

Acacia lahal**Fabaceae (Mimosaceae)****Indigenous**

COMMON NAMES: **English:** Red thorn; **Keiyo:** Mateluk; **Kikuyu:** Mugaa; **Kipsigis:** Chebitet, Chepitet, Kerichsani; **Kisii:** Omonyenyanya; **Luhya:** Munyenyanya; **Luhya (Bukusu):** Kumunyenyanya; **Luo:** Alaktar; **Maasai:** Oltepesi; **Marakwet:** Telak; **Nandi:** Kaimetiet, Kaimetiet, Njebitet; **Sabaot:** Kimet, Ematso; **Taita:** Mzwaule; **Tugen:** Chessia, Ketetia.

DESCRIPTION: A conspicuously **flat-topped highland tree** to 15 m. **BARK:** Grey to dark brown, **rough, grooved**, branchlets brown, hairy. **THORNS:** In pairs, straight, grey-brown, 0.5–7 cm. **FLOWERS:** Cream-pale yellow spikes, to 7 cm long, flowering branchlets covered with **red gland dots**. **FRUIT:** **Short and wide pods**, to 7 cm, straight or curved, shiny brown, splitting on the tree.

ECOLOGY: An upland acacia found in Uganda, Ethiopia, Eritrea, Kenya and Tanzania in wooded grassland and woodland of cool, moist areas, 1,500–2,700 m. Common in the highlands of Rift Valley Province and in western Kenya in grasslands and former forest areas. Left as a shade tree in pastures and fields. Agroclimatic Zones I–III.

USES: Firewood, charcoal, timber (heavy construction, bridges, etc.), posts, edible gum, bee forage, shade, nitrogen-fixing, dye (crushed bark mixed with water gives a solution that, when sprinkled on hot pots, gives them a reddish colour).

PROPAGATION: Seedlings, direct sowing at site, wildings.

SEED: Many seeds damaged by insects while still in pods. These can be separated from good seeds through immersion in water; bad seeds float. About 4,000–5,000 seeds per kg.

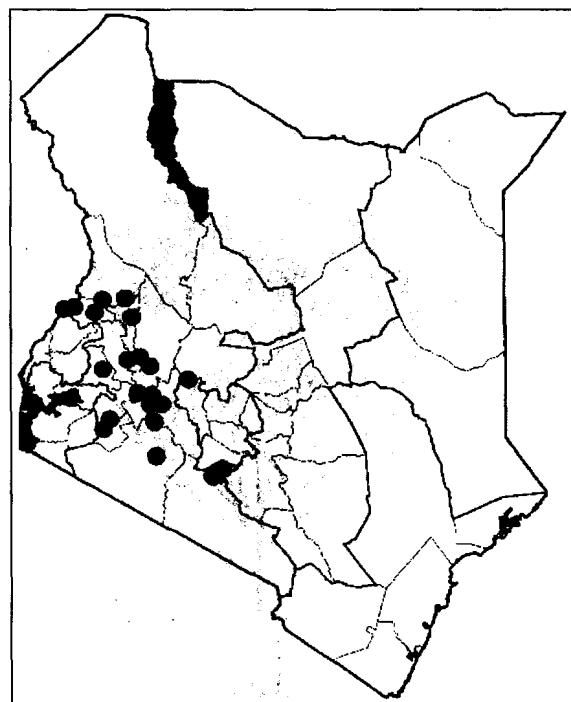
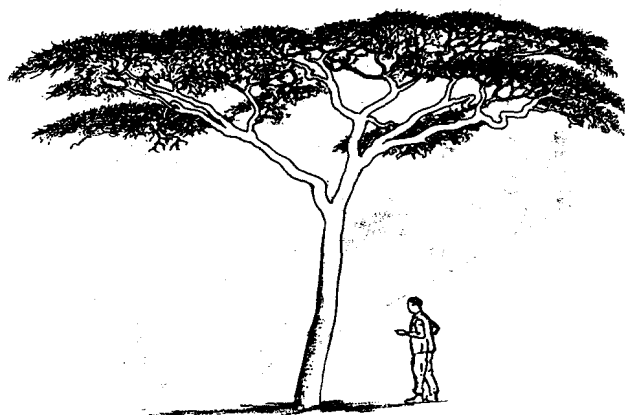
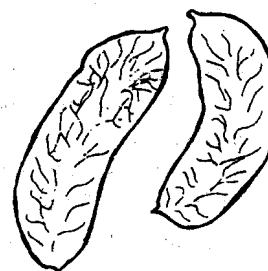
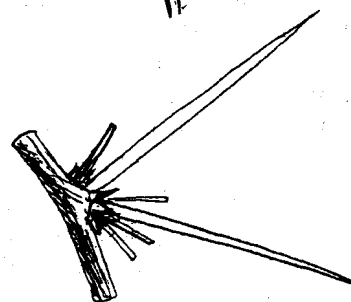
treatment: Immerse in hot water, allow to cool and soak for 24 hours before sowing to break seed dormancy. Alternatively nick seed coat.

storage: Seed can be stored for long periods. Add ash to reduce insect damage.

MANAGEMENT: Slow growing; lopping, prune when young if required. Leave scattered trees to provide some shade in pastures.

REMARKS: The tree has a broad canopy but gives only light shade.

FURTHER READING: Beentje, 1994; Bein et al., 1996; Bekele-Tesemma et al., 1993; Fichtl and Adi, 1994; Katende et al., 1995; Kokwaro, 1993; Mbuya et al., 1994; Noad and Birnie, 1989.



