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Hedgerow tree and shrub ID guide



This guide will help you identify the species of trees and shrubs you're most likely to encounter whilst out surveying hedgerows. It's best used between the months of March and October, when the trees and shrubs are in leaf. We've put species which may easily be confused on the same page spread and highlighted key identification features in **blue** to help you compare and correctly identify them. You may also encounter species not described here.

Further useful plant identification guides are:

The Wildflower Key by Francis Rose revised by Claire O'Reilly

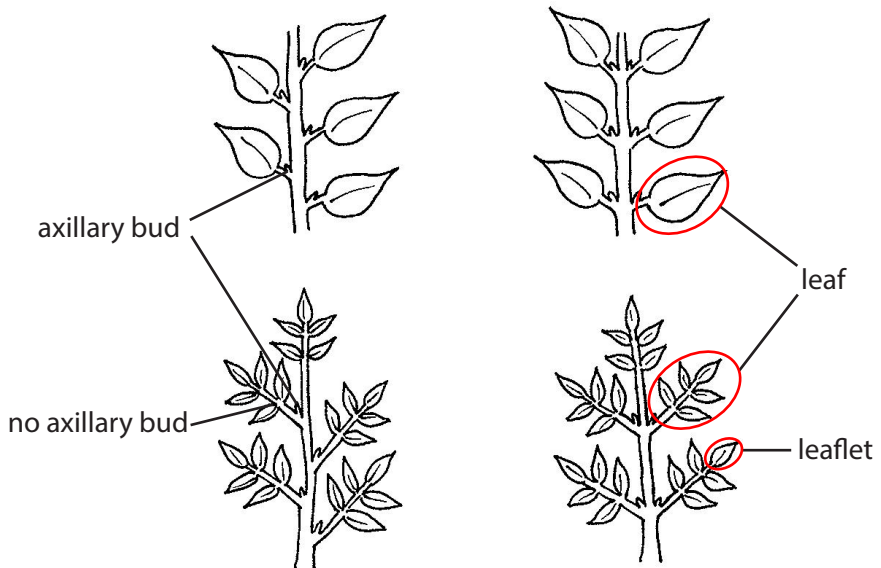
Collins Complete Guide to British Trees by Paul Sterry

The Trees and Shrubs Website - www.saps.plantsci.cam.ac.uk/trees/

Thank you for your help surveying hedgerows.

Leaf terminology

The ability to determine whether leaves are alternate or opposite will help with identification. Look for the axillary bud at the base to determine whether you are looking at the whole leaf or an individual leaflet.



Alternate leaves

Opposite leaves

Beech (*Fagus sylvatica*)



Leaves: oval and pointed, wavy edges, hairless apart from edges and veins underneath, alternate.

Bark: grey, smooth or slightly rough.

Flowers: male catkins tassel-like on long stalks, female flowers in pairs surrounded by scaly cup.

Fruit: 3-sided shiny brown nuts, paired in prickly cases.

Hornbeam (*Carpinus betulus*)



Leaves: long-oval, similar to beech but more leaf veins, sharp irregular teeth and more pointed, pleated along veins, hairy underneath, alternate.

Bark: grey, smooth, vertical stripes.

Twigs: greyish-brown, downy.

Flowers: male catkins yellowish green with red outer scales.

Fruit: clusters of winged, green, ribbed nuts with trident shaped leafy case.

Sweet chestnut (*Castanea sativa*)



Leaves: long-oval, pointed, glossy, saw-like spiny teeth, alternate.

Bark: vertical fissures which may spiral up trunk.

Flowers: 12-20cm long catkins, 3 female flowers at base in scaly cups, male flowers with yellow stamens above.

Fruit: shiny brown nuts, 1-3 together in spiny green capsule.

Common alder (*Alnus glutinosa*)



Leaves: dark green, rounded, **blunt or slightly notched end** with no point, wavy or toothed edges, shiny upper, **sticky when young**, alternate.

Bark: dark and fissured.

Twigs: **hairless**, sticky when young.

Flowers: male catkins yellow with dark tips, 2-6cm and pendulous, female catkins smaller, green, cone-like.

Fruit: small, woody, cone-like.

Hazel (*Corylus avellana*)



Leaves: rounded-oval, **long pointed tip**, sharp irregular teeth, **downy**, alternate.

