

Arctium

Arctium is a genus of biennial plants commonly known as **burdock**, family *Asteraceae*.^[2] Native to Europe and Asia, several species have been widely introduced worldwide.^[3]

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Description



Arctium lappa (greater burdock)

Plants of the genus *Arctium* have dark green leaves that can grow up to 70 cm (28 in) long. They are generally large, coarse and ovate, with the lower ones being heart-shaped. They are woolly underneath. The leafstalks are generally hollow. *Arctium* species generally flower from July through to October. Burdock flowers provide essential pollen and nectar for honeybees around August when clover is on the wane and before the goldenrod starts to bloom.^[4]

Burdock



Arctium tomentosum

Scientific classification

Kingdom:	<i>Plantae</i>
<i>Clade</i> :	<i>Tracheophytes</i>
<i>Clade</i> :	<i>Angiosperms</i>
<i>Clade</i> :	<i>Eudicots</i>
<i>Clade</i> :	<i>Asterids</i>
Order:	<i>Asterales</i>
Family:	<i>Asteraceae</i>
Subfamily:	<i>Carduoideae</i>
Tribe:	<i>Cynareae</i>
Genus:	<i>Arctium</i> <div>L. 1753 not Lam. 1779</div>

Synonyms^[1]

- *Anura* (Juz.) Tschern.
- *Arcium* Rupr.
- *Arcion* Bubani
- *Bardana* Hill
- *Lappa* Tourn. ex Scop.

The roots of burdock, among other plants, are eaten by the larva of the ghost moth (*Hepialus humuli*). The plant is used as a food plant by other Lepidoptera including brown-tail, *Coleophora paripennella*, *Coleophora peribenanderi*, the Gothic, lime-speck pug and scalloped hazel.



Hooked burrs of the burdock plant

The prickly heads of these plants (burrs) are noted for easily catching on to fur and clothing. In England, some birdwatchers have reported that birds have become entangled in the burrs leading to a slow death, as they are unable to free themselves.^[5] Burdock's clinging properties, in addition to thus providing an excellent mechanism for seed dispersal,^[3] led to the invention of the hook and loop fastener.^[6]

A large number of species have been placed in genus *Arctium* at one time or another, but most of them are now classified in the related genus *Cousinia*. The precise limits between *Arctium* and *Cousinia* are hard to define; there is an exact relation between their molecular phylogeny. The burdocks are sometimes confused with the cockleburs (genus *Xanthium*) and rhubarb (genus *Rheum*).

Etymology

Circa 16th century, from bur + dock, the latter meaning sorrel of the genus *Rumex*.^[7]

Uses

Food and drink

The taproot of young burdock plants can be harvested and eaten as a root vegetable. While generally out of favour in modern European cuisine, it is popular in East Asia. *Arctium lappa* is known as *niúbàng* (牛蒡) in Chinese, the same name having been borrowed into Japanese as *gobō*, and is eaten in Japan, Korea and Taiwan. In Korean, burdock root is called *u-eong* (우엉) and sold as *tong u-eong* (통우엉), or "whole burdock". Plants are cultivated for their slender roots, which can grow up to about one metre long and two centimetres across. Burdock root is very crisp and has a sweet, mild, or pungent flavour with a little muddy harshness that can be reduced by soaking julienned or shredded roots in water for five to ten minutes. The roots have been used as potato substitutes in Russia.^[8]



A dish containing a Japanese appetizer, *kinpira gobō*, consisting of sautéed burdock root and carrot, with a side of sautéed dried daikon

Immature flower stalks may also be harvested in late spring, before flowers appear; their taste resembles that of artichoke, to which the burdock is related. The stalks are thoroughly peeled, and either eaten raw, or boiled in salt water.^[9] Leaves are also eaten in spring in Japan when a plant is young and leaves are soft. Some *A. lappa* cultivars are specialized for this purpose. A popular Japanese dish is *kinpira gobō* (金平牛蒡), julienned or shredded burdock root and carrot, braised with soy sauce, sugar, mirin and/or sake, and sesame oil. Another is burdock makizushi (sushi filled with pickled burdock root; the burdock root is often artificially coloured orange to resemble a carrot).

