

***Encephalartos hildebrandtii*****Zamiaceae****Indigenous****COMMON NAMES:** Boni: Tiella; Digo: Mtsapu; English:

Hildebrandt's encephalartos; Giriama: Kitsapu; Sanya: Dhabel; Balacha, Muka; Swahili: Mkwanga, Mgwende, Msapo.

**DESCRIPTION:** An evergreen palm-like tree with a stout unbranched trunk covered with leaf scars, reaching up to 6 m; more often a shrub with a rosette of many leaves. **LEAVES:** Arching, pinnate, dark green, shiny, to 3 m, white woolly when very young; the stalk bearing about 80 pairs of stiff, tough and leathery leaflets, 15–35 cm long, the sharp tip with 2–3 spiny teeth, and 1–9 on each margin, faint parallel nerves below, leaflets narrower towards the base. **CONES:** Male and female plants bear different cones at the stem apex within the circle of leaves. **Male cones, dull red, cylindrical, 20–50 cm high x 5–9 cm across**, on a stalk about 15 cm, producing pollen (after rain). **Female cones up to 3, dull green-yellow, cylindrical 28–60 cm, to 25 cm across**, wider than male cones, also stalked. **Cones ripen brown** after pollination by insects, and seeds develop in pairs below the scales, **orange-red, smooth and angular with a fleshy outer layer, the inner nut to 3 cm long.**

**ECOLOGY:** This plant belongs to a primitive group of cone-bearing plants, with separate male and female plants.

Over 20 rare endemics are found in South Africa and a few in eastern Africa. *E. hildebrandtii*, one of 5 Kenyan species, grows only at the coast, e.g. in Shimba Hills and other coastal forest and bushland areas; 0–500 m. Agroclimatic Zones II–III.

**USES:** Edible centre of stem, ornamental, thatch, ceremonial (cones).

**PROPAGATION:** Suckers can easily be used for propagation. It is more difficult to propagate the plant from seeds. A male plant must be nearby to enable pollination of the female cone. Seed may develop even without pollination, but will be infertile. Seedlings can be raised in pots.

**SEED:** Ripe seed should be collected from mature female cones, flesh removed, seeds washed, dried and sown.

**treatment:** Soaking in water for 24 hours may hasten germination.

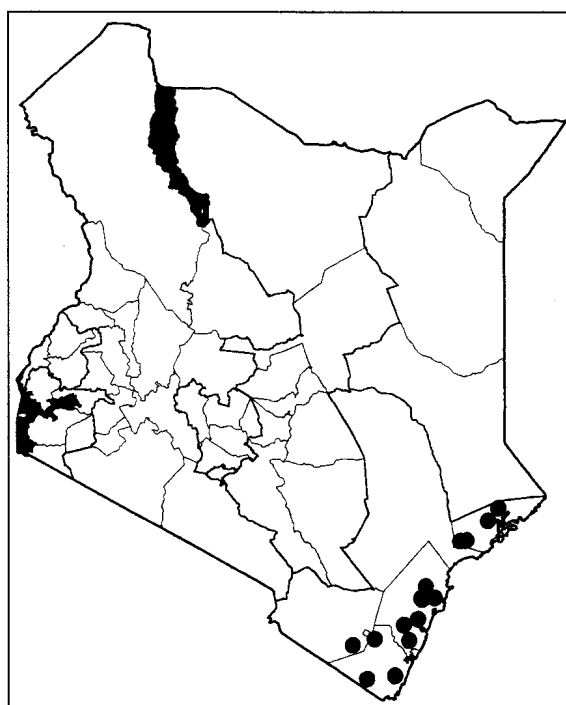
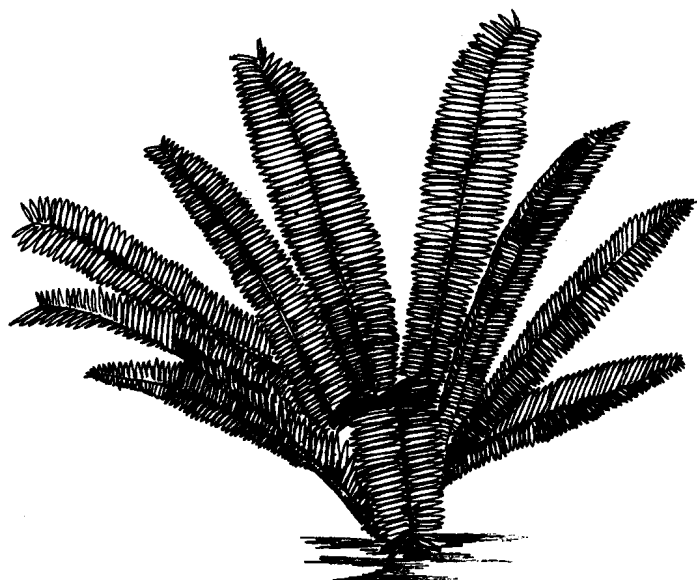
**storage:** If needed, store seeds in sealed containers in a cool place. Susceptible to insect damage; therefore add ash.

