

# Tree identification key

Identification keys are used to identify specimens. This key is made up of a master key and 7 other keys.

# How to use this key

- start at step 1 in the master key
- compare your specimens to the statements at each step
- keep following the instructions until you reach the name of a tree

## **Contents of this key**

This identification key is made up of the following sections:

Master key:	Types of tree found in gardens and urban areas	pages 2–3
Key 1:	Trees with leaves that are needle-like or scale-like	pages 3–7
Key 2:	Trees with broad leaves, arranged opposite each other in pairs	pages 7–9
Key 3:	Trees with leaves arranged alternately, divided into separate leaflets	pages 10-12
Key 4:	Evergreen trees with leaves arranged alternately, not divided into leaflets	pages 12-14
Key 5:	Deciduous trees with leaves arranged alternately, not divided into leaflets; fruits fleshy or juicy	pages 15-19
Key 6:	Deciduous trees with leaves arranged alternately, not divided into leaflets; fruits dry	pages 20-24
Key 7:	Cherry trees	pages 25-26

# Master key: types of tree found in gardens and urban areas

Master key — step 1	Leaves needle-like or scale-like and often overlapping	<b>&gt;&gt;&gt;</b>	<b>go to key 1</b> (page 3)
	Leaves not needle-like, scale-like or overlapping	<b>&gt;&gt;&gt;</b>	go to step 2
Master key – step 2	Leaves in pairs, opposite each other on shoots	<b>&gt;&gt;&gt;</b>	<b>go to key 2</b> (page 7)
	Leaves alternate on shoots	<b>&gt;&gt;&gt;</b>	go to step 3
Master key – step 3	Leaves divided into separate leaflets	<b>&gt;&gt;&gt;</b>	<b>go to key 3</b> (page 10)
	Leaves with one blade, possibly indented into lobes, but not divided into leaflets	<b>&gt;&gt;&gt;</b>	go to step 4
Master key – step 4	Leaves evergreen	<b>&gt;&gt;&gt;</b>	<b>go to key 4</b> (page 12)
	Leaves deciduous	<b>&gt;&gt;&gt;</b>	go to step 5

### Master key - step 5



Fruits fleshy or juicy



go to key 5 (page 15)



Fruits dry



go to key 6 (page 20)

# Key 1: trees with leaves that are needle-like or scale-like

Key 1 – step 1



All leaves scale-like, usually pressed against the twig



go to step 2



All leaves needle-like, usually spread widely apart



go to step 6



Some leaves scale-like, others needle-like



go to step 14





Scale-leaves at least 30mm long, rigid and sharp-edged



Monkey puzzle



Scale-leaves less than 30mm long, not rigid or sharp



Key 1 – step 3	Deciduous tree; foliage is wispy; pink or white flowers		Tamarisks
	Evergreen tree with cones; foliage is dense	<b>&gt;&gt;&gt;</b>	go to step 4
Key 1 – step 4			
	Cone is egg-shaped with overlapping scales, eventually wide-spreading like petals of a flower; crushed foliage smells of pineapple		Western red cedar
	Cone is egg- or ball-shaped, scales meet at edges and don't overlap, scales don't become wide- spreading; crushed foliage doesn't smell of pineapple	<b>&gt;&gt;&gt;</b>	go to step 5
Key 1 – step 5			
	Cone is egg-shaped with more than 15 scales; bark is very thick, with visible fibres, and is rather soft or spongy	<b>&gt;&gt;&gt;</b>	Wellingtonia
	Cone is ball-shaped, with fewer than 10 scales; bark is hard	<b>&gt;&gt;&gt;</b>	Cypresses
Key 1 – step 6			
	Needles are in two flat, parallel rows, at least on the short shoots growing off longer ones; fruit is scarlet and berry-like	<b>&gt;&gt;&gt;</b>	Yew
	All the needles are in clusters or are parted on either side of shoot, but not in flat rows; fruit is a woody cone	<b>&gt;&gt;&gt;</b>	go to step 7