Bark: coppery brown, smooth, often peels.

Twigs: **very hairy**.

Flowers: male catkins pendulous and yellow, female catkins short, erect, red.

Fruit: 2cm, oval, woody shelled nut, surrounded by leafy lobes, clusters of 1-4.

Wych elm (*Ulmus glabra*)



Leaves: oval-diamond, **8-16cm long**, long tapering tip, toothed, rough and hairy, **base uneven – long side extends beyond stalk to twig**, alternate.

Bark: deep vertical ridges when mature, **few or no suckers** (leaf growth at base).

Twigs: hairy when young.

Flowers: as English elm but longer.

Fruit: papery winged seed.

English elm (*Ulmus procera*)/smooth-leaved elm (*U. carpinifolia*)



Leaves: rounded-oval, 4-9cm long, short tapering tip, toothed, base uneven - long side does not extend beyond stalk to twig, alternate.

Bark: rough, squarish plates, suckers.

Flowers: purplish tassel-like catkins.

Fruit: rare, seed with papery wing.

English elm has rough hairy leaves and hairy twigs, smooth-leaved elm has shiny leaves and hairless twigs.

Small-leaved lime (*Tilia cordata*)



Leaves: heart-shaped with uneven base, toothed, 3-6cm long, hairless underneath except for tufts of dark hairs in vein axils, alternate.

Bark: dark grey, smooth.

Twigs: brownish red above, olive below.

Flowers: yellow-white, clusters of up to 10.

Fruit: hard, rounded, pointed tip, no ridges.

Large-leaved lime (*Tilia platyphyllos*)



Leaves: heart-shaped with uneven base, toothed, 6-15cm long, side veins prominent, grey downy underneath, alternate.

Bark: dark grey, smooth.

Twigs: reddish green, slightly downy tips.

Flowers: yellow-white, drooping clusters of 2-6.

Fruit: hard, rounded with 3-5 deep ridges, pendent clusters.

Aspen (*Populus tremula*)



Leaves: rounded with large rounded teeth, **very long flattened stalks**, 'tremble' in slightest breeze producing audible rustle, alternate.

Bark: smooth, greyish green.

Twigs: usually hairless when mature.

Flowers: pendulous catkins, 4-8cm, deeply jagged scales, male reddish-purple, female green-tinged pink.

Downy birch (*Betula pubescens*)



Leaves: oval-triangular, pointed, fairly evenly toothed, **stalk and underside vein axils hairy**, alternate.

Bark: brown, grey or reddish, papery.

Twigs: **downy**.

Flowers: male catkins yellow, 3-6cm and pendulous, female catkins shorter, green, erect.

Fruit: rounded papery wings, wing and seed size similar.

Silver birch (*Betula pendula*)



Leaves: triangular, pointed, irregularly (double) toothed, **hairless underside and stalk**, alternate.

Bark: **silvery white**, papery, black diamond shapes, deep fissures at base when mature.

Twigs: **hairless** and pitted, rough.

Flowers: as downy birch.

Fruit: rounded papery wings, wings larger than seed.

Black poplar (*Populus nigra betulifolia*)



Leaves: triangular or diamond-shaped, **shiny both sides**, finely toothed, **hairless**, long stalks, alternate.

Bark: grey-brown, darker when mature, deeply fissured, base is **blackish** and gnarled with no suckers (leaf growth).

Twigs: hairless, **sticky tips**.

Flowers: pendulous catkins, male reddish, female green.

Grey willow (*Salix cinerea*)



Leaves: long-oval, pointed, **2-3 times longer than wide**, tapering to stalk, bluntly toothed, downy underneath, alternate.

Bark: dark brown, ridged.

Twigs: thick, grey, **downy**, ridged when bark peeled off.

Flowers: short catkins, male grey-yellow, female greener and on separate trees.

Fruit: finely plumed seeds.

Goat willow (*Salix caprea*)



Leaves: oval, pointed, **1-2 times longer than wide**, bluntly toothed, grey woolly underneath, alternate.

Bark: vertically fissured.

Twigs: **downy only when young**, yellowish brown with age, smooth when bark peeled off.

Flowers: as grey willow but larger.

Fruit: silky-haired seeds.