**MANAGEMENT:** Slow growing.

**REMARKS:** Cycads are among the oldest plants still living, sometimes called living fossils. Before they are overgrown, they make beautiful ornamentals and therefore are victims of unscrupulous collectors. Collection of these rare plants from the wild should, however, never be done, but seedlings can be raised.

The hard seed can be boiled and ground into flour in times of famine, but is now reputed to cause liver cancer if eaten in large amounts. The starchy centre of the stem is edible. The lower portion of the stem is peeled and chopped or sliced, left to ferment, then dried in the sun and pounded into flour that can be used to make *uji* or *ugali*.

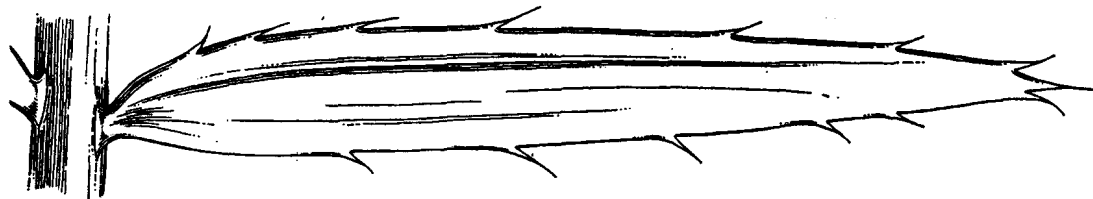
Of the 5 species of *Encephalartos* found wild in Kenya, this species is the most common and most widely distributed. The rest are restricted to one or a few hills in other parts of the country. *E. bubalinus* is found on rocky bushland in the Loita highlands. The median leaflets are relatively narrower (1–2 cm wide) than in others. *E. kisambo* (Taita: Kisambo) is restricted to a few hilly areas in Coast Province. *E. powysorum* is restricted to a single locality in Eastern Province. *E. tengulaneus* (Samburu: Lpision) is found in dry mountain valleys in a few places in Rift Valley Province. As all these plants are potential ornamentals and have a limited range, they stand to be among the most threatened plants in Kenya.



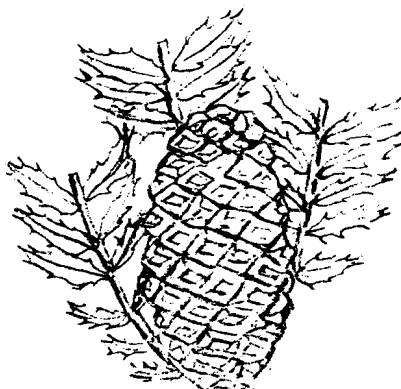
## *Encephalartos hildebrandtii* (cont)

There is worldwide control on removing cycads from their natural habitat with strict legislation enforced in many countries to safeguard their long-term well-being.

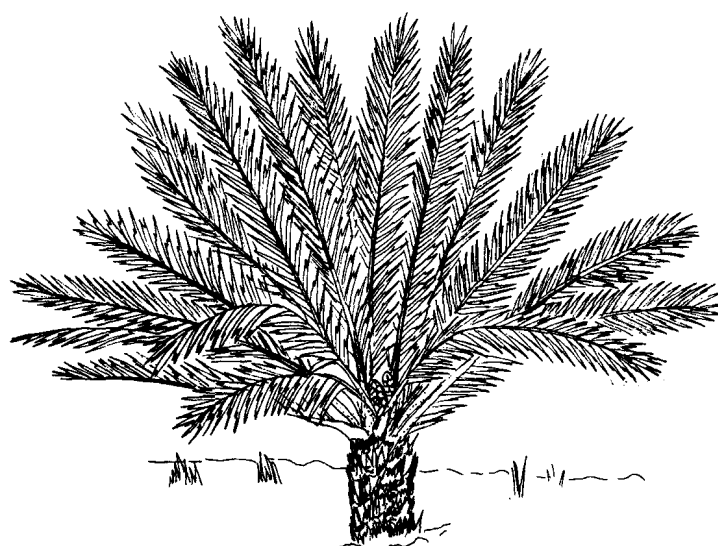
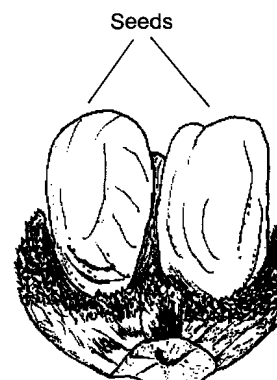
**FURTHER READING:** Beentje, 1994; Blundell, 1987; Dharani, 2002; Katende et al., 1995; Noad and Birnie, 1989; Ruffo et al., 2002.



One leaflet



Female cone



Young tree