Acacia mearnsii (*Racosperma mearnsii*)

South-eastern Australia

COMMON NAMES: **English:** Black wattle; **Kamba:** Munyoonyoo; **Kikuyu:** Muthanduku; **Kisii:** Omotandege.

DESCRIPTION: A round or shapeless tree, 2–15 m, trunk often bent when trees are grown outside plantations. **BARK:** Smooth green, later black, grooved, splitting to give resinous gum. **LEAVES:** Twice-divided, dull green, leaflets extremely small, upper surface of leaf stalk scattered with glands. **FLOWERS:** Many, pale yellow, fragrant, in small round heads. **FRUIT:** Numerous pods, with 3–12 joints, drying dull brown, straight or bent. Seeds small and black.

ECOLOGY: A small tree native to Australia, where it grows from southern New South Wales to Tasmania. Introduced worldwide and now found both in temperate regions and in cool tropical highlands. Grown in plantations and also naturalized in highland parts of Kenya such as Trans Nzoia, Kisii, Limuru, Muguga and around Eldoret and Nairobi. A plant of cool, moist areas at mid-altitudes, mainly 1,500–2,500 m. Common in most soil types. Agroclimatic Zones I–III.

USES: Firewood, charcoal, poles, posts, tool handles, medicine, bee forage, ornamental, windbreak, fibre (bark), gum, tannin.

PROPAGATION: Seedlings, direct sowing at site.

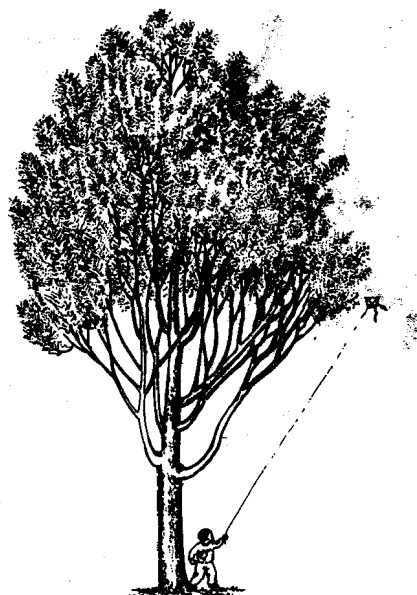
SEED: Germination rate 50–80% in 7–15 days; 50,000–85,000 per kg.

treatment: Immerse seed in hot water, allow to cool and soak for 12 hours before sowing to break dormancy. Burning dry twigs with mature pods spread on an area will usually result in profuse natural regeneration.

storage: Seed can be stored for long periods.

MANAGEMENT: Fast growing but short lived. Thin if established by direct sowing at site. It coppices poorly.

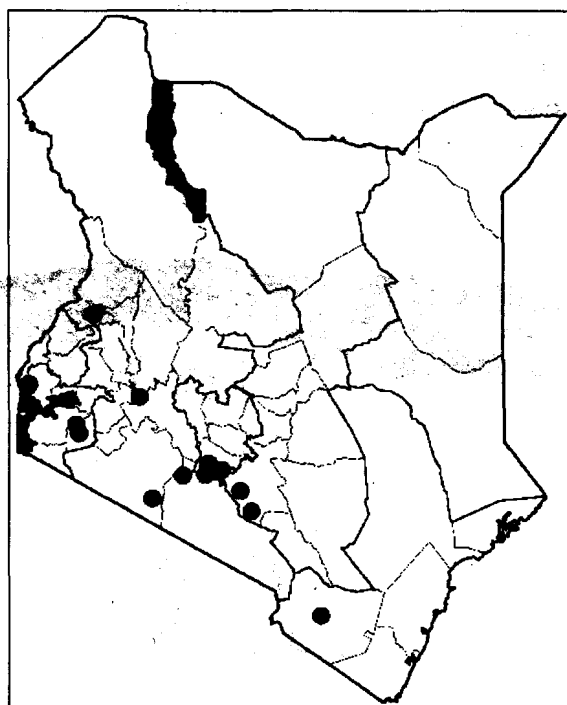
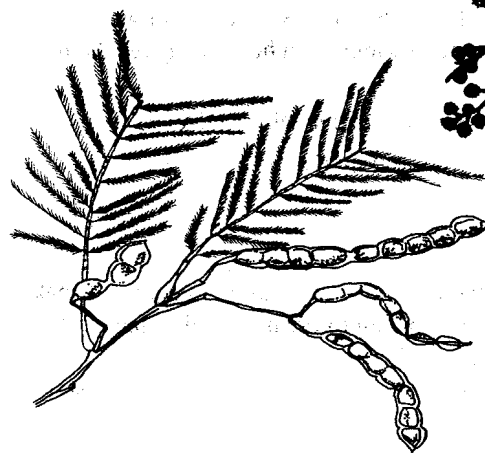
REMARKS: A tree for woodlots. Potentially a weed on farmland. Can be difficult to eradicate. It should not be intercropped as it competes for nutrients and light.



Fabaceae (Mimosaceae)

Introduced to Kenya for its tannin-rich bark used as a source of tannin for tanning leather. Also appreciated as a quick-growing tree for firewood. Suppresses undergrowth and thus not suited for erosion-prone areas.

FURTHER READING: <http://www.worldagroforestrycentre.org/Sites/TreeDBS/AFT/AFT.htm>; Albrecht, 1993; Bein et al., 1996; Bekele-Tesemma et al., 1993; Dharani, 2002; Mbuya et al., 1994; National Academy of Sciences, 1980; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; Turnbull, 1986.



