



Arbutus unedo

Arbutus unedo, the strawberry tree, is an evergreen shrub or small tree in the family *Ericaceae*, native to the Mediterranean region and western Europe north to western France and Ireland. Due to its presence in southwest and northwest Ireland, it is known as either "Irish strawberry tree", or cain or cane apple (from the Irish name for the tree, caithne), or sometimes Killarney strawberry tree.

Taxonomy

Arbutus unedo was one of the many species described by Carl Linnaeus in Volume One of his landmark 1753 work *Species Plantarum*, giving it the name it still bears today

A study published in 2001 which analyzed ribosomal DNA from *Arbutus* and related genera found *Arbutus* to be paraphyletic, and *A. unedo* to be closely related to the other Mediterranean Basin species such as *A. andrachne* and *A. canariensis* and not to the western North American members of the genus.

Arbutus unedo and *A. andrachne* hybridise naturally where their ranges overlap; the hybrid has been named *Arbutus* × *andrachnoides* (syn. *A.* × *hybrida*, or *A. andrachne* × *unedo*),

Description

Arbutus unedo grows to 5–10 m (16–33 ft) tall, rarely up to 15 m (49 ft), with a trunk diameter of up to 80 cm (31 in). It grows in hardiness zones 7–10.

The leaves are dark green and glossy, 5–10 cm (2–4 in) long and 2–3 cm (0.79–1.18 in) broad, with a serrated margin.

The hermaphrodite flowers are white (rarely pale pink), bell-shaped, 4–6 mm (0.16–0.24 in) diameter, produced panicles of 10–30 together in autumn. They are pollinated by bees, and have a mild sweet scent.

The fruit is a red berry, 1–2 cm (0.39–0.79 in) diameter, with a rough surface. It matures in about 12 months, in autumn, at the same time as the next flowering. It is edible; the fruit is sweet when reddish, and tastes similar to a fig. Seeds are often dispersed by frugivorous birds.

The name *unedo* is attributed to Pliny the Elder, who allegedly claimed that "unum tantum edo", meaning "I eat only one". It is not known whether he meant that the fruit was so good he could eat only one, or whether he meant that the fruit was uninteresting so he ate only one.

Distribution

Arbutus unedo is widespread in the Mediterranean region: in Portugal, Spain and southeastern France; southward in Algeria, Morocco, Libya, and Tunisia, and eastward in Italy, Slovenia, Croatia, Greece, Turkey, Cyprus, Lebanon, Syria and Israel. It is also found in western France, Albania, Bulgaria and southwestern Ireland.

Its disjunct distribution, with an isolated relict population in southwestern and northwestern Ireland, notably in Killarney and around Lough Gill in County Sligo, which is its most northerly stand in the world, is a remnant of former broader distribution during the milder climate of the Atlantic period, the warmest and moistest Blytt-Sernander period, when the climate was generally warmer than today. The red-flowered variant, named *A. unedo rubra* by William Aiton in 1785, was discovered growing wild in Ireland in 1835.

Cultivation

Arbutus unedo is quite an easy plant to cultivate, and is adaptable to many climates. Once established it is fairly drought resistant, frost resistant, shade tolerant and salt tolerant.

Lower production of fruit mass has however been reported in case of summer droughts, and frosts in flowering time was seen to decrease the numbers of fruits.

Arbutus unedo is naturally adapted to dry summer climates, and has become a very popular ornamental plant in California and the rest of the west coast of North America. It can grow easily in USDA hardiness zone 7 or warmer.

It also grows well in the cool, wet summers of western Ireland and England, and temperate regions of Europe and Asia. Pests include scales and thrips, and diseases include anthracnose, Phytophthora, root rot, and rust.

Unlike most of the *Ericaceae*, *A. unedo* grows well in basic (limy) pH soils, even though it does better in more acidic soils.

The fruit production is not very high and is highly variable on the weather, and that may be part of the reason this plant is not much cultivated. However, very little work has so far been done in terms of genotype selection.

Arbutus unedo has been seen to form a mycorrhizal relationship. Inoculation with *Pisolithus tinctorius* has shown to greatly improve the plants root mass, size, tolerance to drought and nutritional status.

Propagation

Propagation can be done via seed, layering, or cutting.

Uses

Culinary uses

Arbutus unedo's fruits have a high content of sugars (40%), and antioxidant vitamins such as vitamin C, beta-carotene, niacin, tocopherols, and organic acids that are precursors to omega-

3 and omega-6 fatty acids (nearly 9%). They are edible fresh, but that is an uncommon consumption, especially because the mature fruit tends to bruise very easily, making transportation difficult.

They are used mostly for jam, marmalades, yogurt and alcoholic beverages, such as the Portuguese medronho, a type of strong brandy. Many regions of Albania prepare the traditional drink rakia from the fruits of the plant (mare or kocimare in Albanian), hence comes the name of the drink "raki kocimareje". In order to reduce the high content of methanol in the drink, the spirit is distilled twice.