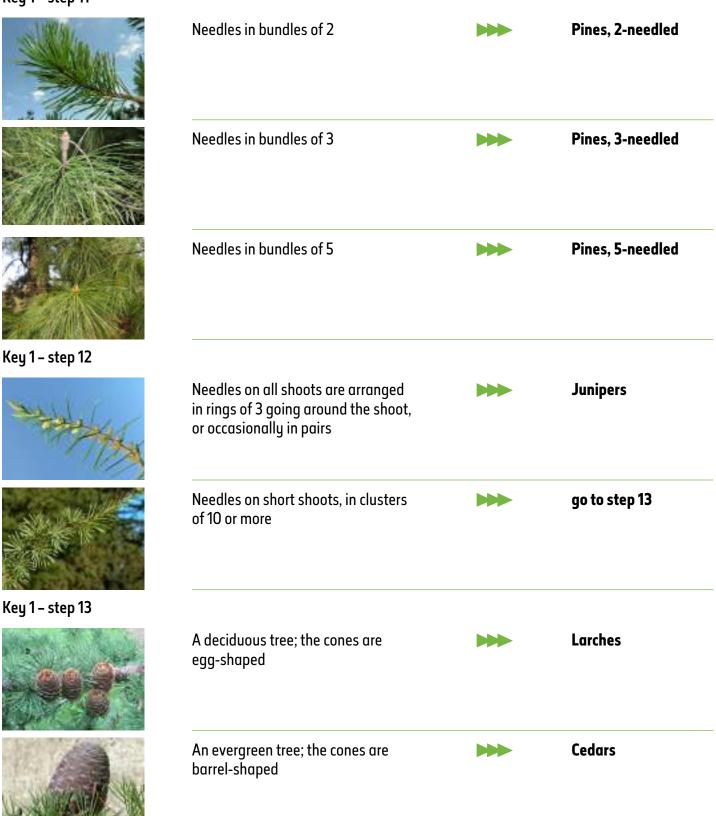
Key 1 – step 7	Needles are all on their own at their position on the shoot	<b>&gt;&gt;&gt;</b>	go to step 8
	Most needles grouped around the shoot, in pairs or bundles of 2 or more	<b>&gt;&gt;&gt;</b>	go to step 10
Key 1 – step 8			
	Cones stand upright on branches; needles are attached by a sucker- like base		Firs
	Cones hang downwards from branches; the base of the needles are not sucker-like	<b>&gt;&gt;&gt;</b>	go to step 9
Key 1 – step 9			
	Needles leave behind their peg-like bases after falling		Spruces
	Needles leave behind their cushion- like bases after falling		Hemlock spruces
Key 1 – step 10			
	Most needles are in bundles of 2–5	<b>&gt;&gt;&gt;</b>	go to step 11
WA W	Maak waadlaa waa wuumu wad wucood	NA.	to otom 12



Most needles are arranged around the shoot in clusters of 3, 10 or more, rarely in pairs



Key 1 - step 11



### Key 1 - step 14





Leaves of main shoots are scale-like, leaves of short shoots are needlelike, up to 20mm long, arranged in 2 rows; foliage doesn't smell unpleasant

Leaves mostly scale-like; those towards the tips of shoots are needle-like, in opposite pairs, 5–6mm long; crushed foliage smells



**Coast redwood** 



Junipers

# Key 2: trees with broad leaves, arranged opposite each other in pairs

unpleasant

Key 2 - step 1



Leaves palmately divided into separate leaflets, the leaflets extending from the leaf stalk



