


Aleurites moluccana

Candlenut	
	
Candlenut foliage, flowers, and nut	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Malpighiales
Family:	Euphorbiaceae
Subfamily:	Crotonoideae
Tribe:	Aleuritideae
Genus:	<i>Aleurites</i>
Species:	<i>A. moluccana</i>
Binomial name	
<i>Aleurites moluccana</i> (L.) Willd.	
Synonyms	
<i>Aleurites javanicus</i> Gand. <i>Aleurites pentaphyllus</i> Wall. ex Langeron <i>Aleurites remyi</i> Sherff <i>Aleurites trilobus</i> J.R.Forst. & G.Forst. <i>Jatropha moluccana</i> L.	

Aleurites moluccana, the **Candlenut**, is a flowering tree in the spurge family, Euphorbiaceae, also known as **Candleberry**, **Indian walnut**, **Kemiri**, **Varnish tree**, **Nuez de la India**, **Buah keras** or **Kukui nut tree**.

Its native range is impossible to establish precisely because of early spread by humans, and the tree is now distributed throughout the New and Old World tropics. It grows to a height of 15–25 m (49–82 ft), with wide spreading or pendulous branches. The leaves are pale green, simple and ovate, or trilobed or rarely five-lobed, with an acute apex, 10–20 cm (3.9–7.9 in) long. The nut is round, 4–6 cm (1.6–2.4 in) in diameter; the seed inside has a very hard seed coat and a high oil content, which allows its use as a candle (see below), hence its name.

Uses

The nut is often used cooked in Indonesian and Malaysian cuisine, where it is called *kemiri* in Indonesian or *buah keras* in Malay. On the island of Java in Indonesia, it is used to make a thick sauce that is eaten with vegetables and rice. In the Philippines, the fruit and tree are traditionally known as *Lumbang* after which Lumban, a lakeshore town in Laguna is named although the name *Jatropha* has since gained more popularity. Outside of Southeast Asia, macadamia seeds are sometimes substituted for candlenuts when they are not available, as they have a similarly high oil content and texture when pounded. The flavor, however, is quite different, as the candlenut is much more bitter. At least one cultivar in Costa Rica has no bitterness, and an improvement program could likely produce an important food crop if non-toxic varieties can be selected and propagated. A Hawaiian condiment known as *'Inamona* is made from roasted *kukui* (candlenuts) mixed into a paste with salt. *'Inamona* is a key ingredient in traditional Hawaiian *poke*.

Several parts of the plant have been used in traditional medicine in most of the areas where it is native. Candlenut oil is sometimes used like castor oil.^[citation needed] In Japan its bark has been used on tumors. In Sumatra, pounded seeds, burned with charcoal, are applied around the navel for costiveness. In Malaya, the pulped kernels or boiled leaves are used in poultices for headache, fevers, ulcers, swollen joints, and gonorrhoea.^[citation needed] In Java, the bark is used for bloody diarrhea or dysentery.^[citation needed] In Hawai'i, the flowers and the sap at the top of the husk (when just removed from the branch) were used to treat *e'a* (oral candidiasis) in children.^[citation needed]

In ancient Hawai'i, *kukui* nuts were burned to provide light. The nuts were strung in a row on a palm leaf midrib, lit one end, and burned one by one every 15 minutes or so. This led to their use as a measure of time. One could instruct someone to return home before the second nut burned out. Hawaiians also extracted the oil from the nut and burned it in a stone oil lamp called a *kukui hele po* (light, darkness goes) with a wick made of *kapa* cloth.

Hawaiians also had many other uses for the tree, including: leis from the shells, leaves and flowers; ink for tattoos from charred nuts; a varnish with the oil; and fishermen would chew the nuts and spit them on the water to break the surface tension and remove reflections, giving them greater underwater visibility. A red-brown dye made from the inner bark was used on *kapa* and *aho* (*Touchardia latifolia* cordage). A coating of *kukui* oil helped preserve *'upena* (fishing nets). The *nohona wa'a* (seats), *pale* (gunwales) of *wa'a* (outrigger canoes) were made from the wood. The trunk was sometimes used to make smaller canoes used for fishing. *Kukui* was named the state tree of Hawaii on 1 May 1959 due to its multitude of uses. It also represents the island of Moloka'i, whose symbolic color is the silvery green of the *kukui* leaf.

In Tonga, even today, ripe nuts, named *tuitui* are pounded into a paste, *tukilamulamu*, and used as soap or shampoo. As recently as 1993, candlenuts were chewed into sweet-scented emollient utilized during a traditional funerary ritual in the outlying islands of the Kingdom of Tonga. Their scent was also used for making various sweet smelling oils for the skin.^[1]

Dead wood of candlenut is eaten by a larva of a coleoptera called *Agrionome fairmairei*. This larva is eaten by some people.

Modern cultivation is mostly for the oil. In plantations, each tree will produce 30–80 kg (66–180 lb) of nuts, and the nuts yield 15 to 20% of their weight in oil. Most of the oil is used locally rather than figuring in international trade.