Acacia mellifera**Fabaceae (Mimosaceae)****Indigenous**

COMMON NAMES: **Boran:** Sabansa gurach; **Embu:** Muthigira; **English:** Honey acacia; **Gabra:** Sa'pans gurrach; **Kamba:** Muthiia; **Kikuyu:** Muthigira; **Maasai:** Oiti, Oiti orok; **Malakote:** Sampasa; **Marakwet:** Belel; **Orma:** Habakoles; **Pokomo:** Musawasa; **Pokot:** Panyarit, Talamoghion, Talamoh; **Rendille:** Bilahen; **Samburu:** Iiti; **Somali:** Bilil; **Swahili:** Kikwata; **Taveta:** Kezia, Kizia; **Tharaka:** Muthigira; **Tugen:** Ngoronet; **Turkana:** Ebenyo; **Wardei:** Belel.

DESCRIPTION: Usually a low shrub, sometimes a tree up to 9 m. **BARK:** Pale grey-brown, smooth. **THORNS:** Distinctive, small to 6 mm long, **hooked prickles, in pairs, grey with black tips.** **LEAVES:** Only 2-3 pairs of **blue-green leaflets** each to 2 cm. **FLOWERS:** White or creamy spikes to 4 cm, attracting bees. **FRUIT:** Short and wide pods, tapering abruptly at both ends, **flat, papery, pale brown-yellow, splitting; rarely to 8 cm,** veined, 3 seeds within.

ECOLOGY: A widely distributed acacia found from western Asia, the Middle East and Egypt south to South Africa and Angola. Widespread in all arid and semi-arid areas of Kenya, 0-1,800 m. Not recorded in the Lake Victoria basin. Rainfall 400-900 mm. May be dominant in dry *Acacia-Commiphora* bushland. Thrives in a variety of soils including gravelly, loam, volcanic and sandy. Agroclimatic Zones I-VI (riverine in VII). Flowers in February-March (Mwingi).

USES: Firewood, charcoal, timber, pestles, clubs, sticks, carvings, edible gum (sparingly), **medicine (bark)**, fodder (pods, twigs, leaves, flowers browsed by camels and goats), bee forage, nitrogen-fixing, soil conservation, live fence, dead fence, veterinary medicine.

PROPAGATION: Direct sowing at site, seedlings, wildings.

SEED: Germination: 60-80% in 2 weeks with good seed; 17,000-20,000 per kg.

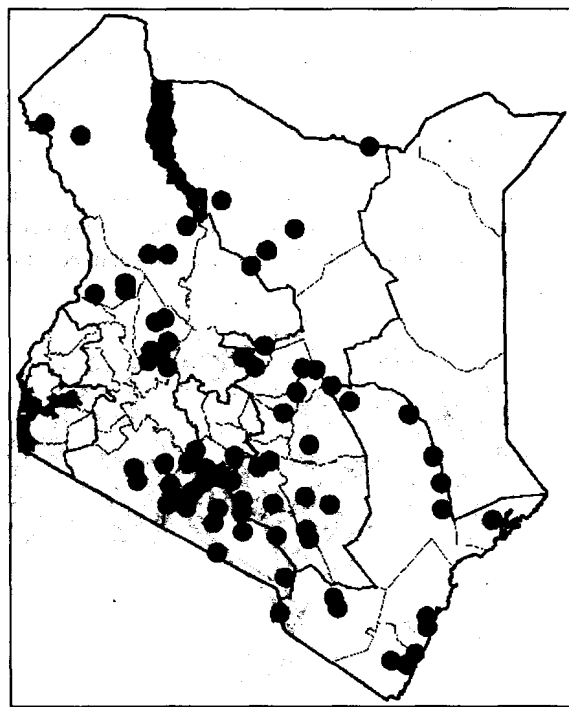
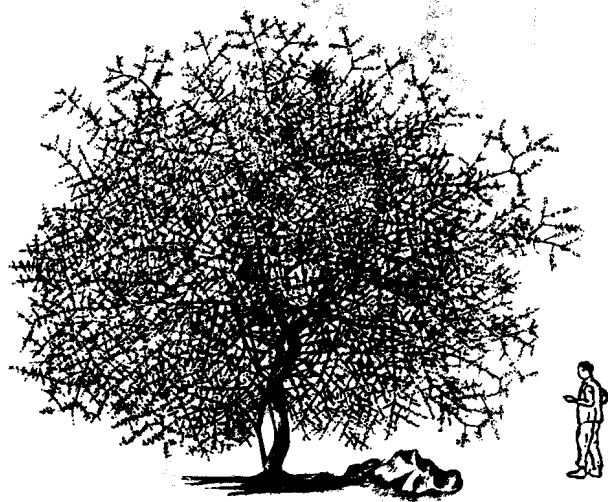
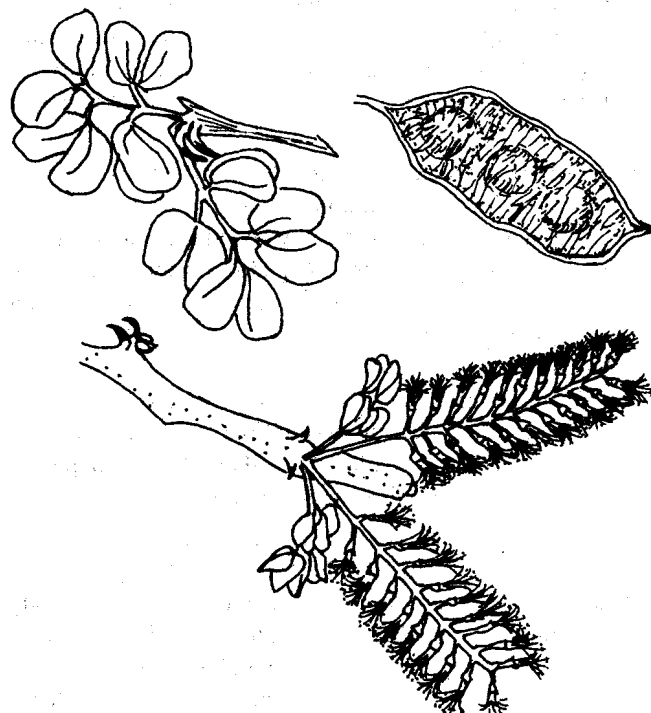
treatment: No treatment is required for fresh seed. For stored seeds immerse in hot water, allow to cool and then soak for 24 hours before sowing to break seed dormancy.

storage: Seed can be stored for long periods.

