Carrotwood

Cupaniopsis anacardioides (A. Rich.) Radlkf.
Soapberry family (Sapindaceae)

NATIVE RANGE

Australia, Irian Jaya (Indonesia) and Papua New Guinea

DESCRIPTION

Carrotwood is a fast-growing evergreen tree that grows to a height of about 35 feet. The leaves are large and compound, made up of four to ten oblong leaflets, each 4 to 8 inches long, and attached by a swollen stalk. Leaflet edges tend to be wavy with rounded tips that are often indented. Leaves alternate along the stems. In Florida, flowering occurs in the winter, from January to March. Clusters of small, greenish-white flowers are borne on stalks that emerge from leaf axils. Flowers are unisexual, with each flower cluster containing both male and female flowers. The brightly colored fruit is a yellow, three-lobed capsule which, when ripe (May to June) splits open to expose three shiny black seeds encased in red or orange fleshy tissue.

NOTICE: As of July 1999, carrotwood has been added to the State of Florida List of Noxious Weeds.

ECOLOGICAL THREAT

While carrotwood invades a variety of natural communities, including dunes, coastal strand, sand pine scrub, slash pine flatwoods, cypress swamps, freshwater marshes and river banks, it poses a special threat to coastal ecosystems like mangrove swamps and tropical hammocks. Coastal plant communities provide crucial erosion control, water quality benefits, and food and shelter for wildlife. Once introduced, carrotwood forms dense monocultures, crowding out and out-competing native plants for available light and nutrients.

Because mangroves provide critical habitat for wading and diving birds, some of which are designated Species of Special Concern, and serve as nursery grounds for crabs, other crustaceans, invertebrates and commercial and recreational fish, the impacts of carrotwood establishment are serious and far-reaching. Coastal hammocks and mangroves are continually losing ground to development and are also impacted by natural forces such as tropical storms and hurricanes. Alteration of species composition and competition by invasive exotic species increases stress to the remaining hammocks. Because carrotwood is a popular, fast-growing landscape tree that is widely planted and very adaptable, the impacts to mangroves and other habitats are expected to increase. Carrotwood has also been found growing among other aggresive, invasive exotic trees.

DISTRIBUTION IN THE UNITED STATES

As of 1996, carrotwood has been documented to occur in natural areas in fourteen Florida counties, from Brevard and Hillsborough counties, southward. The current distribution of carrotwood parallels that of mangrove tree species. While naturalized carrotwood infestations are limited primarily to coastal areas, inland populations are beginning to surface. Carrotwood has also been used ornamentally in California, but there are no reports of naturalized populations there, perhaps due to their drier climate. Cold tolerance may limit its potential distribution. According to one reference, carrotwood is able to withstand temperatures to about 22 F (-6 C). Test specimens in northern Florida, however, have withstood winters at least that cold.

HABITAT IN THE UNITED STATES

Tolerant of salt, poor soils, poor drainage, sunlight and shade, carrotwood can adapt to dry areas, and appears in disturbed and undisturbed sites. As a result, carrotwood inhabits a variety of habitats including coastal hammocks, dunes,

coastal strand, sand pine scrub, slash pine flatwoods, mangrove swamps, cypress swamps, freshwater marshes and river banks.

BACKGROUND
University of Florida Herbarium specimens document carrotwood cultivation as early as 1955 in eastern Florida. A separate introduction in Sarasota, Florida in 1968 resulted in large scale propagation and use as an ornamental tree. Carrotwood became a popular landscape tree throughout southern Florida in the late 1970s and early 1980s. By 1990, wild carrotwood seedlings began to be seen in the wild in various habitats.

BIOLOGY & SPREAD
Carrotwood is a prolific seed producer, and the brightly colored fruits are very attractive to birds which disperse it widely. Bird dispersal explains isolated island populations and seedlings under trees and telephone poles. Seedlings have also been found along estuary rack lines. Clumps of seedlings suggest dispersal by small mammals. In its native range, carrotwood is pollinated by bees, which are the likely pollinators in Florida.

MANAGEMENT OPTIONS
No biological control is available at this time. Chemical control is the most common and effective method of control. Triclopyr (e.g., Garlon®) has proved effective as a basal bark treatment and cut stump treatment. Glyphosate (e.g., Rodeo®) is marginally successful, and usually requires retreatment. Care must be taken in mangrove and wetland areas to avoid impacts to sensitive flora and fauna by use of chemicals or heavy equipment. As a preventive measure, a few counties and municipalities have ordinances restricting use of carrotwood.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully, follow all mixing and application instructions and wear all recommended personal protective gear and clothing. Contact your state department of agriculture for any additional pesticide use requirements, restrictions or recommendations.

NOTICE: mention of pesticide products on this page does not constitute endorsement of any material.

CONTACTS
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SUGGESTED ALTERNATIVE PLANTS
Many native trees make good landscape substitutes for carrotwood. In southern Florida, alternatives include paradise tree (*Simarouba glauca*), pigeon plum (*Coccoloba diversifolia*), Jamaican dogwood (*Piscidia piscipula*), and inkwood (*Exothea paniculata*). In northern and central Florida, there's loblolly bay (*Gordonia lasianthus*), laurel cherry (*Prunus carolinana*) and magnolias (*Magnolia virginiana* or *M. grandiflora*). Dahoon holly (*Ilex casseine*) has a broad range and colorful red fruit.

OTHER LINKS
- http://www.hear.org/starr/hiplants/images/thumbnails/html/cupaniopsis_anacardioides.htm

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