however, here is the remarkably healthy young Catalpa tree that is flourishing within a few yards of the pavement by the street side and where the flat tombstones cover the space in which it has been planted. It is about 25 feet high and in excellent health.

St. John's Church, St. John's Wood.—Tree growth here is unusually luxuriant for London, the Sycamore, Lime, Black and Lombardy Poplars having attained to large dimensions, while the bright, healthy leafage points out that they are quite at home. There are some gigantic Willows which at one time have been beheaded; while the Laburnum and far-spreading Sumachs are as healthy as could be desired.

Jews' Burial Ground, Mile End.—Here there is little of interest in the way of tree growth, and the grounds are wild and badly kept. An avenue, or rather an attempt at such, of mixed Poplars, Sycamores, and a few Ailanthus, intersects the grounds, while near the entrance is a single specimen of *Cotoneaster frigida*—no doubt a seedling from fruit dropped by a bird. It is remarkable how this *Cotoneaster* crops up in out-of-the-way places where it is unlikely to have been planted.

St. Anne and St. Agnes (Bishopsgate).—Here there are a number of well-grown, healthy Fig trees that

have been planted at regular intervals over the space in front of the church, and which point out how suitable this tree is for planting in very confined positions in the heart of the City. The big Plane tree, 70 feet high, is thriving well.

Brompton Cemetery.—These grounds are unusually well furnished with trees and shrubs, some of the former being good specimens of their kind. There is quite a forest of mixed trees by the Richmond Road which will need thinning and other attention later on. Particularly fine are the standards of *Tilia argentea*, which here appear to thrive in quite a vigorous way, and are peculiarly suited for cemetery or churchyard planting. The Pines—Scotch and Austrian—are showing signs of distress, though the Eastern *Thuja* thrives well, and has in some instances attained to a respectable size. Both the common and variegated-leaved Hollies thrive nicely, while the brightly foliated Sumach shows up well amongst the darker-leaved undergrowth. The Turkey Oak looks happy, as it does everywhere in London, and there are good examples of the common and dwarf Acacias, some of the former quite old trees, Laburnum, Weeping Ash and Willow, Ash, Lime, and Evergreen Oak, the last a good graveyard tree. There is a healthy avenue of Lime trees about 30 feet high.

Islington Cemetery.—There are some rare and beautiful trees in these well-kept grounds. Amongst coniferous trees the Deciduous Cypress, Ginkgo or Maidenhair Tree, 20 feet high, *Picea pungens glauca*, *Cedrus atlantica glauca* (very fine), Japan Cedar, Austrian and Corsican Pines, and Common Larch thrive amazingly. The last are fine trees, about 70 feet high and perfectly healthy. Both the Common and

Irish Yews have attained to a goodly size, while the Tulip Tree is 50 feet high, and there are nice specimens of both the Common and Golden Catalpa. Other interesting trees are *Pavia macrostachya*, flowering freely, *Magnolia acuminata*, big specimens of the Double-flowering Cherry and Weeping Elm. The Silver-leaved Maple is 60 feet in height and looks the picture of health, while both the Walnut and Purple Beech are represented by well-grown specimens. *Celtis australis* has reached to a height of 30 feet, with a corresponding spread of branches, and has flowers and fruit in abundance. *Koelreuteria paniculata* is a nice healthy bush, and produced flowers freely in 1918.

Not only is there a remarkable collection of trees in these grounds, but what strikes one particularly is their healthy appearance as growing in the Metropolis. Coniferous trees, which never succeed in smoky localities, are here doing particularly well, many having attained to comparatively large sizes. Even the Lebanon and Indian Cedars, though not of great dimensions, are thriving nicely, and three species of *Pinus*, including the Austrian, Corsican, and Swiss, are all thriving apace and look the picture of health. *Cupressus macrocarpa lutea* is well represented, as are several species of *Thuja* and *Retinospora*, *Sequoia gigantea*, and the upright or Irish Juniper, 12 feet high. One of the largest and healthiest Acacias in the Metropolis is growing in these grounds, the giant butt of which measures 10 feet 4 inches at a yard up; while an equally fine specimen of the Common Birch is 5 feet 9 inches at a similar height and in excellent health. Walnuts are here in quantity, where they succeed well, fruit freely, and have attained to good dimensions. Several examples of the Weeping Willow

stand out conspicuously, as do the fine trees of the Weeping Elm. Rarely is the Lombardy Poplar seen in such condition as on the stiffish soil of this cemetery, some being 75 feet high and 11 feet 3 inches in girth at a yard up. The Tansy-leaved Thorn is of good size, while *Cratægus Crus-galli* occurs in good form, being 30 feet high, 40 feet in spread, and girthing 4 feet at a yard up. The Rowan or Mountain Ash grows freely and fruits abundantly.

