

Woodland Wonders

A search and find activity booklet to identify and learn more about some of Scotland's native tree species



How to use this booklet

This booklet is a guide for outdoor tree searches and is designed for children of all ages to be able to participate in colouring and family search activities, but content is designed primarily with ages 5+ in mind.

You should allow at least an hour
for your tree search.

You may choose to do this on a family walk in one afternoon, or you may choose to spend a whole year completing the checklist of trees provided and observing changes in the different seasons.

Staying safe in woodlands



Never do these activities alone. A parent/carer/responsible adult should **ALWAYS** accompany children with all outdoor activities.



Do not approach a riverbank if it has been raining heavily or if it has just stormed.



Wear appropriate clothing and footwear.



If a tree appears to have fallen branches or looks dangerous, leave it alone and find another tree!



Take care and watch for muddy or slippery areas with potentially dangerous footing.



Wash your hands thoroughly when you return home.

Tree checklist

Adler

Hawthorn

Rowan

Ash

Hazel

Scots Pine

Aspen

Holly

Willow (Goat)

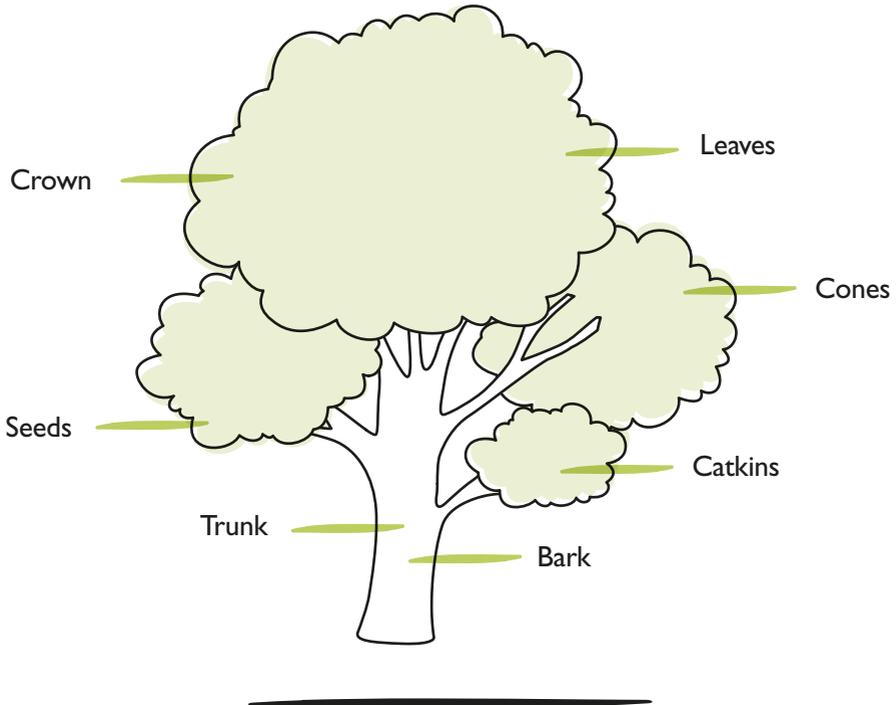
Birch (Downy)

Oak (Common Oak)

Wych Elm

All about trees

Throughout this book we will commonly refer to the following parts of a tree:



We have provided a space for you to colour parts of the trees you find and their colours in various seasons. When you see a dotted line this means you have the option to colour half of the tree (or part of the tree) as it would appear in one season and the other half as it would appear in another season of your choosing.

You have also been provided with a space to draw your own leaf for each tree, so have fun and be creative!

