

Parkinsonia aculeata**Fabaceae (Caesalpinaceae)****Tropical America**

COMMON NAMES: **English:** Jerusalem thorn; **Luo:** Okwato; **Orma:** Muk bee.

DESCRIPTION: A spiny shrub or small tree, usually 5–8 m high, with light, feathery foliage and a low crown, sometimes deciduous in the dry season. The long thin branchlets have **sharp, straight, paired thorns** beside the leaves at the nodes, each about 3–16 mm long. **LEAVES:** Groups of **thin winged leaf stalks to 40 cm with well-spaced tiny leaflets**. **FLOWERS:** Very fragrant, **bright yellow with orange stamens**, on spikes to 15 cm. **FRUIT:** Bunches of woody pale-brown **narrow pods to 0.7 x 11 cm** long with pointed tips, **constricted between seeds**. Pods contain 6 or more dark brown oval seeds and remain on the tree.

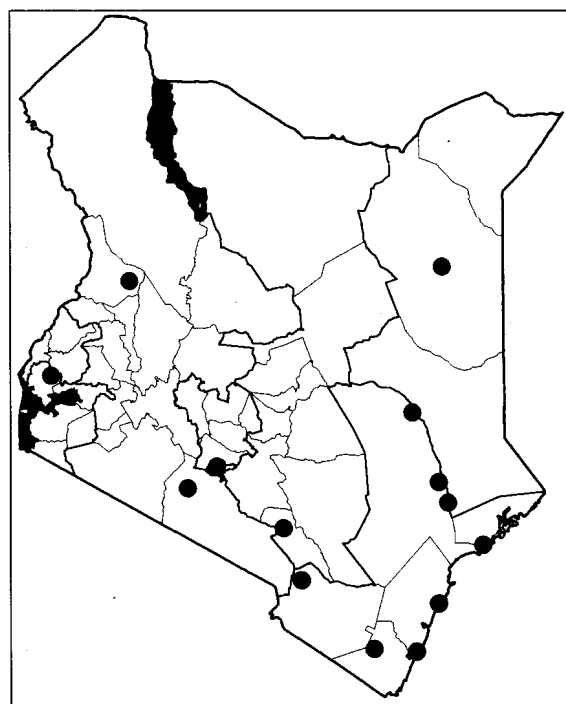
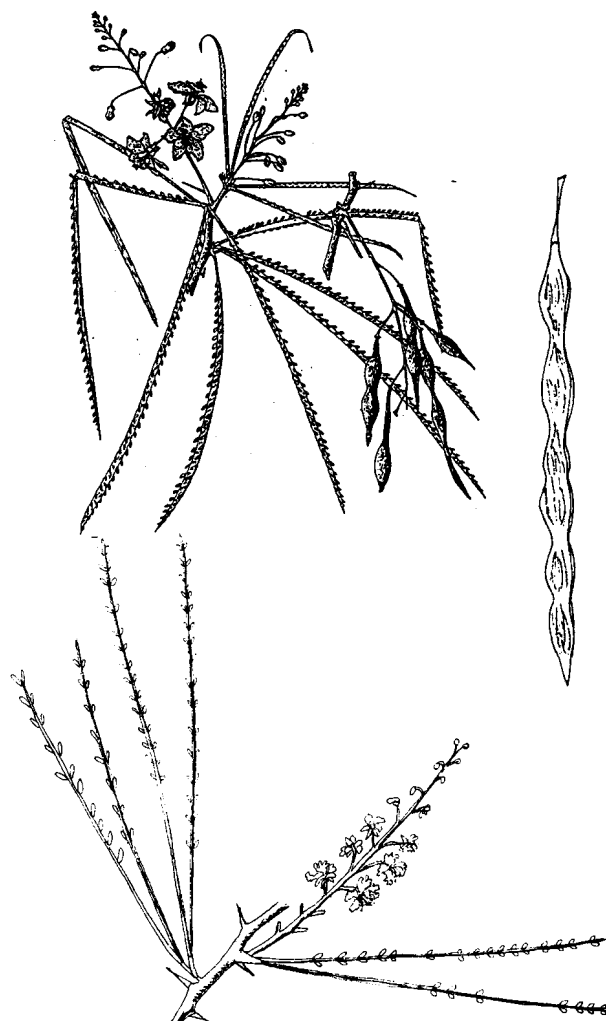
ECOLOGY: The natural range of this plant is the semi-arid areas of the southern United States and south into Argentina. Widely cultivated in dry tropical areas of Africa and South Asia. In Kenya, commonly grown in the drier parts as an ornamental and now almost naturalized from the coast to 1,800 m (Wajir, Hola, Magadi, Garissa, Homa Bay, Mombasa road). Occasionally seen on roadsides, but most commonly found as an ornamental in homesteads, and along rivers and swamps in hot areas. Tolerates strongly alkaline or saline soils, poor sandy eroded soil, but not flooding. Agroclimatic Zones III–V.

