



## *Pelagodoxa henryana* Becc.

**Status: Extinct in the wild (EW)**

### Common name

Vin (?).

### Natural range

There are no known wild populations; there are three documented anthropogenic sites in Vanuatu, Marquesas and Fiji Islands.

### Recognition characteristics

*Pelagodoxa henryana* belongs to the monotypic genus *Pelagodoxa* (Pelagodoxeae: Arecaceae). It is an unarmed, solitary palm to 11 m height. The stem is up to 15 cm diam, and the leaf scars are closely spaced. The leaves are large, undivided, pinnately ribbed with a bifid apex, and may extend to 3 m long and to about 1 m wide. The upper surface is green and glabrous, and the lower surface has a distinctive silvery glaucous bloom. The petiole is stout and short, to about 22 cm long. The leaf bases are densely tomentose, do not form a crownshaft but have a loose entanglement of fine fibres along the lower margins. It is monoecious, and the inflorescences are interfoliar, not extending beyond the leaves and paniculately branched. The fruit is globose, with a corky warty epicarp that is tan colored at maturity. Three size cohorts occur that differ mostly in proportion (the two smaller ones ripen with a pulpy, orange, fragrant mesocarp, the largest ripens to a tan fibrous mesocarp): 2.0 cm diam. (Vanuatu); 5.5 to 6.0 cm diam. (Fiji); 10 to 15 cm diam. (Marquesas).

### Natural history

*Pelagodoxa henryana* is found in cultivation or anthropogenic habitats with a peculiar distribution pattern attributed to human dispersal. The fruits have poor dispersal by floatation in water. Populations have been documented from the Marquesas Islands and Melanesian Islands of the Southwest Pacific, including San Cristobal and Mikiri Harbour, in the Solomon Islands. The type species, *P. henryana* was found in Nuku Hiva, Marquesas Islands. The smallest fruited *Pelagodoxa* was vouchered in 1983 and observed and documented in Vanua Lava, Vanuatu, with reports of an inland population on at least one island. *Pelagodoxa henryana* has naturalized in many of these regions. It is also found in cultivation throughout many private and public botanical gardens. Seeds of the Marquesas and Fiji source palms have been documented to produce viable seed. The anthropogenic sites may suggest a food source or famine food, as the fruit endosperm is edible.

### Threats to survival

*Pelagodoxa henryana* is already extinct in the wild. Being monotypic, *Pelagodoxa* represents a significantly greater loss of biodiversity than a genus with numerous species. The Southwest Pacific islands have been identified as having the highest proportions of the most highly threatened palms in the world. Although *P. henryana* has been observed reproducing in the wild, the small number of individuals that are known do not represent a healthy, viable population structure. The known populations are subject to habitat destruction, and in cultivation the palm seedlings are highly

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susceptible to fungal attacks and disease. While seed banking protocols have recently been applied to palms, the large seed size does not make this palm a good candidate for seed storage.

### **Current Conservation Measures**

*Pelagodoxa henryana* has attracted a great deal of interest historically and currently resulting in research, ex situ collections, and private collections. Documented ex situ collections of the Fiji and Marquesan source palms are managed within botanical gardens internationally.

### **Additional Necessary Conservation Actions**

Recommended management strategies include: protection of habitat areas in the Marquesas and Vanuatu populations; invasive species management and long-rang monitoring; establish new wild populations; establish effective genetically diverse ex situ populations; collaborate to accomplish conservation biology research; adhere to invasive weed, pest management, and quarantine procedures; conduct molecular studies that include all known individuals and populations in the Marquesas, Fiji and Vanuatu. Repatriation (out-planting) from cultivated sources should be considered.

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A mature plant of *Pelagodoxa henryana* showing the curiously warty fruits. Photo by M. H. Chapin.