In the second half of the 20th century, burdock achieved international recognition for its culinary use due to the increasing popularity of the macrobiotic diet, which advocates its consumption. It contains a fair amount of dietary fiber (GDF, 6 g per 100 g), calcium, potassium, and amino acids,^[10] and is low in calories. It contains the prebiotic fiber inulin.^[11] It contains a polyphenol oxidase,^[12] which causes its darkened surface and muddy harshness by forming tannin-iron complexes. Burdock root's harshness harmonizes well with pork in miso soup (tonjiru) and with Japanese-style pilaf (takikomi gohan).

Dandelion and burdock is today a soft drink that has long been popular in the United Kingdom, which has its origins in hedgerow mead commonly drunk in the mediæval period.^[13] Burdock is believed to be a galactagogue, a substance that increases lactation, but it is sometimes recommended to be avoided during pregnancy based on animal studies that show components of burdock to cause uterus stimulation.^[14]

In Europe, burdock root was used as a bittering agent in beer before the widespread adoption of hops for this purpose.

Traditional medicine

The seeds of *A. lappa* are used in traditional Chinese medicine under the name *niubangzi* (Chinese: 牛蒡子; pinyin: *niúbángzi*; some dictionaries list the Chinese as just Chinese: 牛蒡; pinyin: *niúbàng*).^[15]

Burdock is a traditional medicinal herb used for many ailments. Burdock root oil extract, also called bur oil, is used in Europe as a scalp treatment.^[16]

Adverse effects

The green, above-ground portions may cause contact dermatitis in individual with allergies as the plant contains lactones.^[17]

Symbolism

In Turkish Anatolia, the burdock plant was believed to ward off the evil eye, and as such is often a motif appearing woven into kilims for protection. With its many flowers, the plant also symbolizes abundance.^[18] During World War II and earlier Japanese soldiers were issued a 15-1/2-inch bayonet held in a black-painted scabbard, the juken. Their nickname was the burdock sword (gobo ken).



Burdock Kilim motifs

Burdock and velcro

After taking his dog for a walk one day in the late 1940s (1948), George de Mestral, a Swiss inventor, became curious about the seeds of the burdock plant that had attached themselves to his clothes and to the dog's fur. Under a microscope, he looked closely at the hook system that the seeds use to hitchhike on passing animals aiding seed dispersal, and he realized that the same approach could be used to join other things together. His work led to the development of the hook and loop fastener, which was initially sold under the Velcro brand name.^[6]

Serbo-Croatian uses the same word, *čičak*, for burdock and velcro;^[19] Turkish does the same with the name *pitrak*, while in the Polish language *rzep* means both "burr" and "velcro". The German word for burdock is *Klette* and velcro is *Klettverschluss* (= burdock fastener). In Norwegian burdock is *borre* and velcro *borrelås*, which translates to "burdock lock".^[20]



Macro photograph of a bur, showing the sharp hook structures.

Species

The following species are accepted:^[21]

