Native tree and shrub species

‘Native’ tree and shrub species are those that were present at the end of the last Ice Age. This is as opposed to ‘non-natives’, which are species that have been introduced to the British landscape by man. Native tree and shrub species are better adapted to the local environment, and also tend to have greater wildlife value.

When thinking about what species to plant or encourage in your woodland, it is important to consider a range of factors. These include their potential use (timber or woodfuel), wildlife value and aesthetic characteristics. Perhaps most importantly, it is crucial to think about a species’ ecological requirements, and therefore whether it may be suited to your particular woodland. This section details most native tree and shrub species that may be of interest. As well as helping you to identify species, it also gives information about all these factors. The species are:

Alder
Alder buckthorn
Ash
Aspen
Beech
Birch
Blackthorn
Buckthorn
Crab apple
Dogwood
Field maple
Goat willow
Grey willow
Guelder rose
Hawthorn
Hazel
Holly
Hornbeam
Juniper
Oak
Privet
Rowan
Scots Pine
Small-leaved lime
Spindle
Sweet chestnut
Wayfaring tree
Whitebeam
Wild cherry
Yew

For a more detailed analysis of the tree species that may be suited to your site, see the Ecological Site Classification Decision Support System (ESC-DSS), which is developed by Forest Research (www.forestry.gov.uk/esc). The ESC-DSS is a tool that uses your location to find the tree species that are best suited to your particular site, based on ecological information.
So, you own a woodland?

Species guide

**Common alder**
*Cultivation notes*
- Plant in damp areas – requires high water table
- Light demanding
- Frost resistant, hardy
- Intolerant of exposure
- Requires pH>5
- Susceptible to *Phytophthora alni*

*Value*
- Seeds are eaten by birds (especially ducks, redpolls and siskins).
- Soil improvement (fixes nitrogen)

**Alder buckthorn**
*Cultivation notes*
- Previously coppiced for charcoal
- Shade tolerant, but prefers sunlight or moderate shade
- Prefers acidic soils
- Grows in wet woodland or riverbanks

*Value*
- Berries for birds, food plant for yellow brimstone butterfly

**Ash**
*Cultivation notes*
- Good timber species.
- *No longer recommended in planting due to outbreak of Chalara.*

*Value*
- Food plant for privet hawk moth.
- Prized for its firewood.

Downloaded from: [www.rfs.org.uk](http://www.rfs.org.uk)
Aspen
*Cultivation notes*
Intolerant of shade.
Light demanding, fast growing
Frost resistant, hardy
Moderately tolerant of exposure
Grows on range of sites (slightly dry to wet; nutrient poor to rich soils)
*Value*
Unlikely to be affected by climate change
Food plant for many species of moth

Beech
*Cultivation notes*
Good timber species
Damaged by grey squirrels
Shallow rooted, drought intolerant
– *likely to become unsuitable in southern areas*
Shade tolerant
Tolerant of wind exposure
Cold hardy (but susceptible to frost when young)
Intolerant of compacted, waterlogged or very dry soils
Susceptible to *Phytophthora ramorum*
*Value*
Beech nuts are eaten by many mammals and birds.

Birch
*Cultivation notes*
Quick growing – early growth is windfirm and frost resistant
Light demanding
Short-lived
Mature trees die after severe drought – *likely to become unsuitable in southern areas*
*Value*
Excellent for moths, and seeds eaten by many birds.
So, you own a woodland?

**Blackthorn**

*Cultivation notes*
- Exposure tolerant
- Prefers moist, well-drained soil in full sun
- Good as hedging

*Value*
- A valuable source of early nectar as it is early flowering
- In dense thickets it is a favoured nesting site.
- Foodplant for black and brown hairstreak butterflies.