Horse chestnuts



Leaves pinnately divided into separate leaflets, the leaflets in two rows on the stalk



go to step 2



Leaves are sometimes lobed, but are not divided into leaflets



go to step 5





Small trees with ridged, corky bark; the fruit is a berry



Elder



Tall trees with smooth or slightly wrinkled bark; fruits are dry and wing-shaped



Key 2 – step 3	Twigs are clearly flattened where the buds or leaves are attached; leaves are hairy on the underside; 1 fruit per stalk	<b>&gt;&gt;&gt;</b>	go to step 4
	Twigs are not flattened where the buds or leaves are attached; leaves are hairless on the underside; fruits in pairs on the stalks	<b>&gt;&gt;&gt;</b>	Ashleaf maple
Key 2 – step 4	Flowers have no petals; winter buds are black	<b>&gt;&gt;&gt;</b>	Ash
	Flowers have narrow white petals; winter buds are grey or brown	<b>&gt;&gt;&gt;</b>	Manna ash
Key 2 – step 5	Leaves are deeply palmately lobed; fruits are wing-shaped and in pairs		go to step 9
	Leaves are not lobed or are only very shallowly lobed; fruit is either a woody capsule, a berry or a long, narrow pod	<b>&gt;&gt;&gt;</b>	go to step 6
Key 2 – step 6	Leaf edges are toothed		Spindles
	Leaf edges are not toothed	<b>&gt;&gt;&gt;</b>	go to step 7

Key	2 –	step	7
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An evergreen tree, leaves are usually bluish-green and smell of eucalyptus when crushed; bark is usually shredding or flaking



**Eucalyptus** 



A deciduous tree, leaves are pale or bright green and don't smell when crushed; bark is not shredding



go to step 8

Key 2 – step 8



A tall tree up to 20m; leaves are 10–25cm long; flowers are 5cm or more across; fruit is a long, narrow pod that remains after the leaves fall



Indian bean tree



A small tree to 8m; leaves are 4–10cm long; flowers are 4mm across; fruit is a red berry



**Cornelian cherry** 

key 2 - step 9



Leaves with 3-13 lobes. If 5-lobed, then any teeth present aren't small, coarse, round-tipped and numerous, or flowers/fruits don't hang in tails



Maples (other than sycamore)



Leaves 5-lobed with many small, coarse, round-tipped teeth; flowers/fruits in hanging tails



Sycamore

## Key 3: trees with leaves arranged alternately, divided into separate leaflets

Key 3 - step 1



Leaves divided into 3 leaflets



Laburnums



Leaves divided into more than 3 leaflets



go to step 2

Key 3 - step 2



Twigs are thick and densely covered with velvety hairs; flower heads (and later the seed heads) are dense, cone-shaped and hairy



Stag's horn sumach



Twigs not velvety; flowers and fruits are not in hairy, cone-shaped heads



go to step 3

Key 3 - step 3



Twigs have a pair of thorns at the base of each leaf



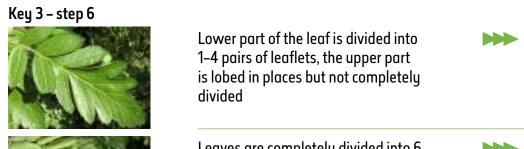
False acacia

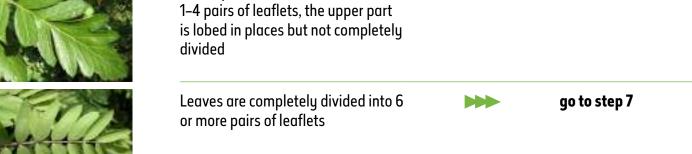


Twigs have no spines or thorns



Key 3 – step 4	Twigs have distinctive Y-shaped scars where leaves have fallen; cut twigs leak latex; flowers are in catkins or clusters of 1–5		Walnuts
	Leaf scars are not Y-shaped; cut twigs don't leak latex; flowers are numerous and in clusters.	<b>&gt;&gt;&gt;</b>	go to step 5
Key 3 – step 5	Leaflets are not lobed, they are not foul-smelling; the fruit is a pod	<b>&gt;&gt;&gt;</b>	Pagoda tree
	Leaflets have a few teeth or lobes in the lower half only and they are foul- smelling when crushed; the fruit is a papery, winged seed	<b>&gt;&gt;&gt;</b>	Tree-of-heaven
	Leaflets are toothed or lobed, not foul-smelling; the fruit is a papery capsule	<b>&gt;&gt;&gt;</b>	Pride-of-India
	Leaflets are toothed at least in the upper half and are not foul-smelling; fruit is juicy and berry-like	<b>&gt;&gt;&gt;</b>	go to step 6