If you want to submit your colourings or drawings to Forth Rivers Trust and would like these to be displayed on the RiverLife website, please get in touch:

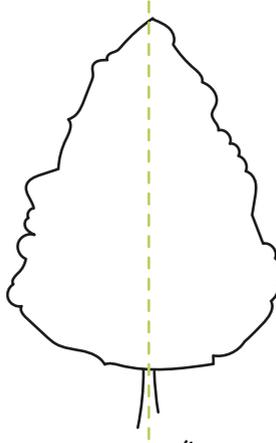
trust@forthriverstrust.org

Alder

Alnus glutinosa

Colour this side with summer colours

Colour this side with autumnal colours



Leaf: Rounded with indented tip, wavy edge, up to 10cm.



Flower: Male and female catkins appear on the same tree between February – April and are wind pollinated.



Seeds: Fertilised female catkins ripen into brown woody cones by October spreading seeds by air and water.

Tales

When alder is cut it turns orange giving the impression that it is bleeding. This led many Irish people to fear alder and believed passing one on a journey was bad luck. Placing their leaves in your shoes was meant to cool the feet and prevent soreness.

Where does it grow? (Habitat)

-  Riverbanks
-  Watercourses
-  Marshy ground
-  Hillsides up to 500m

What is it used for?

-  It is used for gunpowder, medicines, musical instruments, clogs and cabinets.
-  It is tolerant to wet conditions and was used to build piers and crannogs in Venice.
-  Alder is Scotland's most unpalatable tree for grazing animals.

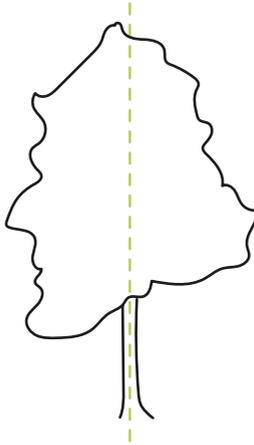
Use this
space to draw
your own
Alder leaf

Features: Alder belongs to the same family as Birch. It needs plenty of light, grows up to 25m and lives for 150 years, averaging at 60. Bark is dark, fissured and often covered in lichen. Twigs have a light brown, spotted stem, which turns red at the top. Young twigs are sticky.

Ash

Fraxinus excelsior

Colour this side with summer colours



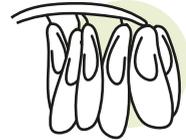
Colour this side with autumnal colours



Leaf: 3-6 pairs of oval leaves, shaped like a feather, coming off a single stem (compound) with a single 'terminate' leaflet.



Flower: Male and female flowers are purple, growing in spiky clusters at the end of twigs. They are wind pollinated.



Seeds: Ash seeds are called keys and spin in the wind. Seeds are then dispersed by birds and mammals.

Tales

In Norse mythology ash was the 'Tree of Life' and the first man on Earth was said to have come from an ash tree. In Britain, druids regarded the ash as sacred and their wands were often made of ash because of its straight grain. 'Fraxinus' means firelight.

Where does it grow? (Habitat)

-  Low elevations
-  Often grows with oak, birch, elm and hazel
-  Favours moist, neutral, rich soil (like riverbanks)
-  Leaves move towards the sun

What is it used for?

-  Ash is a hard wood ideal for making tools and sport handles, including hammers, axes, spades, hockey sticks and oars.
-  It has been used to construct carriages, furniture and been coppiced for firewood and charcoal.
-  Young seeds are edible and have been used in herbal medicine and for treating snake-bites.

Use this
space to draw
your own
Ash leaf

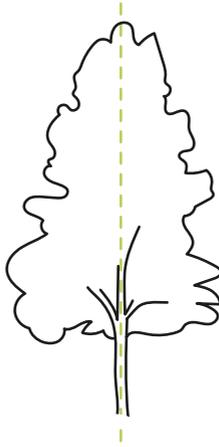
Features: Ash grows up to 35m and lives for up to 300 years. It is tall and graceful with an upright structure. The bark is pale brown to grey and fissures as the tree ages. It is easily identified in winter by its smooth twigs with black velvet leaf buds, arranged opposite each other.

