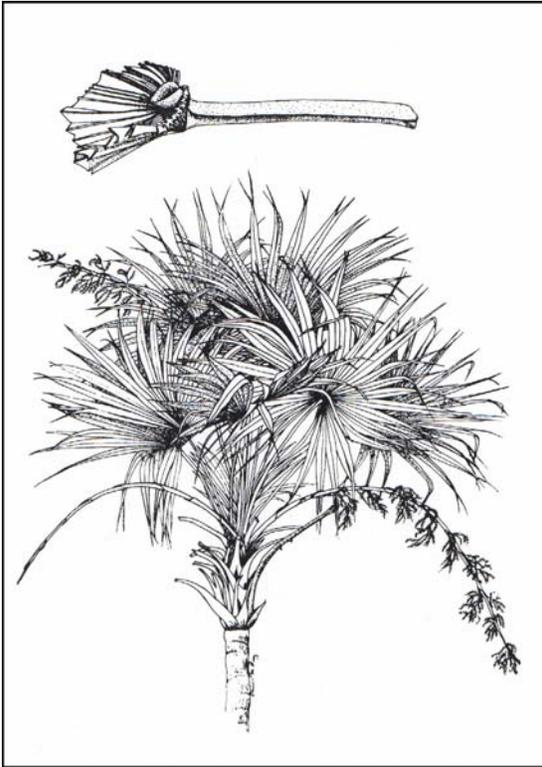


*Thrinax morrisii* H. Wendl.  
ARECACEAE

brittle thatch palm

Synonyms: *Sampsonia microcarpa* (Sarg.) O.F. Cook  
*Thrinax keyensis* Sarg.  
*Thrinax microcarpa* Sarg.  
*Thrinax ponceana* O.F. Cook  
*Thrinax praeceps* O.F. Cook



**General Description.**—Brittle thatch palm is also known as Key thatch palm, small-fruited thatch palm, broom palm, buffalo-tip, palma de escoba, yaray, pandereta, palma de petate, palma de cogollo, guano de sierra, miraguano, and palmita. It is an evergreen, single-stemmed shrub or small tree 1 to 6 m in height. Although most plants in natural stands do not live long enough to develop a discernable stem, when formed, it is brown or gray, 7 to 13 cm in diameter at breast height, with many vertical cracks and prominent leaf scars in the clean portion, covered with old leaf bases near the top, and thick with rootlets at the base. Brittle thatch palms maintain about 20 fan-shaped, pale blue-green or yellow-green leaves, spirally arranged on the trunk. The petioles are 27 to 84 cm long, split at the base. There are deeply incised leaf segments 33 to 75 cm long and 2.3 to 4.8 cm

broad. The inflorescences (spadixes or panicles) are 55 to 100 cm long, arching or straight and usually extend beyond the leaves. Small, white flowers are borne in large numbers. The fruits are white (turning yellow at maturity) drupes, 3.5 to 8 mm in diameter, containing one hard, spherical seed 2.7 to 4.2 mm in diameter. Chromosome number is  $2n = 36$  (Gilman and Watson 1994, Howard 1979, Little and others 1974, Long and Lakela 1976, Nelson 1996)

**Range.**—Brittle thatch palm is native to southern Florida, the Bahamas, Cuba, Hispaniola, Puerto Rico, the Virgin Islands, Anguilla, and Barbuda (Howard 1979, Little and others 1974). It is considered endangered in Florida (Institute of Systematic Botany 2002). The species is planted as an ornamental within and outside its natural range (Hoyos-F. and Braun 2001, Little and others 1974) but has not been reported to have naturalized.

**Ecology.**—Brittle thatch palm grows in sites where it suffers a minimum of competition. It grows along the edges of hammocks and in pinelands in the Florida Keys (Nelson 1996). In Puerto Rico, it grows primarily on cliffs, and ridges of dry and moist limestone and ultramafic rocks at elevations from near sea level to 300 m (Little and others 1974). The soils are sands, or are loams or clays shallow over fractured rocks. Brittle thatch palm is moderately intolerant of shade. It occurs singly, in small groups or in nearly pure thickets in the open, in small openings, or under open stands, usually of low trees. The species can withstand temperatures as low as  $-4^{\circ}\text{C}$  (Desert-tropicals 2002), is tolerant of drought and salt spray, and resists breakage in storms (Gilman and Watson 1994).

