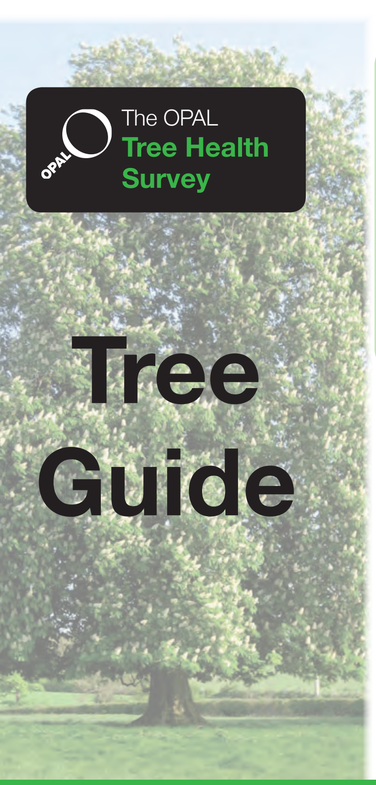


Tree Guide

The OPAL Tree Health Survey

BOX 1. Conifers and broadleaved trees

Trees can be divided into two main groups: conifers and broadleaved trees.

Conifers have leaves which are either scale-like or long and needle-like.

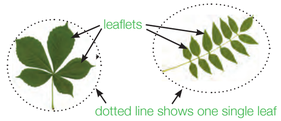
Broadleaved trees have wide flat leaves.

The OPAL Tree Health Survey is for broadleaved trees only.

BOX 2. Simple leaves and compound leaves

A simple leaf is a single leaf attached to a stalk.

A compound leaf is made up of several leaflets.

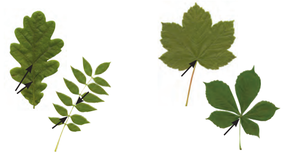


There is no bud at the base of individual leaflets, only at the base of the stalk of the whole leaf.

BOX 3. Pinnate leaves and palmate leaves

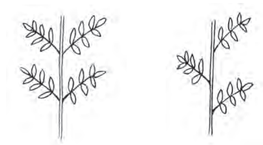
In a pinnate leaf, the veins spread from several places along the leaf stalk.

In a palmate leaf, the veins spread from a single point at the top of the leaf stalk.



Pinnate leaves | Palmate leaves

BOX 4. Opposite pairs and alternate pairs



Opposite pairs | Alternate pairs

If the leaves are in opposite pairs, each pair of leaves grows from a single place on the stem.

If the leaves are in alternate pairs, each leaf grows from a different place on the stem.

BOX 5. Lobed leaves and unlobed leaves

Lobes are large projections at the edge of the leaf.

Unlobed leaf | Lobed leaves

BOX 6. Toothed leaf edges

Teeth are small projections at the edge of the leaf.

START HERE

Does the tree have needles or scale-like leaves? (BOX 1)
- YES → **Conifers**
- NO

If you have found a conifer, choose another tree for the OPAL Tree Health Survey

Does the tree have simple leaves? (BOX 2)
- NO

Do all the leaflets grow from the end of the stalk?
- YES → **Horse Chestnut**
- NO

Does the leaf have two or three pairs of leaflets?
- YES → **Elder**

Check: Elder leaves release a pungent smell when you rub them

- NO

Do the leaves grow in opposite pairs on the twig? (BOX 4)

(Make sure that you are looking at the leaves and not just the leaflets)
- YES → **Ash**

Check: Ash has black buds

- NO → **Rowan**

Check: Rowan never has black buds like Ash. Rowan leaflets are deeper toothed than Ash. Look out for red berries on Rowan in autumn.

Do the leaves have lobes? (BOX 5)
- YES
- NO

Is the leaf at least twice as long as it is wide?
- YES

- NO

Does the leaf have a toothed edge? (BOX 6)
- YES
- NO

Are there fine white hairs on the edge of the leaf?
- YES → **Beech**

Check: Beech leaves have a wavy edge

- NO

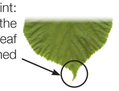
Does the leaf have a blunt or rounded tip?
- YES → **Alder**
- NO → **Willow**

Are the leaves palmate? (BOX 3)
- YES
- NO

Are the twigs thorny?
- YES → **Hawthorn**
- NO → **Oak**

Is the underside of the leaf pale?
- YES
- NO

Is the leaf tip a distinct point?



