

Heliotropium arborescens L.

Heliotrope

(*Heliotropium corymbosum*, *Heliotropium peruvianum*)

Other Common Names: Cherry Pie.

Family: Boraginaceae (sometimes segregated into a separate family, the Heliotropiaceae).

Cold Hardiness: This subtropical shrub is hardy in USDA zones 10(9) to 11 winters, but is used as a transition annual in most of our region or a summer annual in regions with milder summer climates.

Foliage: Alternate, sometimes appearing nearly opposite on new growth or immediately below the cymes; simple; elliptic-lanceolate; 10 to 30 long; tips acute; bases acute to nearly rounded; margins entire; veins pinnate and impressed above giving an almost quilted look to the leaves; clear to white hairy pubescence is present on both leaves and stems; blades are dark green in color; petiole short to nearly sessile.

Flower: The tiny 1/4 long five-petaled individual flowers are borne in dense terminal complex irregular cymes up to 100 or so in diameter; flower colors in the species type are typically a pale violet-lavender, however, the dark purple flowered cultivars are more common in the trade; white and rose colored selections are more rarely encountered; corollas are darkest on the outer portions with a lighter spot appearing near the throat; the cherry-vanilla fragrance is notable in most cultivars, and is particularly strong in some selections while others selected more exclusively for flower color are less fragrant; the initial clusters can be huge, nearly covering the top of the plants, subsequent inflorescences are much smaller; flowering tends to peak in our regional landscapes in spring, occurring sporadically thereafter depending on the ability of the genotype to withstand the heat.

Fruit: Four very tiny nutlets; deadhead spent cymes to encourage more blooms.

Stem / Bark: Stems — rather stiff; green becoming woody with age; pubescent when young; Buds — tiny; foliose; green covered in pubescence; Bark — brown; losing the pubescence with time; not really applicable in our region where it functions as an annual.

Habit: Under suitable environmental conditions in the tropics *H. arborescens* can grow to be a large shrub or small tree up to 12 ft tall; however, it is typically encountered as a rounded herbaceous annual with semi-woody older stems in our regional landscapes where plants are usually 1 ft to 2 ft (3 ft) tall and of a similar width; the overall texture is medium to medium-coarse.

Cultural Requirements: Temperatures and conditions for maximum effectiveness of *H. arborescens* are fairly narrow due to its origins in high elevation dry tropical climates; on one hand this species is prone to chilling damage at temperatures below about 40°F, but on the other hand it tends to decline in the heat of our summers; likewise, although plants are prone to root rots in wet soils, they require regular irrigation; hence, *H. arborescens* is typically reserved for use here regionally as a transition annual, or perhaps summer annual in the higher elevation or northern portions of our region; a similar dilemma exists for light levels, with sunny locations favoring flowering, but partial shade extending the plants ability to tolerate summer temperatures; deadheading will promote rebloom and pinching during production will result in denser plants; soils should be fertile and well drained; chlorosis will sometimes develop on high pH sites.

Pathological Problems: For this species, pests and diseases are generally lesser limitations than are physiological problems with environmental extremes; excessively moist soils may elicit a marginal necrosis on the foliage, often inducing people to exacerbate the problem by applying more water to the plants because the symptoms resemble those of drought stress; when grown indoors, spider mites, whiteflies and aphids can become more of a problem than when plants are placed in outdoors.

Ornamental Assets: Potentially huge clusters of highly fragrant lurid purple flowers set above the dark

green rugose foliage are the primary assets; in Europe it is sometimes cultivated as a perfume plant.

Limitations & Liabilities: Limited tolerance to the heat of summer and cold of winter are the primary limitations; also, all parts of this plant are considered *poisonous* if ingested.

Landscape Utilization: As a transition annual this species will serve a variety of uses as a general purpose bedding plant which can be effective for massing, as an edging plant, or in pots on patios, balconies, roof-top gardens, and window boxes; it is sometimes trained to a standard in pots; this species should be a candidate for inclusion anywhere that a strong fragrance is desired; Heliotrope is sometime used as a windowsill houseplant or in larger high light interiorscapes; Heliotrope was often a component of old-time cut flower gardens for those enjoying a fragrant bouquet.