City of London Cemetery.—The largest *Pterocarya* we have seen is growing in the grounds of the City of London Cemetery. This tree is 70 feet high, with a branch spread of 51 feet, the trunk girthing 9 feet 9 inches at 2 feet from the ground. This is a splendid specimen and in perfect health, and produced flowers abundantly during the summer of 1918. It suckers freely from the root, and dozens of young trees were counted beneath its shade. Here also may be seen a goodly specimen of the rare Black-fruited Thorn (*Cratægus nigra*). There are many other trees of interest in this cemetery, including some of the finest specimens of the White Poplar that are to be found in London, Limes, Evergreen Oak; Holly, and Sycamore.

Flowering Trees.—The summer of 1918 will long be remembered as one in which trees were particularly floriferous everywhere throughout London. Rarely has the *Catalpa* produced its spikes of curiously marked flowers in such abundance as during the summer of 1918, trees both large and small rivalling each other in their wealth of bloom. The giant specimen in Manchester Square has never been known to bear such quantities of its conspicuous flowers as during the latter end of July. The *Ailanthus*, too, has everywhere

blossomed with unusual freedom, the not very showy, greenish-white clusters of flowers being in most cases produced in such abundance as to attract attention. Nearly approaching the latter in appearance is the Honey Locust (*Gleditschia*), which in many parts of London has flowered with unusual freedom. There is a fine specimen in front of the secretary's house in the Royal Botanic Gardens. Rarer still is the Caucasian Pterocarya (*P. fraxinifolia*), which, near the Victoria Gate in Hyde Park, has been a source of wonder to visitors. The curious drooping flowers, which hang downwards at right angles to the branches for a foot and more in length, render this one of the most interesting of hardy trees. In several of the parks and private gardens the Judas Tree (*Cercis*) has flowered with unusual freedom; in some cases even young specimens have produced the deep rosy-purple flowers which distinguish this species. *Rhus Osbeckii* has flowered freely in Ruskin Park, where are the only specimens of this rare and beautiful Sumach that I have found in the Metropolis.

The Tulip Tree (*Liriodendron tulipifera*) is a capital subject for town planting, and may be found in good condition in several of the parks, notably at Golder's Green, where there is by far the largest specimen of its kind in London. Both this tree and the still rarer Liquidambar may be seen in a flourishing state in the grounds of the Royal Botanic Society. Here also is a large Cork Oak (*Quercus Suber*) and some unusually fine specimens of various species of *Pyrus*. The Osage Orange (*Maclura aurantiaca*) has attained to goodly proportions in Battersea Park, and a healthy young tree has flowered freely by the water-lily pond in Regent's Park. In Kensington Gardens many rare

and beautiful trees may be seen, including the finest Persimmon tree in London, the beautiful and distinct *Cotoneaster nummularia*, and the equally large-growing *C. frigida*, both over 30 feet in height. The Marsh and Fastigate Oaks do well in a smoky locality, and so does the Common Birch, which has attained to a size quite equalling that reached in the open country. The Pavias are uncommonly fine, as are also the many distinct forms of Thorn, *Pyrus lobata*, and species of *Prunus*.

In Battersea Park the Nettle Tree (*Celtis occidentalis*) has reached to a fair size, and looks healthy and well suited to its dusty and smoky locality, and this is true also of *Zelkova acuminata*, which has attained to a height of 40 feet, with a branch spread of 30 feet. The Arbutus, or Strawberry Tree, is nowhere in the London area to be seen in finer form than at Battersea, though perhaps equalled by the far-spreading specimen in Waterlow Park, where a healthy, vigorous-growing tree has spread laterally to a distance of 30 feet. The Tamarisk by the lake-side in the same park has quite outgrown its normal dimensions, and some of the stems are fully 20 feet high, girthing $2\frac{1}{2}$ feet at a yard from the ground. The magnificent Hickories in Waterlow Park are by far the finest in London, other species of interest at the same place being the Paper Birch (*Broussonetia papyrifera*), Honey Locust, and *Magnolia acuminata*. The fine Mulberry tree, though old and decrepit, is yet making a brave stand for existence, and should with care exist for many a year. Here also is a good example of the Maiden-hair Tree (*Ginkgo biloba*).

Amongst the many species of Oak, none excels the Turkey Oak for town planting, and in Ruskin Park

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there is a huge specimen, the stem of which girths 12½ feet at a yard high, the branch spread being 100 feet in diameter. It is questionable whether a larger tree of the kind is to be found in the County of London—certainly not in the Metropolitan area.

Both the Cockspur and Tansy-leaved Thorn (*Cratægus Crus-galli* and *C. tanacetifolia*) produced an abnormal quantity of flowers, and later on a rich harvest of fruit. The rare and interesting *Celtis australis* and *Kœlreuteria paniculata* both flowered in Islington during a recent summer.