- YES
- NO

Is the leaf base asymetrical?
- YES → **Elm**

Check: Elm leaves feel rough when rubbed between the fingers

- NO → **Birch**

Check you are looking at Birch not Alder. Alder has a rounded leaf tip, while Birch has a pointed leaf tip (see overleaf)

Does the bud grow on a stalk?
- YES → **Crab Apple**
- NO → **Whitebeam**

Is the leaf stalk flattened?
- YES → **Poplar**
- NO

Does the leaf bulge out more one side?
- YES → **Lime**
- NO → **Hazel**

Check: Hazel leaves and leaf stems are hairy

Do the leaves grow in opposite pairs?
- YES → **Maple**

Check: Maple leaves have more rounded lobes, while London Plane and Sycamore have more pointed lobes

- NO

Does the leaf have a toothed edge? (BOX 6)
- YES → **Sycamore**
- NO → **London Plane**

Are there 2 red spots at the top of the leaf stalk?
- YES → **Cherry**

Cherry leaves have a wide range of sizes

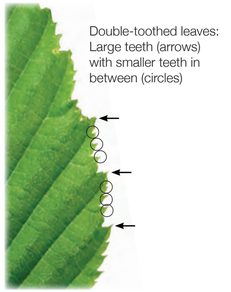
- NO

Does the edge of the leaf have large teeth?
- YES → **Sweet Chestnut**

Check: Sweet Chestnut leaves do not have 2 red spots at the top of the leaf stalk

- NO

Is the leaf shorter than 10 cm?
- YES



Double-toothed leaves: Large teeth (arrows) with smaller teeth in between (circles)

Is the edge of the leaf double toothed? (BOX 6)
- YES → **Hornbeam**
- NO → **Cherry**

Cherry leaves have a wide range of sizes

This guide looks at 22 of some of the most common trees in Britain. If you are unable to find a match, you may want to use a different guide.

More information about identifying trees

OPAL identification guides
www.OPALexplorenature.org/identification

iSpot
www.ispot.org.uk

Field Studies Council
www.field-studies-council.org/publications

Tree Name Trail fold-out chart (code OP51)

Guide to identifying deciduous broadleaved trees in winter (code 258)

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Oak

Look for acorns on the tree and on the ground under the tree.

The leaves are simple and **pinnate**: side veins join the main vein at different points.

Quercus species

Horse Chestnut

Fat, often sticky buds paired on twigs.

Look for conkers in the summer and autumn.

The leaves are compound and palmate: the veins fan out from a single point at the top of the leaf stalk.

Aesculus hippocastanum

Sweet Chestnut

Castanea sativa

Sycamore

Acer pseudoplatanus

London Plane

Platanus × *acerifolia*

Hornbeam

Carpinus betulus

Alder

Alnus species

Elder

Sambucus nigra

Maple

Acer species

Hawthorn

Crataegus monogyna

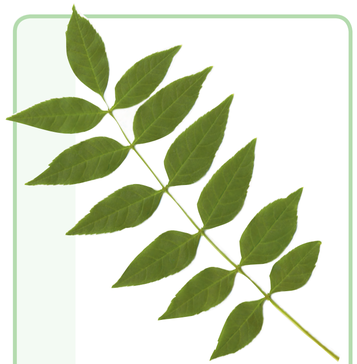
Beech

Fagus sylvatica

Hazel

Corylus avellana

Ash



The leaves are compound and **pinnate**: the veins join the leaf stalk at different points.

Paired leaflets with **untoothed** edges on a **green** stalk.

Large black buds on the twigs.

Look for bunches of single-winged 'keys' on the tree from late summer.

Fraxinus excelsior

Rowan

The leaves are compound and **pinnate**: the veins join the leaf stalk at different points.

Paired leaflets with **toothed** edges on a **red** stalk.

Pale buds on the twigs.

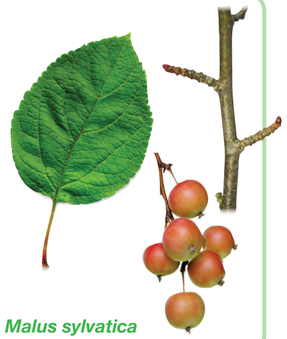
Look for red berries in the autumn.

Sorbus aucuparia

Whitebeam

Sorbus aria

Crab Apple



Malus sylvatica

Lime

Tilia species

Cherry

Prunus species

Conifers

Conifers can have needles (above) or scale-like leaves (below). If you have found a conifer, choose another tree for the Tree Health Survey.

Birch

Betula species

Elm

Ulmus species

Willow

Salix species

Poplar

Populus species