**Buckthorn**

*Cultivation notes*
- Plant several individuals to ensure cross-pollination and successful fruiting.
- Shade tolerant
- Exposure tolerant

*Value*
- Foodplant for yellow brimstone butterfly
- Fruits favoured by birds (although mildly poisonous to people)

**Crab apple**

*Cultivation notes*
- Thrives in heavy soils
- Tolerant of partial shade
- Exposure tolerant
- Prefers moist, well-drained soil

*Value*
- Attractive blossom in spring.
- Fruits eaten by many birds and mammals
**Dogwood**  
**Cultivation notes**  
An edge species (dislikes shade)  
Exposure tolerant  
Requires well-drained, often alkaline soil  
**Value**  
Berries for birds.  
Foodplant for green hairstreak butterfly, case-bearer moth

**Field maple**  
**Cultivation notes**  
Can establish under heavy vegetation cover (very shade tolerant), but more light-demanding when mature  
Fast-growing  
Exposure tolerant  
**Value**  
Beautiful autumn colours.  
Good for lichens  
Attracts a wide variety of wildlife e.g. aphids and predators, caterpillars, bees, birds

**Goat willow**  
**Cultivation notes**  
Plant on ride edges and in damp places  
Grows in wet and dry sites  
Prefer sunny conditions  
Exposure tolerant  
Do not grow well in shallow chalk soils  
**Value**  
Great value for wildlife, especially moths  
Catkins provide early source of pollen
So, you own a woodland?

**Grey willow**  
*Cultivation notes*  
Prefers damp ground  
*Value*  
Early pollen is valuable to bees and other insects. Leaves are food for purple emperor butterfly caterpillar. Catkins provide early source of pollen

**Guelder rose**  
*Cultivation notes*  
Prefers moist, slightly alkaline soils, though tolerates most soil types  
Shade tolerant  
Exposure tolerant  
*Value*  
Attractive red berries eaten by birds.

**Hawthorn**  
*Cultivation notes*  
Exposure tolerant  
Tolerant of partial shade, prefers sunny conditions  
Good as hedging  
*Value*  
Attractive blossom and berries. Foodplant for birds, moths and many insects  
Thorns can protect it from browsing – thickets can be useful in protecting more vulnerable broadleaves
### Hazel

**Cultivation notes**
- Coppices readily
- Grows in full sun or partial shade
- Exposure tolerant
- Prefers chalky soil

**Value**
- Coppice provides good nest sites for birds and dormice
- Hazelnuts eaten by many animals

### Holly

**Cultivation notes**
- Good both as a tree and in hedging
- Prefers sunny position
- Prefers well-drained soil
- Exposure tolerant

**Value**
- Foodplant for holly blue butterfly
- Provide important food (berries) and shelter for many birds in winter

### Hornbeam

**Cultivation notes**
- Can be coppiced or pollarded.
- Slow growing
- Shade tolerant
- Very cold hardy, frost resistant
- Intolerant of exposure
- Intolerant of peaty or very low nutrient soils
- Vulnerable to squirrels

**Value**
- Fruit favoured by hawfinch
So, you own a woodland?

**Juniper**

*Cultivation notes*
- Grows in hot, sunny sites
- Any well-drained soil
- Exposure tolerant

*Value*
- Provides dense nesting cover
- Food plant of many moth caterpillars
- Fruit eaten by birds

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**Oak**

*Cultivation notes*
- Excellent timber species
- Windfirm
- Cold hardy
- Pedunculate oak: prefers medium to rich, heavy and moist soils
- Sessile oak: prefers poor to medium, slightly drier soils
- Likely to become more productive with climate change, but may suffer from drought

*Susceptible to Oak processionary moth*

*Value*
- The best tree for wildlife value.