MANAGEMENT: Pruning in pastures, lopping, thinning if too dense. Trim as fence.

REMARKS: The flowers produce excellent-quality honey ('mellifera' = producing honey). Heavily browsed by game and goats in areas where few trees grow. Can make impenetrable thickets. The dark heartwood is very heavy, strong and termite resistant. The black Maasai clubs and sticks are made of such wood. Stingless bees like to live in it. The tree occasionally hosts an edible root parasite, *Hydnora abyssinica*.

FURTHER READING: <http://www.worldagroforestrycentre.org/Sites/TreeDBS/AFT/AFT.htm>; Albrecht, 1993; Beentje, 1994; Bein et al., 1996; Blundell, 1987; Dharani, 2002; ITDG and IIRR, 1996; Katende et al., 1995; Kokwaro, 1993; Maundu et al., 1999; Mbuya et al., 1994; National Academy of Sciences, 1979; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; von Maydell, 1990.



Acacia nilotica

Fabaceae (Mimosaceae)

Indigenous

COMMON NAMES: **Bajun:** Mtetewe; **Boran:** Burguge, Burquqe, Burquqis; **Digo:** Chigundigundi, Kigundi; **Duruma:** Mgundi; **English:** Nile thorn; **Gabra:** Burkuke, Bur'uk'e, Burquqe; **Giriama:** Mtsemeri, Muhegakululu; **Ilchamus:** Lkiloriti; **Kamba:** Kisewa, Musemei (Machakos), Musemeli (Kitui); **Keiyo:** Kiprutyt; **Kikuyu:** Mugaa, Ngiloliti; **Kipsigis:** Chebitet, Chepitet, Kopko; **Maasai:** Olkiloriti; **Mbeere:** Mulemeti, Mucemeri; **Nandi:** Sertwet; **Orma:** Chalado; **Pokot:** Kopkwo, Kopko, Kapka; **Rendille:** Ilgiliti; **Samburu:** Ikilositi; **Somali:** Tuger, Tuwer, Marah; **Swahili:** Mgunga, Mjungu, Mtetewe; **Taita:** Shighiri; **Teso:** Ekapelimen; **Tharaka:** Mwemba; **Tugen:** Chebiwo; **Turkana:** Ekapilimen.

DESCRIPTION: Usually a small tree seldom exceeding 6 m. Crown scattered when young, later umbrella shaped. **BARK:** Brown-black, rough, deeply grooved; young shoots red-brown, hairy. **THORNS:** Greyish, to 10 cm long, usually shorter. **FLOWERS:** Fragrant, round heads, bright yellow to orange. **FRUIT:** Straight or slightly curved pods that do not split open, 12 cm long to 1.2 cm wide.

ECOLOGY: Distributed from India to North Africa and south to South Africa and Namibia. Widely distributed in Kenya in acacia bushland and wooded grassland, e.g. growing in Kaputei Plains (Kajiado), Kedong Valley and Kerio Valley, 0–2,500 m. Common in both dry lowlands and highlands. Often a dominant species. Soils variable from sandy to black cotton. Usually in areas with 500–1,000 mm rainfall. Agroclimatic Zones III–VI. Flowers in January (Kitui), May–June (Laikipia) or September–October (Naivasha, Kajiado). Seeds in August–September (Kitui, Kajiado) or October (Laikipia).

USES: Firewood, charcoal, poles, tools, carving, tenderizer for meat (bark), drink (boiled bark or fruit pulp drunk like tea), medicine (sap, fruit and bark), fodder (leaves, pods), bee forage, shade, dune fixation, nitrogen-fixing, soil conservation, soil stabilization, windbreak, gum, tannin (bark), dye (bark), live fence, dead fence, toothbrushes, veterinary medicine.