Aspen

Populus tremula

Colour this side with summer colours

Colour this side with autumnal colours



Leaf: Round with irregular teeth and flattened, flexible leaf stalks that tremble in the wind.



Flower: Male and female catkins appear on different trees in spring.



Seeds: Once pollinated, female catkins ripen to release tiny fluffy seeds in summer.

Tales

In Celtic mythology, the effect of an aspen trembling in the wind was said to be the tree communicating with this world and the next. Wearing an aspen crown allowed the participant safe passage. Keeping an aspen twig was meant to prevent theft and help overcome fear.

Where does it grow? (Habitat)

-  Grows in scattered clumps often with ash, oak and birch
-  Can grow in damp, harsh soils including riverbanks
-  Likes woodland edge (near light)
-  Exposed upland sites up to 550m

What is it used for?

-  Aspen wood is white, soft, lightweight and strong.
-  It has been used for making oars, paddles, surgical splints and cartwheels.
-  Matchsticks are made of aspen.
-  The Greeks made shields from aspen.

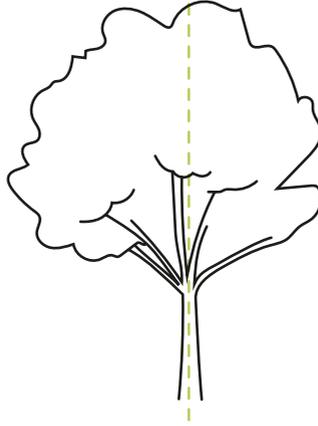
Use this
space to draw
your own
Aspen leaf

Features: Aspen is a keystone species crucial in supporting hundreds of flies, moths, beetles, fungi, lichen and mosses. Known as quaking Aspen as the leaves flutter around in the wind. It grows to 25m and lives for up to 100 years. Tree bark is grey with diamond shaped pores called lenticels, which darken with lichen growth. Twigs are dark brown, slender, shiny, and become knobby with age. It is Scotland's only native poplar tree.

Birch (Downy)

Betula pubescens

Colour this
side with
summer
colours



Colour this
side with
autumnal
colours



Leaf: Small and triangular with a toothed edge. Leaf stalks are downy, as opposed to smooth on Silver Birch.



Flower: Male catkins are long and brownish yellow, females are shorter, smaller and green. They grow on the same tree.



Seeds: After being wind pollinated, female catkins thicken and turn red.

Tales

The Celts believed that birch symbolised renewal and purification. Bundles of birch twigs were used to drive out the spirits of the old year, and gardeners still use the birch besom, or broom, to 'purify' their gardens. It is also used as a symbol of love and fertility.

Where does it grow? (Habitat)

- Downy birch grows well on damp sites in the North and West of Scotland but can be found in most areas of Scotland.

What is it used for?

- It has been used to make furniture, canoe skins, cups, roof tiles, rope, handles and toys etc.
- The sap makes refreshing drinks, wines, ales and liqueurs.
- The bark is used as dye and for tanning leather.
- It is used in herbal medicine to detoxify the urinary system.

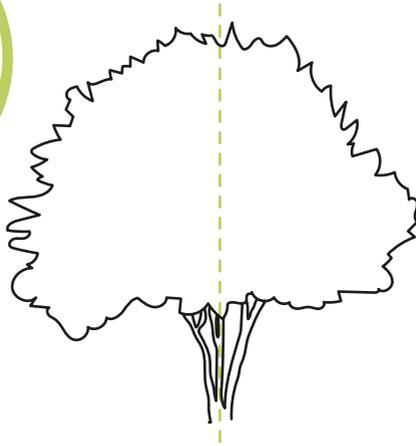
Use this
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your own
Birch leaf

Features: There are three species of native birch in Scotland – Silver, Downy and Dwarf. Birch is a common, elegant tree, with drooping branches. It grows up to 30m and lives for 50-80 years. The twigs of Downy birch are hairy, with dark branches. Birch is a hardy and versatile pioneer species, being one of the first trees to colonise after the Ice Age and improve the soil for others.

