



# ISLAND IRONWOOD

## *Lyonothamnus floribundus* A. Gray

Plant Symbol = LYFL2

### Alternative Names

*Common Names:* Catalina ironwood, fernleaf ironwood, palo fierro

### Description

*General:* Island ironwood is an evergreen tree in the Rosaceae Family growing to 50 feet tall and 15-25 feet in width. The trunk is gray or reddish-brown with the bark peeling in strips. Leaves are opposite, simple or compound 4-6 inches long by 4 inches wide with deciduous stipules and a petiole 0.4-1.2 inches long. The leaves are shiny and dark green on the upper surface and grey on the lower surface. The inflorescence is a flat-topped panicle supporting the flowers which have persistent sepals, round white petals, approximately 15 stamens and 2 pistils, the ovary is superior (Junak & Wilken, 2021). Fruits are capsules, hard and woody with 1-4 seeds, which are compressed and tan (Wall & Macdonald, 2009).

There are two recognized sub species. Santa Cruz Island ironwood, *L. floribundus* ssp. *aspleniifolius* (Green) Raven, has pinnately compound leaves with deeply toothed margins (Junak & Wilken, 2021). Santa Catalina Island ironwood, *L. floribundus* ssp. *floribundus* (Gray) Raven, has single entire leaves although the seedling leaves are often compound (Junak & Wilken, 2021). The two sub-species are genetically similar (Bushakra et al., 1998).

*Distribution:* Native and endemic to California, relict populations survive on the Channel Islands in southern California. According to the fossil record this genus was previously widely distributed over the Western US (Erwin & Schorn, 2000). Santa Cruz Island ironwood is found on Santa Cruz (≈ 1000 groves), San Clemente (≈ 200 groves) and Santa Rosa islands (≈ 10 groves) (Bushakra et al., 1998). Santa Catalina Island Ironwood is restricted to Santa Catalina Island.

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

*Habitat:* On the Channel Islands the trees grow in chaparral and oak woodland in rocky coastal canyons from 100 to 1,500 feet elevation, more frequently found on north facing slopes (Junak & Wilken, 2021). Outside of this area they are planted as an ornamental and landscape plant (Calscape, 2022; San Marcos Growers, 2001; Wilson, 2013).

### Adaptation

The trees are adapted to Mediterranean climate areas. They withstand full sun, and are tolerant of a range of soil types, including sandy, loamy, sandy clay and rocky soils, pH 5-8, as long as the soil is well drained (Calscape, 2022; SelecTree, 2022). They are very drought tolerant and require little irrigation. Moderately tolerant to soil salinity and the foliage is very tolerant of salt spray (SelecTree, 2022). The plant is cold hardy to 22 F and tolerates high temperatures over 100 F. Specimens have been planted as far north as Washington State and England (San Marcos Growers, 2001; Wilson, 2013).



Figure 1. Island ironwood at the Lockeford Plant Materials Center, 40 years after planting. Photo, Margaret Smither-Kopperl

## Uses

**Ornamental:** Island ironwood is an attractive ornamental plant, with its upright habit, mahogany colored trunk and green foliage, the creamy white flowers and retained inflorescences add visual appeal. It is very drought tolerant requiring little or no summer irrigation (Theodore Payne, 2014). The nursery trade is dominated by *L. floribundus* ssp. *aspleniifolius*, due to the more attractive foliage (Figure 2), and is commonly named Catalina ironwood, instead of the technically correct Santa Cruz Island ironwood (San Marcos Growers, 2001). The trees shed bark and woody inflorescences to produce mulch at the base of the trees, this is can be considered attractive and suppresses weeds.

**Wildlife:** Island ironwood blooms in May, June and July and provides good pollinator habitat being visited by both numerous native bees and European honeybees in its native Channel Islands and birds (SelecTree, 2022; Thorpe et al., 1994). It is considered tolerant of browsing by deer although some protection is advisable for the first five years (San Marcos Growers, 2001; Wilson, 2013).

**Windbreak:** Island ironwood is fast growing, has straight trunks, strong branches, and dense foliage. The Lockeford Plant Materials Center rated island ironwood as the best native potential windbreak species based upon fast growth over 6 years. The growth rate is about 24 inches a year (SelecTree, 2022).

## Ethnobotany

The Chumash valued the hard wood for a variety of purposes: posts for houses, shafts of canoe paddles because of their strength for their large seagoing redwood plank canoes, harpoons, a shovel shaped tool about a foot in length for removing abalone from their shells, wooden knives about 20 inches long and sharpened at both ends for fighting, and shredded bark may have been used for women's aprons (Timbrook, 2007).

## Status

**Threatened or Endangered:** Both sub species are listed as a California rare, threatened or endangered plants, Rank 1B.2 (CNDDDB, 2022). On the Channel Islands, the species are threatened by the grazing of non-native mammals including goats (Junak & Wilken, 2021; O'Malley, 1991). Please consult the PLANTS Web site (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

## Planting Guidelines

Plant container grown stock in the fall. Irrigation may be required during establishment. Once established, summer watering should be limited to a deep watering no more than once a month in a California summer (Calscape, 2022).

## Management

Management should be minimal, the tree tends to form its own mulch from the leaves, woody inflorescences and bark. It will resprout from the base if cut down or damaged (San Marcos Growers, 2001; Wilson, 2013). Clonal growth in its native habitat has resulted in stands of genetically identical trees (Bushakra et al., 1998).

## Pests and Potential Problems

If overwatered the plants become chlorotic (San Marcos Growers, 2001).

## Environmental Concerns

None.

## Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.



Figure 2. Inflorescence of island ironwood, the commercially available *aspleniifolius* subspecies. Photo Margaret Smither-Kopperl.

## Seeds and Plant Production

Seed can be collected in abundance annually from the mature inflorescences. To release seed from capsules, rub vigorously with a wood block over a #25 sieve, use a blower with speed set at 1 and rub gently over a #40 sieve, increase speed to 1.25 and sieve again several times through a # 25 sieve to remove chaff (Wall & Macdonald, 2009). Seed cleaning is difficult and there are a high percentage of hollow seeds. A recommended stratification treatment is placing seed in 6 times their volume of water at 140°F then let cool for 45 minutes before planting (Calscape, 2022).

## Cultivars, Improved, and Selected Materials (and area of origin)

Currently there are no cultivars or improved materials available commercially. The *L. floribundus* ssp. *aspleniifolius* subspecies is commercially available from several nurseries in California (San Marcos Growers, 2001).

Cultivars should be selected based on the local climate, resistance to local pests, and intended use. Consult with your local land grant university, local extension or local USDA NRCS office for recommendations on adapted cultivars for use in your area.

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## Citation

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