

## Wiliwili

*Erythrina sandwicensis* Deg.

Legume family (Leguminosae)

Native species (endemic)

Small deciduous native tree, originally one for the most common in dry regions, characterized by short spines, leaves with three broadly triangular leaflets, and showy orange, yellow, salmon, greenish or whitish flowers when leafless. Pea subfamily (Faboidae).

Tree 15–30 ft (4.5–0 m) tall, with short stout crooked or gnarled trunk 1–3 ft (0.3–0.9 m) in diameter, stiff spreading branches, and broad thin crown becoming wider than high. Bark smoothish, light to reddish brown, with scattered stout gray or black spines to  $\frac{3}{8}$  inch (1 cm) long, becoming slightly fissured, thin. Inner bark light yellow beneath green outer layer, gritty and slightly bitter. Twigs nearly horizontal, stout, green and with yellowish hairs when young, with scattered blackish prickles or spines.

Leaves alternate, compound, 5–12 inches (13–30 cm) long, with long slender leafstalk  $3\frac{1}{2}$ –10 inches (9–25 cm) long. Leaflets three, short-stalked, two paired and one largest at end, broadly triangular,  $1\frac{1}{2}$ –4 inches (4–10 cm) long and  $2\frac{1}{2}$ –6 inches (6–15 cm) wide, slightly broader than long, short-pointed at apex and almost straight at base, thin, becoming nearly hairless above, beneath yellow hairy with raised veins, with two dotlike glands at base of each leaflet and one or two glands at base of leafstalk.

Flower clusters (racemes) near ends of twigs, at end of yellow hairy stalk of 3 inches (7.5 cm) or less. Flowers many, crowded in mass 3–6 inches (7.5–15 cm) long, short-stalked, composed of cuplike densely yellow hairy calyx  $\frac{5}{8}$  inch (15 mm) long, curved and split open on one side; corolla orange, yellow, salmon, greenish, or whitish with one very large elliptical curved petal (standard) about  $1\frac{1}{2}$  inches (4 cm) long and four small petals (wings and keel) about  $\frac{1}{2}$  inch (13 mm) long; 10 orange or yellow curved stamens about  $1\frac{1}{2}$  inches (3 cm) long, nine united in lower half and one separate; and pistil with stalked narrow densely hairy ovary and slender curved or straight style.

Fruits (pods) about 4 inches (10 cm) long and  $\frac{1}{2}$  inch (13 mm) broad, flattened, long-pointed at both ends slightly narrowed between seeds, blackish, hard-walled, splitting open. Seeds 1–5, beanlike, elliptical,  $\frac{1}{2}$ – $\frac{5}{8}$  inch (13–15 mm) long, shiny orange red.

The wood is pale yellow brown, soft, very lightweight and coarse-textured. Hawaiians used it for fish-net floats, outriggers of canoes, and surf boards.

The flowers, mostly orange but varying in color on different trees, are borne from early spring to July, while the trees are leafless.

Hawaiians strung into leis the bright red seeds, which probably are poisonous. Seeds of several other members of the genus contain alkaloids similar to curare. However, a large number of seeds would have to be cooked and eaten to be harmful. Captain James Cook was given leis made of wiliwili seeds and the worn bases of conus shells (“puka” shells) when he visited the islands in 1778.

Wiliwili was one of the most common native trees in the dry forests at low altitudes of 500–2000 ft (152–610 m) on the lee side of the Hawaiian Islands. It is characteristic of the barren, rough aa lava flows. At present, it has been largely replaced by kiawe (*Prosopis pallida*), but may still be seen in the dry gullies on the lee side of all islands. It is particularly common along the road from Ulupalakua to Kaupo on Maui and frequent in the dry forest near Puuwaawaa on Hawaii. There are several trees still surviving on the goatravaged island of Kahoolawe. The Division of Forestry has planted more than 6000 wiliwili trees in Forest Reserves, 4000 of them on Molokai on the land of Palaa.

Wiliwili should be planted more often, since it thrives where other trees cannot survive. It is easily propagated by seeds and cuttings.