As a handy reference guide to where some of the largest London trees are growing the following alphabetical list will be useful :

<i>Acacia Pseud-acacia</i> . . .	Central parks ; Russell Square ; Ravenscourt Park ; Islington Cemetery.
<i>A. Pseud-acacia monophylla</i>	Ruskin Park.
<i>Acer campestre</i> . . .	Hyde Park.
<i>A. dasycarpum</i> . . .	Regent's Park ; Golder's Green.
<i>A. Negundo</i> . . .	Ruskin Park.
<i>A. palmatum</i> . . .	Central and other parks.
<i>A. Pseudo-platanus</i> . . .	Lambeth ; Golder's Green ; Ranelagh.
<i>Æsculus Hippocastanum</i> . . .	Kensington Gardens ; Regent's Park.
<i>Ailanthus glandulosa</i> . . .	St. James's and other parks ; Kennington Park ; Ladbroke Gardens ; Bloomsbury Square ; Holland House.
<i>Alnus cordifolia</i> . . .	Battersea Park ; Clapham Common.
<i>A. glutinosa</i> . . .	Battersea Park.
<i>A. glutinosa laciniata</i> . . .	Victoria Park.
<i>Amelanchier canadensis</i> . . .	Central parks ; Greenwich Park.

<i>Amygdalus</i> (in variety)	. . .	Kensington Gardens; Victoria Park.
<i>Arbutus Unedo</i>	. . .	Ruskin Park; Battersea Park; Buckingham Palace; Springfield Park; Waterlow Park.
<i>Beam tree</i>	. . .	Royal Botanic Gardens; Golder's Hill Park.
<i>Betula alba</i>	. . .	Ruskin Park; Kensington Gardens.
<i>B. alba purpurea</i>	. . .	Kensington Gardens.
<i>Broussonetia papyrifera</i>	. . .	Waterlow Park; Chelsea.
<i>Carpinus Betulus</i>	. . .	Regent's Park; Hampstead, by wall of Parish Churchyard.
<i>Carya alba</i>	. . .	Waterlow Park.
<i>Castanea sativa</i>	. . .	Greenwich Park.
<i>Catalpa bignonioides</i>	. . .	Manchester Square; Holland Park; Finsbury Circus; Dulwich Picture Gallery.
<i>C. Kæmpferi</i>	. . .	Chelsea Physic Garden.
<i>Cedrus Libani</i>	. . .	Mill Hill; Fulham Palace.
<i>Celtis occidentalis</i>	. . .	Battersea Park.
<i>Cerasus</i> (in variety)	. . .	Central and other parks.
<i>C. Padus</i>	. . .	Regent's Park.
<i>Cercis Siliquastrum</i>	. . .	Golder's Hill Park; Dover House, Roehampton; Hampstead Heath.
<i>Cladrastis lutea</i>	. . .	Fulham Palace.
<i>Cornus Mas</i>	. . .	Regent's Park and central parks.
<i>Cotoneaster frigida</i>	. . .	Regent's Park; Kensington Gardens; Battersea Park.
<i>C. nummularia</i>	. . .	Kensington Gardens; Chelsea.
<i>Cratægus Crus-galli</i>	. . .	Victoria, Hyde, and Regent's Parks.
<i>C. Oxyacantha</i>	. . .	Greenwich Park; Clissold Park.
<i>C. Oxyacantha præcox</i>	. . .	Clissold Park; Hyde Park.
<i>C. tanacetifolia</i>	. . .	Battersea Park.
<i>Diospyros virginiana</i>	. . .	Kensington Gardens.
<i>Fagus sylvatica</i>	. . .	Golder's Green Park; Grove House, Regent's Park; Hampstead Heath.
<i>F. sylvatica asplenifolia</i>	. . .	Kensington Gardens.
<i>F. sylvatica purpurea</i>	. . .	Fulham; Greenwich Park.