- *Arctium abolinii* (Kult. ex Tscherneva) S.López, Romasch., Susanna & N.Garcia
- *Arctium alberti* (Regel & Schmalh.) S.López, Romasch., Susanna & N.Garcia
- *Arctium* × *ambiguum* (Celak.) Nyman
- *Arctium amplissimum* Kuntze
- *Arctium anomalum* Kuntze
- *Arctium arctiodes* Kuntze
- *Arctium atlanticum* (Pomel) H.Lindb. – Algeria, Morocco
- *Arctium aureum* Kuntze
- *Arctium chloranthum* (Kult.) S.López, Romasch., Susanna & N.Garcia
- *Arctium dolichophyllum* (Kult.) S.López, Romasch., Susanna & N.Garcia
- *Arctium* × *dualis* (Juz.) Duist.
- *Arctium echinopifolium* (Bornm.) S.López, Romasch., Susanna & N.Garcia
- *Arctium egregium* (Juz.) S.López, Romasch., Susanna & N.Garcia
- *Arctium elatum* (Boiss. & Buhse) Kuntze
- *Arctium evidens* (Tscherneva) S.López, Romasch., Susanna & N.Garcia
- *Arctium fedtschenkoanum* (Bornm.) S.López, Romasch., Susanna & N.Garcia
- *Arctium grandifolium* (Kult.) S.López, Romasch., Susanna & N.Garcia
- *Arctium haesitabundum* (Juz.) S.López, Romasch., Susanna & N.Garcia
- *Arctium horrescens* (Juz.) S.López, Romasch., Susanna & N.Garcia
- *Arctium karatavicum* Kuntze
- *Arctium korolkowii* Kuntze
- *Arctium korshinskyi* (C.Winkl.) S.López, Romasch., Susanna & N.Garcia
- *Arctium lappa* L. – greater burdock – much of Eurasia; naturalized in North America, Australia and New Zealand

"Black from dust but still alive and red in the center. It reminded me of *Hadji Murad*. It makes me want to write. It asserts life to the end, and alone in the midst of the whole field, somehow or other had asserted it."

–Russian author Leo Tolstoy, in his journal (July, 1896) of a tiny shoot of burdock he saw in a ploughed field

- *Arctium lappaceum* (Schrenk) Kuntze
- *Arctium* × *leibardanum* Juz. & C.Serg. ex Stepanov – Siberia
- *Arctium leiospermum* Juz. & Ye.V.Serg.
- *Arctium* × *maassii* Rouy
- *Arctium macilentum* (C.Winkl.) S.López, Romasch., Susanna & N.Garcia
- *Arctium medians* (Juz.) S.López, Romasch., Susanna & N.Garcia
- *Arctium minus* (Hill) Bernh. – lesser burdock – Europe and southwestern Asia; naturalized in North and South America, Australia and New Zealand
- *Arctium* × *mixtum* (Simonk.) Nyman
- *Arctium nemorosum* Lej.
- *Arctium nidulans* (Regel) Sennikov
- *Arctium* × *nothum* (Ruhmer) J.Weiss – central and eastern Europe
- *Arctium palladinii* (Marcow.) R.E.Fr. & Soderb. – Turkey, Iran, Caucasus
- *Arctium pallidivirens* (Kult.) S.López, Romasch., Susanna & N.Garcia
- *Arctium pentacanthoides* (Juz. ex Tscherneva) S.López, Romasch., Susanna & N.Garcia
- *Arctium pentacanthum* (Regel & Schmalh.) Kuntze
- *Arctium pseudarctium* (Bornm.) Duist. – Afghanistan, Tajikistan
- *Arctium pterolepidum* (Kult.) S.López, Romasch., Susanna & N.Garcia
- *Arctium radula* Juz. & Ye.V.Serg.
- *Arctium refractum* (Bornm.) S.López, Romasch., Susanna & N.Garcia
- *Arctium sardaimionense* Rassulova & B.A.Sharipova – Tajikistan
- *Arctium schmalhausenii* Kuntze
- *Arctium* × *semiconstrictum* Duist.
- *Arctium tomentellum* (C.Winkl.) Kuntze
- *Arctium tomentosum* Mill. – woolly burdock – northern and eastern Europe, Turkey, Iran, Caucasus, Siberia, Xinjiang; naturalized in North America
- *Arctium triflorum* Kuntze
- *Arctium ugamense* (Karmysch.) S.López, Romasch., Susanna & N.Garcia
- *Arctium umbrosum* (Bunge) Kuntze
- *Arctium vavilovii* (Kult.) S.López, Romasch., Susanna & N.Garcia
- *Arctium* × *zalewskii* (Dybowski.) Arènes



The man holding this burdock leaf is 180 centimetres (5 ft 11 in) tall

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External links

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This page was last edited on 5 March 2022, at 18:41 (UTC).

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