Other Comments: While flower displays can be dazzling in spring landscapes, the sweet cherry-vanilla scented flowers of some cultivars is the trait that jumps to my mind with Heliotrope and is the source of the old-fashioned name of Cherry Pie by which this species was once known; when used as annuals, plants are vaguely reminiscent of miniature compact versions of Joe Pie Weed (*Eupatorium dubium*), a wildflower of the Eastern U.S.; in the Victorian language of flowers Heliotrope meant devotion or fidelity; the genus name derives from the Greek words for sun (helios) and to turn (trope), a misnomer since the flowers of this species do not follow the course of the sun as do species such as Sunflower (*Helianthus annuus*); the specific epithet means tree-like and refers this species' ability to become a large woody shrub in its native environment.

Native Habitat: This species is native to the Peruvian Andes.

Related Taxa: Although the genus *Heliotropium* L. (*Beruniella*, *Bourjotia*, *Bucanion*, *Cochranea*, *Euploca*, *Lithococca*, *Meladendron*, *Parabouchetia*, *Valentina*) contains approximately 200 species, only *H. arborescens* is widely encountered in commerce; the newer cultivars with dark purple flowers and more compact growth habits are much better for use as annuals than the older cultivars resembling the species type; 'Princess Marina', 'Marine' and 'Dwarf Marine' are popular compact cultivars with fragrant purple flowers, while 'Chatsworth' is an upright form used for producing standards.

***Borago officinalis* L.**

Borage

- C This type species for the genus *Borago* L. is also known as Beebread, Beeplant, Borraja, Cool Tankard, Star-Flower, or Talewort; Borage is in our region a cool to transition season annual growing 2Nto 3Ntall with an equal or greater spread; it may be effective in colder climates as a season-long summer annual; Borage is direct sown or transplanted to the landscape in later winter to early spring in the northern portions of our region, or fall planted in southern sections; this Mediterranean herb has been cultivated since ancient times; both the dark green coarse textured stems and 3Oto 8Q(12O) long crinkly broadly ovate-elliptic to lanceolate alternate leaves are clothed in a prickly white pubescence.
- C Flowers have striking blue colored petals, occasionally purple or white, covered in a frosty looking heavy pubescence; the loose open inflorescences are held above the foliage, but are nodding with the individual ¾Olong star or wheel-shaped flowers being pendent; the blue-black stamens extend about ¼Obeyond the lighter blue petals; blooms begin to appear in late winter in southern locations, or in early spring further north and continue until plants decline in the heat of late spring or early summer; flowers are not only visually interesting, but are also valued as a honey plant, hence common names alluding to bees.
- C In addition to its traditional uses in herb and cottage gardens, Borage incorporates well into mixed annual and perennial borders, is attractive in massed plantings for spring color and textural contrasts, and can be grown in container gardens; Borage should either be sown directly where it is to grow or transplanted when very young from containers as plants often suffer severe

transplant stress when moved; growth and flowering are best on fertile soils in full sun; irrigate as needed; this species may reseed regularly in the garden and has naturalized locally in portions of the U.S.

- C The genus name derives from the Latin word for woolly or hairy garments (*burra*) and the specific epithet means official, in reference to its official status in early pharmacopoeias; it was once very popular as an edible herb and was used in treating heart, circulation, and urinary tract problems; the young leaves, when picked before flowering begins, have a cucumber-like flavor and scent; eating this plant or drinking a beverage flavored with this species was believed to induce courage, hence the saying “Borage for courage”.
- C In some areas, “perennial borages” are grown which are actually closely related species more commonly known as Comfrey in the genus *Symphytum* L. (*Procopiana*, *Procopiana*); while the true Borage (*Borago officinalis*) is a fast growing plant, it is annual.

References: Cooke, 1998; Marston, 1993; Still, 1994; Winterrowd, 2004.

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