

***Cestrum diurnum* L.**
SOLANACEAE

day jasmine

Synonyms: *Cestrum fastigiatum* Jacq.
Cestrum diurnum L. var. *fastigiatum* (Jacq.) Stehlé in Fournet
Cestrum diurnum portoricense O.E. Schulz in Urban



General Description.—Day jasmine is a single or multistemmed shrub or rarely a small tree that is also known as day cestrum, wild jasmine, ink-bush, Chinese inkberry (English), dama de día, rufiana, galán de día, and saúco tintóreo (Spanish) (Little and others 1974). The bark of day jasmine is nearly smooth and gray. The inner bark is yellow-brown and slightly bitter. The twigs are slender, greenish gray, and sometimes drooping (Liogier 1995, Little and others 1974). The leaves of day jasmine are oblong or oblong-elliptic, and shiny green to yellow green, and somewhat membranous. They are about 15 by 6.5 cm and have petioles about 2.5 cm long. The small, white flowers are grouped in panicles attached at the bases of the last leaves in each branch. These develop into elliptical, purplish-black berries about 6.5 mm long (Howard 1989, Liogier 1995, Little and others 1974).

Range.—Day jasmine is native to the Bahamas, Cuba, Jamaica, Hispaniola, and the Cayman Islands (Little and others 1974). It has been introduced as an ornamental into most of tropical

and subtropical America. The species has escaped from cultivation in at least Florida, southern Texas, Hawaii, Puerto Rico, Guam, and American Samoa (Florida Exotic Plants Council 2001, Institute of Pacific Islands Forestry 2001).

Ecology.—Day jasmine grows in gardens, roadsides, fencerows, pastures, vacant lots, and abandoned farmland in Puerto Rico (Liogier 1995). The species is particularly associated with pasture fencerows because its seeds are deposited there by birds, vegetative competition is controlled by grazing, and day jasmine is rarely eaten by cattle. There is no mention in the literature of the types of natural forest stands where day jasmine grows within its native range. However, because the species is intolerant of heavy shade and quickly disappears when overtopped by forest, it can be inferred that day jasmine is an opportunist that invades disturbed areas and quickly completes its life cycle ahead of encroaching forest. The species may grow as individual plants or in thickets. Day jasmine will grow in areas receiving from about 800 to 3000 mm of precipitation, but most aggressively colonizes areas that receive from about 1400 to 2400 mm of precipitation. It tolerates soils of all textures, apparently from all parent materials, but is most common in limestone areas (Florida Exotic Plants Council 2001). Day jasmine does not prosper on exposed subsoil nor grow on swampy ground. The plant is salt tolerant if not exposed to heavy salt spray or overwash from storms (Florida Exotic Plants Council 2001).

Reproduction.—Day jasmine flowers and fruits year-round (Florida Exotic Plants Council 2001). The fruits from a Puerto Rican collection were sweet and slightly bitter with little other flavor and weighed (fresh) an average of 0.208 ± 0.010 g/fruit. The seeds weighed an average of 0.0021 ± 0.0005 g/seed (air dry). The fruits are much more variable in size (CV = 49) than the seeds (CV = 25). There are from four to 14 seeds/fruit (Florida Exotic Plants Council 2001). Day jasmine seeds are dispersed by frugivorous birds (Neal 1965, Little and others 1974). Seventy-nine percent of

the seeds from the Puerto Rican collection cited above germinated between 7 and 30 days after sowing.

Growth and Management.—Day jasmine rarely reaches more than 4.5 m in height and 8 cm in trunk diameter (Little and others 1974). Early growth is relatively fast and life spans are relatively short (5 to 20 years). Although seeds are still sold by regional seed houses and ornamental seedlings are offered by nurseries, nothing is published about propagation and management. With a plant so aggressive, few nursery and planting problems seem likely. Because the species is a weed in many situations, control may be desirable. In the absence of control guidelines, cutting followed by herbicide treatment of the sprouts is suggested.

Benefits.—Day jasmine has long been planted as an ornamental for its pleasing appearance, moderate size, ease of establishment, and fragrant flowers. The plant has the drawback of being poisonous to livestock. The leaves contain a calcinogenic glycoside called 1,25-dihydroxycholecalciferol that leads to a vitamin D toxicity that results in elevated serum calcium and deposition of calcium in soft tissues. Fifteen to 30 percent of day jasmine leaves in an animal's diet is sufficient to cause symptoms (Animal Science at Cornell University 2001). However, the fruits of day jasmine are one of the three foods that make up the bulk of the diet of the endangered plain pigeon (*Columba inornata*) in Puerto Rico (Island Resource Foundation 2001).

References

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