### **Special areas**

Foster, Koko, Wahiawa, Waimea Arboretum, Volcanoes

### **Champion**

Height 55 ft (16.8 m), c.b.h. 12.5 ft (3.8 m), spread 57 ft 917.4 m). Puuwaawaa Ranch, North Kona, Hawaii (1968).

### **Range**

Known only from Hawaiian Islands. A closely related species in Tahiti.

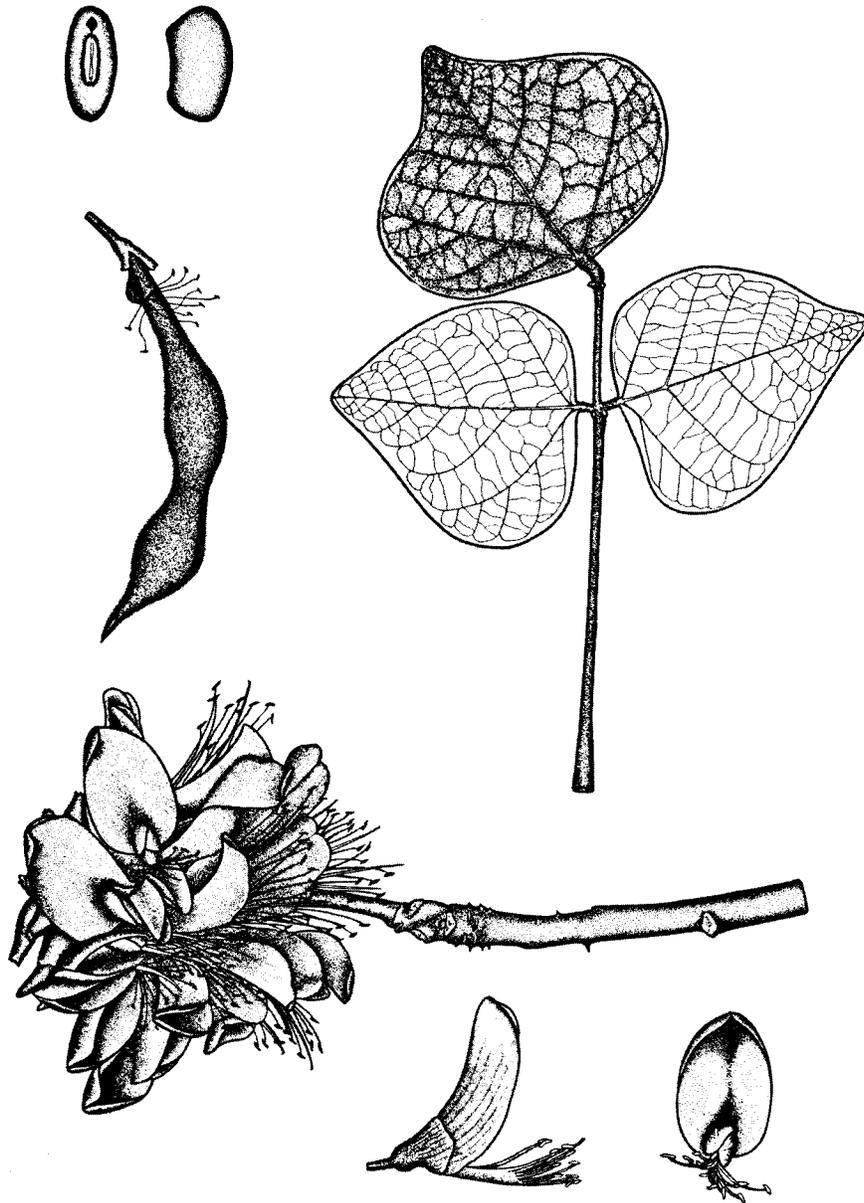
### **Other common names**

Hawaiian erythrina, Hawaiian coral tree

### **Botanical synonym**

*Erythrina monosperma* Gaud., not Lam.

Trees of many species of *Erythrina* from around the world can be seen at Waimea Arboretum.



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Leaf with flowers and fruits, 1/2 X; seed (upper left), 5 X (Degener)