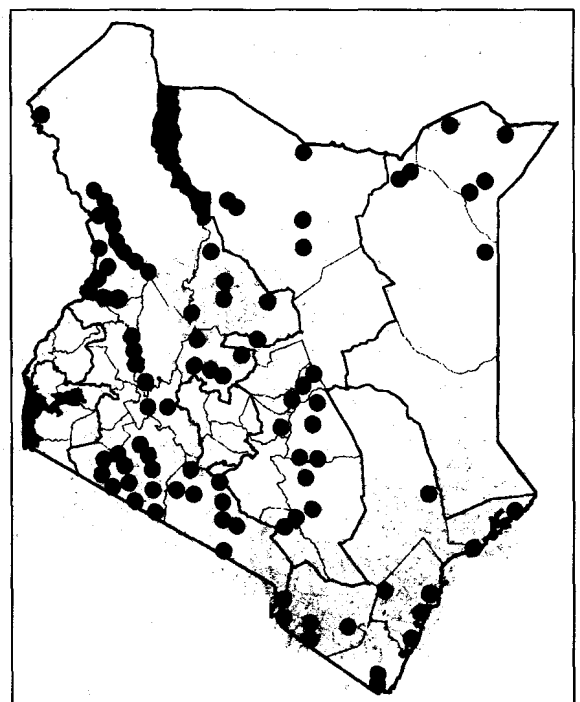
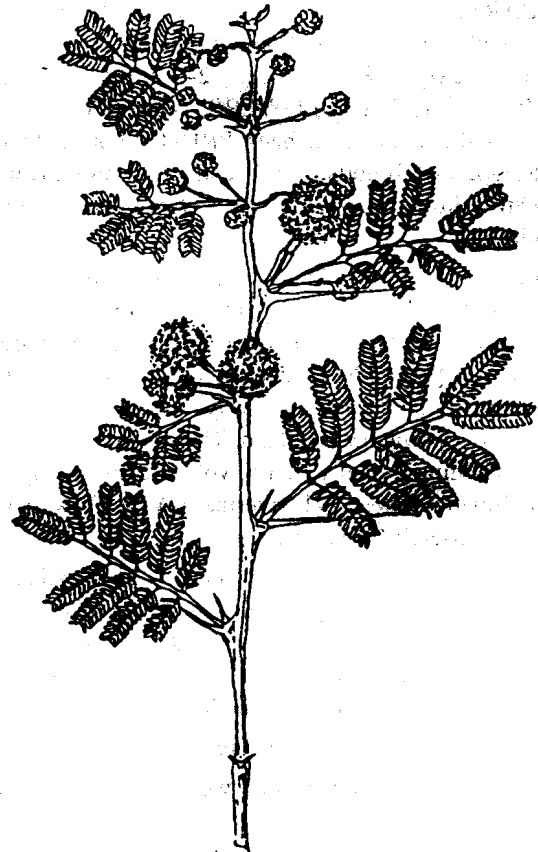
PROPAGATION: Seedlings, direct sowing at site.

SEED: Separate through immersion in water; bad seeds float. Germination rate 60–90%; 7,000–11,000 per kg. **treatment:** Not necessary for fresh seed. For stored seed only, nick or soak in cold water for 24 hours. Immersing in hot sulphuric acid for 8–10 minutes is very effective. Germination rates of 75–95% can be realized in one week.

storage: Seed can be stored for long periods.

MANAGEMENT: Fairly fast growing on good sites: Lopping, pollarding, pruning in pastures.

REMARKS: The bark is commonly used as a substitute for tea. Juice from the fruits gives a black dye that is rubbed on the eyelids by Digo women. The bark is used for

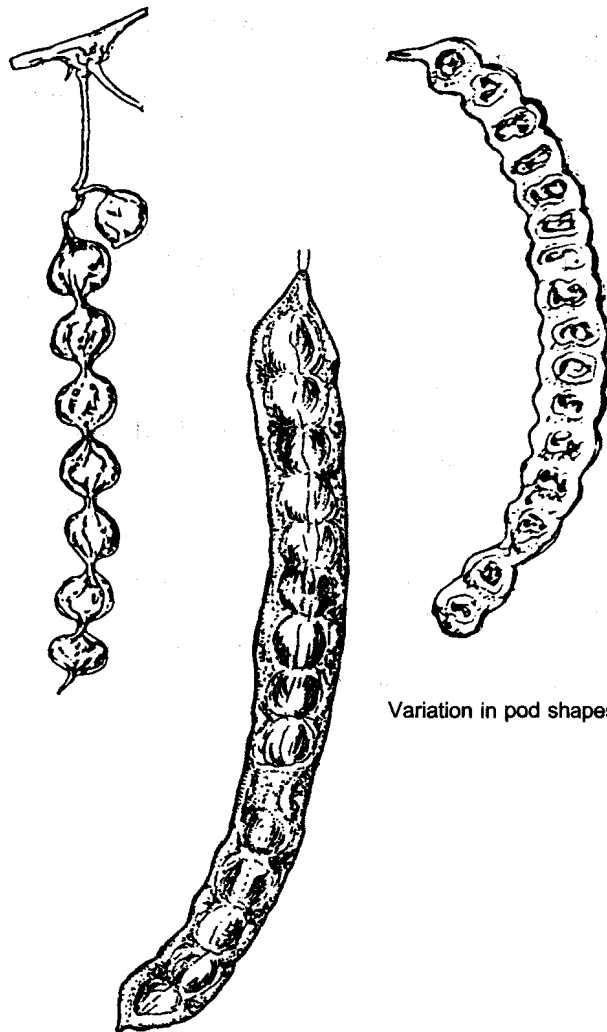
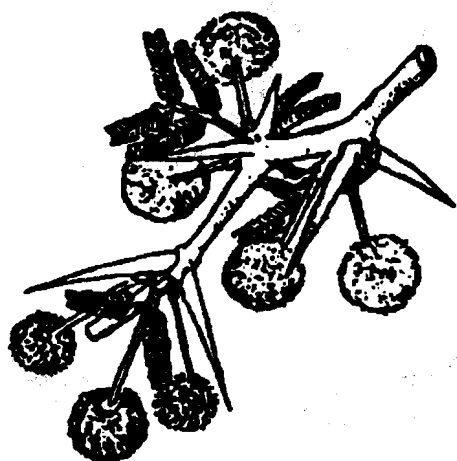


Acacia nilotica (cont)

tanning and dying leather (red-brown colour). Thorns used for piercing ears and as plugs for gourds. The wood is hard, tough, termite resistant and durable, used as posts for grain stores and as roof support in traditional Maasai homes. Young trees do not compete well so weeding is necessary. Can form thickets.

One of the most widespread acacias. An extremely variable species in its entire range, with at least 7 subspecies.