**Service trees** 

#### Key 3 - step 7



Ripe fruits are orange-red to vermillion-red or occasionally yellow, with yellow pulp



Rowans with orange or vermillion fruit



Ripe fruits are white to pink or crimson, with white pulp



Rowan with white, pink or crimson fruit

# Key 4: evergreen trees with leaves arranged alternately, not divided into leaflets

Key 4 - step 1



Leaves have spiny edges



go to step 2



Leaves sometimes have toothed edges but are not spiny



go to step 3





Leaves are white- or green-felted on the underside; fruit is an acorn; flowers are green, the male flowers are in slender catkins



Evergreen oak



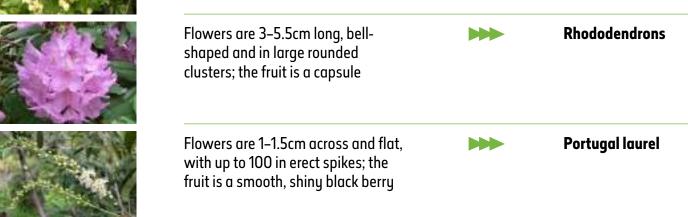
Leaves are paler but hairless on the underside; fruit is a berry; flowers are white and in small clusters

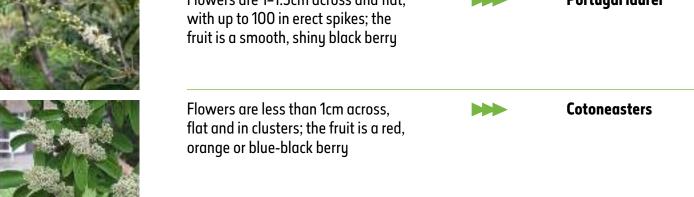


**Hollies** 

Key 4 – step 3	Leaves are aromatic when crushed	<b>&gt;&gt;&gt;</b>	go to step 4
	Leaves are not aromatic when crushed		go to step 5
Key 4 – step 4		<b></b>	
	Leaves smell of eucalyptus when crushed, or rarely of lemon, the edges are flat		Eucalyptus
	Leaves smell of almonds when crushed; the edges are rolled under		Cherry laurel
	Leaves smell of bay when crushed, the edges are wavy	<b>&gt;&gt;&gt;</b>	Bay
Key 4 – step 5			
	Leaves are densely covered with rusty brown or grey hairs on the underside		go to step 6
	Leaves are hairless or have white hairs on the underside	<b>&gt;&gt;&gt;</b>	go to step 7

Key 4 – step 6	Flowers are on their own		Evergreen magnolias
	Flowers are in clusters	<b>&gt;&gt;&gt;</b>	Rhododendrons
Key 4 – step 7	Flowers are roughly 1cm long, urn-shaped and in small drooping clusters; the fruit is a warty, matt- red berry		Strawberry tree
2000	Flowers are 3–5.5cm long, bell-	<b>&gt;&gt;&gt;</b>	Rhododendrons