**Reproduction.**—Brittle thatch palm in natural stands flowers seasonally or irregularly in response to favorable conditions in Puerto Rico (Little and others 1974) and flowers in the spring in Florida (Gilman and Watson 1994). The flowers are insect pollinated. A collection of seeds in Puerto Rico

averaged  $0.0396 \pm 0.0007$  g/seed or 25,000 seeds/kg. Sown without pretreatment on moist blotter paper, 85 percent germinated in 17 months (author's observation). The seeds are reported to begin germination 50 to 70 days after sowing (Hoyos-F. and Braun 2001). The seeds can stand storage at  $-40$  °C and  $66$  °C for at least 1 week without loss of viability (Broschat and Meerew 2000). Because seeds have such a long dormant period, they can be collected by hand from plants or from the ground at almost any time of the year. The seeds are dispersed by animals. Surviving seedlings are not usually common, but the plants are long-lived and populations can build to high levels.

**Growth and Management.**—Brittle thatch palm is slow growing. A specimen in the Fairchild Tropical Garden, Florida was 42 years old and 1.16 m in height (Zona and Maidman 2000). Plants mature and begin flowering and fruiting with only a rosette of basal leaves, long before they develop a discernable stem. Plants with long stems are uncommon and are probably more than 50 years old. Wildland plantings are not documented but presumably could be done with container stock. Either they must be established in poor sites where few other species will grow, or weed protection must be given almost in perpetuity. Management of existing stands should consist mainly of protection from fire, development, or heavy grazing.

**Benefits.**—Brittle thatch palm helps protect the soil, contributes to the aesthetics of natural stands, and furnishes food and cover for wildlife. The species is grown and sold as an ornamental. It is used as a container plant and for buffer strips in parking lots and medians on highways as well as background and specimen plantings (Gilman and Watson 1994). Leaves are still used to make brooms, thatch, and mats (called petate) (Osvaldo 2002), although now for ornamentation rather than necessity. The fruit pulp contains 4,083 µg/g of oxalate—capable of causing a burning sensation on the skin of sensitive people—that may reduce its palatability to some species of wildlife (Broschat and Meerew 2000). However, it is eaten in Florida by the introduced Mexican red-bellied squirrel (*Sciurus aureogaster* (Cowley 2002) and the eastern box turtle (*Terrapene carolina*) (Liu and others 2002), and in the Bahamas by the Bahamas amazon parrot (*Amazona leucocephala bahamensis*) (Attril 2002).

## References

- Attril, R. 2002. Bahamas wildlife pages: The status and conservation of the Bahamas amazon. <http://www.bahamaswildlife.fsnet.co.uk/parrotconservation.htm>. 8 p.
- Broschat, T.K. and A.W. Meerew. 2000. Ornamental palm horticulture. University Press of Florida, Gainesville, FL. 255 p.
- Cowley, M. 2002. Florida native plants: palm family. <http://www.nsis.org/garden/family/palm.html>. 3 p.
- Desert-tropicals. 2002. Broom palm. [http://desert-tropicals.com/Palm/Thrinax\\_morrisii.html](http://desert-tropicals.com/Palm/Thrinax_morrisii.html). 3 p.
- Gilman, E.F. and D.G. Watson. 1994. *Thrinax morrisii*, Key thatch palm. Fact Sheet ST-628. U.S. Department of Agriculture and Southern Group of State Foresters. Winder, GA. 3 p.
- Howard, R.A. 1979. Flora of the Lesser Antilles, Leeward and Windward Islands. Vol. 3. Arnold Arboretum, Harvard University, Jamaica Plain, MA. 586 p.
- Hoyos-F., J. and A. Braun. 2001. Palmas en Venezuela. Monograph 47. Sociedad de Ciencias Naturales La Salle, Caracas, Venezuela. 424 p.
- Institute of Systematic Botany. 2002. *Thrinax morrisii*. Institute of Systematic Botany, University of South Florida, Tampa, FL. <http://www.plantatlas.usf.edu/main.asp?plantID=555>. 2 p.
- Little, E.L., Jr., R.O. Woodbury, and F.H. Wadsworth. 1974. Trees of Puerto Rico and the Virgin Islands. Vol. 2. Agriculture Handbook 449. U.S. Department of Agriculture, Washington, DC. 1024 p.
- Liu, H., S.G. Platt, and C.K. Borg. 2002. Seed dispersal by the eastern box turtle (*Terrapene carolina*) in subtropical pine rockland of the Lower Florida Keys. Botany 2002 Conference, August 2-4, Madison, WS. Abstract. <http://www.botany2002.org/section3/abstracts/3.6.shtml>. 1 p.
- Long, R.W. and O. Lakela. 1976. A flora of Tropical Florida. Banyan Books, Miami, FL. 962 p.

Nelson, G. 1996. The shrubs and woody vines of Florida. Pineapple Press, Inc. Sarasota, FL. 391 p.

Osvaldo, J. 2002. El petate. <http://joseosvaldo.freeyellow.com/Petate/html>. 12 p.

Zona, S. and K. Maidman. 2000. Growth rates of palms in Fairchild Tropical Garden. *Palms* 45(3): 151-154.

---

John K. Francis, Research Forester, U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984