The flowers are pollinated by bees, and the resulting honey is bitter tasting but still considered a delicacy.

Herbal medicine

Arbutus unedo's leaves have been employed in traditional and folk medicine in the form of a decoction having the following properties: astringent, diuretic, urinary anti-septic, antiseptic, intoxicant, rheumatism, tonic, and more recently, in the therapy of hypertension and diabetes.

The leaves are reported to have a high concentration of flavonol antioxidants, especially quercetin, best extracted with a decoction, and together with the fruits are a source of antioxidants.

The leaves also have anti-inflammatory properties.

Ecological design

In landscape design, ecosystem restoration or permaculture based designs, *A. unedo* can have many purposes. While the ornamental one is the most common, this can be a valuable plant also for restoring degraded ecosystems and preventing desertification. Being a pioneer plant and growing well also in poor soils, can be used in a wide array of situations.

- The flowers are a significant source of nectar and pollen for bees, while the fruits are food for the birds.
- Its salt tolerance, coupled with it being an evergreen, make it a good choice for wind barriers in lands close to the sea.
- *A. unedo* is fire resistant (can regrow after a fire), and being a pioneer plant can contribute to the discontinuity of fire-prone pines and eucalypts monocultures; for the same reasons it is a good candidate for reforestation in Mediterranean areas.
- The dense foliage throughout the year can be a shelter for insects and small animals during the winter.
- Its extensive root system can help in the soil stabilization process.

Other uses

- The wood is quite hard and well suited for a various uses such as fire wood and to make pipes. Since it doesn't usually grow straight, it is not well suited for construction or similar uses.
- The tree is also grown as an ornamental plant, because of the nice looking and smelling of the flowers and the fruit, the interesting presence at the same time of fruits and flowers on the plant and because it is an evergreen. It is used as a single or multi-trunked ornamental tree, and as a specimen or hedge shrub in gardens and public landscapes.

History

Its Mediterranean habitat, elegant details of leaf and habit and dramatic show of fruit with flowers made *Arbutus unedo* notable in Classical Antiquity, when Pliny thought it should not be planted where bees are kept, for the bitterness it imparts to honey.

The first signs of its importation into northern European gardens was to 16th-century England from Ireland. In 1586 a correspondent in Ireland sent plants to the Elizabethan courtiers Lord

Leicester and Sir Francis Walsingham. An earlier description by Rev. William Turner (*The Names of Herbes*, 1548) was probably based on hearsay. The Irish association of *Arbutus* in English gardens is reflected in the inventory taken in 1649 of Henrietta Maria's Wimbledon: "one very fayre tree, called the Irish arbutis standing in the middle part of the sayd kitchin garden, very lovely to look upon'. By the 18th century *Arbutus unedo* was well known enough in English gardens for Batty Langley to make the bold and impractical suggestion that it might be used for hedges, though it "will not admit of being clipped as other evergreens are."

In the United States, Thomas Jefferson lists the plant in his Monticello gardens in 1778..

Symbolic uses

The Garden of Earthly Delights, a painting by Hieronymus Bosch, was originally listed by José de Sigüenza, in the inventory of the Spanish Crown as *La Pintura del Madroño* – "The Painting of the Strawberry Tree".

The tree makes up part of the Coat of arms of Madrid (*El oso y el madroño*, The Bear and the Strawberry Tree) of the city of Madrid, Spain. In the center of the city (Puerta del Sol) there is a statue of a bear eating the fruit of the Madroño tree.

The name of the Italian promontory Mount Conero, situated directly south of the port of Ancona on the Adriatic Sea, derives from the Greek name κόμαρος (*komaròs*) indicating the strawberry tree which is common on the slopes of the mountain.

In the Italian Risorgimento the strawberry tree, because of its autumnal colours, the same colours of the Italian flag, at the same time red for fruits and white for flowers, beyond the green colour of leaves, was considered, indeed, a symbol of the flag.



Arbutus unedo

Il corbezzolo (*Arbutus unedo*), che viene chiamato anche albatro, è un albero da frutto appartenente alla famiglia delle Ericaceae e al genere *Arbutus*. È diffuso nei paesi del Mediterraneo occidentale e sulle coste meridionali dell'Irlanda. I frutti vengono chiamati corbezzole o talvolta albatre. Uno stesso arbusto può ospitare contemporaneamente fiori e frutti maturi oltre alle foglie perché è sempreverde, cosa che lo rende particolarmente ornamentale, per la presenza sull'albero di tre vivaci colori: il rosso dei frutti, il bianco dei fiori e il verde delle foglie.

Etimologia

Il nome corbezzolo deriva dal latino volgare *corbitjus, incrocio del lemma mediterraneo (preindoeuropeo) corba, sopravvissuto nell'Italia settentrionale, e del nome del genere dal latino *arbutus*, derivato da *arbutus*, anch'esso lemma di origine mediterranea (preindoeuropeo)

Il nome della specie, *unedo*, deriva da Plinio il Vecchio che, in contrasto con l'apprezzamento che in genere riscuote il sapore del frutto, sosteneva che esso fosse insipido e che quindi dopo averne mangiato uno (*unum* = uno e *edo* = mangio) non veniva voglia di mangiarne più.