# Key 5: deciduous trees with leaves arranged alternately, not divided into leaflets; fruits fleshy or juicy

Key 5 – step 1	Leaves are fan-shaped with a central notch	<b>&gt;&gt;&gt;</b>	Maidenhair tree
	Leaves are not fan-shaped	<b>&gt;&gt;&gt;</b>	go to step 2
Key 5 – step 2	At least some leaves are lobed		go to step 3
	Leaves are undivided, the edges may be toothed but not lobed		go to step 6
Key 5 – step 3	Leaves are palmately lobed, distinctly bristly to the touch on the upper side		go to step 4
	Leaves are pinnately lobed, smooth or softly hairy on the upper side	<b>&gt;&gt;&gt;</b>	go to step 5

Key 5 – step 4			
Reg 9 Step 4	Some leaves are lobed and all are toothed; the fruit resembles a raspberry, red or purple when ripe	<b>&gt;&gt;&gt;</b>	Mulberry
	All leaves are lobed; the fruit is pearshaped and brownish purple when ripe	<b>&gt;&gt;&gt;</b>	Fig
Key 5 – step 5	Twigs are thorny	<b>&gt;&gt;&gt;</b>	Hawthorns
	Twigs are not thorny	<b>&gt;&gt;&gt;</b>	Whitebeams
Key 5 – step 6	Leaves are not toothed	<b>&gt;&gt;&gt;</b>	Cotoneasters
	Leaves are toothed	<b>&gt;&gt;&gt;</b>	go to step 7
Key 5 – step 7	Flowers and fruits are in cylinder- or cone-shaped spikes	<b>&gt;&gt;&gt;</b>	go to step 8
	Flowers and fruits are on their own, in pairs or in clusters	<b>&gt;&gt;&gt;</b>	go to step 9

Key 5 – step 8	Flowers are less than 10mm in diameter, the petals are broadly oval; the fruit is smooth at the apex	<b>&gt;&gt;&gt;</b>	Bird cherries
	Flowers are more than 10mm in diameter, the petals are narrow and strap-shaped; the fruit is crowned with the withered sepals	<b>&gt;&gt;&gt;</b>	Amelanchier
Key 5 – step 9	Flowers have 1 style; sepals are absent on the ripe fruit; 1 seed	<b>&gt;&gt;&gt;</b>	go to step 10
	Flowers have 2 or more styles; sepals are usually present on the ripe fruit; 2 or more seeds	<b>&gt;&gt;&gt;</b>	go to step 14
Key 5 – step 10	Twigs are very thorny	<b>&gt;&gt;&gt;</b>	Blackthorn
	Twigs are not thorny or have only occasional thorns	<b>&gt;&gt;&gt;</b>	go to step 11

Key 5 – step 11	Fruit is less than 2cm long; the bark often has distinctive horizontal bands of pores	<b>&gt;&gt;&gt;</b>	<b>go to key 7</b> (page 25)
	Fruit is more than 2cm long; the bark doesn't have horizontal bands of pores	<b>&gt;&gt;&gt;</b>	go to step 12
Key 5 – step 12	Fruit has a velvety skin, even when fully ripe	<b>&gt;&gt;&gt;</b>	Peach and almond
	Fruit has a smooth skin, often with a greyish waxy bloom on the skin	<b>***</b>	go to step 13
Key 5 – step 13	Young twigs are green, smooth and glossy	<b>&gt;&gt;&gt;</b>	Cherry plum



Young twigs are brown or grey, dull and often hairy

**>>>** 

Plum

Key 5 – step 14	Flowers and fruits in clusters of 11 or more, with their stalks not arising from a central point	<b>&gt;&gt;&gt;</b>	go to step 15
	Flowers and fruits in clusters of 10 or fewer, with their stalks all arising from a central point	<b>&gt;&gt;&gt;</b>	go to step 16
Key 5 – step 15	Twigs are thorny or spiny, sometimes with very few spines	<b>&gt;&gt;&gt;</b>	Cockspur-thorns
	Twigs are not thorny	<b>&gt;&gt;&gt;</b>	Whitebeams
Key 5 – step 16	Fruit is usually pear-shaped, with gritty flesh; styles are not joined together at the base	<b>&gt;&gt;&gt;</b>	Pears
	Fruit is usually apple-shaped, the flesh is not gritty; styles are joined together at the base	<b>&gt;&gt;&gt;</b>	go to step 17
Key 5 – step 17	Fruits less than 4cm long	<b>&gt;&gt;&gt;</b>	Crab apple
	Fruits more than 4cm long	<b>&gt;&gt;&gt;</b>	Apples

