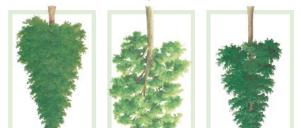
commonly found in Britain's forests and woodlands An illustrated guide to the identification of trees







and their uses forest trees An easy guide to



Why do we need trees?

Britain's forests and woodlands are a valuable natural and renewable resource providing wood and timber for use in our daily lives.

Wood is a wonderful natural material. It is completely renewable and all parts of the tree can be used.

The trunk of the tree can be sawn to provide planks and posts, chipped, glued and pressed to make boards, or pulped for making into paper.

The roots, bark and branches of the tree have many uses ranging from fuelwood to the manufacture of medicines, and from chips for playground surfaces to mulch for flowerbeds.

Although we use forests for our timber needs they provide so much more. The complex forest ecosystem is a home and a source of food for a wide variety of plants and animals. This in turn gives us a valuable educational resource as well as a wonderful place for recreation. All these link together and help to define the landscape of our countryside.

Trees also help keep the world healthy by trapping carbon dioxide and producing oxygen. This is why forests are often called the lungs of the earth.

nagine a world

Boards

Boats

Books

Bowls

Brooms

Brushes

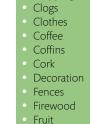
Buildings

Cartons

Chippings

S vithout trees s not just timber tha e get from trees, as is list shows:

> t takes a very heavy blow to shatte a piece of ash making it ideal for tool handles, such as axes and spades, and for oars, flooring, nockey sticks and rackets.



Fruit Furniture Labels Medicine Mulch Musical instruments Nuts Paper

Pegs Photographs Roofing 'felt' Rubber Spoons Sports equipmen Stamps

Toilet seats Tools Toys Wrapping paper

Vhat do you use? an you add any ore things to the li

Fraxinus excelsior

Supposed to have mystical and medicinal properties, the ash is a widespread native tree whose wood is a natural shock absorber.

uses it has now been replaced by

hickory from America, which is

an even better shock absorber.

Ash has been used for skis, coaches,

carts and farm implements. It was

powers and its excellent firewood

mythology the

mighty ash was

the tree of life.

once thought to have healing

was burnt to drive out evil

ark is smooth nd greenish gre ning grey and uring with ag e distinctive lack winter but oduce next ear's shoots nd also dense lusters of smal

e arranged in

ese tall, dom

es can reach

The husks

split to

triangulai

the fruits

are neithe





Fagus sylvatica

on light soils elsewhere.

ometimes called 'The Lady

hade usually keeps the forest

ts easily turned, fine-grained

and knot-free wood is ideal for

furniture making, especially for

chairs. In the past the wood was

used for rifle butts,

brush backs and

for making shoe

heels and lasts.

floor clear of undergrowth.



opy made

ranches and





Betula pendula

appearance, it is one of

Britain's hardiest trees.

Despite its graceful

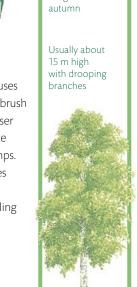


imber is a hardwood whose uses include plywood production, brush backs, toys and reels. On a lesser scale, the twigs are cut to make besom brooms and horse jumps. In the past its sacred properties



Quercus robur

Held sacred by the Druids,



ipper bark is

apery and



dropping oi

Sorbus aucuparia

Often called the 'mountain ash'



Castanea sativa



An easy guide to forest trees and their uses

This guide lets you find out more about the trees found in the forests and woodlands of the British Isles. It helps you identify some of the most common species and shows how important they are in our day-to-day lives.

If you need further information about Forestry Commission forests and woodlands near you, go to:

www.forestry.gov.uk/england www.forestry.gov.uk/scotland

In Wales, go to:

www.naturalresourceswales.gov.uk

Hard or soft?

refer to the botanical origins of a timber and not its density or hardness.

The terms softwood and hardwood

Softwoods come from coniferous trees such as pine, fir, spruce and larch.

Coniferous trees are cone-bearing and often have needle-like leaves. They are particularly well suited for cold conditions with their narrow leathery needles. Most are evergreen but some like larch are deciduous and drop their needles in winter.

Hardwoods come from broadleaved trees such as oak, ash and beech.

Broadleaved trees usually have wide leaves. Most broadleaved trees in Britain are deciduous and drop their leaves in winter in order to survive in the cold climate, but some like holly with its 'waxy' protection are evergreen.



runk of a hardwood ee showing the close rained structure. No l broadleaved trees re close grained,

e.g. poplar





leafy bracts

catkins

Corylus avellana

Hazel is the ideal coppice tree, in that every few years it can be cut back to a 'stool' at ground level so that it produces a cluster of straight flexible stems that can be



late April afte ne catkins have ispersed their ollen through eafless woods

In the past when a countryman wanted a piece of wood this was usually provided by his hazel copse. One seventh of the wood was cut each year to give a constant supply of poles for firewood, 'wattle and daub' building,

thatching spars,

plant supports. A

industry thrives today.

elop as a tre hrives as a rub, but it can each 7 m if left fences and garden small hazel coppice