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**Privet**

*Cultivation notes*
- Grows in full sun or partial shade
- Exposure tolerant
- Prefers well-drained soils

*Value*
- Evergreen, providing good nesting cover
- Main foodplant for privet hawk moth caterpillar and many other butterfly and moth larvae
3. Native tree and shrub species

**Rowan**

*Cultivation notes*
- Suitable for acid sandy soils.
- Light demanding
- Cold hardy, frost tolerant
- Tolerant of severe exposure
- Prefers poor to medium nutrient, slightly dry to moist soils
- Very palatable to browsers e.g. deer

*Value*
- Attractive berries, eaten by a variety of birds (especially thrushes)

**Scots Pine**

*Cultivation notes*
- Light-demanding
- Prefers drier soils
- Acid to neutral soils, intolerant of alkaline soils
- Grows well on low fertility, light soils
- Frost hardy
- Drought tolerant
- Not suited to exposed sites
- Can survive and grow in difficult conditions

*Value*
- Likely to be suitable in east England when droughts increase

**Small-leaved lime**

*Cultivation notes*
- Coppices well
- Shade tolerant
- Cold hardy, frost tolerant
- Drought resistant
- Intolerant of exposure
- Prefers fresh to moist, and medium to rich nutrient soils
- Warming climate likely to benefit this species

*Value*
- Flowers have abundant nectar (good for bees)
So, you own a woodland?

**Spindle**

*Cultivation notes*
- Tolerant of drier conditions
- Grows well in well-drained soils
- Exposure tolerant
- Prefers full sun or partial shade
- Grows in acid or alkaline soils

**Value**
- Colourful pink fruits follow flowers

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**Sweet Chestnut**

*Cultivation notes*
- Suited to warm areas
- Prefers medium to poor soils
- Intolerant of waterlogging
- Intolerant of alkaline soils
- Intolerant of exposure
- Cold hardy

*Susceptible to Phytophthora*

**Value**
- Likely to benefit from climate change

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**Wayfaring tree**

*Cultivation notes*
- Good on thin, dry soils (but grows in any moist but well-drained soil)
- Grows in full sun and partial shade
- Exposure tolerant

**Value**
- Fruits attractive to birds.
Whitebeam

*Cultivation notes*
Very wind-resistant.
Light-demanding pioneer species
Tolerant of pollution and dry conditions
Prefers fertile, humus-rich soil

*Value*
Fruits attractive to birds (especially thrushes)
Foodplant of various moth caterpillars

Wild cherry

*Cultivation notes*
Plant several individuals to ensure cross-pollination and to obtain the fruits, which are favoured by birds
Light demanding
Cold hardy, frost resistant
Intolerant of exposure
Sensitive to drought
Prefers medium to very rich, fresh moisture soils
Generally favoured by climate change (except eastern England where drought increases)

*Value*
Attractive to insects

Yew

*Cultivation notes*
Exposure tolerant
Tolerant of pollution and dry conditions
Grows in any soil, as long as it is well-drained

*Value*
Valuable timber species.
Fruits enjoyed by birds.
So, you own a woodland?

**Recommended species by soil type**

**Wet soils**

**Highly recommended**
- Common Alder
- Rowan

**Recommended**
- Field Maple
- Hawthorn
- Holly
- Hornbeam
- Oak (*Quercus robur*)
- Small-leaved lime

**Not recommended**
- Ash
- Birch
- Oak (*Quercus petraea*)

**Clay soils**

**Highly recommended**
- Goat willow
- Holly
- Hornbeam
- Oak (*Quercus robur*)
- Whitebeam
- Wild cherry

**Recommended**
- Common Alder
- Birch
- Field maple
- Hawthorn
- Oak (*Quercus petraea*)
- Rowan
- Small-leaved lime

**Dry, sandy soils**

**Highly recommended**
- Beech
- Birch
- Holly
- Oak (*Quercus petraea*)
- Whitebeam

**Recommended**
- Field maple
- Goat willow
- Hornbeam
- Oak (*Quercus robur*)
- Rowan
- Small-leaved lime
- Wild cherry

**Not recommended**
- Common Alder
- Hawthorn

**Chalk soils**

**Highly recommended**
- Beech
- Holly
- Whitebeam

**Recommended**
- Common Alder
- Field maple
- Hawthorn
- Hornbeam
- Rowan
- Small-leaved lime
- Wild cherry

**Not recommended**
- Birch
- Oak