

STREET PLANTS

ETHNOBOTANY OF INNER CITY L.A.

A series examining the wild plants of Los Angeles



CASTOR BEAN • *RICINUS COMMUNIS* L. SPURGE FAMILY (EUPHORBIACEAE)

THE TROPICS OF LA, USEFUL AND DEADLY DENIZENS OF THE WILD WEST

The conversion of Los Angeles - an arid grass and shrubland rimmed by arid mountains - into the pseudo-tropical landscape that it is today was no small feat. It required the redistribution of enormous quantities of water and the introduction of a whole new set of plants. One of the earlier introductions was the Castor bean, a plant which would look much more at home in an exotic jungle understory than in the full sun of Southern California. Though it was brought to California primarily as a crop plant for the production of castor oil, its strange look was admired by [nineteenth century Angelenos](#). They were so infatuated by its rapid growth in the mild climate of LA that they sent specimens to Chicago for the [1893 World's Fair](#) to portray the city. Years later the public became aware that the highly toxic seeds, the source of the poison ricin, could be consumed by unwitting children. This, coupled with concerns over its ecological effects led to eradication efforts. By then it was too late, it had escaped cultivation more than a century before those efforts began, adding a tropical look to the wilds of Los Angeles whether we like it or not.

Castor bean is a striking, easily recognizable plant which is native to the Mediterranean Basin, Eastern Africa and India. It can grow into a small tree, but is more often seen as an erect shrub less than 10 feet tall. The palmate leaves range from six inches to well over a foot in length and contain five to twelve pointed lobes. Male and female flowers are borne separately along a flowering spike up to a foot in length. The yellow green male flowers are found at the bottom of the spike, while the female flowers are located at the top of the flowering spike and are found inside of the immature fruit capsule. The feathery, red stigmas can be seen poking out of the capsule. Mature fruit capsules are spiny and have three chambers, each containing a smooth, mottled seed approximately half an inch in length. Each seed is adorned with a distinct fleshy white appendage known as an eliasome which aids in its dispersal by ants. It is widely cultivated, and has naturalized in anthropogenic landscapes throughout much of the tropical and subtropical world.



In Los Angeles, Castor bean proliferates in disturbed areas such as drainage ditches, roadsides, construction sites, back alleys and vacant lots. Given its large size, it is usually absent in highly manicured parts of the city, but is common in neglected areas. The extreme fecundity of the Castor bean in Southern California has led to its designation as an invasive species. Though the [California Invasive Plant Council](#) rates it as being only of limited invasiveness throughout the whole state, Los Angeles and San Gabriel River Watershed council place it among the “[Terrible Ten](#)” plant invaders of Southern California. Awareness of its invasiveness by the LA gardening public is generally high and most nurseries in Southern California do not carry it. Many cultivars with ornamental appeal are still available through [mail order](#) however. Selections which emphasize [different leaf and fruit colors](#) seem to be the most popular.



Pressing the seeds of the Castor bean produces castor oil, a product with many uses. As a supplement consumed by humans, it is most well known as a powerful laxative. Its expulsive powers have made their way into pop culture; the famous pie eating scene from the 1986 film Stand by Me shows a character consuming a whole bottle of castor oil to induce vomiting.



There is a darker side of these properties, their historical use as a punishment. A notable example of this [took place in 1920s Italy](#), when the fascist Black Shirts would force feed castor oil to political dissidents, as a form of humiliation (and presumably extreme discomfort.) In addition to being a laxative, castor oil is touted for a variety of [other health uses](#), including as a moisturizer, acne reducer and anti inflammatory agent. The pharmaceutical industry uses it as an [additive](#) for a variety of drugs. It was even shown to [stimulate labor](#) in pregnant women who had previously had a child (though not those who were having their first). The unique chemistry of castor oil allows it to be broken down into its derivative compounds in a ways that most other vegetable oils are not. For this reason, castor oil and its derivatives have a wide range of industrial applications, particularly as lubricants, hydraulic fluids and surfactants. In order to supply these industries, a massive quantity of Castor bean is cultivated. [In India](#) well over a million tons of castor seeds are harvested each year.

The extraction of castor oil from seeds of the Castor bean removes ricin, a highly toxic protein, thus making the oil safe for human consumption. A quantity as small as a few milligrams of ricin can kill an adult, leading to a long and disturbing history of weaponized use. The United States and Soviet Union both studied its potential in warfare, experimenting with ways to use it as a coating of bullets and shrapnel, or to spread it over large areas in a bomb blast as a toxic dust. It has been implicated in a number of [political assassinations](#), and was detected in letters sent to Michael Bloomberg and Barack Obama from a disgruntled former [actress from Texas](#). The quantity of ricin in the castor seeds is significant, but it appears that a number of them must be ingested to be lethal. A woman who consumed [30 seeds in a suicide attempt](#) did not die.

“ARTICLES ENCOURAGING CALIFORNIA FARMERS TO DO THEIR PATRIOTIC DUTY AND PLANT CASTOR BEAN TO SUPPORT THE WAR EFFORT WERE COMMON.”



The history of the Castor bean in Los Angeles is surprisingly well documented in old newspaper articles. The earliest of these, from the second half of the nineteenth century are all business. They [exuberantly celebrate](#) the prolific growth of Castor bean in California, and the potential to produce more income per acre than other crops. But [high tariffs](#) on Indian imports were not enough to make California grown seeds competitive on a large scale and it fell out of favor. Towards the end of World War I, there was another spike in interest of the Castor bean, this time in relation to the war effort and the use of castor oil in airplane engines. Articles encouraging California farmers to do their [patriotic duty](#) and plant Castor bean to support the war effort were common. As technology pushed this design [into obsolescence](#), the Castor bean once again withdrew from the public eye. In the 1960s, the deadly nature of the seeds became a focus of newspaper editors, and a whole slew of articles about the [hidden dangers](#) lurking in gardens were published. More recent articles identify it's invaseiness and describe eradication efforts in places such as the [Sepulveda Basin](#).

The [disturbance loving](#), naturalizing habit of the Castor bean in Los Angeles was [identified early](#), and as it proliferated in the rapidly developing landscape it became a common backdrop of life in the rough and tumble streets of the city. [In 1887](#) two laborers were arrested after being found “on Alameda street, under a Castor bean bush, [making] preparations to take hypodermic injections” of morphine sulfate. [In 1895](#), a hired gunman hiding under a Castor bean plant attempted to assassinate a witness against a Chinese gangster. [The following year](#), muggers escaped into a thicket of Castor bean bushes at the corner of Omar and Boyd with “some \$60 in gold and greenbacks.” [In 1901](#) a young man slipped on a Castor bean stalk at the corner of 5th and San Pedro, breaking his left kneecap. Though references to the Castor bean in relation to the darker sides of the city are sparser in more recent years, there’s no doubt that they are a backdrop to all types of nefarious activities. Today, they are most abundant in the cities roughest and least policed areas.

The average Angeleno probably does not look at the large leaved tropical looking plants growing wild throughout their city as escaped crops with enormous industrial use, or as the source of one of the world’s deadly poisons. They are to many nothing but an unwanted weed, causing ecological havoc and tarnishing the Mediterranean look that composed the pre-European landscape. To others they are simply part of the unseen backdrop of the city, and not thought of at all. To me, they are a perfect example of our strangely intertwining world where wild, cultivated, useful, deadly, desired, unwanted, ugly, and beautiful all flow together seamlessly.

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