Tilia cordata Since ancient times the lime

tree, which has no relation to the citrus fruit, has been used for shade and lowland shelterbelts. It was also planted along village streets as a holy tree to protect against evil spirits.

ts pale cream coloured wood is fine textured and resistant to splitting, making it ideal for turning and



As it does not

and sounding

boards of pianos.

warp, lime wood is used for the keys



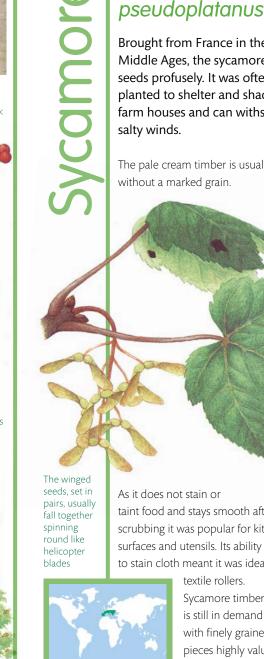
ooth grey

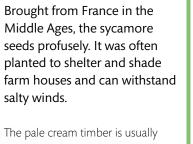
melling flowers

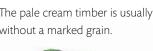
pedunculate or English oak has always been important. From early days its strong and durable timber was found to be ith age ideal for shipbuilding and for making timber frames ∕lost oaks do of buildings. stalks, a feature characteri of the Engl The tannin in oak that its bark was used it from the for tanning leather. Even the sawdust related was, and still is, used for smoking food. Oak is now 0 m in Britain used for furniture, barrels and is also planted for its conservation value. In western areas sessile oak is the more common species.

pinnate leaf leaflets which turn red in autumn Flat heads of cream coloured heavily scented











e smooth grey

igh, flat surfac

tes that fall

vay to reveal

broad tree wit

ense foliage

orange-brow oark below

As it does not stain or taint food and stays smooth after scrubbing it was popular for kitchen surfaces and utensils. Its ability not to stain cloth meant it was ideal for



Svcamore timber is still in demand with finely grained. pieces highly valued for making violins and for veneers

ISBN: 978-0-85538-692-4

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From seed to timber

Plant, grow, fell; plant, grow, fell: this is the forest cycle that enables well managed forests to go on for ever, providing wood for timber, a haven for wildlife and a place for people

The forest is home to thousands of species of plants, birds, mammals, reptiles and insects. As some areas of the forest are cut down, others are being planted, creating a patchwork of forest with trees at different stages of development. Which plants and animals are present at any one time or place depends on the stage of the 'forest cycle'

Trees are cut down when fully grown. This can

be between 40-150 years depending on the type of tree. Once the trees have been cut down they are taken to the forest roadside. A timber wagon then transports them to the mill where they are converted to timber products.

The mature forest As trees mature, new home are continually created in cracks, holes and branches Old trees and dead wood are often left for large bird

animals to find

Preparation In some places the ground needs to be prepared before trees can be planted. This is like digging the

garden, but a plough might

be used instead of a spade.

irds. In turn these provide food irds and

Newly planted areas

areas give shelter to insects,

eptiles and ground nesting

Open ground and newly planted

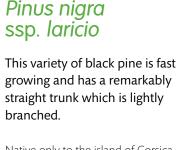


Planting Planting is nearly always done by hand. Lots of factors, such as soil, climate and site, affect which trees can be planted and how they are planted. Trees re planted close together

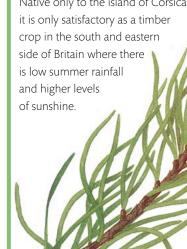
give them protection rom the wind and to

The sheltering thicket Dense bushy trees trap warm air which gives protection from the cold and rain. These quiet areas attract small birds and animals, such as wrens, warbles and shrews. Dee





Native only to the island of Corsica, it is only satisfactory as a timber crop in the south and eastern side of Britain where there s low summer rainfall



orsican pine was introduced in 1759 and its timber was used for railway sleepers and pit props. Though not naturally durable, and considered inferior to Scots pine, t takes preservatives well and is used for general building work,



Henry



rk breaks off

ctive twist

nder conical

ranches reachi

ee with

It is a pioneer species due to its ability to regenerate and thrive in poor soils. It is found in its native state in Scotland, although planted durable, but it takes preservatives well.



used for ships' masts, as a source of turpentine, resin and tar and for charcoal. Today it's used for building, pit-props, furniture, chipboard, boxes, fences, telegraph

poles and paper pulp.

ssured and



. (4-7 cm long)

Pinus contorta var. latifolia

rown with fine

An inland variety of the American shore pine, its straight stem was used by North American Indians for the central supporting pole of their lodges or wigwams.

ntroduced into Britain in 1855, its remarkable tolerance to poor soil makes it particularly useful as a timber crop in the north of Britain. Its timber is used for roofing, looring and other joinery, and also in the production of chipboard and paper pulp.



Picea abies

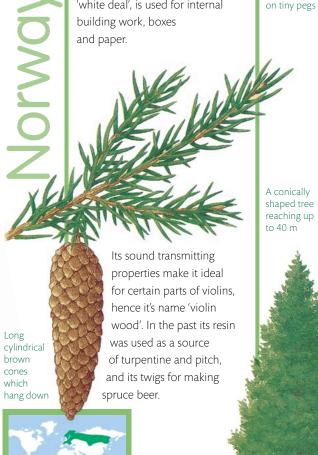
The traditional Christmas tree found in many of our homes during December.

