

**LOCAL NAMES**

Chinese (xi fei li, wen li); English (Zanzibar oil vine, queen's nut, oyster nut); French (koueme, chataigne de l'Inhambane, bane); German (talekurbis); Portuguese (sabina, castanha de l'Inhambane); Spanish (kueme); Swahili (mkweme, kweme)

**BOTANIC DESCRIPTION**

*Telfairia pedata* is a liane reaching a height of up to 30 m when using tall trees as support. Stem herbaceous, ribbed, glabrous, tendrilled and becoming woody with age.

Leaves petiolate, 5-7 foliolate; median leaflet broadly lanceolate or elliptic, acuminate, acute narrowed into the petiole, obscurely sinuate-toothed, glabrous or with sparse scattered hairs especially on the main nerves; lateral leaflets slightly broader and occasionally lobed on the outer side at the base; petiolules up to 6.5 cm long; petiole glabrous, slightly hairy, 9-10 cm long.

Male flowers in racemes 6-23 cm; bracts 0.5-1.0 cm long and broad, pubescent, adnate to the pedicels below, expanded and toothed above; pedicels 5-30 mm long; receptacle-tube campanulate, pubescent outside 5 mm long; lobes triangular-acuminate, pubescent and coarsely toothed, 1.6 cm long, petals obovate, 2 cm long, pinkish-purple and green striped basally; stamens 3-5. Female flowers with stalks 6.5-14 cm long; ovary green with an expanded base collar. 2.5 cm across, 10-12 ribbed, pubescent; receptacle-tube very short, petals larger than in male flowers.

Fruit green, ellipsoid with a lobed expanded base, bluntly 10-ribbed 45-60 cm long and 20 cm in diameter, weighing up to 15 kgs and dehiscent apically, containing between 70-150 seeds/fruit.

Seeds 3 cm in diameter, yellow or brown in colour, flat and nearly circular and covered with a network of fibrous material.

The generic epithet *Telfairia* commemorates Charles Telfair, 1778-1833, an Irish surgeon, naturalist, botanist and plant collector who sent seeds to Kew from Mauritian specimens. The specific name is derived from pedate (palmate) and means with lateral lobes divided. All 3 species of the genus are indigenous to Africa. *T. pedata* seems to be rapidly disappearing in Tanzania.

**BIOLOGY**

The oyster nut is dioecious and difficult to differentiate sexually until after flowering. Flowering normally occurs 15-18 months after planting, fruit ripens 5-6 months later. *T. pedata* produces up to 30 gourds in its third year and continues production for another 20 years.

**ECOLOGY**

T. pedata is frequently found in lowland rain forest and riverine forest.

**BIOPHYSICAL LIMITS**

Altitude: 100-2 000 m

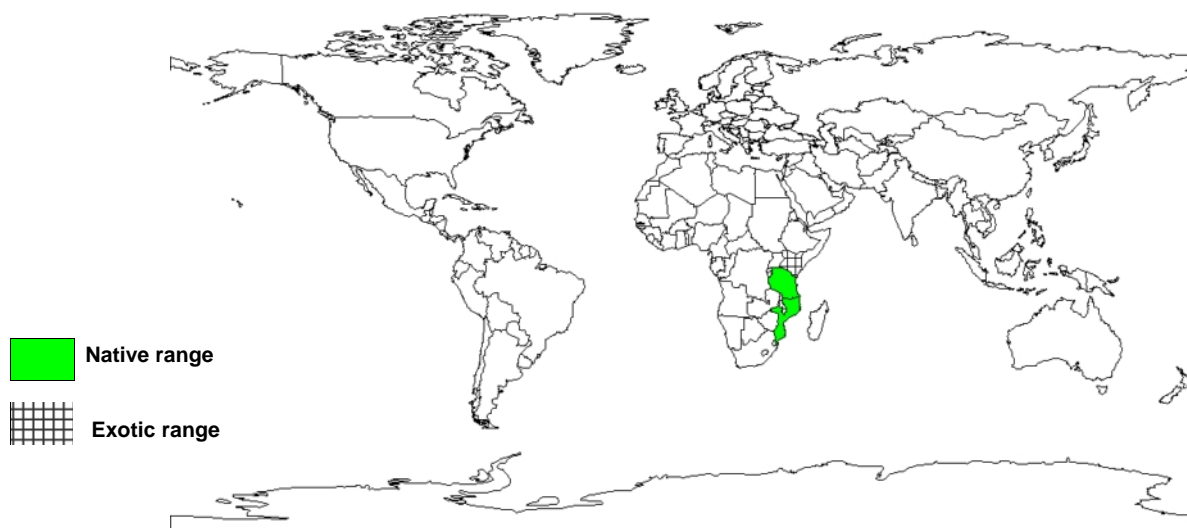
Mean annual rainfall: 1 000 mm and above

Soil type: The vine thrives well on well drained medium loam soils.

**DOCUMENTED SPECIES DISTRIBUTION**

Native: Mozambique, Tanzania, Zanzibar

Exotic: Kenya, Malawi, Mauritius



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

**PRODUCTS**

Food: The seed is eaten raw or cooked and is rich in extractable oil (61%). Nuts are especially mentioned as source of food for women during the lactating period.

Fodder: After oil extraction the residue makes a valuable cake for livestock feeding.

Lipids: The seed oil is extractable and can be used for a number of household purposes and cosmetics.

**SERVICES**

Ornamental: *T. pedata* is an evergreen liane with beautiful foliage.

Intercropping: The vine is part of a rich agroforestry system in the coffee-banana regions of Mt. Meru and Mt. Kilimanjaro.

**TREE MANAGEMENT**

Usually trellised until it reaches the branches of the supporting tree, it produces very large, long, flat seeds which taste similar to almonds when roasted. The plant is a fast grower, hardy and deep rooting, within six months after planting mkweme can attain a length of up to 7 m. Commercial plantations have been successful using trellises, which must usually be strong and durable to support the massive growth and weight of the vines. The plants are spaced 15 m apart and the lines 3-4 m, ensuring yields between 3-7 tonnes per hectare. The seeds are ripe when the fruit splits.

**GERMPLASM MANAGEMENT**

Seeds germinate in 1-2 weeks.

**FURTHER READING**

Griesbach J. 1992. A guide to propagation and cultivation of fruit-trees in Kenya. GTZ (Kenya), Nairobi.

Jaenicke H and Lengkeek A. unpubl. Trip Report Arusha 6-10 February, ICRAF, Nairobi.

Jeffrey C. 1967. Cucurbitaceae. In: Flora of Tropical East Africa. Crown Agents, London.

Knox E et al. unpubl. List of East African Plants. National Museum of Kenya, Nairobi.

Tindall HD. 1983. Vegetables in the tropics. ELBS/Macmillan, Hampshire.

**SUGGESTED CITATION**

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 Agroforestry Database: a tree reference and selection guide version 4.0 (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)