Hawthorn

Crataegus monogyna

Colour this
side with
summer
colours



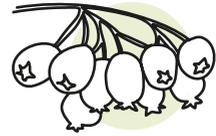
Colour this
side with
autumnal
colours



Leaf: 6cm in length, shiny, with deep toothed lobes.



Flower: Highly scented, white or pink, with 5 petals. They grow in flat topped clusters.



Seeds: Once pollinated by insects, flowers develop into deep red berries known as 'haws'.

Tales

In Celtic mythology it symbolises love and protection and is linked to the homes of fairies. It is also a pagan symbol of fertility. Other folklore warned against bringing hawthorn into the home as it would be followed by illness or death. Decaying flowers give off scent of rotting animals. Its blossoming is said to mark the turn of spring to summer.

Where does it grow? (Habitat)

-  A wide range of exposed and urban areas
-  Found in woodland and scrub
-  Found widely in hedges
-  Grows in most soils, but prefers full sun

What is it used for?

-  Its biggest use is for wildlife friendly hedging.
-  The timber is used for turning and carving and to make veneers, cabinets, boxes and hand tools.
-  It provides good firewood and charcoal.
-  Young leaves, flower buds and flowers are all edible and can be added to salads.
-  Blossom and haws are made into wines, jellies and ketchups.

Use this
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your own
Hawthorn
leaf

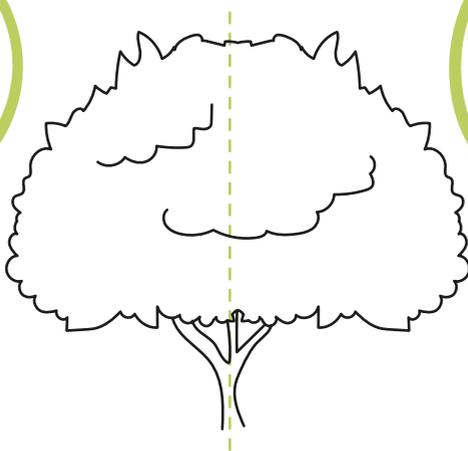
Features: Mature trees can reach a height of 15m and are known for their dense, thorny habitat, ideally suited for nesting birds. They have a rounded crown and can grow as a small tree with a single stem. The bark is brown-grey, knotted and fissured and twigs are slender, brown and covered in thorns.

Hazel

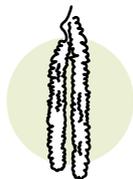
Corylus avellana

Colour this side with summer colours

Colour this side with autumnal colours



Leaf: Round to oval, doubly toothed, hairy and pointed at the tip. Turn yellow in autumn.



Flower: Male yellow catkins or 'lamb's tails' appear in February. Females are small, red and budlike.



Seeds: Females develop into oval fruits of groups of 1-4 and mature into nuts in late summer, with a woody shell and leafy bracts.

Tales

The Celts believed hazelnuts to be magical. In tales nine hazel trees grew around a sacred pool, dropping nuts into the water where they were eaten by the salmon that absorbed wisdom. A hazel rod is supposed to protect against evil spirits, as well as being used as a wand for water divining. In the UK hazelnuts were carried as a lucky charm, and as a symbol of fertility.

Where does it grow? (Habitat)

-  Prefers heavy, rich soil
-  Often found in the understory of lowland oak
-  Will also grow on shallow soil or over limestone
-  Often found with ash or birch and in hedgerows

What is it used for?

-  Historically it was used for thatching, net stakes, hurdles and furniture.
-  Straight coppiced hazel poles have been used for wattle fencing, walking sticks, fishing rods, bean poles and basketry.
-  Until the early 1900s Hazel was grown in the UK for large-scale nut production.

