



Expanding Tree Diversity in Hawai'i's Landscapes: *Kukui, Aleurites moluccana*

Richard A. Criley
Department of Tropical Plant and Soil Sciences

The kukui tree is found throughout the Polynesian Islands into Indonesia and Malaysia and is the state tree of Hawai'i. Its oily nuts were burned as candles, hence another common name, candlenut. The roots of its Polynesian names mean "light," referring to this use. In some cultures it is considered a symbol of enlightenment, protection, and peace. Its dense, rounded crown typically reaches to about 65 feet in height by 40 across. Kukui has many traditional uses: it can be made into a dye, while its oils are used in cosmetics, and parts of the plant may be applied medicinally. Selection has produced several fruit and fruit forms.



Kukui flowers



This kukui has been subjected to repeated pollarding (a kind of severe pruning) but still returns to an attractive form.

Recommended Use in Landscapes

- Shade tree
- Visual screen
- Windbreak (multi-row)
- Grove, massed planting
- Specimen/focal point

Distribution

- Native to the Indo-Malaysia region.
- At home in moderately moist valleys and naturalized along streams and gulches.

Propagation Techniques

- Seed
- Cuttings (uncommon)
- Selected forms can be grafted

Cultural Requirements and Tolerances

- Drought tolerant once established.
- Tolerant of a variety of soil types: well drained, moist, slightly acidic to slightly alkaline
- Full sun to about 25% shade
- Moderately salt-spray tolerant
- Wind tolerant
- In Hawai'i, grows to about 2300 ft elevation

Flower and Fruit Characteristics

- Greenish-white flowers in clusters 4–6 inches long.
- Five petalled.
- Small male flowers surround female flowers
- Fruits are round, averaging about 2½ inches in diameter, and somewhat compressed apple-shaped with leathery brownish-green husks.
- Seeds (nuts) are elliptical, about 1 to 1½ inches long, black at maturity, with a smooth, hard shell.

Leaf Characteristics

- Evergreen
- Variable, 4–8 inches long, 3–5 lobed
- Upper surface of young leaves is whitish to silver, maturing to dark green.
- The variety 'Katoi' has narrow lanceolate leaves, while 'Remyi' has deeply lobed leaves with narrow lateral lobes and an elongated terminal lobe.

Advantages for Use in Landscapes

- Fast growing
- Wind tolerant
- Tolerant to pollarding
- Shells, leaves, and flowers can be used in lei

Disadvantages for Use in Landscapes

- Fruits can litter lawns.
- Moderate invader, as seeds germinate readily
- All parts of the tree are potentially toxic.



The large (up to 4-inch) fruits contain black, oily seeds used in lei and for extraction of the oils. They can also be a hazard and contribute litter to a landscape.



Different forms of kukui foliage.



Crown forms vary from pyramidal to rounded.