# Key 6: deciduous trees with leaves arranged alternately, not divided into leaflets; fruits dry

Key 6 – step 1	Leaves are lobed	<b>&gt;&gt;&gt;</b>	go to step 2
	Leaves are not lobed	<b>&gt;&gt;&gt;</b>	go to step 6
Key 6 – step 2			
	Leaves are square or notched at the tip; the flowers are up to 5cm long and are on their own	<b>&gt;&gt;&gt;</b>	Tulip tree
	Leaves are rounded or pointed at the tip; the flowers are much smaller, in clusters or catkins	<b>&gt;&gt;&gt;</b>	go to step 3
Key 6 – step 3			
	Leaves are pinnately lobed; the fruit is an acorn	<b>&gt;&gt;&gt;</b>	Oaks
	Leaves are palmately or irregularly lobed; the fruits form a catkin or globe-shaped head		go to step 4

Key 6 – step 4	Leaves are felted with white or grey hairs on the underside		White poplar
	Leaves are smooth or sparsely hairy on the underside	<b>&gt;&gt;&gt;</b>	go to step 5
Key 6 – step 5	Bark is flaking in large patches; the fruits form a soft, hairy ball like a pom-pom		Plane
	Bark is fissured, not flaking; the fruits form a stiff, spiky ball like the head of a mace	<b>&gt;&gt;&gt;</b>	Sweet-gum
Key 6 – step 6	Bark is silver or white	<b>&gt;&gt;&gt;</b>	go to step 7
	Bark is greyish or brown	<b>&gt;&gt;&gt;</b>	go to step 8
Key 6 – step 7	Tree is weeping, the twigs and smaller branches hang loosely; the bark has black, diamond-shaped splits	<b>&gt;&gt;&gt;</b>	Silver birch
	Tree is not weeping; the bark is often peeling but doesn't have black diamond-shaped splits	<b>&gt;&gt;&gt;</b>	White or Himalayan birch

Key 6 - step 8



Leaves are more than 3 times as long as they are wide



go to step 9



Leaves are less than 3 times as long as they are wide



go to step 11

Key 6 - step 9



Leaf edges are coarsely toothed, the teeth end in a softly spiny tip; the seeds are enclosed in a softly spiny husk



Sweet chestnut



Leaf edges are not indented but may have small, fine teeth; the seeds have a plume of silky hairs at one end



go to step 10





Tree is weeping, the smaller branches hang downwards, often almost to the ground



Weeping willow



Tree is not weeping



Willows

Key 6 – step 11	Fruit is a small, woody cone, they are numerous and stay on the tree until spring	<b>&gt;&gt;&gt;</b>	Alders
	Fruit is not a woody cone	<b>&gt;&gt;&gt;</b>	go to step 12
Key 6 – step 12	Leaf edges aren't indented	<b>&gt;&gt;&gt;</b>	go to step 13
	Leaf edges are toothed, the teeth may be very small	<b>&gt;&gt;&gt;</b>	go to step 15
	Leaves are double-toothed	<b>&gt;&gt;&gt;</b>	go to step 16
Key 6 – step 13	Leaves are almost circular; flowers are pea-like and found on the trunk and main branches as well as the twigs	<b>&gt;&gt;&gt;</b>	Judas tree
	Leaves are oval or egg-shaped; flowers aren't pea-like	<b>&gt;&gt;&gt;</b>	go to step 14