Field maple (*Acer campestre*)



Leaves: 3-5 **blunt lobes**, untoothed, hairless upper, downy underside, opposite.

Bark: grey-brown, fissured, flaking.

Twigs: brown, **downy**.

Flowers: yellow-green, 5 petals, cup-shaped in erect open clusters.

Fruit: downy, paired seeds with greenish, **horizontal propeller-shaped wings**, clusters of 4.

Sycamore (*Acer pseudoplatanus*)



Leaves: 5 **pointed lobes**, bluntly toothed, hairless, opposite.

Bark: greyish, smooth when young, flaky when mature.

Twigs: grey-green, **hairless**.

Flowers: yellow, 5 petals, in drooping open clusters.

Fruit: clusters of hairless, paired seeds with **propeller-shaped wings at acute angle**.

Wild service tree (*Sorbus torminalis*)



Leaves: Deep green lobed leaves, **each lobe with a pointed tip**. Serrated margin edge. Similar shape to maple leaves but alternate rather than opposite.

Flowers: Clusters of frothy white flowers.

Fruit: **Golden-green berries on long stems** with an oval shape (vaguely similar in appearance to an olive).

Pedunculate oak (*Quercus robur*)



Leaves: deeply lobed, side and **base lobes rounded**, hairless, **stalks less than 5mm long**, alternate.

Bark: grey, rugged, deeply fissured when mature.

Twigs: hairless.

Flowers: male and female catkins in spring.

Fruit: acorns in scaly cups, groups of 1-3 on **long stalks**.

Sessile oak (*Quercus petraea*)



Leaves: lobed, **base lobe tapers into stalk**, hairs in vein axils underneath, **stalks over 1cm long**, alternate.

Bark: grey-brown, deep vertical fissures.

Twigs: hairless.

Flowers: male and female catkins.

Fruit: acorns have no or small stalks, **sit directly on twig** in small clusters.

Holly (*Ilex aquifolium*)



Leaves: dark green, shiny, **tough and leathery**, wavy edges with **spiny teeth**, underneath paler colour, those higher in tree may not have spines, alternate.

Bark: smooth, silver-grey.

Twigs: green.

Flowers: small, white, 4 petals, small clusters at leaf axils.

Fruit: bright red, round, stalked berry.

Blackthorn (*Prunus spinosa*)



Leaves: oval, pointed, toothed, dull when mature, alternate.

Bark: dark blackish brown, often suckers from base.

Twigs: downy when young, many side shoots which become thorns.

Flowers: 5 white petals, open before leaves to cover shrub.

Fruit: sloes, round or slightly oval, 1.5cm, blue-black with whitish dusting.

Common hawthorn (*Crataegus monogyna*) / **midland hawthorn** (*C. laevigata*)



Leaves: 3-5 lobes, tough, alternate.

Common hawthorn has more pointed and deeply lobed leaves than midland hawthorn.

Bark: Heavily fissured.

Twigs: hairless, very thorny.

Flowers: 5 petals, white or pink in flat clusters, open late spring.

Fruit: rounded-oval, crimson.

Crab apple (*Malus sylvestris*)



Leaves: oval and pointed, toothed, smooth and hairless when mature, alternate.

Bark: dark brown, scaly, cracking into small oblong plates.

Twigs: smooth and thorny.

Flowers: 5 petals, white with pink tinge, yellow stamens.

Fruit: up to 4cm, apple-shaped, yellow-green, tough and sour.

Wild cherry (*Prunus avium*)



Leaves: oval, long pointed tip, irregularly toothed, dull and smooth upper, downy underside. **2 red glands on stalk** where leaf joins, alternate.

Bark: **shiny** reddish brown, **horizontal lines**, peeling.

Twigs: smooth and reddish.

Flowers: white with 5 petals.

Fruit: 1-2cm, round, bright or dark red, shiny.

Wild pear (*Pyrus pyraeaster*)



Leaves: oval or rounded, pointed, finely toothed, smooth and **glossy**, long stalks, alternate.

Bark: dark brown, rough, breaking into **small square plates**.

Twigs: smooth, normally spiny.

Flowers: white, 5 petals, purple stamens.

Fruit: yellow-brown, 3.5cm, rounded to pear-shaped, hard, pitted.

Plum (*Prunus domestica* agg.)



