'Ōhi'a ai, mountain-apple

Eugenia malaccensis L

Myrtle family (Myrtaceae)

Polynesian introduction

This species with its red, sometimes pink or white, pear-shaped fruits of applelike color undoubtedly was introduced by the early Hawaiians. It has large pretty, purplish red or rose purple flowers (sometimes whitish) composed of a mass of many threadlike stamens $2\frac{1}{2}-3$ inches (6–7.5 cm) across, spreading like pins in a pin cushion, which drop to form a purplish red carpet on the ground beneath.

A small to medium-sized evergreen tree 20–50 ft (6–15 m) tall with erect trunk 4–8 inches (0. 1 –0.2 m) or more in diameter and with dense conical or columnar crown of dark green foliage. Bark light brown, smoothish to slightly fissured. Inner bark brownish streaked and slightly astringent. Twigs light brown, green when young, hairless with slightly raised leaf-scars.

Leaves opposite, hairless, with stout green to brown leafstalks of ½–¾ inch (1.3–2 cm). Blades large oblong, 7–12 inches (18-30 cm) long and 3–5 inches (7.5–13 cm) broad, long-pointed at apex, short-pointed at base, leathery, slightly curved upward on both sides of midvein, side veins slightly sunken and connected near straight margins. Upper surface dark green or green and slightly shiny, lower surface dull light green, with scattered tiny gland-dots visible under a lens.

Flower clusters (cymes or panicles) 4–5 inches (10–13 cm) across several to many almost stalkless flowers at end of short branched green lateral axis along branches back of leaves and trunk. Flowers odorless, with funnel-shaped light purplish green base (hypanthium) ³/₄ inch (2 cm) long and more than ³/₈ inch (1 cm) wide at top, enclosing ovary and extending as broad tube ³/₁₆ inch (5 mm) beyond. Calyx of four broad rounded thickened persistent sepals ¹/₈–³/₁₆ inch (3–5 mm) long; 4 spreading rounded concave purplish red petals ¹/₂ inch (13 mm) long; many spreading stamens 1–1 ¹/₄ inches (2.5–3 cm) long, purplish red with yellow dot anthers; and pistil composed of inferior two-celled ovary and persistent purplish red straight style about 1 ¹/₄ inches (3 cm) long.

Fruits (berries) pear-shaped, 2–3 inches (5–7.5 cm) long and 1–2 inches (2.5–5 cm) in diameter, red (sometimes pink or white), with four calyx lobes at apex, thin

soft skin, and white crisp juicy pulp with pleasant slightly sour or sweet flavor suggesting apple. Seed single, large, rounded, ³/₄ inch (2 cm) in diameter, light brown. Flowering mainly in March and April or irregularly and maturing fruits in summer and autumn.

Sapwood light brown, heartwood reddish brown, straight-grained, and fine-textured. Wood described as hard, tough, very heavy, tending to warp and difficult to work. Hawaiians hewed the trunks into posts, rafters for houses, and enclosures for temples. Religious images were carved from the wood, which was regarded as sacred. A tea brewed from bark was used as a sore throat remedy.

Widely cultivated through the tropics. Fruits are eaten raw, cooked, or preserved. It is said that the slightly sour stamens are good in salads. Elsewhere astringent bark, flowers, and leaves have been used in folk remedies.

An attractive ornamental and shade tree, planted elsewhere for windbreaks. One author places it among the most beautiful flowering trees of the tropics. Easily propagated from seeds, it has moderately rapid growth. Fruits are produced in 7–8 years.

Mountain-apple was introduced into Jamaica in 1793 from Tahiti by Captain William Bligh of the British ship *Providence*. This, along with breadfruit, was one of several trees brought in to provide inexpensive food for slaves.

Naturalized in moist lowland forests through the Hawaiian Islands, mainly on windward sides in valleys and gorges. It forms almost pure stands to about 1800 ft (549 in) altitude. Accessible groves on Oahu are in Waimano Gulch and Sacred Falls Valley (Kaliuwaa), also along Trail Number 1 in upper Makiki Valley and Kahana Valley. The form with white flowers and fruits, rare on Oahu, was named 'ōhi'a'ai hua keokeo or 'ōhi'a kea.

Special areas

Waimea Arboretum, Foster.

Champion

Height 35 ft (10.7 m), c.b.h. 4.8 ft (1.5 m), spread 20 ft (6.1 m). Kaelakehe, Kailua-Kona, Hawaii (1968).

In Puerto Rico and Virgin islands, trees are grown around buildings as ornamentals, also occasionally for windbreaks. Uncommon in southern Florida.

Range

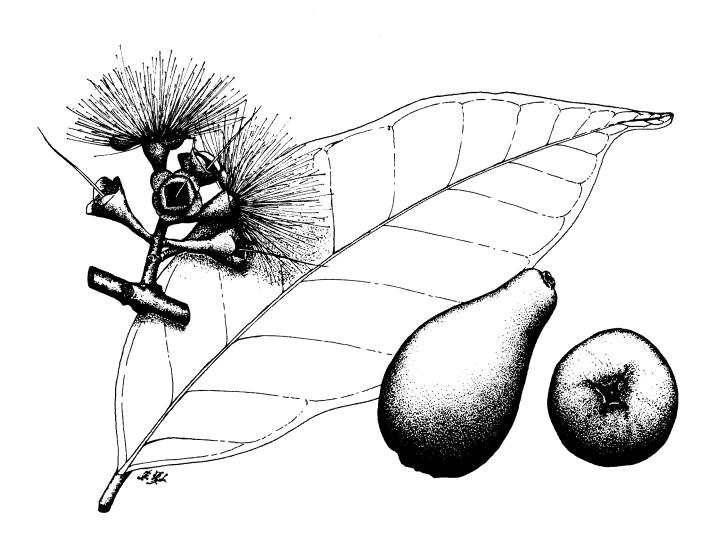
Native probably of Malay Peninsula or Malay Archipelago. Widely planted through tropics.

Other common names

Malay-apple; manzana malaya, pomarrosa malaya (Puerto Rico); macupa (Guam); kidel (Palau); faliap (Yap); faniap (Truk); paniap (Pohnpei)

Botanical synonyms

Jambosa malaccensis (L.) DC., *Syzygium malaccense* (L.) Merr. & Perry.



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Eugenia malaccensis L Flowers, leaf, fruits, 1 X (P.R. v. 1).