A European, but not British, native species. It was widely planted earlier this century, but later replaced by the higher yielding Sitka spruce. The tough and elastic timber, known as 'white deal', is used for internal building work, boxes and paper.

nooth bark wit

id-green

dles standing



Pica sitchensis

manufacture of differen

types of board.

Named after Sitka in southern Alaska, this species is the mainstay of the forest industry in Britain.

Its ability to adapt to a wide variety of site conditions and its high yield, es off in especially in the wetter western regions, makes it our most successful upland plantation

eedles on peg ave a slatey species. A versatile timber, with ue tint and smaller trees being of particular value for paper making because of their fibre length and white colour. It is also used in the

Sawlog material is used for pallets and packing cases with the better grades used for

From tree



A mix of light and shade encourages

Idflowers, which in turn attract

grasses, mosses, fungi and

to products

In this country we produce less than 15% of the nation's timber needs. Nowadays fast growing conifers are required to meet 85% of our timber requirements. Broadleaved trees are still used for some high quality products including furniture. In recent years there has been a return to traditional methods of managing broadleaved trees including the production of charcoal and basket-making.

needed. Over time

the poorer trees are

removed to give room

for the rest to grow.

Thinnings tops of trees and small trees

Paper and cardboard e made by breaking the wood down into individual fibres to duce 'pulp'. The pulp is then mixed with water and spread in a er before being rolled and dried under pressure.

made from small particles of wood bonded together with resins nd rolled under pressure to form a sheet. It is used for flooring, oofing, partitions or covered in veneers or laminates for furniture

Medium Density Fibreboard (MDF) an be made from most parts of a felled tree. The wood is broken. own into individual fibres which are bonded under pressure with esins. It makes an easy material to work and shape

Oriented Strandboard (OSB) s a sheet material formed by compressing large flakes of wood which re held together by resin glues. This moisture resistant board is used or flooring and is a cheaper substitute for imported plywood.



.arge-dimension beams for specialist construction work such as post and beam houses, offices and other buildings.

Planks and boards sawn straight from the tree are the simplest products made directly

lacktriangle Bark and other parts ot the tre

Bark chippings, rustic poles, small logs and coppice wood

kaging, stamps and

ring, furniture, ulation, worktops

ring, furniture,

king cases, pallets

in rosettes

on the short shoots



The result of the chance cross-pollination of Japanese and European larch on the Duke of Atholl's estate at the turn of the century.

Nowadays most of the seeds are produced in seed orchards with rees of each parent planted in alternate rows. The offspring show remarkable 'hybrid vigour' growing faster than the parent and surviving under poorer conditions.

Its changing crown colour in spring, autumn and winter contrasts with other coniferous species making it videly used in designing forest andscapes. Its strong durable timber is used for fencing, rails and gates.



egular plates

Pseudotsuga menziesii

hanging

Named after David Douglas, who in 1827 sent the first seed back to Britain. Its botanical name commemorates Archibald Menzies who discovered the tree in 1791.

> A major timber species in its native North America. Imported timber is sold here as 'Oregon Pine' and is used for construction work and for high quality plywood and veneers as well as for furniture



with a Originally grown 3-point bra in this country for on every ornamental purposes, scale it is now a valuable timber tree used for sawmill timber and paper pulp.



noble fir is a native of the forests of Washington and Oregon where it grows to a great height.

decorative species, on account of its striking bluegrey foliage and regular growth habit it is often used in Europe



Pale grey to

arge upright

Introduced into Britain in 1830,

Regarded as a

bluish-grey needles at right angles to twig

> For the Danes it is also the preferred Christmas tree. In Britain it has been planted on a very limited scale in the wetter western districts. Its timber is hard and close-grained and used for interior joinery.



Tsuga heterophylla A graceful tree reaching up to

500 years of age on its native American west coast.

ntroduced into Scotland during the 19th century for ornamental purposes, it has been used commercially on a limited scale. Its tolerance to light shade allowed it to be planted under old broadleaved woodlands but its susceptibility to butt rot has much



nails well and is used for building,

box making and paper pulp. In the

past the North American Indians

used the inner bark for 'bread'

making.

egg-shaped

lownturned eading shoots

to scaly ridges

indom needle



One of the oldest living trees in northern Europe, yew is one of the three conifers native to

Britain (the others are Scots pine and juniper). They bear succulent red fruits instead of cones.

Taxus baccata

When a bird eats one of the fruits it digests the fleshv jacket, or aril, and passes the poisonou

Although a 'softwood' it grows slowly, giving the wood great strength. Thin, springy branches were once used for making longbows. Nowadays the wood is made into veneers and is used for furniture making. Yew is popular in gardens as it can

shaping. Huge and ancient trees are common in churchyards, some are considered to be housands of years old

withstand unlimited clipping and



ark is thin and

caly, becoming

ound densely

p to 15 m tall