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; ITDG and IRR, 1996; Katende et al., 1995; Kokwaro, 1993; Maundu et al., 1999; Mbuya et al., 1994; National Academy of Sciences, 1980; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; Ruffo et al., 2002; Storrs, 1979; von Maydell, 1990.



Acacia paolii

Fabaceae (Mimosaceae)

Indigenous

COMMON NAMES: **Boran:** Chachane, Wanga; **Gabra:** Chachane; **Malakote:** Chyachyaneh; **Orma:** Chachane; **Rendille:** Gomor; **Somali:** Gammur, Gommor, Jerin, Jahjahneh; **Turkana:** Eyelel.

DESCRIPTION: A multi-stemmed deciduous shrub or small tree with spreading flat-topped crown to 4.5 m high. **BARK:** Smooth, dark green, dotted with white lenticels. **THORNS:** Straight, in pairs up to 5 cm long. **LEAVES:** Grey-green, twice-divided, usually 4–9 pairs of pinnae; leaflets in 7–15 pairs. **FLOWERS:** In round heads, cream, produced when tree is leafless. **FRUIT:** Red or brownish pods with spreading white hairs. Splits open.

ECOLOGY: Found only in north-eastern Uganda, Sudan, Ethiopia, Somalia and Kenya. Widespread in acacia bushlands or dwarf shrub grasslands of northern and eastern Kenya, 100–1,250 m. May be locally common near Lake Turkana, in Isiolo, Tana River and in Mandera Districts in depressions with clay soil and on gently undulating slopes with clay-loam soils, mainly in lowlands. Agroclimatic Zones VI–VII.

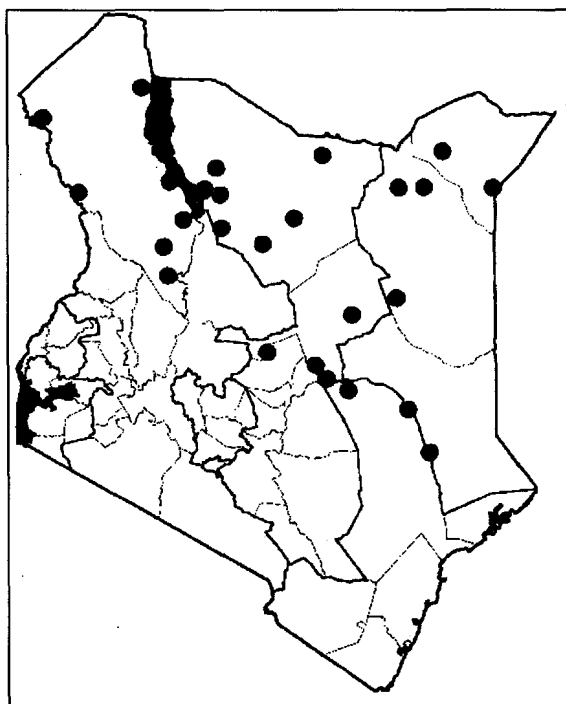
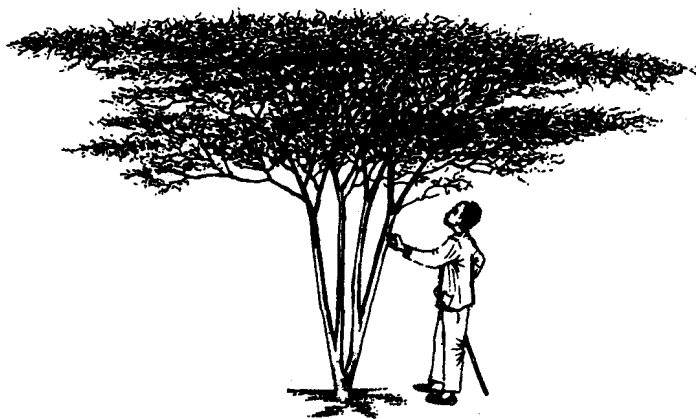
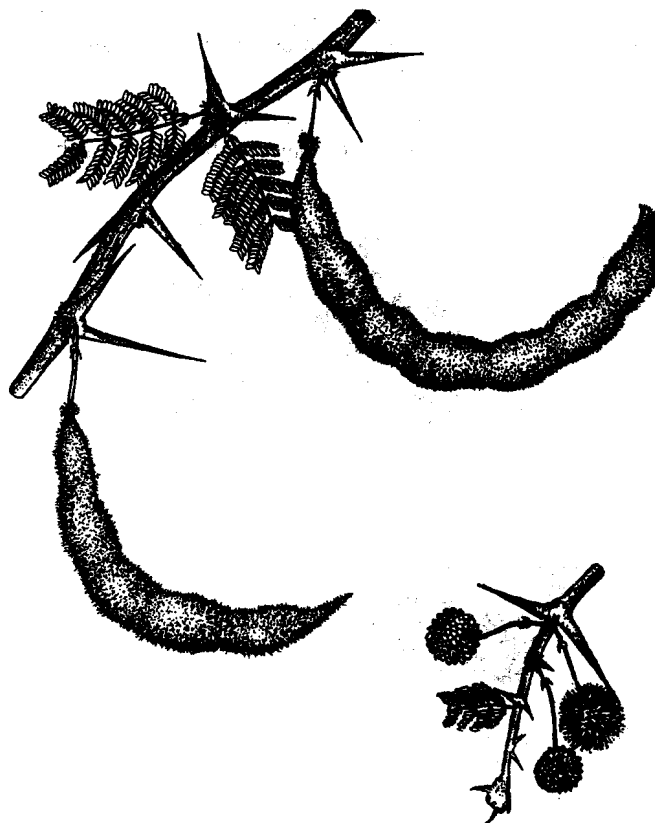
USES: Firewood, edible gum, medicine, fodder (leaves), bee forage, dead fence (thorny branches).

