

Prunus spinosa

(L.) Walt.

Rosaceae

LOCAL NAMES

Chinese (hei ci li); Danish (slåen); English (sloe,skeg,blackthorn); French (prunier,prunellier,épine noire); German (Schlehdorn,gewöhnliche,schlehe,schwarzdorn); Italian (spino nero,prugnolo); Portuguese (espinheiro negro,abrunheiro bravo); Spanish (espino negro,ciruelo silvestre,endrino)

BOTANIC DESCRIPTION

Prunus spinosa is a thorny, deciduous shrub or small tree 1-4 m tall; often multi-stemmed, and forming dense thickets; roots spread forming suckers; branches stiff and rigid, twigs with many spiny dwarf shoots on the branches terminating into a hardened thorn. The branches, buds and leaves are arranged spirally in an 'alternate' fashion.

Leaves small, alternate, pointed, oval to nearly lanceolate, 2-4 cm long, borne on short stems; dull-green with tiny hairs on the veins underneath; edges very finely and irregularly toothed. In autumn the leaves may turn yellow and red.

Flowers solitary, white with a 5 lobed calyx and 5 petals 5-8 mm long, on small stalks appearing before the leaves; flowers contain nectar and have a subtle sweet smell.

Fruits smooth green berries changing to purplish dark-blue with a misty bloom over its skin as it ripens, the astringent flesh inside remains green; about 1 cm in diameter; each sloe berry has one central stone or seed.

The common name is derived from its dark bark and skin, and from the thorns or spines that it bears.

BIOLOGY

Blackthorn flowers from late February to April and the fruits (sloes) ripen in September to October. The flowers are hermaphrodite and are insect pollinated. The pistils are ripe before the stamens, so self-fertilization is avoided.



seeds (Tracey Slotta @ USDA-NRCS PLANTS Database)

ECOLOGY

Blackthorn grows in hedges, in clearings, on the edges of woodlands and neglected farmland, on dry slopes and waste land, usually in sunny positions, and stands any amount of wind and salt spray.

BIOPHYSICAL LIMITS

Altitude: 0-1700 m

Temperature: 9-14°C

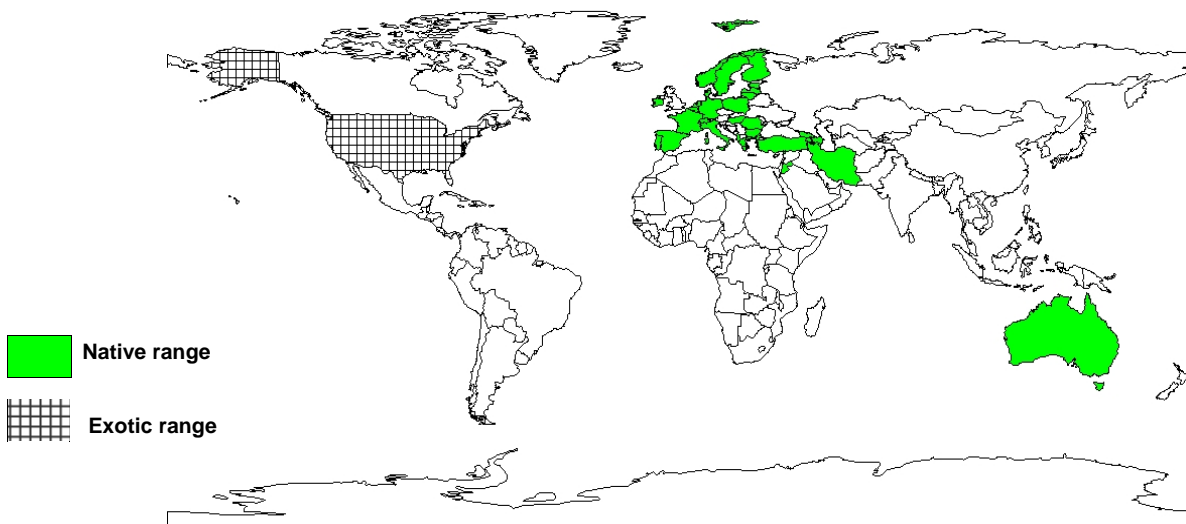
Rainfall: 300-600 mm

Soil type: Blackthorn requires a well-drained moisture retentive soil and succeeds in all soils (including the heaviest clays) except very acid peats. It thrives in loamy soils, does well on limestone and shallow, rocky soils of recent origin.