Use this
space to draw
your own
Hazel leaf

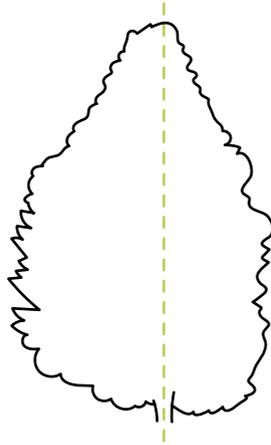
Features: A medium sized shade tolerant shrub growing up to 12m and living for up to 80 years. Often grows in clumps, as a multi stemmed small tree and can be coppiced to extract poles and encourage new growth. Hazel is the same family as Hornbeam. It has a smooth, grey brown bark, which peels with age and bendy hairy stems.

Holly

Ilex aquifolium

Colour this side with summer colours

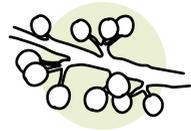
Colour this side with autumnal colours



Leaf: Dark green, glossy and oval, leathery leaves with spiky prickles on the edges. Remain all year.



Flower: White with four petals. They bloom in fine weather. Male and female flowers grow on separate trees.



Seeds: Once pollinated by insects, female flowers develop into red berries, which last all winter.

Tales

Holly has often been used to decorate houses at Christmas. The tree was a fertility symbol and a charm against witches, goblins and the devil. But be sure to take it back outside by the 1st of February to avoid the spirits' revenge! Carrying a holly leaf in your pocket is meant to be a good luck (sounds prickly!). It was thought unlucky to cut down a Holly tree.

Where does it grow? (Habitat)

-  Common in woodland, scrub and hedgerows Requires well-drained soil
-  Is shade tolerant and can grow as an understory
-  Grows well in oak and beech woodland Does not like exposed areas (the coast)

What is it used for?

-  Its white, heavy wood is hard and fine grained.
-  It can be stained and polished and used to make furniture or in engraving work.
-  It is commonly used to make walking sticks and provides good quality firewood.

Use this
space to draw
your own
Holly leaf

Features: A small hardy tree growing up to 15m and living for up to 300 years in ideal conditions. It is notable for its prickly leaves and red berries. The bark is smooth and thin with lots of small brown 'warts' and the stems are dark brown.

Oak (Common Oak)

Quercus robur

Colour this side with summer colours



Colour this side with autumnal colours



Leaf: 2-5 deep lobes, with smooth edges. 10cm long. Almost no stem and grow in bunches.



Flower: Male catkins are long, hanging and yellow which distribute pollen by air. Tiny female flowers appear at the base of the leaves.



Seeds: Acorns are 2 cm long, on long stalks in cupules and turn from green to brown once ripe.

Tales

Oak was often seen as a strong and masculine tree in legend, termed the 'lord of the woods'. Ancient kings and Roman Emperors wore crowns of oak leaves. It was sacred to the gods Zeus, Jupiter and Celtic Dagda who ruled over thunder and lightning. Druids practised rituals in oakwoods.

Where does it grow? (Habitat)

-  Prefers clays and damp lowlands
-  Widely found in the south and east of Scotland

What is it used for?

-  Oak hardwood takes 150 years to mature before being used to produce quality furniture, flooring, wine barrels, firewood and charcoal.
-  Bark tannin has been used for tanning leather for centuries.
-  Used in herbal medicine to treat diarrhoea, inflammation and kidney stones.

Use this
space to draw
your own
Oak leaf

Features: Common and Sessile oak are native, widespread and iconic. They grow to 40m tall and live for an amazing 1,000 years. Common oak is known for its broad and spreading crown, remarkable girth and twisted branches. Bark is grey and fissured. Buds appear rounded and in clusters. Leaves turn yellow - brown in autumn.

Rowan

Sorbus aucuparia

Colour this
side with
summer
colours

Colour this
side with
autumnal
colours



Leaf: 5-8 pairs of serrated leaves with a terminal end. Pinnate (shaped like a feather).