Dal nome greco del corbezzolo (κόμμαρος - pron. kòmáros) derivano molti nomi dialettali del cespuglio (Marche, Calabria, Puglia, Campania), e anche il nome del Monte Cònero, promontorio sulle cui pendici settentrionali sorge la città di Ancona, e la cui vegetazione è appunto ricca di arbusti di corbezzolo.

Descrizione

il corbezzolo è longevo e può diventare plurisecolare, con crescita rapida.

Portamento

Si presenta come un cespuglio o un piccolo albero, sempreverde e latifoglia, molto ramificato, con rami giovani di colore rossastro. Può raggiungere un'altezza compresa tra 2 e 8 m.

Foglie le caratteristiche tipiche delle piante sclerofille. Hanno forma ovale lanceolata, sono larghe 2-4 centimetri e lunghe 10-12 centimetri, hanno margine dentellato. Si trovano addensate all'apice dei rami e dotate di un picciolo corto. La lamina è coriacea e si presenta lucida e di colore verde-scuro superiormente, mentre inferiormente è più chiara.

Fiori

I fiori sono riuniti in pannocchie pendule che ne contengono tra 15 e 20. La corolla è di colore bianco-giallastro o rosea, con 5 piccoli denti ripiegati verso l'esterno. I fiori sono ricchi di nettare e per questo motivo intensamente visitati dalle api, se il clima non è già diventato troppo freddo. Dai fiori di corbezzolo si ricava dunque l'ultimo miele della stagione, pregiato per il suo sapore particolare, amarognolo e aromatico. Questo miele è prezioso anche perché non sempre le api sono ancora attive al momento della fioritura e non tutti gli anni è possibile produrlo, essendo la fioritura in ottobre-novembre.

Frutti

Il frutto è una bacca sferica di circa 2 centimetri, carnosa e rossa a maturità, ricoperta di tubercoli abbastanza rigidi spessi qualche millimetro; i frutti maturi hanno un buon sapore. I frutti maturano in ottobre-dicembre, nell'anno successivo rispetto alla fioritura che dà loro origine, hanno una maturazione scalare e possono essere presenti sullo stesso arbusto bacche rosse mature e più chiare ancora acerbe.

Legno

Il legno di corbezzolo è un ottimo combustibile per il riscaldamento casalingo utilizzato su camini e stufe, ma il suo utilizzo maggiore è per gli arrostiti grazie alle sue caratteristiche aromatiche. Il corbezzolo è un legno molto robusto e pesante; dopo circa 60 gg dal taglio può perdere fino al 40% del suo peso.

Distribuzione e habitat

È una tipica essenza della macchia mediterranea, vegetando tra altri cespugli e nei boschi di leccio. Predilige terreni silicei e vegeta ad altitudini comprese tra 0 e 800 metri. Il corbezzolo cresce in ambienti semiaridi.

All'interno del Giardino di Villa Cipressi vi è un grosso e vecchio esemplare che si sporge sul lago e un paio di esemplari nell'aiuola retrostante.

Usi

- I frutti sono eduli, hanno una maturazione che si conclude a ottobre-dicembre dell'anno successivo, quando si hanno i nuovi fiori. si possono consumare direttamente, conservarli sotto spirito, utilizzarli per preparare confetture, mostarde e liquori, cuocerli nello zucchero per caramellarli; con la fermentazione forniscono una buona acquavite e facendoli macerare per 10-30 giorni in soluzione alcolica se ne ottiene un delicato liquore[5] in uso specialmente nelle Marche e in Corsica..
- La pianta viene utilizzata a scopo ornamentale in parchi e giardini per il colore rosso intenso dei propri frutti presenti sulla pianta contemporaneamente ai bei grappoli di fiori bianchi ed anche per il denso e lucido fogliame.

- In passato le foglie del corbezzolo, essendo ricche di tannini e arbutoside, venivano utilizzate per la concia delle pelli. Preparate in decotto hanno caratteristiche diuretiche, astringenti e antisettiche[6].
- I frutti hanno effetto antidiarroico[6]. Essi contengono però un alcaloide che può causare, in persone particolarmente sensibili a esso, inconvenienti di solito non gravi. Tali effetti erano noti agli antichi che ne consigliano un uso moderato, il nome deriva infatti dalla contrazione di unum edo, ossia ne mangio uno solo.

Coltivazione

Il corbezzolo è un arbusto resistente alla siccità, e tollera leggermente il freddo, fino a circa -10/-15 °C. , è un arbusto rustico e resistente a molti parassiti. Vegeta in terreni sub-acidi, anche rocciosi. Il corbezzolo, fiorendo in inverno, fruttifica solo in zone a clima mite dove le api possono impollinare, nel sud italia, anche se la piante riesce vivere in inverni più freddi (come nespole del Giappone).