PROPAGATION: Seedlings, wildings. Seed germinates easily after fire.

MANAGEMENT: No management practice is commonly applied. Can be pruned if needed.

REMARKS: The species is an indicator of areas that can be cultivated. Used for making bomas (Somali).

FURTHER READING: Beentje, 1994.





Acacia abyssinica, Loita highlands, Narok District



Acacia brevispica, Mwala, Machakos District



Acacia drepanolobium, Kaputei plains, Kajiado District



Grassland with scattered *Acacia gerrardii* at Corner Baridi, Ngong, Kajiado District



Acacia gerrardii, Ong'ata Rongai, Kajiado District; (inset) pods

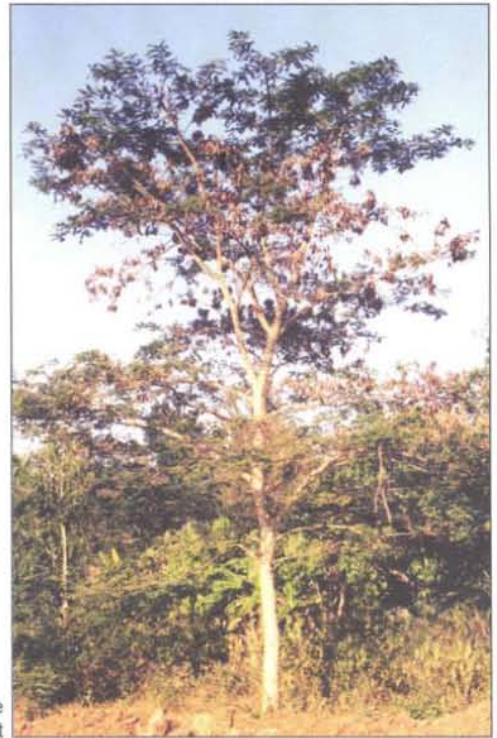


Acacia kirkii woodland is common around Nairobi; (inset) bark





Acacia seyal, Mbiuni, Machakos District;
(inset) var. *fistula*, thorns with ant galls

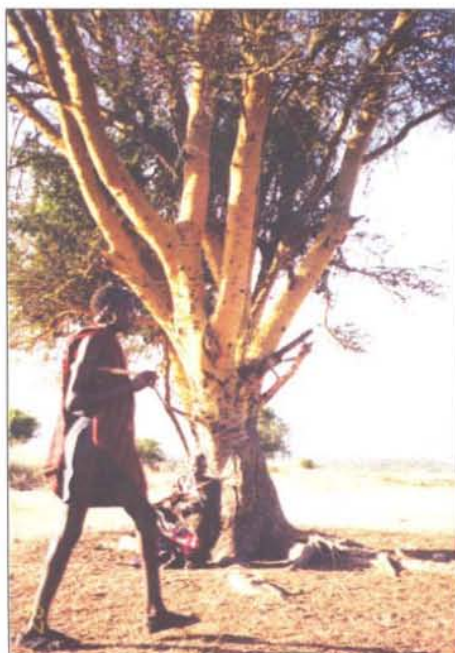


Acacia polyacantha with mature pods, Kyanika, Kitui District

Acacia nilotica pods; the coastal variety, Lamu District

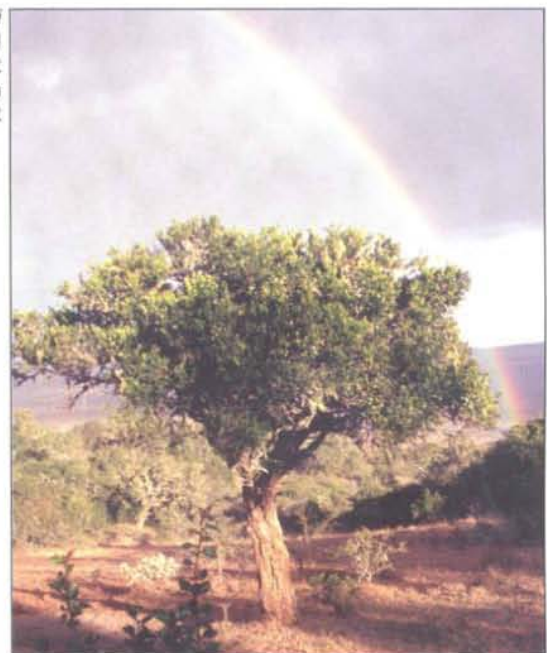


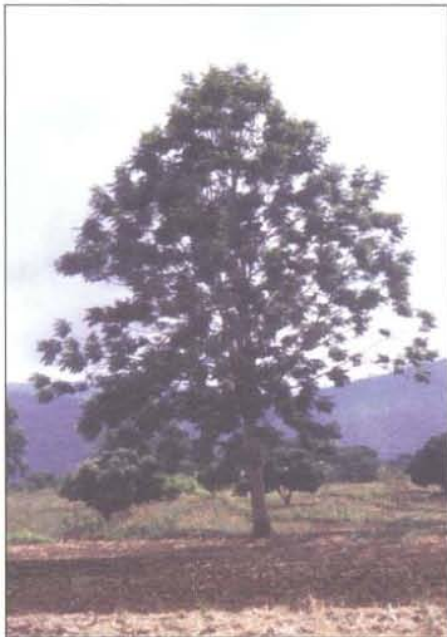
Acacia tortilis trees are often left in cropland, Mwea, Mbeere District; (inset) pods, which are important fodder