DOCUMENTED SPECIES DISTRIBUTION

Native: Albania, Armenia, Australia, Azerbaijan, Belgium, Bulgaria, Czechoslovakia (Former), Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Ireland, Italy, Jordan, Latvia, Lithuania, Moldova, Republic of, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Spain, Sweden, Switzerland, Turkey, Yugoslavia (Former)

Exotic: US



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS

Food: Fruit can be eaten raw or cooked, though exceedingly astringent when raw. The fruit is used in jams, jellies, syrups, conserves etc and as flavouring for sloe gin and other liqueurs. Seeds can also be eaten raw or cooked, but should not be eaten if it's too bitter. Dried fruits can be added to herbal teas. The leaves have been used as a substitute for tea, and the edible flowers contain traces of vitamin C and can be crystallized or sugared.

Timber: Blackthorn wood is very hard and tough; used for turnery, branches are used for making walking sticks and are highly valued for this purpose because of their twisted and interesting shapes; making small artifacts, tent pegs and teeth for hay-rakes..

Medicine: The flowers, bark, leaves and fruits are aperient, astringent, depurative, diaphoretic, diuretic, febrifuge, laxative and stomachic. An infusion of the flowers is used in the treatment of diarrhoea (especially for children), bladder and kidney disorders, stomach weakness etc. Blackthorn may produce cyanide or prussic acid, which in small amounts stimulates respiration, improves digestion and gives a sense of well-being and is also claimed to be of benefit in the treatment of cancer.

Tannin or dyestuff: The bark is a good source of tannin. It is used to make an ink. The juice of unripe fruits is used as a laundry mark, it is almost indelible. The pulped ripe fruit is used cosmetically in making astringent face-masks. A green dye can be obtained from the leaves. A dark grey to green dye can be obtained from the fruit. The bark, boiled in an alkali, produces a yellow dye.

Poison: Although no specific mention has been made for this species, blackthorn belongs to a genus where most, if not all members of the genus produce hydrogen cyanide - a toxin found mainly in the leaves and seed and is readily detected by its bitter taste. It is usually present in too small a quantity to do any harm but any very bitter seed or fruit should not be eaten. In excess, it can cause respiratory failure and even death. The thorns are also known to be hazardous since they are covered with algae which can cause a wound to go septic. The thorns are very brittle and tend to break off and fragment in the wound, making removal difficult.

Apiculture: Blackthorn is a good source of nectar for the honeybee.

Fuel: All parts of the tree are good firewood and make a hot, blazing fire.

SERVICES

Boundary or barrier: The blackthorn is very resistant to maritime exposure and also suckers freely. It can be used as a hedge in exposed maritime positions. The hedge is stock-proof if it is well maintained.

Reclamation: Blackthorn is a natural pioneer species, invading cultivated fields and creating conditions conducive to the regeneration of woodland. Plants regenerate quickly after cutting or after fast moving forest fires, producing suckers from below ground level.

Shade or shelter: Plants are shallow-rooted can form dense impenetrable thickets which are ideal for nesting birds, especially nightingales. Blackthorn often acts as a 'nurse' for smoothwood seedlings, protecting them from grazing animals.

TREE MANAGEMENT

Several management techniques on blackthorn have been tried and adopted in Britain with varied success. These include coppicing, trimming and flailing, and scalloping in hedges.

Sloes should be harvested just before they fully ripen and after the first few night-frosts of the autumn, because the frost tempers the sharpness of the fruit and also makes the skins softer and more permeable.

Invasiveness: Wherever blackthorn's colonizing habit is not checked, it grows into dense thickets.

GERMPLASM MANAGEMENT

Seed requires 2-3 months cold stratification.

PESTS AND DISEASES

Blackthorn is notably resistant to honey fungus, but susceptible to apple chlorotic leaf spot virus and plum pox potyvirus which causes leaf mottling and fruit malformation. The foliage is a food source for the caterpillars of several species of butterfly, especially the larvae of the brown and black hairstreak butterflies.

FURTHER READING

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SUGGESTED CITATION

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