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<i>Ficus Carica</i> . . .	Lambeth Palace; High Street, Poplar; St. Paul's Churchyard; St. James's Park; Avondale Park.
<i>Fraxinus excelsior</i> . . .	Royal Botanic Gardens; Cavendish Square.
<i>F. excelsior juglandifolia</i> . . .	Primrose Hill.
<i>F. excelsior pendula</i> . . .	Royal Botanic Gardens.
<i>F. Ornus</i> . . .	Buckingham Palace; Primrose Hill; Royal Botanic Gardens.
<i>Ginkgo biloba</i> . . .	Waterlow Park; Chelsea; central parks; Golder's Green Park; Commercial Road.
<i>Glastonbury Thorn</i> . . .	Hyde Park; Waterlow Park.
<i>Gleditschia chinensis</i> . . .	Greenwich Park; Victoria Park.
<i>Hippophae rhamnoides</i> . . .	Regent's Park; Victoria Park.
<i>Ilex Aquifolium</i> . . .	Kennington Park; Victoria Park; Golder's Green.
<i>I. Aquifolium Hodginsii</i> . . .	Poplar; Ruskin Park; Victoria Park.
<i>Juglans nigra</i> . . .	Chelsea Physic Garden; central parks.
<i>Juniperus virginiana</i> . . .	Mill Hill.
<i>Kædreuteria paniculata</i> . . .	Chelsea Botanic Garden; Victoria Park.
<i>Laburnum vulgare</i> . . .	Ruskin Park; Chelsea; Victoria Park.
<i>Larix europæa</i> . . .	Islington Cemetery.
<i>Laurus nobilis</i> . . .	Battersea Park; Russell Square; Ruskin Park.
<i>Lebanon Cedar</i> . . .	Holland House; Mill Hill.
<i>Liquidambar styraciflua</i> . . .	Royal Botanic Gardens; Hyde Park.
<i>Liriodendron tulipifera</i> . . .	Golder's Hill Park; Greenwich Park; Charlton Park.
<i>Maclura aurantiaca</i> . . .	Battersea Park; Regent's Park.
<i>Magnolia acuminata</i> . . .	Waterlow Park.
<i>Morus nigra</i> . . .	Clissold Park; Vauxhall Park; Finsbury Circus; Haringgay; Dean's Yard, Westminster.
<i>Negundo fraxinifolia</i> . . .	Ruskin Park.
<i>N. fraxinifolia variegata</i> . . .	Ruskin Park; central parks.

- Paulownia imperialis* . . . Regent's Park ; Camberwell Green.
- Pavia flava* . . . Kensington Gardens ; Marylebone Road.
- Platanus orientalis acerifolia* Fulham Palace ; central parks.
- Populus alba* . . . Clissold Park ; Greenwich Park.
- P. canescens* . . . St. James's Park.
- P. fastigiata* . . . Waterlow Park ; Golder's Green Park ; Islington Cemetery.
- P. nigra* . . . St. James's Park ; commonly distributed.
- Prunus* (in variety) . . . Central parks ; Kensington Gardens.
- Ptelea trifoliata* . . . Golder's Hill ; Battersea Park.
- Pterocarya fraxinifolia* . . . Hyde Park, near Victoria Gate ; City of London Cemetery.
- Pyrus Aria* . . . Royal Botanic Gardens ; Golder's Hill Park.
- P. communis* . . . Hanover Lodge and Scudamore Lodge, Regent's Park.
- P. Malus floribunda* . . . Inner Circle, Regent's Park.
- P. salicifolia* . . . Battersea Park ; Victoria Park.
- P. salwifolia* . . . Hyde Park.
- P. Sorbus* . . . Botanic Gardens, Regent's Park.
- Quercus Cerris* . . . Ruskin Park.
- Q. Cerris Fulhamensis* . . . Fulham Palace.
- Q. Ilex* . . . Fulham Palace.
- Q. palustris* . . . Clissold Park.
- Q. rubra* . . . Royal Botanic Gardens, Regent's Park ; Dulwich.
- Q. Suber* . . . Hyde Park ; Chelsea ; Dulwich.
- Rhus Osbeckii* . . . Ruskin Park.
- R. typhina* . . . Regent's Park ; central parks.
- Salix alba* . . . Clissold Park ; St. James's Park.
- S. babylonica* . . . Regent's Park ; Victoria Park.
- Sambucus nigra* . . . Regent's Canal, near Gloucester Gate.
- Taxus baccata* . . . Chelsea Physic Garden ; Hyde Park.
- Thuja orientalis* . . . Chelsea ; Fulham ; St. John's Wood.
- Tilia alba* . . . Central parks.

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<i>Tilia europæa</i>	.	.	.	Bank of England; Hyde Park; Golder's Hill Park.
<i>T. parvifolia</i>	.	.	.	Kensington Gardens.
<i>Ulmus campestris</i>	.	.	.	Hyde Park; Fulham; central parks.
<i>U. campestris cornubiensis</i>	.	.	.	Regent's Park.
<i>U. montana</i>	.	.	.	Regent's Park.
<i>U. montana macrophylla</i>	.	.	.	Kensington Gardens.
<i>U. montana pendula</i>	.	.	.	Lambeth; Chelsea; Lincoln's Inn Fields.
<i>Wistaria sinensis</i>	.	.	.	Kensington Gardens; Ruskin Park.
<i>Zelkova acuminata</i>	.	.	.	Battersea Park.

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