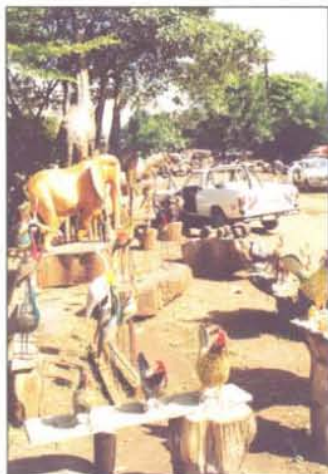
Acokanthera schimperi (arrow-poison tree), typical of wooded grasslands at higher altitudes, Loita highlands, Narok District

Acacia xanthophloea (fever tree) is easily recognized by its yellow bark and great size, Loita, Narok District





Acrocarpus fraxinifolius; young tree, Kamuu'ani, Machakos District



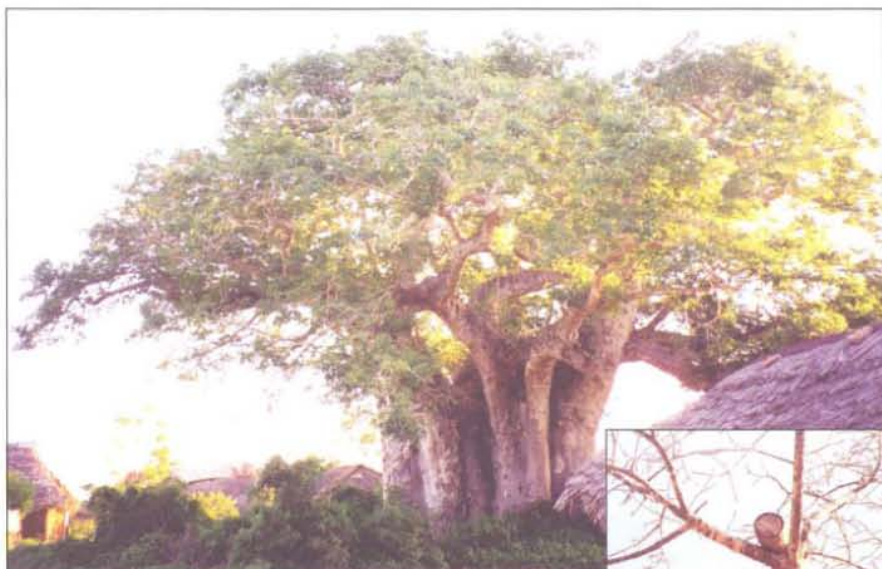
Woodwork products in an open-air market, Nairobi; the large carvings are from *Acrocarpus fraxinifolius*



Adenium obesum (desert rose), near Wenje, Tana River District



Antiaris toxicaria trunk, Kaya Kinondo, Kwale District



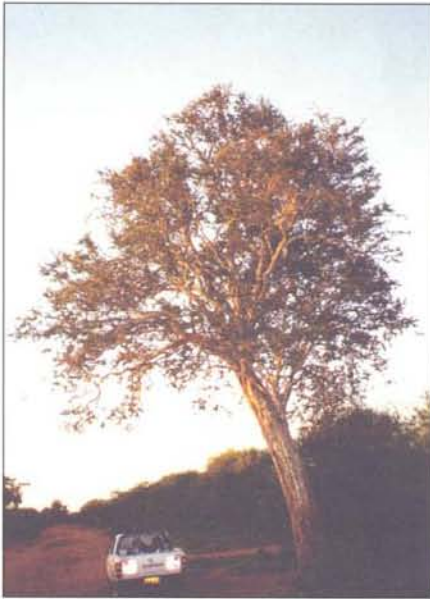
Adansonia digitata (baobab), Kibaoni, Malindi District; (inset) a traditional hive placed in the fork of baobab branches



Neem (*Azadirachta indica*), leaves and flowers, Kilifi District; (above) a trunk stripped of bark for medicine



Neem wood for carving in Mombasa



Boscia angustifolia can be recognized from the thick-barked, grooved and often leaning trunk, Katangi, Yatta, Machakos District



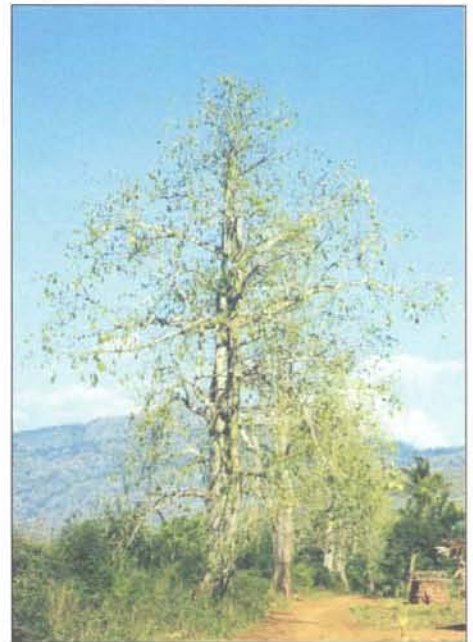
Calodendrum capense (Cape chestnut), Nairobi



Cassia abbreviata near Mzima Springs, Tsavo West, Taita Taveta District



Balanites aegyptiaca fruit, West Pokot District



Ceiba pentandra



Ceiba speciosa (bombax), Nairobi; (inset) flowers



Cussonia holstii, Loita highlands, Narok District



Dalbergia melanoxylon (mpingo or African blackwood) was an important woodcarving species in Kenya; (inset) close-up of trunk