Leaves: dull, oval, pointed, toothed, alternate.

Bark: dull brown, may be purple tinged.

Twigs: **hairless** when mature, very few or **no thorns**.

Flowers: white or greenish-white, 5 petals, small clusters of 2-3, **open at same time as leaves not before**.

Fruit: yellow, red, blue-black or green, oval, 2-8cm, stone flattened and pitted.

Ash (*Fraxinus excelsior*)



Leaves: 7 to 13 long-oval, **strongly pointed** and toothed leaflets along a central stem, dark green smooth upper and paler underneath with **densely hairy midribs**, opposite.

Bark: pale grey, vertical ridges when mature.

Twigs: smooth, grey, **large black buds**.

Flowers: very small, purple, clustered.

Fruit: bunches of flat, slender 'keys'

Rowan (*Sorbus aucuparia*)



Leaves: 11-17 long-oval, pointed and strongly toothed leaflets along a central stem, **white-grey downy underside when young**, alternate.

Bark: silver-grey, smooth.

Twigs: purple-tinged, hairy when young.

Flowers: 5 petals, white, dense clusters.

Fruit: small, round and scarlet, contains 1-2 seeds, large clusters.

Elder (*Sambucus nigra*)



Leaves: 5 to 9 oval, pointed and toothed leaflets along a central stem, slightly hairy underside, opposite.

Bark: deeply furrowed and **'corky'**, suckers (straight shoots) emerge from base.

Flowers: 5 petals, **creamy** white, large flat clusters.

Fruit: round, black, shiny berries in **pendulous clusters**.

Dogwood (*Cornus sanguinea*)



Leaves: oval and pointed, untoothed, slightly downy, **veins converge towards tip**, deep red in autumn, opposite.

Twigs: **purplish red**.

Flowers: small, creamy white, **4 petals alternating with stamens**, large flat clusters at stem tips.

Fruit: small, blackish, rounded berries in clusters.

Buckthorn (*Rhamnus cathartica*)



Leaves: oval or rounded, short pointed tip, finely toothed, **veins converge towards tip**, opposite.

Bark: dark, orange-brown.

Twigs: **grey or brown** with spiny shoots.

Flowers: small, fragrant, green, **4 petals**, small clusters.

Fruit: 6-10mm berries, green turning shiny and black when ripe.

Alder buckthorn (*Frangula alnus*)



Leaves: oval, short pointed tip, untoothed, **veins do not converge towards tip**, opposite.

Bark: grey, smooth, vertical furrows.

Twigs: downy, green to grey-brown.

Flowers: very small, **5 petals**, green-white, small clusters.

Fruit: 6-10mm berries, green then red then black.

Wayfaring-tree (*Viburnum lantana*)



Leaves: oval, pointed, finely-toothed, **rough and wrinkled**, sparsely-downy upper, dense grey-downy underneath, opposite.

Bark: brown.

Twigs: pale brown-grey, downy, rounded.

Flowers: 5 petals, white, round-headed clusters with **all flowers alike**.

Fruit: flattened oval, red ripening to black.

Guelder-rose (*Viburnum opulus*)



Leaves: **3-5 lobes**, sharply toothed, hairless upper and downy underneath, opposite.

Bark: reddish brown.

Twigs: greyish, angular, hairless.

Flowers: white, flat clusters with **small fertile flowers in centre and larger outer flowers**.

Fruit: round, shiny, translucent red berries in clusters.

Wild privet (*Ligustrum vulgare*)



Leaves: long-oval, pointed, untoothed, **shiny and hairless**, opposite.

Twigs: downy when young, many branches forming **dense shrub**.

Flowers: creamy white, 4 petals, scented, clusters at branch tips.

Fruit: black, shiny, poisonous berries.

Garden privet (*Ligustrum ovalifolium*) is similar but has more rounded-oval leaves.

Dog-rose (*Rosa canina*)



Leaves: 5-7 oval, pointed and toothed leaflets along central stem, **usually hairless**, leaf stalks have long leafy stipules, alternate.

Branches: strong, long and arching, **big hooked thorns** with long bases, suckers.

Flowers: large (4-5cm), **pink or white**, 5 petals, clusters of 1-5.

Fruit: oval red 'hips'.