Key 6 – step 14	Leaves are flat and 15cm or more in length; the flowers have 5 or more large petals that are white or pink; the fruit is cone-like but not woody	<b>&gt;&gt;&gt;</b>	Magnolias
	Leaves are up to 9cm long with wavy edges; the flowers are greenish and don't have petals; the fruit has a spiny husk	<b>&gt;&gt;&gt;</b>	Beech
Key 6 – step 15	Flowers and fruits are in clusters suspended beneath an oblong, wing-shaped bract; the leaves are roughly heart-shaped	<b>&gt;&gt;&gt;</b>	Limes
	Flowers and fruits are in cylindrical catkins; the leaves are oval to oblong	<b>&gt;&gt;&gt;</b>	Willows
Key 6 – step 16	Flowers are in small clusters; the fruit is a seed surrounded by a papery wing	<b>&gt;&gt;&gt;</b>	Elms
	Flowers are in slender, hanging catkins; the fruit is a nut	<b>&gt;&gt;&gt;</b>	go to step 17
Key 6 – step 17	l eaves pairu on both surfaces.		Hazels



Leaves hairy on both surfaces; fruits are solitary or in clusters of a few; each nut is wrapped in a leafy sheath



Hazels



Leaves hairy only on veins on the underside; fruits are in a hanging catkin, paired nuts are attached to a large, 3-lobed, bract



Hornbeam

## **Key 7: cherry trees**

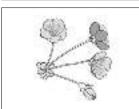
## Key 7 – step 1



Flowers or fruits arranged in roughly cylinder-shaped spikes, 11 or more per spike



go to step 2



Flowers or fruits on their own or in clusters of 10 or fewer



go to step 3

Key 7 – step 2



Leaves hairless or with white hairs along midrib, sometimes only where veins join; flowers 10-15mm across



**Bird cherries** 

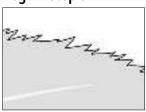


Leaves have rusty or orange hairs underneath, each side of the midrib; flowers 8mm across



Rum cherry

**Key 7 – step 3** 



Flower and leaf stalks densely hairy; leaf edges have pointed teeth



go to step 4



Flower and leaf stalks hairless or almost hairless; leaf edges have pointed teeth, often with thin, bristle-like tips



go to step 5



Flower and leaf stalks hairless; leaf edges have blunt or round teeth, often with a claw-shaped gland at the tip



#### Key 7 - step 4



Sepal edges are toothed; leaves hairless on the upper side with hairy veins on the underside



**Spring cherries** 



Sepal edges not toothed; leaves hairy on both surfaces



Fuji cherry

Key 7 – step 5



Bark on trunk and branches very glossy, purplish-brown and peeling in thin, copper-brown strips



Tibetan cherry



Bark mostly dull grey or brown, sometimes peeling to reveal shiny red-brown on the trunk



Japanese cherries

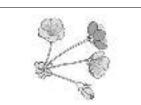
Key 7 - step 6



Flowers less than 20mm across, on stalks up to 15mm long, not arising from a central point; fruit less than 10mm long



St Lucie cherries



Flowers more than 20mm across, on stalks more than 15mm long, arising from a central point; fruit more than 10mm long



go to step 7

Key 7 - step 7



Flowers cup-shaped; leaves dull on the upper side, sparsely hairy on the underside



Wild cherry



Flowers saucer-shaped; leaves glossy on the upper side, hairless on the underside



Morello cherry

#### **Image credits**

#### Master Key: Types of tree found in gardens and urban areas

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step 1.2

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#### Key 1: Trees with leaves that are needle-like or scale-like

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step 14.2

#### Key 2: Trees with broad leaves, arranged opposite each other in pairs

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#### Key 4: Evergreen trees with leaves arranged alternately, not divided into leaflets

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## Key 5: Deciduous trees with leaves arranged alternately, not divided into leaflets; fruits fleshy or juicy Bob Press 11

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## Key 6: Deciduous trees with leaves arranged alternately, not divided into leaflets; fruits dry

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