Flower: Each flower has male and female parts and five cream petals. Flowers cluster.



Seeds: After being pollinated by insects, flowers develop into red berries.

Tales

Rowan comes from the Norse word 'Raun', meaning charm or spell. Its old Celtic name means wizard's tree. It was once widely planted by houses as a protection against witches. The colour red was said to be the best colour for fighting evil, and so the rowan's bright red berries have been associated with magic and witches.

Where does it grow? (Habitat)

-  Widespread throughout Scotland
-  Often grows in pine, oak and birch woods
-  Can grow up to an altitude of 1000m
-  Is partially shade tolerant

What is it used for?

-  Rowan is used in furniture making, craftwork and engraving.
-  Rowan berries are edible and often made into jelly, rich in vitamin C.
-  Cross beams of chimneys were called 'rantrees' in Scots because they were traditionally made from rowan trees.
-  It is commonly planted as a street or garden tree for its resilience and reliability

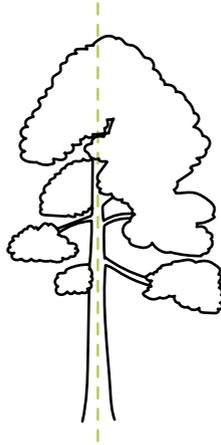
Use this
space to draw
your own
Rowan leaf

Features: Rowan can grow to 15m in height and live up to 200 years. The bark is smooth and silver grey, and leaf buds are purple and hairy. It is a fast growing pioneer species in the Caledonian forest.

Scots Pine

Pinus sylvestris

Colour this
side with
summer
colours



Colour this
side with
autumnal
colours



Leaf: Simple needles are blue-green, slightly twisted and grow in pairs. Evergreen and present all year.



Flower: Male flowers have clusters of yellow anthers at base of shoot. Females are small, red-purple and globular, growing at the tip of new shoots.



Seeds: After being wind pollinated, female flowers turn green and develop into cones.

Tales

Druids used to light large bonfires of Scots pine at the winter solstice to celebrate the passing of the seasons and to bring back the sun. Pine is known as the tree of heroes and symbolises mortality.

Where does it grow? (Habitat)

-  Now common throughout Scotland
-  Is able to grow in infertile ground
-  Prefers light sandy dry soil
-  Is drought resistant and dislikes salt spray

What is it used for?

-  One of the strongest softwoods available and widely used in construction and joinery works.
-  The bark can be tapped for resin to make turpentine. Dry cones can be used as kindling for fires.
-  Other uses include rope made from the inner bark, tar from the roots and a dye from the cones.

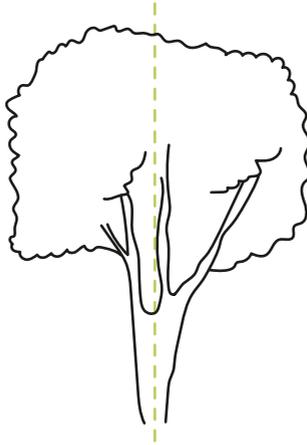
Use this
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your own
Scots Pine leaf

Features: Native conifer growing to 35m and living for up to 500 years. Scots pine is a keystone species of the Caledonian forest, providing a crucial habitat for many species. It can grow alongside deciduous trees such as birch, rowan, beech and sycamore. Bark is scaly orange-brown, which develops plates and fissures with age. Twigs are green-brown and hairless.

Willow (Goat)

Salix caprea

Colour this side with summer colours



Colour this side with autumnal colours



Leaf: Oval with a pointed tip that bends to one side.



Flower: Male and female catkins grow on different trees. The male catkins look like a cat's paw.



Seeds: After being pollinated by the wind and insects, female catkins develop into woolly seeds.