Candlenuts (kemiri) from Indonesia

Aleurites moluccana flowers

Young leaves showing the hairy character

Toxicity

Because the seeds contain saponin and phorbol, they are mildly toxic when raw. However, the Kukui seed oil has no known toxicity and is a non-irritant, even to the eyes.^[2]

Mythology

In Maui the *kukui* is a symbol of enlightenment, protection and peace. It was said that Kamapua'a, the hog-man fertility demi-god, could transform into a *kukui* tree. One of the legends told of Kamapua'a: one day, a man beat his wife to death and buried her beneath Kamapua'a while he was in tree form. Because he saw that the woman had been a good person, he raised her to new life, but damned her husband to death.^[citation needed]

References

- [1] Morrison, R. Bruce and C. Roderick Wilson, eds. (2002) *Ethnographic Essays in Cultural Anthropology*. Belmont, CA: Wadsworth. p. 18. ISBN 0-87581-445-X
- [2] Price, Len. *Carrier Oils For Aromatherapy And Massage*, 4th edition 2008 p 119. ISBN 1-874353-02-6

External links

- Gozun, Patrick. "Our Philippine Trees" (<http://pinoytrees.blogspot.com/2008/11/learning-trees-that-places-were-named.html>).
- "Hawaii Ecosystems at Risk factsheet" (http://www.hear.org/pier/species/aleurites_moluccana.htm).
- "Kukui images" (<http://www.hear.org/start/plants/images/species/?q=aleurites+moluccana>). Hawaii Ecosystems at Risk.
- "Oils of Aloha" (<http://www.oilsofaloha.com>). Wikipedia:Identifying reliable sources A Hawaii company producing kukui and macadamia nut products, their website plays host to much information about both nuts.
- Little Jr., Elbert L.; Skolmen, Roger G. (1989). *Kukui, candlenut-tree* (http://www.ctahr.hawaii.edu/forestry/trees/CommonTreesHI/CFT_Aleurites_moluccana.pdf) (PDF). United States Forest Service.
- *Aleurites moluccana* (L.) Willd (http://libproject.hkbu.edu.hk/was40/detail?lang=en&channelid=1288&searchword=herb_id=D00903) Medicinal Plant Images Database (School of Chinese Medicine, Hong Kong Baptist University) (traditional Chinese) (English)

Article Sources and Contributors

Aleurites moluccana *Source:* <http://en.wikipedia.org/w/index.php?oldid=572007144> *Contributors:* Abrahami, Abrech, Anglais1, Anomalocaris, Anonymous3190, Aris Katsaris, Astanhope, Badagnani, Berean Hunter, Bogdangiusca, Bradensam, Brya, Bwilreker, Canyq, Caspian blue, ChildofMidnight, Cit helper, Deli nk, DocWatson42, Dpinpin, Dr.frog, Earthlyreason, Ellenois, Ellywa, Fastily, Fuzheado, Gcalas, Geographer, Gioto, Hula Rider, J04n, JoJan, Jogloran, L Gottschalk, Lokionly, Lotje, MPP, Macrakis, Maias, Marshman, Niduzzi, Nodekeeper, Quietust, R'n'B, RainbowOfLight, Razorksu, RedWolf, Rich0908, Rkitko, Rroaj, Scottmaui, Seglea, Sir aaron sama girl, Sjledet, Sligocki, Snowmanradio, TDogg310, Tau'olunga, Thricecube, Tombrend, TonyTheTiger, Versageek, Viriditas, Waitak, WingkeeLEE, WriterHound, XtoF, Ynagar, YourEyesOnly, Zoicon5, Zscout370, 57 anonymous edits

Image Sources, Licenses and Contributors

file:Starr 020803-0119 Aleurites moluccana.jpg *Source:* http://en.wikipedia.org/w/index.php?title=File:Starr_020803-0119_Aleurites_moluccana.jpg *License:* Creative Commons Attribution 3.0 *Contributors:* Forest & Kim Starr

File:Candle nuts (kemiri).jpg *Source:* [http://en.wikipedia.org/w/index.php?title=File:Candle_nuts_\(kemiri\).jpg](http://en.wikipedia.org/w/index.php?title=File:Candle_nuts_(kemiri).jpg) *License:* Creative Commons Attribution 3.0 *Contributors:* Kelly

File:Aleurites moluccana flower4.jpg *Source:* http://en.wikipedia.org/w/index.php?title=File:Aleurites_moluccana_flower4.jpg *License:* Public Domain *Contributors:* WingkLEE

File:The young leaves of Aleurites moluccana.JPG *Source:* http://en.wikipedia.org/w/index.php?title=File:The_young_leaves_of_Aleurites_moluccana.JPG *License:* Creative Commons Attribution-Sharealike 3.0 *Contributors:* Geographer (talk)

License

Creative Commons Attribution-Share Alike 3.0 Unported
[//creativecommons.org/licenses/by-sa/3.0/](http://creativecommons.org/licenses/by-sa/3.0/)