

Tropical ash

Fraxinus uhdei (Wenzig) Lingelsh.

Olive family (oleaceae)

Post-Cook introduction

Tropical ash was originally introduced from Mexico as a shade tree but was found suitable for forest plantations. This large deciduous tree is identified by the paired, pinnately compound leaves with 5–9 lance-shaped finely saw-toothed leaflets and the many brown key fruits with long narrow wing.

A large forest tree 80 ft (24 m) or more in height and 3 ft (0.9 m) in trunk diameter. Bark gray or brown, rough, thick, furrowed into ridges. Inner bark whitish and bitter. Twigs green, turning brown, hairless except when young, with paired raised half-round leaf-scars. Buds paired, $\frac{3}{16}$ inch (5 mm) long, blunt, covered by few finely hairy brown scales.

Leaves opposite, pinnate, 6–11 inches (15–28 cm) long, composed of slender green hairless axis and 5–9 leaflets paired except at end, on slender stalks of $\frac{1}{8}$ – $\frac{1}{2}$ inch (3–13 mm). Leaflet blades mostly 2–4 inches (5–10 cm) long and $\frac{3}{4}$ –2 inches (2–5 cm) wide, long-pointed at apex, shortpointed or blunt at base, finely saw-toothed on edges, slightly thickened, upper surface dull green and hairless, lower surface light green with small hairs along midvein.

Flower clusters (panicles) at sides of twigs, 5–8 inches (13–20 cm) long, much branched, with many slenderstalked small greenish flowers without petals, male and female on different trees (dioecious). Male flowers have tiny four-toothed calyx and two stamens $\frac{1}{8}$ inch (3 mm) long. Female flowers have four-toothed calyx and pistil $\frac{3}{16}$ inch (5 mm) long with ovary and two-forked style.

Key fruits (samaras) $\frac{3}{4}$ – $1\frac{1}{2}$ inches (2–4 cm) long, composed of small nearly cylindrical dark brown body $\frac{1}{4}$ – $\frac{3}{8}$ inch (6–10 mm) long at base and long light brown wing to $\frac{1}{4}$ inch (6 mm) wide, extending down to middle of body and slightly notched at end.

The wood is blond without a differentiated sapwood. It is lightweight (sp. gr. 0.47), ring porous, straight-grained, moderately fine-textured, and almost indistinguishable from white ash, except in its lower density and hardness. It is more stable than white ash and easier to work, so is better suited for furniture. It is not as tough

as white ash and not well suited for handle stock as its wide-ringed characteristic would suggest. Easy to season and to work, but not resistant to decay or insect attack. It has been used in Hawaii for furniture and paneling. Tests have shown it to be a good veneer species as well.

In the late 1800s two trees were planted on Oahu, one in Kalihi Valley and the other in Nuuanu Valley. According to Lester W. 'Bill' Bryan, these trees were the seed source for the tropical ash planted in Hawaii. The Division of Forestry began planting this species for watershed cover about 1920 and since then has planted over 700,000 trees on all islands. For a time in the early 1960s, the species was extensively planted as a potential timber. It was found to have such a poor form, however, that it has now been dropped from consideration. The poor form may result from inbreeding depression, since the entire population originates from one or two parent trees. Tropical ash is a shade-tolerant tree when young and regenerates prolifically in moist sites where planted.

Special areas

Tantalus, Kula, Waihou, Waiakea

Champion

Height 92 ft (28.0 m), c.b.h. 11.7 ft (3.6 m), spread 95 ft (29.0 m). Kohala Forest Reserve, Muliwai, Hawaii (1968).

In Mexico City and elsewhere in subtropical parts of Mexico where native, this species is a popular street and shade tree. Introduced in southern Arizona.

Range

Native of western and southern Mexico from Sinaloa to San Luis Potosi and Oaxaca south to Guatemala

Other common names

Hawaiian ash, Shamel ash; fresno (Spanish)

Related to white ash, *Fraxinus americana* L., of continental USA.



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Female flowers (upper right), twig with leaf, and fruits (lower left), 1 X (P.R. v. 2).