USES: Firewood, charcoal, fodder (pods, young branches), medicine, bee forage, shade, ornamental, mulch, soil conservation, sand stabilization, windbreak, live fence.

PROPAGATION: Seedlings, direct sowing at site.

SEED: The species is a prolific seeder. About 13,000 seeds per kg; germination 30–70%. Collect as soon as the pods have turned yellow or pale brown to minimize insect damage. Dry in the sun and then thresh in a bag using a stick. Separate seed from chaff by winnowing. Separate seeds already attacked by insects by floating—the good seed will sink. Germination is fast and good,

often about 90% of viable seeds within 2–10 days. **treatment:** Immerse seed in hot water and soak for 12 hours, or nick the seed at the distal (cotyledon) end.



***Parkinsonia aculeata* (cont)**

storage: Dried seed can be stored for at least a year in sealed containers at room temperature.

MANAGEMENT: Fast growing; pollarding.

REMARKS: Seedlings are susceptible to attack by termites.

Due to its prolific seeding the tree can become a weed. It is a useful species for the reclamation of degraded sites, as an ornamental and for light shade in dry areas. The leaves are liked by weavers to build their nests on.

Most of the over 2 dozen members of this genus are indigenous in tropical and warm parts of America. Two of the 4 indigenous in Africa occur in Kenya with one, *P. anacantha*, being endemic to the country and the other, *P. scioana*, to the region. *P. anacantha* has spineless branches. It is a shrub or small tree to 5 m with reddish brown bark. Leaves have 2–6 pairs of pinnae, each with 4–17 pairs of leaflets. Flowers are golden yellow and the fruit are long pods to 2 x 13 cm with a sharp tip. It is found in dry bushland in Turkana, Samburu, Marsabit, Isiolo, Meru, Tharaka, Garissa and northern parts of Tana River and Mwingi Districts. *P. scioana* (**Boran:** Kodi) is a low branching shrub or small tree, with branches that have paired short (<5 mm) hooked or straight spines. Leaves have 2–8 pairs of pinnae, each with 3–6 leaflets. The main axis of the leaf is rounded and up to 12 cm (compare *P. aculeata* with a longer and flattened axis). Flowers are yellow. Fruit are yellow to brown flattened pods to 2.5 x 10 cm. In Kenya, this species is restricted to the north-east, especially Wajir and Mandera Districts.

All species are potential ornamental plants. All are browsed by camels, game and goats.

FURTHER READING: <http://www.worldagroforestrycentre.org/Sites/TreeDBS/AFT/AFT.htm>; Albrecht, 1993; Beentje, 1994; Bein et al., 1996; Bekele-Tesemma et al., 1993; Blundell, 1987; Dharani, 2002; Fichtl and Adi, 1994; Katende et al., 1995; Löttschert and Besse, 1983; Mbuya et al., 1994; National Academy of Sciences, 1980; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; von Maydell, 1990.