Tales

It is thought that the words 'witch', 'wicked' and 'wiccan' all originate from the word Willow. It has long been associated with death and mourning, and symbolically features in the description of Ophelia's death in Shakespeare's Hamlet. Their branches are used to celebrate Palm Sunday. 'Salix' comes from the Celtic word 'Sallis', meaning near water.

Where does it grow? (Habitat)

-  Prefer damp wet sites (near rivers)
-  Are often found near rivers in woodland
-  Can grow on bare contaminated ground

What is it used for?

-  Salicin from bark acts as an anti-inflammatory.
-  Willow species like osier, purple osier, crack and white willow are used to protect riverbanks from erosion.
-  The species supports many insects, fungi and lichen, adding great biodiversity value.

Use this
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your own
Alder leaf

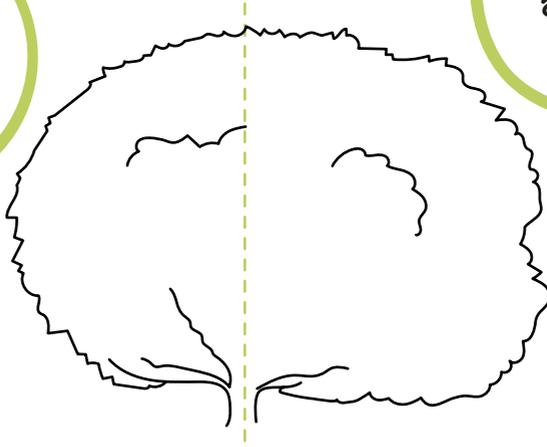
Features: There are lots of different kinds of Willow, ranging from tall trees to dwarf shrubs. Some narrowed leaved varieties are known as 'osiers' and broader leaved species 'sallows'. Goat Willow grows up to 10m and lives for up to 300 years. Bark is grey-brown and develops diamond shaped fissures with age. Twigs are hairy at first but become smooth appearing red-yellow in the light. The most common species in Scotland are Goat, Eared and Grey and they often hybridise.

Wych Elm

Ulmus glabra

Colour this side with summer colours

Colour this side with autumnal colours



Leaf: Toothed, up to 16cm long, asymmetrical base and pointed tip.



Flower: Appear in spring before leaves, red-purple and grow in clusters of 10-20, spaced along branches.



Seeds: Small winged fruits known as samaras that are wind-blown like confetti.

Tales

Elms used to be linked with melancholy and death, perhaps because the trees can drop dead branches without warning. In Celtic and Greek mythology, the elm is associated with the underworld. In folk tales, elm holds the power to give you prophetic dreams.

Where does it grow? (Habitat)

-  Dislikes pollution and very dry soils
-  More commonly found in the east of the country
-  Does well in hilly or rocky woodlands, streams and ditches
-  Will grow into a large tree when sheltered, but remains a shrub when exposed.

What is it used for?

-  Its most common use is to make coffins.
-  Elm wood is strong, durable and water resistant.
-  It has also been used to make boat parts, furniture, wheel hubs and floorboards.

Use this
space to draw
your own
Wych Elm leaf

Features: Native to Scotland but rarer than in the past due to Dutch Elm disease. It grows to 30m and up to 500 years. Bark is smooth and grey when young, becoming grey-brown and fissured after 20 years. Twigs are dark grey and covered in coarse orange hairs. Leaf buds are hairy, purple-black and in squat shape.



Get in touch with us and share your findings. We love woodlands too and would be excited to answer any questions you might have!

Share your woodland adventures:



 @ForthRiversTrust

 @ForthRiversT

 Forth Rivers Trust

 forthriverstrust

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Who are Forth Rivers Trust?

The Forth Rivers Trust aims to engage people with rivers and wildlife that live within the Forth catchment whilst conserving rivers and their important species for future generations. The Trust is involved with many projects ranging from full-scale restoration of rivers to engaging communities through organised events.



This booklet was made possible with funding from National Lottery Heritage Fund and those involved in the RiverLife:Almond & Avon project (2016-2021)