



## Hawaiian Native Plant Propagation Database

### *Pandanus tectorius*

#### Alternative Botanical Names

*Pandanus chamissonis*  
*Pandanus douglasii*  
*Pandanus menziesii*  
*Pandanus odoratissimus*

#### Common Names

Hala  
 Pandanus  
 Pu hala  
 Screw Pine

#### Family

Pandanaceae

#### Potential or Traditional Uses

Fiber  
 Landscape  
 Lei (Flower or Seed)  
 Medicine



#### Description

*Pandanus tectorius* is a small tree growing 20 to 30 feet in height and from 15 to 35 feet in diameter. The trunk is stout and the branches grow at wide angles to it. It has distinctive long blade-like leaves (*lau hala*) about 2 inches wide and over 2 feet long. Most varieties have spines along the edges and on the midribs of the leaves. Spineless and variegated forms are available. The leaves are spirally arranged towards the ends of the branches and leave a spiral pattern on the trunk when they fall. *Pandanus tectorius* trees develop support or prop roots (*ule hala*) at the base of the trunk and sometimes along the branches.

*Pandanus tectorius* trees are either male or female. Female trees produce a large, segmented fruit somewhat resembling a pineapple. Male trees produce large clusters of tiny, fragrant flowers surrounded by white to cream colored bracts. These clusters are about 1 foot long and are called *hinano* in Hawaiian. (Lamb 1981; Meilleur et al 1997; NTBG 1996; Hensley 1997; Wagner 1990)

#### Habitat and Geographic Range

Currently, there is only one species of *Pandanus* formally recognized from the Hawaiian Islands - *Pandanus tectorius*. It is currently thought to be indigenous to Hawai'i, but there may have been additional introductions by the early Polynesians. *Pandanus tectorius* is found on all the main islands except

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Kaho'olawe. It is also found on Pacific islands in the rest of Polynesia, in Micronesia, in Melanesia, and as far west as northern Australia. *Pandanus tectorius* grows in moist coastal locations and valley slopes to an elevation of 2,000 feet. (Wagner 1990)

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### **Propagation by Seeds**

Female *Pandanus tectorius* trees flower 1 to 3 times a year, while male trees flower every 2 months. *Pandanus tectorius* is thought to reproduce sexually in Hawai'i, but there is some evidence that asexual seed development (apomixis) also occurs. Wind and small insects are assumed to be the pollinators.

The fruit of *Pandanus tectorius* is a round or oval head about 8 inches long and consisting of numerous segments called carpels, phalanges, or keys. There are 40 to 80 keys in each fruit. The color of the fruit ranges from yellow to orange to reddish when ripe. It takes several months for the fruits to ripen. Ripe fruits are very fragrant.

*Pandanus* keys are wedge shaped and 1 to 2 inches long. The inner end of the key is fleshy and the outer end is woody, generally containing a single seed. Lee found that larger fruit often contain seedless keys. Sometimes keys contain 2 seeds; infrequently, they contain more than 2 seeds.

In Hawai'i, traditionally, *Pandanus tectorius* was generally propagated by seed. To speed germination, soak the keys in cool tap water for 5 days, changing the water every day. Viable *Pandanus* keys will float, so do not discard them. NTBG suggests planting the keys in sterile potting mix at a depth of two times their diameter; Bornhorst recommends removing the fleshy part of the key, laying it on the planting medium, and burying it half way. Keep the potting mix moist. Germination takes about 2 months. (Bornhorst 1996; Bornhorst 2000; Lamb 1981; Lee 1989; Meilleur et al 1997; NTBG 1996; Hensley 1997; Wagner 1990)

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### **Propagation by Cuttings**

*Pandanus tectorius* can be grown from large cuttings. In Micronesia, selected forms of *Pandanus tectorius* are propagated by stem cuttings. Plants with aerial or prop roots are selected and about 2/3 of the leaves are trimmed off to reduce water loss. Moriarty suggests using a mature branch with leaves and some small aerial roots and rooting it in a sand bed. Plants grown from cuttings fruit in 4 to 6 years. (Bornhorst 1996; Manarangi 1992; Moriarty 1975; Stone et al 2000)

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### **Propagation by Division**

Not applicable.

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### **Propagation by Air Layers**

Not applicable.

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### **Propagation by Grafting**

Not applicable.

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### **Propagation by Tissue Culture**

No information located to date.

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## Notes

The image in this record is used with permission from Dr. Gerald Carr's Web site "Hawaiian Native Plants" at <http://www.botany.hawaii.edu/faculty/carr/natives.htm>

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