Field-rose (*Rosa arvensis*)



Leaves: as dog-rose except often **hairs on main vein underneath**, alternate.

Branches: weak, scrambling or trailing, **thorns slightly curved** with short bases.

Flowers: 3-5cm, **white only**, 5 petals, styles joined together in central column.

Fruit: oval red 'hips,' style column remains from flower.

Spindle (*Euonymus europaeus*)



Leaves: long-oval, pointed, finely toothed, purple-orange in autumn, opposite.

Bark: smooth, grey, fissured when mature.

Twigs: **green, four-angled**, hairless.

Flowers: small, greenish-white, 4 petals alternating with stamens, clusters of 3-10 in leaf axils.

Fruit: **4-chambered pink capsules**, contains orange seeds.

Common gorse (*Ulex europaeus*)



Spiny evergreen shrub.

Leaves: only on young plants, otherwise **long spines** with deep ridges.

Flowers: yellow, coconut-scented, **March to June**.

Dwarf gorse and western gorse are similar species but both smaller, with faintly furrowed spines and flower July to September.

Broom (*Cytisus scoparius*)



Evergreen shrub, similar to gorse except **spineless**.

Leaves: 3 small leaflets, occur on younger stems.

Flowers: golden yellow, 2-3cm long, covering shrub in spring and summer.

Fruit: black, hairy seed pods, 2-3cm, burst open with audible crack in late summer.

Bramble (*Rubus fruticosus agg.*)



Leaves: 3-5 (or more rarely 7) oval, pointed and toothed leaflets around a central stem, **hairy or prickly**, alternate.

Branches: **scrambling**, tangled, long and arching, **prickly thorns**.

Flowers: 2-3cm, white or pale pink.

Fruit: **blackberries** or similar, aggregate of tiny fleshy 'drupelets' each containing a seed, red at first then shiny black when ripe.

Ivy (*Hedera helix*)



Leaves: 3-5 triangular lobes on creeping and climbing stems, oval on flowering stems, shiny dark green upper with paler veins, untoothed, hairless, alternate.

Branches: climbing, with sucker-like roots which stick to substrate.

Flowers: greenish-yellow, small, 5 petals, in clusters at stem tips, open late summer to autumn.

Fruit: blue-black berries in clusters.

Honeysuckle (*Lonicera periclymenum*)



Leaves: oval, pointed, untoothed, grey-green, opposite.

Branches: climbing, twining around trees and other vegetation.

Flowers: creamy white or yellow, trumpet shaped with broad upper lip and narrow lower lip, long protruding style and stamens, sweet smelling, in clusters at stem tips.

Fruit: round, bright red berries.

Traveller's-joy (*Clematis vitalba*)



Leaves: usually 3-5 oval, pointed and sparsely toothed leaflets along central stem, opposite.

Branches: climbing, scrambling rather than twining, peeling fibrous bark.

Flowers: 4 cream-green sepals (no petals) and many stamens, almond scented, in small clusters.

Fruit: long, silvery-grey, feathery.

Butcher's broom (*Ruscus aculeatus*)



Low bushy evergreen shrub with grey-green stems.

Grey-green leaf-like 'cladodes' (actually an extension of the stem) are alternately positioned along the stem. Each cladode has a sharp spine at the end.

Flowers: Small cream / green-tinted flowers positioned on the cladode.

Fruit: A bright red berry positioned on the cladode.

Horse Chestnut (*Aesculus hippocastanum*)



Leaves: compound leaves consisting of groups of approx. 5-7 leaflets. Each leaflet is broadly tear-drop shaped with an acuminate tip (tapers to a point). Serrated leaf margin (biserrate), with teeth more pronounced towards the tip.

Flowers: White flowers, with a yellow/pink centre, positioned along a raceme.

Fruit: A 'conker' encased in a fleshy green case covered in widely positioned spines.

Scots pine (*Pinus sylvestris*)



Leaves: twisted needles in pairs, up to 7cm long, grey-green or blue-green, alternate.

Bark: red or orange-brown, scaly or papery.

Flowers: male yellow and clustered, female crimson turning brown, solitary, at tips of new shoots.

Fruit: blunt cones, green ripening to brown, open to shed seeds.

Surveyor's notes

Use these pages to add your own notes, sketches or additional species:



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