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Scientific Name: *Jatropha cordata*

Synonyms: J*atropha clarae-hildae, Loureira glandulosa, Mozinna cordata*

Common Names: papelio, torote,

Botanical Family: Euphorbiaceae

Botanical Characteristics:

J. cordata is a soft-wooded, somewhat succulent deciduous to semievergreen tree or shrub growing as high as 10 m (30 feet) tall (1, 4). This plant has a taller than wide habit (4). It has a well-developed main trunk and small flexible branches. Stems: gray-yellow, erect, sometimes branched from base, young stems pubescent, somewhat succulent, bark papery, peeling in golden-yellow strips, , this is the reason why this it is called "papelillo". leaf scars round and protruding; latex translucent and viscid in young branches but sulfur-yellow in older stems. Leaves: The leaves are simple, widely ovate-cordate and 2.1-5 x 3-7.3 cm (1-2.5 inches) long and wide, with a cordate to cordate-truncate base and acuminate apex (1, 4). Leaf margins have sessile glands (1). The leaf surface shows palmate venation with 3-5 primary veins, and is glabrescent on both upper and lower surfaces (1). In spring through summer, 5-petalled, male and female flowers are borne on lateral cymes with many flowers on each male inflorescence and fewer flowers on pistillate structures (1, 7).

Staminate flowers have ovate to ovate-lanceolate, glabrous sepals (1.5-3.5 x 1-1.5 mm long and wide) with glandular margins and corollas are urceolate, have tiny petals (4-6 x 1.5-2.5 mm) varying in color from white to dark pink or scarlet and having white margins and a white apex (1). Pistillate flowers are similar but sometimes have a more narrow or wide ovate corolla (2.5-6.5 x 1-2.5 mm) and larger petals (5-8 x 1.5-3 mm). Fruits are 1.3-2cm (<1 inch) bilobed, ellipsoid, somewhat flattened capsules which dry and eventually become dehiscent (1, 4). Seeds are light brown and speckled with dark brown spots (1).

Since herbarium specimens of *Jatropha cordata* and *J. cardiophylla* have been often misidentified, we note that key differences distinquishing *J. cordata* are the presence of marginal glands on the leaves and a more upright tree-shrub form (1).

Natural History:

J. cordata is commonly distributed in the arid and semi-arid regions of Mexico and the southern United States especially in the western coastal and inland states of Mexico (disjunct, shrubby populations occur in Chihuahua and Sonora) (1, 3, 4). The plant appears in a wide range of habitats including exposed, grassy hills, in sparse, dry, deciduous woodlands, in low spiny forests, and in tropical, deciduous forests at 1200-1500 m (1, 3). Observations of this species more typically occur at less than 300 m (~2000 feet) elevation (7).

Cultivation Notes:

This genus Jatropha is widely distributed in tropical and subtropical regions from Africa, the America, and Asia (4), through Mexico is the diversity center with 50 of the 186 known Jatropha species found here and 39 of those being endemic to Mexico (4). Many of these areas experience extreme temperatures and variable humidity conditions, suggesting a tremendous adaptation in the genus to extreme weather (4). They are often found growing on a plant or on decaying plant material in forests, or in a grove, stand or woods/associated with trees (7). *J. cordata* is one of the four most widely

distributed Jatropha species occurring in Mexico (*J. cinerea*, *J. cardiophylla*, and *J. cuneata*, being the others). All four are considered within the Priority Terrestrial Regions of the National Commission for the Knowledge and Use of Biodiversity (CONABIO) (4).

Ethnobotany:

Traditionally, *J. cordata* root was used by ethnic groups in the state of Sonora to combat toothache and the stem and leaves are used to cure gums [14]. The leaves were added to bath water to encourage growth and health in children while bruised leaves were applied to sores (3). The large papery sheets of bark from the trunk were also used to wrap food like cheese and to keep honey fresh (2).

In the 2020s, a greater number of phytochemical studies of the genus Jatropha increased as those species in the genus became more widely known as a source of bioactive compounds including phenolic acids, lignans, flavonoids, coumarins, alkaloids, and terpenes (4, 5). *J. cordata* has the highest antioxidant capacity and the highest concentration of phenolic compounds of the Mexican Jatropha species analyzed (4). All of the compounds found in J*atropha cordata* have shown antioxidant, cytotoxic, antimicrobial, antifungal, and anti-inflammatory activities (5). As such this and other Jatropha species appear to be a potential source of both antioxidant compounds and potential biotechnological uses (4).

Height: 30 feet
Width: 10 feet
Growth Rate: fast
Grow Season: summer
Flower Season: spring-summer
Color: pink, white, red
Function: accent
Spread: no
Allergen: no
Invasive: no
Toxicity: no
Hardy: moderate
Water Use: low

Resources:

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7. Wildflower Search. Retrieved June 15, 2024. https://wildflowersearch.org/search?name=Jatropha+cordata